GLENDALE COMMUNITY COLLEGE

60

1965 - 2025

Academic Catalog 2025-2026

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2025-2026 Academic Calendar

MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT
2025-2026 ACADEMIC CALENDAR
Dates are subject to change / The most up to date calendar information can be found at*
https://district.maricopa.edu/regulations/admin-regs/section-2/academic-calendars

Colleges may modify start dates in order to meet special needs. Dates listed below which are directly related to instruction refer to the traditional academic year model. Some courses may be offered over time-periods for which these dates are not applicable.

Links to ASU, GCU, NAU, and U of A calendars are incorporated on the last page for reference only and are subject to change without notice.

SUMMER SEMESTER – 2025 Note: Subject to the 2025-2026 Catalog		
Mon	May 12	Final Grades Due for Spring 2025 Semester
Mon	May 19	Tuition Due for Summer 2025 Semester
Mon	**May 26**	**Memorial Day (Colleges Closed)**
Tue	May 27	Summer Semester Begins
Thu	**Jun 19**	**Juneteenth National Independence Day (Colleges Closed)**
Mon-Sat	Jun 30-Jul 5	Summer Break for Clock Hour Programs Only
Thu	**Jul 3**	**Observance of Independence Day (Colleges Closed)**
Thu	Jul 31	Summer Semester Ends
Mon	Aug 4	Final Grades Due for Summer 2025 Semester

FALL SEMESTER – 2025		
Wed	Aug 13	Tuition Due for Fall 2025 Semester
Fri	Aug 15	First Day of Faculty Accountability
Sat	Aug 23	Fall Semester Begins
Mon	**Sep 1**	**Labor Day (Colleges Closed)**
Mon	Sep 22	Find A Class Opens for Spring 2026 Semester
Mon	Oct 6	Spring 2026 Priority Registration Begins for Currently Enrolled Students
Sat	Oct 11	Last Day for Withdrawal without Instructor's Signature
Mon++	Oct 13	Student Withdrawal with Instructor’s Signature Begins
Mon	Oct 13	Spring 2026 Open Registration Begins
*		Application for December 2025 Graduation
Tue	**Nov 11**	**Veterans Day (Colleges Closed)**
Thu-Sun	**Nov 27-30**	**Thanksgiving Holiday (Colleges Closed)**
Sun	Dec 14	Last Day of Regular Classes
Mon-Fri**	Dec 15-19	Final Exam Week
Fri	Dec 19	Fall Semester Ends / Last day of Faculty Accountability
Sat	Dec 20	Mid-Year Recess Begins for Students
Mon	Dec 22	Final Grades Due for Fall 2025 Semester
Thu-Thu	**Dec 25-Jan 1**	**Mid-Year Recess (Colleges Closed)**

SPRING SEMESTER - 2026		
Fri	Jan 2	Employees Return to Campus
Mon	Jan 5	Clock Hour Student Classes Begin
Wed	Jan 7	Tuition Due for Spring 2026 Semester
Mon	Jan 12	First Day of Faculty Accountability

Sat	Jan 17	Spring Semester Begins
Mon	**Jan 19**	**Martin Luther King Jr. Day (Colleges Closed)**
Mon	**Feb 16**	**Presidents' Day (Colleges Closed)**
Tue	Feb 17	Summer/Fall 2026 Semesters - Find A Class Opens
Mon	Mar 2	Summer/Fall 2026 Semesters - Priority Registration Begins for Currently Enrolled Students * Application for 2026 May Graduation
Sat+	Mar 7	Last Day for Withdrawal without Instructor's Signature
Mon++	Mar 9	Student Withdrawal w/ Instructor's Signature Begins
Mon-Sun	**Mar 16-22**	**Spring Break for Students, Faculty, & Employees (Campus closed)**
Mon	Mar 23	2026 Summer/Fall Semesters - Registration Opens
Sun	May 10	Last Day of Regular Classes
Mon-Fri**	May 11-15	Final Exam Week
Fri	May 15	Commencement
Fri	May 15	Spring Semester Ends / Last day of Faculty Accountability
Mon	May 18	Final Grades Due for Spring 2026 Semester

SUMMER SEMESTER 2026 Note: Subject to the 2026-2027 Catalog

Mon	May 18	Tuition Due for Summer 2026 Semester
Mon	**May 25**	**Memorial Day (Colleges Closed)**
Tue	May 26	Summer Semester Begins
Thu	**Jun 18**	**Observance of Juneteenth National Independence Day (Colleges Closed)**
Mon-Sat	Jun 29-Jul 4	Summer Break for Clock Hour Programs Only
Thu	**Jul 2**	**Observance of Independence Day (Colleges Closed)**
Thu	Jul 30	Summer Session Ends
Mon	Aug 3	Final Grades Due for Summer 2026 Semester

* For specific information concerning the last day to apply for graduation, individual class start dates, and final exams, consult the college of enrollment.

** Any classes meeting on Friday, Saturday or Sunday will have final examinations during their regular class time.

+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (see Administrative Regulation 2.3.6 in Catalog Common Pages).

++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (see Administrative Regulation 2.3.6 in Catalog Common Pages)

A Message from Our President

Welcome to Glendale Community College! As a native Arizonan and proud graduate of Arizona's public schools, I am deeply committed to the excellence in education that Glendale Community College provides for all who seek opportunities for themselves and their families. Together with our dedicated faculty, staff, and student leaders, I am committed to our mission of preparing students for further higher education, employment and advancement, and successful participation in a global society.

As you travel your academic journey with us, take time to explore the educational possibilities we have to offer. With over 100 degrees and certificates leading to success at your transfer university or the job you've been seeking, I'm confident that you will find the pathway that aligns with your goals. With classes available both in-person and online, you can create a schedule that fits into your life.

At Glendale Community College, you will experience academic rigor that challenges you to learn and think deeply about your chosen area of study and the world around you. Outside of the classroom, you will have the support you need to succeed academically and to engage with your fellow students and the community in the West Valley. I encourage you to use the many services we offer, such as tutoring, advising, and career services. Get involved in the vibrant life of the college by joining student organizations, honor societies, and our championship athletics teams. Most importantly, get to know our faculty who are experts in their fields and our staff who are passionate about helping you navigate your college journey and reach your goals. Everyone is here for one purpose: Your Success!

Glendale Community College has been serving the West Valley for 60 years. We are proudly designated a Hispanic Serving Institution and are committed to an environment of inclusivity and belonging. We focus on the strengths of our students and are dedicated to helping you achieve your dreams through innovation, student-centered teaching, and community partnerships.

It is my deepest honor and a privilege to serve as Glendale Community College's ninth president. Thank you for choosing us as your partner in education; I'm so glad you're here!

Tiffany Hernandez, Ph.D., J.D.
GCC President

About Us

Making It Happen in Glendale Since 1965

Education has the power to inspire growth and change lives. Since 1965 Glendale Community College has welcomed over 500,000 students as they worked towards graduating with two-year degrees, transferring to a university, completing new career training, or finishing an occupational certificate.

Glendale Community College upholds the guiding principles and foundations of the Maricopa Community College District and works to serve the diverse and evolving needs of students and the community.

Welcome to Glendale Community College.

History of GCC Main

In 1965, Glendale welcomed the first community college in the West Valley. Housed in temporary facilities at the Camelback and Maryland extensions of Phoenix College, 1,974 students enrolled in liberal arts classes at the brand-new Glendale Community College.

By September the following year, the college had moved to its permanent home at 59th Avenue and Olive Avenue. The sprawling 147-acre campus was anchored by 226 majestic palm trees that line the central mall. These beautiful and stately trees were part of the original ranch and were carefully moved and replanted during construction. The look of the iconic palm was incorporated into the main architectural elements used throughout campus and is prominent in the official campus logo.

The Northwest Valley population exploded in the 1980s and 1990s and with it, the need for affordable higher education. In 2000, the GCC North campus opened at 57th Avenue and Happy Valley Road. In 2004 a bond election provided capital funds for critical expansion and renovations to main campus facilities. The most recent additions, the Public Safety Science and Life Sciences buildings, incorporate innovative, hands-on teaching facilities, collaborative environments and LEED-certified design.

Keeping pace with rapid population growth and growing business needs, GCC continues to expand community development efforts and partnerships that contribute to the economic vitality of Glendale, the West Valley and Maricopa County.

Glendale Community College remains focused on serving the community, sustainability, strategic growth, advancing technology, continuing its commitment to student success, building on a reputation of quality education and striving to inspire excellence in all who attend.

History of GCC North

In 1994, $2 million from Maricopa Community Colleges Capital Development Bond was allocated to be used to provide initial site development such as sewer, water, electricity, and parking for the 20,000 square-foot campus. In 2004, $25 million from Maricopa Community Colleges Capital Development Bond was allocated to be used to expand and create a master plan for the GCC North site. Fall 2008, phase one of the GCC North Master Plan opened adding 67,000 square feet of new facilities and services.

- 75-acre site at 57th Avenue and Happy Valley Road purchased with monies approved in the 1984 Maricopa Community Colleges Capital Development Plan.
- $2 million of capital monies provided 10,000 square feet of classrooms, study areas, student support services, and offices.
- $25 million of capital monies approved to provide a master plan and additional 67,000 square feet of new services and facilities.

Values, Vision, and Mission

GCC Values
Glendale Community College is guided by six core values:

- Learning - Provide comprehensive and transformative experiences to assist students in achieving their personal, academic, and career goals.
- Quality - Assure excellence in instructional and support services through employee development and continuous assessment for optimal results.
- Integrity - Demonstrate an unwavering commitment to honesty, transparency, and accountability.
- Inclusiveness - Promote a community that supports diversity, equity, and social justice.
- Community - Foster a culture that enables positive internal and external relationships based on mutual respect, trust, and a sense of belonging.
- Future-Focused - Enhance innovative and forward-thinking perspectives and approaches to prepare students for evolving educational, workforce, and societal needs.

GCC Vision
Glendale Community College fosters student success by providing innovative, quality learning experiences for all members of the community.

GCC Mission
Glendale Community College prepares students for further higher education, employment and advancement, and successful participation in a global society.

Accreditation

Glendale Community College is accredited by the Higher Learning Commission (HLC). For more information see www.ncahlc.org.

GCC completed its previous Reaffirmation Accreditation in April 2012. Our accreditation relationship has continued with the Higher Learning Commission on the Open Pathway.

Accreditation Project
As part of the Reaffirmation of Accreditation process, GCC has prepared for the Comprehensive Visit on February 28- March 1, 2022. The "Assurance Argument 2022" details the current work and tells GCC's story and showcases our continuous improvement as we serve our students and our community.

GCC programs are also accredited/approved by:

Glendale Community College is an accredited institutional member of the National Association of Schools of Music 11250 Roger Bacon Drive, Suite 21 Reston, VA 20190-5248. Phone 703-437-0700 Fax 703-437-6312 info@arts-accredit.org

The Maricopa Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN).

Arizona Peace Officer Standards and Training Board (AZPOST)
2643 E. University Drive
Phoenix, AZ 85034
Telephone: 602-223-2514

Assessing Student Learning

Glendale Assessment Unites to Change Outcomes (GAUCHO)
The GAUCHO goal is to provide an extensive resource for assessment information in one easy location. The engagement that occurs with assessment on campus in formal and informal settings continues in this online environment. To learn more please visit the GAUCHO website.

Assessment Program
When their time at GCC is complete, are students leaving with the content knowledge, marketable skills, and life skills necessary for success? That is the question the GCC assessment of student learning program seeks to answer.

Glendale Community College strives to develop and maintain learning systems that foster student success with respect to disciplinary expertise and the institution's general education learning outcomes: oral, written, and visual communication; critical and creative thinking; personal and community well-being; awareness and appreciation of diversity; information literacy; and clarification of career goals and the knowledge and skills needed for success in the workplace.

Student assessment at GCC focuses on the verification and improvement of student learning through a comprehensive program of academic benchmarking, data collection, analysis, and implementation. GCC uses multiple sources of evidence to discover what and how students learn and how they might use their learning experiences upon exiting the institution.

Compliance Disclosures

Office of Compliance
As part of Institutional Effectiveness, the Office of Compliance provides tools and support to college departments to help fulfill the mission of the institution in an ethical way that adheres to Maricopa Community College policy and federal, state, and local regulations.

The Office of Compliance provides direction, education, oversight, ongoing risk monitoring, guidance, and resources to the College to optimize ethical and compliant behavior, provide assurance, and continuously improve our compliance and ethics program.

Glendale Community College adheres to all Federal, State, and Maricopa District policies, regulations, disclosure reporting requirements, and laws.

Most policies can be found in at one of these links:

- GCC Student Handbook
- Maricopa Student Regulations
- Maricopa Technology Resource Standards
- Maricopa Community College District Website

Student Right to Know:

- **Campus Security Report**: The Glendale Community College Public Safety department publishes annual reports that disclose relevant information about campus security policies and crime statistics.
- **Cost of Attendance**: The Net Price Calculator is a tool designed to help students estimate the annual cost to attend a Maricopa Community Colleges. This broad estimate is based on the cost of attendance and the financial aid that was provided to full-time, first-time degree/certificate-seeking undergraduate students in 2019-20. The actual net price can vary significantly based on student eligibility and does not represent

an actual award. The submission of the FAFSA is the only way to obtain a true and accurate determination of eligibility.

- **Diversity of Enrollment**: In Fall 2020 enrollment of all full-time undergraduate students in credit programs was 4,133. Of these 56% were female and 44% were male. 1% were American Indian/Alaska Native, 5% were Asian/Pacific Islander, 5% were Black, 41% were Hispanic, 39% were White, 5% were Two or More Races, and 2% were Non-Resident Alien.
- **Diversity of Pell Recipients**: Federal Pell Grant recipients comprised 43% of the full-time enrolled students in Fall 2020. Of these, 61% were female and 39% were male. 69% of the Pell recipients identified themselves as members of a racial or ethnic minority.
- **Retention Rates**: 56% of the first-time, full-time undergraduate students who enrolled in Fall 2019 returned in Fall 2020. The part-time student retention rate was 35%.
- **Graduation and Transfer Rates**: The 3-year graduation rate for full-time students entering in Fall 2017 was 14%. The 3-year transfer-out rate was 26%.
- **Out of State Enrollment in Online Programs**: Glendale Community College is currently not authorized to deliver online classes to students who reside in a state other than Arizona per 34 CFR Part 600.9 - Institutional Eligibility under the Higher Education Act of 1965.
- **FERPA and GDPR Rights**: Glendale Community College complies with the Family Educational Rights and Privacy Act (FERPA) and the General Data Protection Regulation (GDPR), which affords students certain rights with respect to their education records.
- **Voter Registration**: Voter Registration forms are available in the Enrollment Center or may be requested via the website.

Equal Employment Opportunity Policy Statement
It is the policy of Maricopa to promote equal employment opportunities through a positive continuing program. This means that Maricopa will not discriminate, nor tolerate discrimination, against any applicant or employee because of race, color, religion, gender, sexual orientation, gender identity, national origin, citizenship status (including document abuse), age, disability, veteran status or genetic information. Additionally, it is the policy of Maricopa to provide an environment for each Maricopa job applicant and employee that is free from sexual harassment, as well as harassment and intimidation on account of an individual's race, color, religion, gender, sex, sexual orientation, gender identity, or national origin, citizenship status (including document abuse), age, disability, veteran status or genetic information.

Learning Environment

Guiding Principles
Maricopa's Excellence in Teaching and Learning Guiding Principles provide an overarching framework for defining who we are and how we engage students in transformative ways.

We actualize these principles at Glendale Community College (GCC) by committing to create learning environments that align with GCC's institutional values and intentionally move students toward the achievement of our institutional learning outcomes.

Because we value LEARNING, our learning environments …

- Provide comprehensive and transformative experiences that help students achieve their personal, academic, and career goals
- Spark intrinsic interest in course content and challenge students through problem-solving, analyzing, synthesizing, and evaluating ideas
- Assume intelligence and abilities can grow with experience
- Engage students in hypothesizing and then testing their conceptual understanding

- Teach students to create and assess different types of information and ways of knowing
- Encourage students to take risks, receive feedback, and build resilience to try again

Because our learning environments are designed in this way, our students are able to demonstrate critical and creative thinking skills as well as quantitative reasoning and analysis.

Because we value QUALITY, our learning environments …

- Assure excellence in instruction and support services and continuous assessment for optimal results
- Engage students in deep learning in which they challenge their existing paradigms to evaluate the merit of their own ways of thinking
- Encourage students to take responsibility and self-regulate their own learning so the quality of their educational experiences extends beyond an individual class
- Provide students opportunities to test their understanding and apply their knowledge through real-world experiences

Because our learning environments are designed in this way, our students are able to demonstrate information literacy.

Because we value INTEGRITY, our learning environments …

- Demonstrate unwavering commitment to honesty, transparency, and accountability
- Ensure fair and honest consideration of student work
- Encourage students to strive to be the best students they can be both in terms of character and commitment
- Provide students a sense of control over and responsibility for their own learning
- Help students develop ethical principles and an understanding of the world
- around them

Because our learning environments are designed in this way, our students are able to demonstrate responsible decision-making that leads to personal and community well-being.

Because we value INCLUSIVENESS, our learning environments …

- Cultivate and support diversity, equity, and social justice
- Develop cultural awareness and sensitivity
- Attend to students' intellectual, emotional, and physical well-being to ensure a sense of belonging and empowerment
- Build connections among different people, disciplines, and perspectives

Because our learning environments are designed in this way, our students are able to demonstrate awareness and appreciation of diversity.

Because we value COMMUNITY, our learning environments …

- Foster a culture that enables positive relationships based on mutual respect, trust, and a sense of belonging
- Ensure students believe we have confidence in their ability to learn and they believe that they can learn
- Afford opportunities for students to collaborate with other learners who are struggling with the same problems

- Encourage teamwork and an understanding of how students can share their skill set with others at multiple levels of society (locally, nationally, and globally)
- Cultivate student understanding of the importance of being a responsible citizen

Because our learning environments are designed in this way, our students are able to demonstrate the communication skills necessary for effective oral, written, and visual communication.

Because we value being FUTURE-FOCUSED, our learning environments …

- Enhance innovative and forward-thinking perspectives and approaches to prepare students for evolving educational, workforce, and societal needs
- Pose significant, encompassing, important questions to challenge students with relevant learning that prepares them to address problems impacting their lives, their work, and the world around them
- Engage students in inventing ways to solve problems
- Prepare students to be self-directed, intentional, life-long learners
- Assist students in acquiring leadership skills and the ability to manage complex projects

Because our learning environments are designed in this way, our students are able to clarify their career goals and demonstrate the knowledge and skills needed for success in the workplace.

References:

Bain, K. (2004). What the best college teachers do. Cambridge, Mass: Harvard University Press.

Fink, L. D. (2013). Creating significant learning experiences: An integrated approach to designing college courses. San Francisco, Calif: Jossey-Bass.

Strategic Planning

At GCC, our strategic plan defines and communicates our most important efforts to realize our college's vision to foster student success by providing innovative, quality learning experiences for all members of the community. Springing from our fundamental institutional values, the strategic plan also sets forth the metrics by which we will hold ourselves accountable as we work to make this vision a reality.

Focus 2024

Focus 2024 is GCC's college-wide strategic plan, accessible via the link included in the Downloads section on this page. Developed through an inclusive process, the plan leverages the Four Disciplines of Execution (4DX) to help to ensure forward momentum by asking individuals and departments to take an active role in our GCC Super Goal: Increase completion with equity from 23% to 33% by Fall 2024. The plan also includes three strategic goals to advance specific areas across the college: Enrollment, Operational Effectiveness, and GCC's Reputation and Competitive Edge. Together, our Super Goal and three Strategic Goals will result in a stronger and more integrated engagement in our strategic efforts to better serve our community.

Background

In fall 2020, the Strategic Plan Design Team (SPDT) was formed to draft the institution-wide 2021-2024 strategic plan. The SPDT was tasked with the mandate to engage in a process that was thorough, inclusive, transparent, data-informed, and future-focused. The SPDT engaged with constituencies across the college, including direct interviews and listening sessions with more than 150 students, faculty, staff, administrators, and community members who provided feedback on key areas and big ideas requiring college-wide attention for future success. Out of this process came a strategic plan that was shorter, more streamlined and more focused than prior plans, and which included quantified metrics for success. The plan also provides vertical and horizontal alignment of college strategy across all departments and with the Maricopa District.

Strategy Execution and 4DX
Many institutions create a strategic plan and then struggle with follow-through to actually execute the strategy they have developed. Recognizing the need for a structured, diligent and integrated approach to strategy execution, GCC has devoted significant institutional energy and resources to make sure its strategy execution is achieving the goals set forth in the college's strategic plan. The tool we are using to support this is Franklin Covey's Four Disciplines of Execution® (4DX). The 4DX program and process is enabling GCC to focus on our strategic goals and to engage everyone in a standardized framework for weekly accountability.

In Fall 2021, GCC launched a college-wide effort to begin the organizational change to implement 4DX, train hundreds of employees in the new methodology, and identify the college's goals-of-focus. Through an inclusive process, GCC identified one primary Wildly Important Goal (WIG) focusing on increasing Student Completion, and three sub-WIGs focusing on increasing Enrollment, Fall-to-Fall Student Retention and Successful Course Completion. Each of these WIGs is stated with clear, numerical metrics for success, with Equity as an explicit component of every metric.

In January 2022, GCC began its first 4DX Run Cycle with 75 teams and over 500 employees, representing nearly every department in the college. Each team developed a goal aligned with one of the college's WIGs and established Lead Measures to guide their weekly work and commitments. Following a successful completion of the first Run Cycle in May 2022, GCC began its second Run Cycle in Fall 2022 with 80 teams. At GCC, 4DX is proving to be a useful tool to enable the college to focus on goals most critical to its institutional Vision to foster student success by providing innovative, quality learning experiences for all members of the community.

Get Involved with Strategic Planning
Executing the strategy outlined in Focus 2024 requires an inclusive and engaging approach to ensure all constituents have the opportunity to share their ideas as we engage in this concerted effort to implement a plan for our future. If you would like to schedule a meeting or listening session, please contact us at strategicplanning@gccaz.edu to coordinate a time that works for your group to ensure your voices and ideas are heard and integrated into our future plan.

Sustainability

Commitment
Glendale Community College (GCC) is a strong proponent of sustainability with many initiatives in place which are actively supported by students, faculty and staff. In line with GCC's commitment to sustainability, we have pledged to be carbon neutral by 2025 through the signing of the American College and University Presidents' Climate Commitment in 2011.

The Sustainability Board, chaired by Vice President of Administrative Services, Augustine Erpelding, works with the Green Efforts Committee, Environmental Club, and academic members of the Sustainability degree & certificate programs to incorporate sustainable ideas and programs in the administration of the college.

The list of green efforts at the main and North campuses have continued to flourish through the years, for example:

Energy Conservation
The college implemented temperature set points, converted to LED light bulbs, uses hybrid vehicles as well as sensors, innovated with LEED-designed buildings, improved HVAC efficiency, used locally sourced building materials, and participated in partnerships for electric vehicle charging stations, Salt River Project (SRP) Energy Reduction Program, and the upcoming Solar Select Project.

Sustainable Cafeteria
Provided Meatless Monday food offerings, compostable utensils, recycled coffee beans for gardening, and promoted the use of reusable cups.

Bee Campus USA Affiliate
GCC is an affiliate of the Bee Campus USA program, designed to marshal the strengths of educational campuses for the benefit of pollinators. GCC was the first college in Arizona to be named a Bee Campus and joins with other campuses across the country who are united in improving their landscapes for pollinators.

Maricopa Native Seed Library at GCC Main Library
The Maricopa Native Seed Library provides free native seeds to the. community and education and information to make it easy to incorporate these plants into your yards, patios, and balconies. Anyone can include native plants in their residences, whether they have a lot of space or a small apartment. Growing native plants helps conserve water and prevent drought.

Greenhouse Gas Emission Efforts
GCC has developed a Climate Action Plan to minimize its Greenhouse Gas Emissions and incorporated sustainability metrics into its strategic plan.

The state-mandated Trip Reduction Program provides discounted bus passes and other commuting alternative opportunities (telecommuting, carpooling, vanpooling, bike racks) to its employees and students to help lessen emissions.

Earth Day Celebrations
GCC celebrates Earth Day every spring semester involving students, faculty, and staff. Typical celebrations involve sustainable vendors and guest speakers to educate all stakeholders on sustainability.

Water Conservation
GCC installed landscaping that does not require irrigation, used environmentally friendly chemicals & cleaners, and partnered with the City of Glendale and SRP for a Water Conservation project.

Plastic & Paper Use Reduction
Installed water bottle fill stations across campus, worked with vendors to increase aluminum cans vs. plastic use and engaged in a campus-wide paper-reduction pledge. Increased recycling & waste reduction through campus-wide Zero Waste program, commingled recycling bins, secure document destruction services (paper recycling) and electronic recycling events.

Celebrating Success
Through our campus-wide commitment to sustainability, GCC has won awards for many of our programs and is working on lowering greenhouse gas emissions.

Get More Information
To learn more about the sustainability efforts of the Maricopa County Community College District, please visit the MCCCD Sustainability page.

Arizona General Education Curriculum (AGEC)

Maricopa County Community College District (MCCCD)
2025-2026 Arizona General Education Curriculum (AGEC) – A, B, S
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AGEC-A%2C%20B%2C%20S.pdf

Description
The Maricopa County Community College District Arizona General Education Curriculum (MCCCD AGEC) is a general education certificate that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university. Generally, the MCCCD AGEC transfers as a block without loss of credit. In most cases, all courses used to satisfy the MCCCD AGEC will apply to graduation requirements of the university major for which the AGEC was designed.

As described below, the AGECs are a component of most MCCCD associate degrees and comparable degrees at other Arizona public community colleges. The AGEC-A defines the general education requirements in the Associate in Arts (AA), Associate in Arts, Elementary Education (AAEE), and the Associate in Arts, Fine Arts (AAFA) degrees. The AGEC-B defines the general education requirements in the Associate in Business-General Requirements (ABUS-GR) and Associate in Business-Special Requirements (ABUS-SR) degrees. The AGEC-S defines the general education requirements in the Associate in Science (AS) degree.

As described in more detail below, all AGECs require designated courses in First Year Composition [FYC], Literacy and Critical Inquiry [L], Mathematical Studies [MA], Social-Behavioral Sciences [SB], Humanities, Design and Fine Arts [HU], and Natural Science [SQ/SG]. Students must satisfy two Awareness areas as well: Cultural Diversity in the U.S. and either Global Awareness or Historical Awareness. In addition, the AGEC-A and AGEC-B require a Computer/Statistics/Quantitative Applications course [CS] that is not required for students pursuing the AGEC-S.

Purpose of the AGECs
AGECs were designed to articulate with different academic majors at the state universities, and their particular requirements vary accordingly. In some major-specific pathways, students are allowed to choose from a broad list of courses to satisfy the AGEC requirements, and for others the courses are more restricted or even specified. Additional information on academic majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools

1. The AGEC-A is designed to satisfy General Education requirements in many liberal arts majors as well as other majors that articulate with an Associate in Arts degree (e.g., social sciences, fine arts, humanities, elementary education). AGEC-A requires a minimum of college mathematics or college algebra to satisfy the Mathematics [MA] requirement.
2. The AGEC-B is designed to satisfy requirements in business majors that articulate with the Associate in Business (ABUS-GR, ABUS-SR). AGEC-B requires a minimum of brief calculus to satisfy the Mathematics [MA] requirement.
3. The AGEC-S is designed to satisfy requirements in majors with more prescriptive mathematics and mathematics-based science requirements such as many in the sciences, technology, engineering and mathematics. AGEC-S requires a minimum of the first course in a calculus sequence to satisfy the Mathematics [MA] requirement, and a minimum of eight (8) credits of either university chemistry, university physics, general biology for majors, or physical and historical geology to satisfy the Natural Sciences [SQ/SG] requirement. In addition, students must select six (6)- to ten (10) additional credits of Subject Options composed of math and/or science appropriate to their major.

Academic Policies that Govern the AGEC A, B, S

- Requires completion of at least 35 credit hours* (for AGEC-A and AGEC-B) and 36 credit hours* (for AGEC-S) in courses numbered 100 and above that have been approved for one or more AGEC designations; a minimum of 12 of those credits must be completed at one or any combination of the MCCCD colleges. See First Year Composition [FYC] notes in the following AGEC descriptions and footer for credit minimum exceptions.*
- All MCCCD courses applied to the AGEC must be completed with a grade of "C" or better.
- All MCCCD courses applied to the AGEC must be accepted for transfer credit as a direct equivalent, departmental elective, or general elective credit at ASU, NAU, and UAZ according to the Course Equivalency Guide for the academic year in which the course was taken. Courses approved for transfer exclusively toward the Bachelor of Applied Science are ineligible for inclusion in the AGEC.
- A single course can simultaneously count toward one or more Awareness Areas and other AGEC requirements. For example, an approved course in world geography may be used to satisfy [SB] and [G] requirements. While multiple requirements can be met with a single course, the credits for that course are only counted one time toward the required minimum total for the AGEC. Except as detailed below for the AGEC-S, a single course cannot be used to satisfy more than one AGEC requirement, with the exception of Awareness Areas. While multiple requirements can be met with a single course, the credits are only counted one time toward the required minimum for the degree. Except as detailed below for the AGEC-S, a single course cannot be used to satisfy more than one AGEC core requirement other than Awareness Areas. For example, for AGEC-A and AGEC-B, a single course cannot be used to satisfy both [HU] and [SB], but it could be used to meet [HU] and [C], [G] and/or [H].
- Awareness Areas and MCCCD's Additional Requirements may also be shared with other AGEC Requirements. Optimizing credits in this way is often recommended because some programs and universities limit transferable credits at 64.

Transfer Credit from Institutions Outside of MCCCD

- Credits transferred from outside of MCCCD must be completed with a grade of "C" (2.0 on a 4.0 scale) or better. Transfer credit graded pass/fail or pass/no credit may be used to satisfy AGEC requirements if documentation collected by the community college indicates that this was the only grading option available and that the Pass grade ("P") is equivalent to a "C" or better.
- The AGEC (Arizona General Education Curriculum) designations of courses completed at other Arizona public colleges or universities will be applied as listed on AZTransfer's Course Equivalency Guide (CEG) at aztransfer.com/tools/ for the semester(s) in which the course(s) were completed. If a transcript evaluation determines there is no MCCCD direct equivalency to a course from another Arizona public college or university, applicability to AGEC and/or associate degree requirements will be based on the source institution's AGEC designation for the semester in which the course was completed.
- Courses from private, out-of-state, and/or online institutions (i.e., outside of the Arizona Transfer System composed of Arizona's public community colleges, tribal colleges and universities) will be applied toward AGEC and/or associate degree requirements based on the courses' evaluated MCCCD equivalence. If courses are not directly equivalent, the credit may be articulated as a departmental elective, and if deemed appropriate, may have a general education designation applied to the course.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. A deficiency in an AGEC category due to quarter-hour or other credit system application must be recovered by additional credits to a total of 35 AGEC credits overall (or 32 credits overall if a student transfers in a single course from an Arizona public university that fulfills the First Year Composition requirement).

- Credit awarded at a Maricopa Community College through prior learning assessment in a non-traditional setting is transferable to other colleges in the MCCCD district but is not necessarily transferable to other colleges and universities outside of the MCCCD system. No more than 20 such assessed semester credit hours may be applied toward AGEC

Completion and Transfer

- Completion of the AGEC with a minimum grade point average of 2.0 for Arizona residents and 2.50 for non-residents (on a 4.0 scale) meets Arizona public university general admission requirements. It does not ensure admission to specific university majors or programs with selective admission processes and/or limited enrollment.
- Students planning to transfer to another college or university are urged to refer to university requirements and academic advisors from both institutions to be certain that all their selected coursework is applicable to the requirements of their intended transfer degree. For some majors, the statewide Common Course matrix, AZTransfer Pathway Guides and/or University Transfer Guides posted on the AZTransfer website on aztransfer.com/tools/can also provide some guidance. For appropriate course selection, students should consult with an academic advisor.

AGEC Requirements

Descriptions and definitions of the requirements for each of the three AGECs follow. The following website identifies the courses that apply to the different requirements within each AGEC for a given academic year: AGEC matrix. AGEC designations are subject to change. It is important to verify a course's AGEC value in the semester it is taken. For convenience, this information is provided for the current and upcoming semester in the "Find a Class" tool on maricopa.edu and on each MCCCD college's website as well as in the AGEC matrix provided by AZTransfer at aztransfer.com/tools/.

Note that for students pursuing an associate degree with a specific emphasis (for example: Associate in Arts, Emphasis in History; Associate in Arts, Fine Arts, Emphasis in Theatre; Associate in Science, Emphasis in Physics), the AGEC course requirements are usually more prescriptive. Students pursuing a major-specific pathway should consult the Program (Degree) Search at curriculum.maricopa.edu (click on Current Programs) for specific degree and AGEC requirements. Consultation with an academic advisor about course selection is always recommended.

Arizona General Education Curriculum – Arts (AGEC-A)

Credits: 35 (min)*

The AGEC-A requires a minimum of 35 credits (32 if [FYC] is met by single transfer course)*; courses applied to meet AGEC-A requirements vary by emphasis. Refer to the program (Degree) Search at curriculum.maricopa.edu (click on Current Programs) for specific course requirements. The Required Courses and/or Restricted Electives for some areas of Emphasis may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.

	Credits
A. First-Year Composition [FYC]	**6***
ENG101 OR ENG107	(3)*
AND ENG102 OR ENG108	(3)*
B. Literacy and Critical Inquiry [L]	**3**
C. Mathematical Applications [MA]	**3-6**
Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or pre-calculus (MAT187, MAT188) or higher [MA]-approved general education course.	
The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require high-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.	
D. Computer/Statistics/Quantitative Applications [CS]	**3**
E. Humanities, Arts and Design [HU]	**6**
Students are encouraged to choose course work from more than one discipline.	
F. Social-Behavioral Sciences [SB]	**6**
G. Natural Sciences [SQ]SG]	**8**
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four credits each. Credits for lecture and lab components may be combined or each may carry separate credits. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.	
H. Awareness Areas	**0-6**
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for current course values). Credits for such shared courses may only be counted once.	
1. Cultural Diversity in the United States [C]	(0-3)
2. Global Awareness [G] OR Historical Awareness [H]	(0-3)

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Arizona General Education Curriculum - Business (AGEC-B)

Credits: 35 (min)*

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)*, The Required Courses and/or Restricted Electives for corresponding Associate's degree may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree.

A. First-Year Composition [FYC] **6***
   - ENG101 OR ENG107 ..... (3)*
   - AND ENG102 OR ENG108 ..... (3)*

B. Literacy and Critical Inquiry [L] **3**

C. Mathematical Applications [MA] **3-5**
   - MAT212 Brief Calculus OR ..... (3)
   - MAT213 Brief Calculus OR ..... (4)
   - Higher [MA] designated course ..... (3-5)

   The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.

D. Computer/Statistics/Quantitative Applications [CS] **3**
   - CIS105 Survey of Computer Information Systems

E. Humanities, Arts and Design [HU] **6**
   - Students are encouraged to choose course work from more than one discipline.

F. Social-Behavioral Sciences [SB] **6**
   - ECN211 Macroeconomics AND ECN212 Microeconomics

G. Natural Sciences [SQ]SG] **8**
   - The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.

H. Awareness Areas **0-6**
   - The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for current course values). Credits for such shared courses may only be counted once.
   1. Cultural Diversity in the United States [C] ..... (0-3)
   2. Global Awareness [G] OR Historical Awareness [H] ..... (0-3)

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Arizona General Education Curriculum - Science (AGEC-S)

Credits: 36 (min)*

The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course)*; courses applied to meet AGEC-S requirements vary by emphasis. Refer to the program (Degree) Search at curriculum.maricopa.edu (click on Current Programs) for specific course requirements. The Required Courses and/or Restricted Electives for some areas of Emphasis may also have AGEC designations including one or more of the Awareness Areas ([C], [G] and/or [H]). A single course may meet more than one requirement but its credits are only counted once toward the total for the degree.

Some courses have been approved for more than one AGEC designation (see AGEC matrix). For the AGEC-S only, a single course with an [L] designation may be used to satisfy a second AGEC requirement (as well as any approved Awareness Areas). Only courses with [L] designations may be shared in this way.

A. First-Year Composition [FYC] **6***
   ENG101 OR ENG107 ..... (3)*
   AND ENG102 OR ENG108 ..... (3)*

B. Literacy and Critical Inquiry [L] **0-3****
   Students pursuing AGEC-S and/or AS degree are strongly encouraged to choose an [L] course that also has [HU] or [SB] designation or to use CRE101 or COM225 from the Maricopa Additional Requirements Area to satisfy the [L] requirement. The [L] course selected may also have been approved to satisfy one or more Awareness Areas ([C], [G], [H]). Thus, a single [L] course could potentially meet another AGEC requirement as well as one or more Awareness areas.

C. Mathematical Applications [MA] **4-5**
   Requires the first semester of calculus courses designed for scientists and engineers (MAT220 or MAT221) or any other [MA] designated course for which Calculus I is a prerequisite.

   The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.

D. Humanities, Arts and Design [HU] **6**
   A single course approved for both [L] and [HU] designations may be used to satisfy both requirements. This policy is unique to AGEC-S and to [L] courses. A course approved for both [HU] and [SB] can be counted for one or the other designation, not both. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.
   Physical Geology: Dynamic Earth Lab

E. Social-Behavioral Sciences [SB] **6**
   A single course approved for both [L] and [SB] designations may be used to satisfy both requirements. This policy is unique to AGEC-S and to [L] courses. A course approved for both [SB] and [HU] can be counted for one or the other designation, not both. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.

F. Natural Sciences [SQ]SG] **8-10**
   Students must complete eight (8) credits of General Chemistry, University Physics, General Biology for Majors, or Physical and Historical Geology. Consult specific requirements of university transfer major or associate degree with corresponding emphasis. for guidance.
      [(CHM150 or CHM151) & CHM151LL] or
      CHM150AA or CHM151AA General Chemistry I
      AND
      [CHM152 & CHM152LL] or CHM152AA General Chemistry II

OR

PHY121 University Physics I : Mechanics
AND
PHY131 University Physics II: Electricity and Magnetism
OR

BIO181 or BIO181XT General Biology (Majors) I
AND
BIO182 or BIO182XT General Biology (Majors) II
OR

GLG101IN Physical Geology: Dynamic Earth or
GLG101 Physical Geology: Dynamic Earth Lecture and
GLG103 Physical Geology: Dynamic Earth Lab
AND
GLG102IN Historical Geology: Primordial to Present or
GLG102 Historical Geology: Primordial to Present Lecture and
GLG104 Historical Geology: Primordial to Present Lab

G. Subject Options – Math/Science **6-10**

Students should refer to transfer resources, including academic advisement, transfer guides and/or requirements for associate degree with corresponding area of emphasis, to select six (6)-ten (10) additional math and/or science credits that meet requirements for selected major.

This Math/Science requirement can be met by selecting Mathematics course(s) [MAT] that require Calculus I as a prerequisite and/or Computer Science course(s) [CSC] and/or additional Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)

H. Awareness Areas **0-6**

The same courses may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements (see AGEC matrix for current course values).

1. Cultural Diversity in the United States [C] .....(0-3)
2. Global Awareness [G] OR Historical Awareness [H].....(0-3)

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**0 only is shared with [HU] or [SB]

Description of AGEC Designations

First-Year Composition (FYC)
First-Year Composition courses emphasize skills necessary for college-level expository writing, including correct grammar and punctuation, logical organization of ideas, and identification of supporting documentation.

Literacy and Critical Inquiry [L]
In the [L] course, students typically at the sophomore level, express their findings in writing or speech. This course includes a series of graded written or spoken formal assignments.

Literacy is defined broadly as communicative competence in written and oral discourse; critical inquiry is defined as the gathering, interpreting, and evaluating of evidence. Building on the proficiency attained in traditional First-Year Composition courses, the Literacy and Critical Inquiry [L] requirement sustains and extends students' ability to thoughtfully use and critically analyze written and/or spoken language.

Mathematical Applications [MA]
The Mathematical Studies requirement is intended to ensure that students have requisite skill in mathematics appropriate for their discipline and can apply mathematical analysis in their chosen fields.

Computer/Statistics/Quantitative Applications [CS]
AGEC-A and AGEC-B require a course that emphasizes the use of statistics, other mathematical methods, computer programming languages and/or software in the interpretation of data and in describing and analyzing quantitative relationships.

Humanities, Arts and Design [HU]
The study of the humanities and the disciplines of art and design deepen awareness of the complexities of the human condition and its diverse histories and cultures. Courses in the humanities are devoted to the production of human thought and imagination, particularly in philosophical, historical, religious and artistic traditions. Courses with an emphasis in fine arts and design are devoted to the study of aesthetic experiences and the processes of artistic creation. They may also feature a design emphasis in which material culture is studied as a product of human thought and imagination.

Social-Behavioral Sciences [SB]
Social-Behavioral Sciences provide scientific methods of inquiry and empirical knowledge about human behavior, both within society and within individuals. This area of emphasis may include study of such disciplines as anthropology, economics, history, political science, psychology, or sociology. The courses in this area address the challenge of understanding the diverse natures of individuals and cultural groups who live together in a complex and evolving world.

Natural Sciences [SQ/SG]
In addition to an understanding of basic scientific principles and concepts, courses in the Natural Sciences are designed to help students appreciate, from firsthand laboratory and/or field research experience, the nature of science as a process that embraces curiosity, inquiry, testing, and communication to better understand natural phenomena. At least one of the two natural science courses must include an introduction to the fundamental behavior of matter and energy in physical or biological systems.

AWARENESS AREAS
Students must satisfy two Awareness areas: Cultural Diversity in the U.S. and either Global Awareness or Historical Awareness. Courses can satisfy other AGEC requirements and one or two Awareness areas simultaneously. Therefore, no additional semester credits are required to satisfy the two Awareness areas provided courses selected are approved for those designations (see AGEC matrix).

Cultural Diversity in the United States [C]
The contemporary "culture" of the United States involves the complex interplay of many different cultures that exist side by side in various states of harmony and conflict. U.S. history involves the experiences of European immigrants and their descendants, American Indians, Hispanic Americans, African Americans and Asian Americans-all of whom played significant roles in the development of contemporary culture and together shape the future of the United States. At the same time, the recognition that gender, class, and religious differences cut across all distinctions of race and ethnicity offers an even richer variety of perspectives from which to view one. Awareness of cultural diversity and its multiple sources can illuminate the collective past, present, and future and can help to foster greater mutual understanding and respect.

The objective of the Cultural Diversity area requirement is to promote awareness of and appreciation for cultural diversity within the contemporary United States. This is accomplished through the study of the cultural, social, or scientific contributions of women and minority groups, examination of their experiences in the United States, or exploration of successful or unsuccessful interactions between and among cultural groups.

Global Awareness [G]
Human organizations and relationships have evolved from being family and village centered to the modern global interdependence that is apparent in many disciplines--for example, contemporary art, business, engineering, music, and the natural and social sciences. Many serious local and national problems are world issues that require solutions which exhibit mutuality and reciprocity. These problems occur in a wide variety of activities, such as food supply, ecology, health care delivery, language planning, information exchange, economic and social developments, law, technology transfer, and even philosophy and the arts. The Global Awareness Area recognizes the need for an understanding of the values, elements, and social processes of cultures other than the culture of the United States. The Global Awareness Area includes courses that recognize the nature of other contemporary cultures and the relationship of the American cultural system to generic human goals and welfare.

Courses that satisfy the global awareness option in the requirements are of one or more of the following types:

1. Area studies that are concerned with an examination of culture-specific elements of a region of the world
2. The study of a non-English language
3. Studies of international relationships, particularly those in which cultural change is facilitated by such factors as social and economic development, education, and the transfer of technology
4. Studies of cultural interrelationships of global scope such as the global interdependence produced by problems of world ecology.

Historical Awareness [H]
The Historical Awareness Area option in the requirements aims to develop a knowledge of the past that can be useful in shaping the present and future. Because historical forces and traditions have created modern life and lie just beneath its surface, historical awareness is an aid in the analysis of present-day problems. Also, because the historical past is a source of social and national identity, historical study can produce intercultural understanding by tracing cultural differences to their origins. Even the remote past may have instructive analogies for the present.

The Historical Awareness Area consists of courses that are historical in method and content. In this area, the term "history" designates a sequence of past events or a narrative whose intent or effect is to represent such a sequence.

The requirement presumes that these are human events and that history includes all that has been felt, thought, imagined, said, and done by human beings. History is present in the languages, art, music, literature, philosophy, religion, natural sciences, as well as in the social science traditionally called history

Academic Policies

Academic Certificate (AC)

Maricopa County Community College District (MCCCD)
2025-2026 Academic Certificate (AC)
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AC_0.pdf

Purpose of the Academic Certificate
The Maricopa County Community College District Academic Certificate (AC) is a defined and coherent program of study that is recommended for students who wish to gain additional expertise in a specific area of emphasis in an academic discipline. While this program of study can result in proficiency in the specified skills and competencies, as well as mastery of a body of knowledge, it is not designed to prepare someone for employment in a specific occupation. The coursework for an Academic Certificate may be from a variety of disciplines or it can be discipline specific. There is no required general studies component to an Academic Certificate; however, the program may include some courses that have specific general education (AGEC) designations such as Humanities, Arts and Design [HU], Social-Behavioral Sciences [SB], Literacy and Critical Inquiry [L], or Cultural Awareness [C]. (See AGEC matrix for current course values.)

Academic Policies that Govern the Academic Certificate:

- Although the program of study for an Academic Certificate (AC) does not have a mandated minimum number of credit hours, most ACs require approximately 12-39 credit hours in courses numbered 100 and above; students must have earned a minimum of 6 credits toward the certificate at the institution awarding the certificate. For certificates with less than 6 credit hours, all credits must be completed at the college granting the award.
- Students must earn a grade of C or better in each course in the program.
- Follows the graduation policies listed in the college's general catalog for the appropriate catalog year.
- Any course cross-referenced under another prefix(es) (for example ENH291/EDU291-Children's Literature) covers identical content and its credits can only be counted once toward certificate requirements.
- Although ACs may include a subset of coursework required in particular transfer degrees, the intent of an AC is not to align with any specific university major. There is no presumption of block transfer to another college or university.
- May have admission criteria established by the college if and when appropriate.
- Generally offered at a limited number of colleges. For a listing of all ACs available in the district and their affiliated college(s) see the CCTA web site at curriculum.maricopa.edu

Associate in Applied Science (AAS) Degree and General Education Requirements

Maricopa County Community College District (MCCCD)
2025-2026 Associate In Applied Science (AAS) Degree and General Education Requirements
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AAS.pdf

Description
The Associate in Applied Science (AAS) degree requires at least 60 credits in its program of study. The exact number of credits for a specific degree is identified as part of the presentation of its requirements at curriculum.maricopa.edu click on Current Programs or search in the offering college(s)' catalog.

Purpose of the Degree
The Maricopa County Community College District Associate in Applied Science (AAS) degree is recommended for students who wish to gain a depth of technical expertise in a particular workforce-related area of study. The AAS degree options vary at the different MCCCD colleges and can be searched alphabetically (click on Current Programs) or by field of interest. Requirements for each degree can be found on the linked web pages and in the corresponding college(s)'s catalog.

Academic Policies that Govern the AAS degree:

- Degree requires 60 or more credits numbered 100 or above and includes credits or the equivalent in the General Education Core areas and credits in the Distribution areas. AAS degree requirements follow with the use of a diagonal character or comma (/ or ,) between course numbers to signify options. An asterisk (*) following the course number defines requirements with an effective begin term of spring; * All courses must be completed with a grade of C or higher; any additional requirements such as grades of B or higher or minimum grade point average requirements are listed on individual degrees and certificates
- The graduation policies within the general catalog must be satisfied. (see General Graduation Requirements Administrative Regulation 2.3.9). First Year Experience is required (FYE 101 or FYE 103).
- Some courses also have equivalent combinations of modular variants; all options are listed and completion of either the course or its modular equivalents will satisfy the AAS requirements.
- Requires completion of General Education courses as indicated in the General Education Requirements for the Associate in Applied Science degree from the Maricopa County Community College District, or completion of a curriculum as stated in the catalog.
- Industry-recognized credentials can be counted as general electives.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. The recovery of a deficiency in a requirement (Prerequisites, Required Courses, Restricted Electives, or General Education) category due to a quarter-hour or other credit system application will be determined by the college.
- Any course that is cross referenced with that of another discipline/subject (for example EDU/ENH291, Children's Literature) covers identical contents. A course under either subject (for example, EDU291 or ENH291) will count only once toward degree requirements.

AAS GENERAL EDUCATION CORE
(12-15 credits)*

Demonstrate college-level skills in the following areas:

First-Year Composition (6 credits)*
ENG English [101/107] & [102/108/111]

Oral Communication (3 credits)
COM Communication 100/100AA & 100AB & 100AC / 110 / 110AA & 110AB &110AC / 225 / 230

Critical Reading (3 credits)
CRE Critical Reading 101 or Equivalent as indicated by assessment

Mathematics (3 credits)
MAT Mathematics 112, 114, 115, 120, 121, 122, 126, 140, 141, 142, 145, 146, 150,150&182, 151, MAT151&182, 152, 152&182, 155, 155&182, 156, 156&182, 172, 187, 188, 206, 212, 213, 217, 218, 220, 221, 225, 227, 230, 231, 240, 241, 256, 257, 276, 277, equivalent course/Satisfactory completion of a higher-level mathematics course

AAS GENERAL EDUCATION DISTRIBUTION AREAS
(9-10 credits)

Humanities, Arts and Design (2-3 credits)
AFR African American Studies 203
AHU Arabic Humanities 245
AIS American Indian Studies 213
AJS Administration of Justice Studies 123
ARH Art Humanities Any ARH Course(s)
ART Art 131
ASB Anthropology 211 / 214 / 220 / 222 / 223 / 253
AVC Art and Visual Communication 150
CCS Chicana and Chicano Studies 101
COM Communication 150, 241
CON Construction 101
DAH Dance Humanities 100 / 201 / 250 / 255
ECE Engineering Science 150
EDU Education 230 / 291 / 292 / 294
EED Early Education 225
ENG English 200 / 213 / 218
ENH English Humanities Any ENH Course(s)
FMT Film, Media, and Theatre 107
FRE French 265
GST Game Studies 202
HCR Health Care Related 210
HIS History 101 / 102 / 103 / 108 / 110 / 111 / 113 / 114 / 203 / 212 / 251 / 252
HON Honors 190
HUM Humanities Any HUM course(s) (except 120, 225)
INT Interior Design 115 / 120
JPH Japanese Humanities 245
LAT Latin 201 / 202
MHL Music: History/Literature 140 / 143 / 145 / 146 / 153 / 155 / 194 / 204 / 241 / 242 / 295
PHI Philosophy Any PHI Course(s)
QST Queer Studies 200, 210
REL Religious Studies Any REL Course(s)
SLC Studies in Language & Culture 201 / 202
SPA Spanish 241 / 242 / 265 / 266
SPH Spanish Humanities 241, 245
SSH Sustainability/Social Sciences and Humanities 111
STO Storytelling 292 / 294, 295
SWU Social Work 183
TEC Textiles and Clothing 105, 125
THE Theatre 111 / 220
THF Theatre and Film 205 / 206 / 210

THP Theatre Performance/Production 217, 241
WST Women's Studies 209 / 284 / 285 / 290

Social-Behavioral Sciences (3 credits)
AFR African American Studies 202 / 203 / 204
AIS American Indian Studies 101 / 140 / 141 / 160
AJS Administration of Justice Studies 101 / 200 / 225 / 258 / 270
ASB Anthropology 100 / 102 / 202 / 211 / 222 / 223 / 226 / 230 / 235 / 252
ASM Anthropology 104 / 275
BHS Behavioral Health Services Technology 150, 155, 175, 210
CAP Counseling and Applied Psychology 120
CCS Chicana and Chicano Studies 202
CFS Child/Family Studies 112 / 157 / 159 / 176 / 205 / 235 / 259
COM Communications 100 / 100AA&100AB&100AC / 110 / 110AA&110AB & 110AC / 163 / 230 / 250 / 263
CPD Counseling and Personal Development 102AH, 180
ECH Early Childhood Education 176
ECN Economics Any ECN course(s)
EDU Education 221 / 222
EED Early Education 205 / 222
EMT Emergency Medical Technology 258
ENG English 213
FSC Fire Science Technology 258
GCU Cultural Geography 102 / 113 / 121WG / 141 / 221
HES Health Science 100, 120
HIS History Any HIS course(s) (except 111, 170, 173, 251, 252)
HON Honors 201
HUM Humanities 235
IBS International Business 109
IFS Information Studies 201, 210, 213
MCO Mass Communications 120
MGT Management 229 / 230
PAD Public Administration 200
POS Political Science Any POS course(s)
PSY Psychology 101 / 123 / 132 / 156 / 157 / 215 / 218 / 225 / 235 / 240 / 241 / 243 / 250 / 260 / 262 / 266 / 277 / 280 / 292
QST Queer Studies 200, 210
REC Recreation 120
SBU Society and Business 200
SLC Studies in Language & Culture 201
SOC Sociology Any SOC course(s) (except 143, 245, 253, 265)
SSH Sustainability/Social Sciences and Humanities 111
SUS Sustainability/Natural Sciences 110
SWU Social Work 171 / 182 / 250 / 258 / 295
TEC Textiles and Clothing 105
WST Women's Studies 100 / 161
YAQ Yaqui Indian History and Culture 100

Natural Sciences (4 credits)
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course. The lecture and corresponding laboratory course(s) may carry separate credit. Students should consult with an advisor for appropriate course selection.

AGS Agricultural Science 164, 260
ASB Anthropology (Soc/Behv. Science) 231
ASM Anthropology (Science/Math) 104 / 265 / 275
AST Astronomy 101 / 106 / 111 / 112
BIO Biology 100 / 101 / 102 / 105 / 107 / 108 / 109 / 111 / 116 / 145 / 149AN / 156 / 156XT / 160 / 181 / 181XT / 182 / 182XT / 201 / 201XT / 202 / 205
CHM Chemistry 107&107LL / 130&130LL / 130AA, 140AA, 150AA / 150&151LL / 151AA / 151&151LL / 152AA / 152&152LL / 230AA / 230&230LL
CON Construction 106
ENV Environmental Sciences 101
FON Food and Nutrition 241&241LL
FOR Forensic Science 105 / 106
GLG Geology Any combination of GLG course(s) meeting the minimums described above
GPH Physical Geography 111&112 / 113 / 211 / 212&214 / 213&215
PHS Physical Science 110 / 115 / 120
PHY Physics 101 / 111 / 112 / 121 / 131
PSY Psychology 275 / 290AB / 290AC

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

Associate in Arts (AA) Degree

Maricopa County Community College District (MCCCD)
2025-2026 Associate in Arts (AA) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AA.pdf

Description
The Maricopa County Community College District Associate in Arts (AA) degree requires a minimum of 60 semester credits for the program of study; minimum total credits vary by specific emphasis (for example, Associate in Arts, Emphasis in Psychology). Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for credit minimums. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree.

The AA degree is governed by the MCCCD General Academic Policies for Degrees Designed for University Transfer. The Associate in Arts degree includes the following components:

I. Program Prerequisites (as specified by emphasis area)
II. II. Required Courses
III. Restricted Electives (as specified by area of emphasis)
IV. Arizona General Education Curriculum for Arts (AGEC-A)
V. MCCCD Additional Requirements (Oral Communication and Critical Reading)
VI. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree
The Associate in Arts (AA) degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Liberal Arts or programs of study other than business or science. Generally, the degree will transfer as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements.

In most cases, courses used to satisfy the MCCCD Associate in Arts (AA) will apply to general university graduation requirements of the majors that align with the AA degree; however, students need to be aware of any specific requirements of their intended major at the university to be sure they select courses that will meet them. Information regarding the articulation of the AA with majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools

Degree Requirements
The requirements for the Associate in Arts (AA) follow. The AA degree requires at least 60 credits; however, minimum credits for the AA vary for a specific area of emphasis. Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis and credit minimums; review course sequence at maricopa.edu/degrees-certificates#programs. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-A and the AGEC matrix. Industry-recognized credentials can be counted as general electives.

Requirements ***Credits***

I. **Program Prerequisites.....Number varies**
Program prerequisites for the AA degree vary by specific emphasis, and are neither required for all emphases nor for the AA degree without a specific emphasis Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis and credit minimums.

II. **Required Courses .....Number varies**
Students must complete FYE 101 (1) or FYE 103 (3) (see General Graduation Requirements Administrative Regulation 2.3.9) and select the required courses for the specific AA degree emphasis. Refer to

curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums.

III. **Restricted Electives ..... Number varies**

Restricted electives for the AA degree vary by specific emphasis and are not required for the general AA degree without a specific emphasis. Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums.

IV. **Arizona General Education Curriculum--Arts (AGEC-A) ..... up to 44**

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)*. Courses applied to meet AGEC-A requirements vary by emphasis. Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis and credit minimums.

Any prerequisite/required/restricted elective courses that also have one or more AGEC designation(s) may be applied toward both requirements. Credits for such shared courses are only counted once toward the total credits for the degree.

AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken. Some of the courses have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

A. First-Year Composition [FYC] **6***
   ENG101 OR ENG107 ..... (3)*
   AND ENG102 OR ENG108 ..... (3)*
B. Literacy and Critical Inquiry [L] **3**
C. Mathematical Applications [MA] **3-6**
   Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or precalculus (MAT187, MAT188) or higher [MA]-approved general education course.

   The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.
D. Computer/Statistics/Quantitative Applications [CS] **3**
E. Humanities, Arts and Design [HU] **6**
   Students are encouraged to choose course work from more than one discipline.
F. Social-Behavioral Sciences [SB] **6**
   Students are encouraged to choose course work from more than one discipline.
G. Natural Sciences [SQ/SG] **8**
   The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits each. Credits for lecture and lab components may be combined or each may carry separate credits. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.
H. Awareness Areas **0-6**
   The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix for current course values). Credits for such shared courses may only be counted once.
   1. Cultural Diversity in the United States [C] ..... (0-3)
   2. Global Awareness [G] OR Historical Awareness [H] ..... (0-3)

      May be met by [HU] and/or [SB] course depending on specific course(s) selected. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.) (0-3) (0-3)

V. **MCCCD Additional Requirements.....0-6**

As noted below**,** courses in this area may also be applied toward AGEC-A requirements.

A. Oral Communication ..... (0-3)
COM100 [SB] Introduction to Human Communication OR
COM110 [SB] Interpersonal Communication OR
COM225 [L] Public Speaking OR
COM230 [SB] Small Group Communication (3 credits)

B. Critical Reading ..... (0-3)
CRE101 [L] Critical Reading OR equivalent as indicated by assessment

VI. **General Electives.....**

Select courses 100-level or higher if needed to complete a minimum of 60 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing to align with various "Emphasis Areas" in one of nine different "Fields of Interest." See maricopa.edu/degrees-certificates for links to these transfer pathways.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer and major guides are accessible on the following websites: aztransfer.com/tools, maricopa.edu/degrees-certificates/university-transfer/partners as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor

TOTAL..... 60-64**

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information

Associate in Arts, Fine Arts (AAFA) Degree

Maricopa County Community College District (MCCCD) 2025-2026
Associate in Arts, Fine Arts (AAFA) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AAFA.pdf

Description
The Maricopa County Community College District Associate in Arts, Fine Arts (AAFA) degree requires a minimum of 60 semester credits for the program of study; however, minimum total credits for the AAFA vary by specific emphasis. Students must select one of the emphasis areas: Art, Dance, Music, Musical Theatre, or Theatre. If an emphasis area is not selected, this program is not eligible for Title IV Federal Financial Aid. Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums for each emphasis. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The AAFA degree is governed by the MCCCD General Academic Policies for associate degrees designed for university transfer.

The Associate in Arts, Fine Arts degree includes the following components:

I. Program Prerequisites (as specified by emphasis area)
II. Required Courses (as specified by area of emphasis)
III. Restricted Electives (as specified by area of emphasis)
IV. Arizona General Education Curriculum for Arts (AGEC-A)
V. V. MCCCD Additional Requirements (Oral Communication and Critical Reading)
VI. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree
The Associate in Arts, Fine Arts (AAFA) degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors in the Fine Arts. The degree is designed to prepare students to meet selective admission criteria for programs such as the Bachelor of Fine Arts; program admission may have an additional emphasis-specific portfolio or performance requirements.

In most cases, courses used to satisfy the MCCCD Associate in Arts, Fine Arts (AAFA) will apply to general university graduation requirements of the majors that align with AAFA degree; however, students need to pay attention to any specific requirements of their intended focus at the university to be sure they select courses that will meet them. Information regarding the articulation of the AAFA degree with majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools

Degree Requirements
The requirements for the Associate in Arts, Fine Arts (AAFA) follow. The Associate in Arts, Fine Arts degree requires at least 60 credits; however, minimum total credits for the AAFA vary by specific emphasis (Art, Dance, Music, Musical Theatre, or Theatre). Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums; review course sequence at maricopa.edu/degrees-certificates. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-A and the AGEC matrix. Courses available for both Areas during a current or upcoming semester can also be found using the "Find a Class" tool on maricopa.edu and on each MCCCD college's website. Industry-recognized credentials can be counted as general electives.

I. **Required Courses .....Number varies**
Students must complete FYE101 or FYE103 (see General Graduation Requirements Administrative Regulation 2.3.9) and the required (major-specific) courses listed in the Associate in Arts Fine Arts degree Required Courses area for the specific emphasis (Art, Dance, Music, Musical Theatre, or Theatre).

Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums for each emphasis.

II. **Restricted Electives ..... Number varies**

Restricted electives for the Associate in Arts, Fine Arts degree vary by specific emphasis: (Art, Dance, Music, Musical Theatre, or Theatre). Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding area of emphasis for specific courses required and credit minimums for each emphasis.

III. **Arizona General Education Curriculum--Arts (AGEC-A).....**

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)*. However, depending on courses selected, it may take as many as 44 credits to satisfy all the General Education criteria. Any required/restricted elective courses that also have one or more AGEC designation(s) may be applied toward both requirements. Credits for such shared courses are only counted once toward the total credits for the degree.

AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken. Some of the courses may have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

A. First-Year Composition [FYC] **6***
   ENG101 OR ENG107 ..... (3)
   AND ENG102 OR ENG108 ..... (3)
B. Literacy and Critical Inquiry [L] **3**
C. Mathematical Applications [MA] **3-6**
   Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or higher [MA]-approved general education course.

   The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.
D. Computer/Statistics/Quantitative Applications [CS] **3**
E. Humanities, Arts and Design [HU] **6**
F. Social-Behavioral Sciences [SB] **6**
   Students are encouraged to choose course work from more than one discipline.
G. Natural Sciences [SQ/SG] **8**
   The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four credits must be designated as SQ-Science Quantitative. Eight credits of SG-Science General will not satisfy this requirement.
H. Awareness Areas **0-6**
   The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix at https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec.woa/3/wa/agecMatrixReport?inst=0 01075 for current course values). Credits for such shared courses may only be counted once.
   1. Cultural Diversity in the United States [C] ..... (0-3)
   2. Global Awareness [G] OR Historical Awareness [H] ..... (0-3)

      May be met by [HU] and/or [SB] course(s) depending on specific courses selected. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.) up to 44 6* (3)* (3)* 3 3-6 3 6 6 8 0-6 (0-3) (0-3)

IV. **MCCCD Additional Requirements.....0-6**

As noted below, courses in this area may also be applied toward AGEC-A requirements.

A. Oral Communication ..... (0-3)
Refer to emphasis area (Art, Dance, Music, Musical Theatre, or Theatre) for specific COM course to select from the following list: COM100 [SB] Introduction to Human Communication OR COM110 [SB] Interpersonal Communication OR COM225 [L] Public Speaking OR COM230 [SB] Small Group Communication (3 credits) OR COM100AA & COM100AB & COM100AC [SB] (3 credits) OR COM110AA & COM110AB & COM110AC [SB] (3 credits)

B. Critical Reading ..... (0-3)
CRE101 [L] Critical Reading OR equivalent as indicated by assessment (0-3)

V. **General Electives.....0-25**

Select courses 100-level or higher if needed to complete a minimum of 60 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing to align with the Fine Arts Emphasis Areas. See maricopa.edu/degrees-certificates for links to these transfer pathways.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer and major guides are accessible on the following websites: aztransfer.com/tools, curriculum.maricopa.edu, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor. 0-25

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information

Associate in Arts, Elementary Education (AA-EE) Degree

Maricopa County Community College District (MCCCD) 2025-2026
Associate in Arts, Elementary Education (AAEE) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AAEE.pdf

Description
The Maricopa County Community College District Associate in Arts, Elementary Education (AAEE) degree requires a minimum of 60 semester credits for the program of study. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better in all courses are required to earn the degree. The AAEE degree is governed by the MCCCD General Academic Policies for Transfer Degrees. Refer to curriculum.maricopa.edu (click on Current Programs) to search for the corresponding 8101 AAEE. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The AA degree is governed by the MCCCD General Academic Policies for Degrees Designed for University Transfer.

The Associate in Arts, Elementary Education degree includes the following components:

I. Required Courses
II. Restricted Electives
III. Arizona General Education Curriculum for Arts (AGEC-A)
IV. MCCCD Additional Requirements (Oral Communication and Critical Reading)

Purpose of the Degree
The Associate in Arts, Elementary Education (AAEE) degree is designed for the student who plans to transfer to an Elementary Education, Early Childhood, Multicultural/Multilingual, or Special Education program at an Arizona public higher education institution and/or who plans to become a classroom instructional aide. Generally, the degree transfers as a block without loss of credit to Arizona's public universities, and in most cases, its required courses apply to graduation requirements for these Education majors. The AAEE is also embedded within the Bachelor of Arts, Elementary Education and Special Education (BAEE/SPED) offered by the Maricopa Community Colleges.

Degree Requirements
The requirements for the Associate in Arts in Elementary Education follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC and the AGEC matrix report at aztransmac2.asu.edu/cgi-bin/WebObjects/agec. Courses available for both Areas during a current or upcoming semester can also be found using the "Find a Class" tool on maricopa.edu and on each MCCCD college's website. Course sequence is available at maricopa.edu/degrees-certificates#programs.

Requirements		***Credits***
I.	**Required Courses**	**14-20**
	EDU221 Introduction to Education	(3)
	EDU222 Introduction to the Exceptional Learner	(3)
	EDU230 Cultural Diversity in Education	(3)
	FYE101 or FYE103 Introduction/Exploration To College, Career and Personal Success	(1-3)
	MAT256 Investigating Quantity: Number, Operations, and Numeration Systems	(4)
	MAT257 Investigating Geometry, Probability, and Statistics	(0-4)
II.	**Restricted Electives**	**8**

A total of eight (8) semester credits is required to satisfy the Arizona Professional Teacher Standards: three (3) credits in an additional Education (EDU) course and five (5) credits in Content Area Electives.

Courses must transfer to all public Arizona universities as elective credit, departmental elective, or equivalent to a university course as indicated in the Arizona Course Equivalency Guide

(https://aztransfer.com/tools/) in effect when the course is taken. Courses identified as non-transferable in the Arizona Course Equivalency Guide cannot be used to satisfy this requirement.

Select one (1) additional EDU course (other than EDU221, EDU222, EDU230 or EDU250 .. (3)
Recommended:
EDU110 Education in Film
EDU220 Introduction to Serving English Language Learners (ELL)
EDU236 Classroom Relationships
EDU/HUM/STO292 The Art of Storytelling

Choose any combination from the following list of courses and prefixes to total five (5) credits of additional coursework. Course(s) selected must be different from those used to fulfill a requirement of the AGEC-A and/or those used to fulfill Required Courses.

Content Area Electives: Select a total of five (5) credits from the following options ..... (5)
ARH+++ Any ARH Art Humanities course(s)
ART+++ Any ART Art course(s)
BPC+++ Any BPC Business-Personal Computers course(s)
CFS/ECH176 Child Development
CFS205 Human Development
CIS+++ Any CIS Computer Information Systems course(s)
ECN+++ Any ECN Economics course(s)
EDU+++ Any EDU Education course(s) (except EDU221, EDU222, EDU230, and EDU250)
EED215 Early Learning: Health, Safety, Nutrition and Fitness **OR**
CFS123 Health and Nutrition in Early Childhood Settings **AND**
CFS125 Safety in Early Childhood Settings

ENG+++ Any ENG English course(s)
ENH+++ Any ENH English Humanities course(s)
GCU+++ Any GCU Cultural Geography course(s)
GPH+++ Any GPH Physical Geography course(s)
HIS+++ Any HIS History course(s)
MAT+++ Any MAT Mathematics course(s) 140 or higher (except MAT256 and MAT257)
MHL+++ Any MHL Music: History/Literature course(s)
MTC+++ Any MTC Music: Theory/Composition course(s)
POS+++ Any POS Political Science course(s)
THE+++ Any THE Theatre course(s)
THF+++ Any THF Theatre and Film course(s)
THP+++ Any THP Theatre Performance/Production course(s)
Any Foreign Language course(s)
Any Natural Science course(s) 8 (3) (5)

III. **Arizona General Education Curriculum--Arts (AGEC-A).....35-44***

The AGEC-A requires a minimum of 35 credits (32 if FYC is met by single transfer course)*; AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken. Some of the courses have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

A. First-Year Composition [FYC] **6***
   ENG101 OR ENG107..... (3)*
   AND ENG102 OR ENG108..... (3)
B. Literacy and Critical Inquiry [L] - COM225 Public Speaking 3
C. Mathematical Applications [M] 3-6
   Requires a course in college mathematics (MAT140, MAT141, MAT142, MAT145, MAT146) or

college algebra (MAT150, MAT151, MAT152, MAT155, MAT156) or precalculus (MAT187, MAT188) or higher approved general education course in the Mathematical Applications [MA] area for which MAT15+ is a prerequisite. (Note that MAT182, MAT206, MAT256, MAT257 do NOT meet this requirement).

The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.

D. Computer/Statistics/Quantitative Applications [CS]..... 3
BPC110 Computer Usage and Applications **OR**
CIS105 Survey of Computer Information Systems **OR**
EDU/EED115 Digital Literacy for Teaching and Learning in Education
EDU/EED115 recommended.

E. Humanities, Arts and Design [HU] **6**
Note that some of these courses also have Awareness Areas designations and can be used to satisfy [G] and/or [H] requirement as well as [HU]. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

1) Select one of the following ARH, DAH, MHL or THE courses..... (3)
ARH100 Introduction to Art OR
ARH101 Prehistoric through Gothic Art OR
ARH102 Renaissance through Contemporary Art OR
DAH100 Introduction to Dance OR
DAH201 World Dance Studies OR
DAH250 Dance in Popular Culture OR
MHL140 Survey of Music History OR
MHL145 American Jazz and Popular Music OR
MHL146 Survey of Broadway Musicals OR
MHL153 Rock Music and Culture OR
THE111 Introduction to Theatre OR
THE220 Modern Drama

AND

2) Select one of the following EDU, ENH or HUM courses ..... (3)
EDU/ENH291 Children's Literature (Recommended) OR
ENH110 Introduction to Literature OR
ENH241 American Literature Before 1860 OR
ENH242 American Literature After 1860 OR
HUM250 Ideas and Values in the Humanities: Early Civilizations to the Renaissance OR
HUM251 Ideas and Values in the Humanities: Renaissance to the Contemporary World

F. Social-Behavioral Sciences [SB]..... **6**
Note that some of these courses also have Awareness Areas designations and can be used to satisfy [G] and/or [H] requirement as well as [SB]. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.)

1) Select one of the following US History/Government courses** ..... (3)
These courses satisfy the United States Constitution requirement for state teacher certification.
GCU/POS113 United States and Arizona Social Studies OR
HIS103 United States History to 1865 OR
POS110 American National Government

AND

2) Select one of the following CFS, ECH, GCU, ECN, HIS or PSY courses ..... (3)
CFS205 Human Development OR
CFS/ECH176 Child Development OR
ECN211 Macroeconomic Principles OR
ECN212 Microeconomic Principles OR
GCU121WG World Geography: People, Places, and Culture OR
HIS104 United States History 1865 to Present OR
PSY101 Introduction to Psychology (CFS/ECH176 recommended)

G. Natural Sciences [SQ/SG] **8**
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of four (4) credits each. At least four (4) credits must be designated as [SQ]. Eight (8) credits of [SG] will not satisfy this requirement.

1) Life Sciences: Select four (4) credits of SQ or SG in Biology (BIO) ..... (4)
AND

2) Physical Sciences or Earth/Space Sciences: Select four (4) credits of SQ or SG from one of the following prefixes: ..... (4)
AGS, ASM, AST, CHM, GPH, GLG, PHS, or PHY

Note: Students are advised to check with the university they plan to attend as specific requirements for lab sciences may vary.

H. Awareness Areas **0-3**

1) Cultural Diversity in the United States [C] ..... (0)
Met by EDU222 and EDU230 in Required Courses

2) Global Awareness [G] OR Historical Awareness [H] ..... (0-3)
May be met by [HU] and/or [SB] course(s) depending on specific courses selected. (AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.) (3) 8 (4) (4) 0-3 (0) (0-3)

IV. MCCCD Additional Requirements.....0-3

A. Oral Communication ..... (0)
Met by COM225 that is required to satisfy AGEC-A Literacy and Critical Inquiry [L]

B. Critical Reading..... (0-3)
CRE101 [L] Critical Reading OR equivalent as indicated by assessment

TOTAL..... 60-64**

*FYC may be met with fewer than 6 credits if a student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**State certification requirements include courses on the constitutions of the U.S. and Arizona. Taking GCU/POS113 for [SB] fulfills this requirement completely. Students who instead take HIS103 or POS110 for [SB] should consider taking POS221 as a Content Area Elective so they have completed study of both constitutions. POS220 meets state certification requirements for both constitutions but does not meet [SB].

***64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer pathways.

Associate in Business, General Requirements (ABUS-GR) Degree

Maricopa County Community College District (MCCCD) 2025-2026
Associate in Business, General Requirements (ABUS-GR) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20ABUS-GR.pdf

Description
The Maricopa County Community College District Associate in Business General Requirements (ABUS-GR) degree requires a minimum of 62 semester credits for the program of study. A minimum grade point average of 2.0 (4.0 scale) and grades of C or better are required in all courses to earn the degree. The Associate in Business-General Requirements degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

This degree provides the first two years of a four-year curriculum for students who wish to transfer to a university and pursue a bachelor's degree in business. For a comprehensive list of bachelor's degrees at Arizona's public universities, refer to the AZTransfer Business Matrix. With a bachelor's degree, students may pursue a number of careers, including but not limited to accountancy, business administration, business data analytics, economics, entrepreneurship, finance, marketing, management, retail management, and supply chain management.

The Associate in Business-General Requirements degree includes the following components:

I. Required Courses
II. Restricted Electives
III. Arizona General Education Curriculum for Business (AGEC-B)
IV. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree
The Associate in Business General Requirements (ABUS-GR) degree is designed for students who plan to transfer to four-year colleges and universities. In general, the components of this degree meet requirements for the various business majors (except Computer Information Systems) at Arizona's public universities. Computer Information Systems majors should follow the Associate in Business Special Requirements (ABUS-SR) pathway instead. Generally, the ABUS-GR degree transfers as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements. It does not, however, guarantee acceptance into particular university majors/programs with a limited number of students. Students should consult with their transfer institution for any specific admission requirements (e.g., GPA, letters of reference, work experience)

Special Academic Policies that Govern the ABUS-GR Degree
- The ABUS-GR does not include any MCCCD Special Requirements for Oral Communication and/or Critical Reading like the other associate degrees. (However, some university programs have a speech requirement; consult your academic advisor or transfer guide to verify the specifics for your program.)

Degree Requirements
The courses required for the Associate in Business General Requirements follow. The following websites identify the courses that apply to the different General Education Areas: AGEC-B and the AGEC Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the "Find A Class" tool on maricopa.edu or on each MCCCD college's website.

Requirements ***Credits***

I. **Required Courses 22-28**
Accounting..... (6-9)
ACC111 Accounting Principles **AND**
ACC230 Uses of Accounting Information I **AND**
ACC240 Uses of Accounting Information II

OR
ACC211 Financial Accounting **AND**
ACC212 Managerial Accounting
OR
ACC111 Accounting Principles I **AND**
ACC112 Accounting Principles II **AND**
ACC212 Managerial Accounting

Some of the following courses can be used to satisfy both this requirement and an AGEC-B requirement. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.

ECN211 [SB] Macroeconomic Principles ..... (3)
ECN212 [SB] Microeconomic Principles ..... (3)
FYE101 **OR** FYE103 Introduction To College, Career And Personal Success..... (1-3)
GBS205 Legal, Ethical, and Regulatory Issues in Business..... (3)
GBS221 Business Statistics ..... (3)
Quantitative Methods ..... (3-4)
GBS220 Quantitative Methods in Business **OR**
MAT217 or MAT218 Mathematical Analysis for Business

Note: Students planning to transfer to ASU's W.P. Carey School of Business BS program should take MAT217 or MAT218.

Students planning to transfer to ASU's W.P. Carey School of Business BA program may take GBS220, MAT217, or MAT218.

Students planning to transfer to the University of Arizona should take GBS220.

II. **Restricted Electives 0-6**
Complete six (6) credits from the following options. Some courses may be used to satisfy both Restricted Elective and Arizona General Education Curriculum (AGEC) requirements simultaneously. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.

CIS114DE Excel Spreadsheet ..... (3)
CIS133DA Internet/Web Development Level I..... (3)
CIS162AD C#: Level I..... (3)
GBS110 Human Relations in Business and Industry **OR**
MGT251 Human Relations in Business..... (3)
GBS151 Introduction to Business (Recommended) ..... (3)
GBS220 Quantitative Methods in Business ..... (3)
GBS233 Business Communication..... (3)
IBS101 Introduction to International Business..... (3)
MGT253 Owning and Operating a Small Business ..... (3)
MKT271 Principles of Marketing..... (3)
PAD100 21st Century Public Policy and Service..... (3)
REA179 Real Estate Principles I ..... (3)
REA180 Real Estate Principles II ..... (3)
REA201 Real Estate Principles I and II ..... (6)
SBU200 Society and Business..... (3)

III. **Arizona General Education Curriculum- Business (AGEC-B) 29-37***
The AGEC-B requires a minimum of 35 credits (32 if FYC is met by a single transfer course).* Any Required and Restricted elective course(s) that also have one or more AGEC designation(s) may be used to meet

AGEC-B requirements. Credits for such shared courses only count once toward the total for the degree.

Some courses may be met by Required Courses or Restricted electives. Some of these courses also have Awareness Areas designations and can be used to satisfy [C], [G] and/or [H] requirement(s) as well as other AGEC requirements, Required Course(s), or Restricted Elective(s). Courses may meet more than one requirement but are only counted once toward the total credits for the degree. AGEC designations are subject to change. See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for each course's value(s) in the semester it is taken.

A. First-Year Composition [FYC] 6*
   ENG101 OR ENG107 AND..... (3)*
   ENG102 OR ENG108..... (3)*
B. Literacy and Critical Inquiry [L] ..... (0-3)
   May Be Met By GBS 233 in the Restricted Electives Area.
C. Mathematical Applications [MA] ..... (3-5)
   MAT212 Brief Calculus OR
   MAT213 Brief Calculus OR
   Higher General Education Courses in the Mathematical Applications [MA] Area

   The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.
D. Computer/Statistics/Quantitative Applications [CS]..... 3
   CIS105 Survey of Computer Information Systems
E. Humanities, Arts and Design [HU] 6
   Students are encouraged to choose course work from more than one discipline.
F. Social-Behavioral Sciences [SB]..... 0
   Met by ECN211 AND ECN212 in Required Courses
G. Natural Sciences [SQ/SG] 8
   The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.
H. Awareness Areas..... 0-6
   The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for current course values). Credits for such shared courses may only be counted once.
   1. Cultural Diversity in the United States [C] ..... (0-3)
   2. Global Awareness [G] OR Historical Awareness [H] ..... (0-3)

Students transferring to ASU to major in business should complete courses from the following list (up to the 64 credit transfer maximum) to meet W.P. Carey School of Business requirements. If students do not take these prior to transfer, they may need to take additional credits to meet ASU graduation requirements:

- Any course that transfers to ASU in the SOC prefix and carries the [SB] designation
- Any course that transfers to ASU in the PSY prefix and carries the [SB] designation
- One of the following courses in Oral Communication (COM)
  COM100 Introduction to Human Communication (3) OR
  COM225 Public Speaking (3) OR
  COM230 Small Group Communication (3) OR

COM259 Communication in Business and Professions (3)

Note: COM requirements vary by business major. Check ASU's MyPath2ASU or major map for acceptable options.

IV. **General Electives.**

Select courses 100-level or higher if needed to complete a minimum of 62 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines. MCCCD has established recommended courses and sequencing for the various associate's degrees.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HIS ELC for a history elective), or general electives (GEN ELC) that are numbered 100 level or higher, and completed with a grade of "C" or better, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree.

Transfer advisement information is accessible on the following websites: aztransfer.com/tools, curriculum.maricopa.edu, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

TOTAL..... 62*

* *FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information.

Associate in Business, Special Requirements (ABUS-SR) Degree

Maricopa County Community College District (MCCCD) 2025-2026
Associate in Business, Special Requirements (ABUS-SR) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20ABUS-SR.pdf

Description
The Maricopa County Community College District Associate in Business, Special Requirements (ABUS-SR) degree requires a minimum of 62 semester credits for the program of study. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The Associate in Business-Special Requirements degree is governed by the MCCCD General Academic Policies for Transfer Degrees.

This degree provides the first two years of a four-year curriculum for students who wish to pursue Computer Information Systems majors at Arizona's public universities. With a bachelor's degree, students may pursue a number of careers, including but not limited to accountancy, business administration, business data analytics, computer information systems, economics, entrepreneurship, finance, marketing, management, retail management, and supply chain management.

The Associate in Business-Special Requirements degree includes the following components:

I. Required Courses
II. Arizona General Education Curriculum for Business (AGEC-B)
III. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree
The Associate in Business Special Requirements (ABUS-SR) degree is designed for students who plan to transfer to four-year colleges and universities. In general, the components of this degree meet requirements for Computer Information Systems majors at Arizona's public universities. Other Business majors should follow the Associate in Business General Requirements (ABUS-GR) pathway instead. Generally, the ABUS-SR degree transfers as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements. It does not, however, guarantee acceptance into particular university majors/programs with a limited number of students. Students should consult with their transfer institution for any specific admission requirements (e.g., GPA, letters of reference, work experience).

Special Academic Policies that Govern the ABUS-SR Degree
- The ABUS-SR does not include any MCCCD Special Requirements for Oral Communication and/or Critical Reading like the other associate degrees. (However, some university programs have a speech requirement; consult your academic advisor or transfer guide to verify the specifics for your program.)

Degree Requirements
The courses required for the Associate in Business Special Requirements follow. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-B and the AGEC Matrix. Courses available for both Areas during a current or upcoming semester can also be found using the Find A Class tool on maricopa.edu or on each MCCCD college's website.

Requirements ***Credits***

I. **Required Courses 28-34**
Accounting..... (6-9)
ACC111 Accounting Principles **AND**
ACC230 Uses of Accounting Information I **AND**
ACC240 Uses of Accounting Information II
OR

ACC211 Financial Accounting **AND**
ACC212 Managerial Accounting
OR
ACC111 Accounting Principles I **AND**
ACC112 Accounting Principles II **AND**
ACC212 Managerial Accounting

Some of the following courses can be used to satisfy both this requirement and an AGEC-B requirement. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.

ECN211 [SB] Macroeconomic Principles ..... (3)
ECN212 [SB] Microeconomic Principles ..... (3)
FYE101 OR FYE103 Introduction To College, Career And Personal Success ..... (1-3)
GBS205 Legal, Ethical, and Regulatory Issues in Business ..... (3)
GBS221 Business Statistics ..... (3)
CIS162AD C#: Level 1 ..... (3)
CIS250 Management of Information Systems ..... (3)
Quantitative Methods ..... (3-4)
GBS220 Quantitative Methods in Business OR
MAT217 or MAT218 Mathematical Analysis for Business

Note: Students planning to transfer to ASU's W.P. Carey School of Business BS program should take MAT217 or MAT218.

Students planning to transfer to ASU's W.P. Carey School of Business BA program may take GBS220, MAT217, or MAT218.

Students planning to transfer to the University of Arizona should take GBS220.

II. **Arizona General Education Curriculum- Business (AGEC-B) 29-37***

The AGEC-B requires a minimum of 35 credits (32 if FYC is met by single transfer course)* Any Required and Restricted elective course(s) that also have one or more AGEC designation(s) may be used to meet AGEC-B requirements. Credits for such shared courses only count once toward the total for the degree.

Some courses may be met by Required Courses or Restricted electives. Some of these courses also have Awareness Areas designations and can be used to satisfy [C], [G] and/or [H] requirement(s) as well as other AGEC requirements or Required Course(s). Courses may meet more than one requirement but are only counted once toward the total credits for the degree. AGEC designations are subject to change. See AGEC matrix for each course's value(s) in the semester it is taken.

A. First-Year Composition [FYC] 6*
   ENG101 OR ENG107 AND ..... (3)
   ENG102 OR ENG108 ..... (3)
B. Literacy and Critical Inquiry [L] 3
C. Mathematical Applications [MA] 3-5
   MAT212 Brief Calculus OR ..... (3)
   MAT213 Brief Calculus OR ..... (4)
   Higher General Education Courses in the Mathematical Applications [MA] Area

   The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.

D. Computer/Statistics/Quantitative Applications [CS]..... 3
CIS105 Survey of Computer Information Systems

E. Humanities, Arts and Design [HU] 6
Students are encouraged to choose course work from more than one discipline.

F. Social-Behavioral Sciences [SB]..... 0
Met by ECN211 AND ECN212 in Required Courses

G. Natural Sciences [SQ/SG] 8
The lecture courses selected for Natural Sciences must include or be accompanied by the corresponding laboratory courses for a total of four (4) credits each. Credits for lecture and lab components may be combined or each may carry separate credit. At least four (4) credits must be designated as SQ-Science Quantitative. Eight (8) credits of SG-Science General will not satisfy this requirement.

H. Awareness Areas 0-6
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix for current course values). Credits for such shared courses may only be counted once

1. Cultural Diversity in the United States [C] ..... (0-3)
2. Global Awareness [G] OR Historical Awareness [H] ..... (0-3)

Students transferring to ASU to major in business should complete courses from the following list (up to the 64 credit transfer maximum) to meet W.P. Carey School of Business requirements. If students do not take these prior to transfer, they may need to take additional credits to meet ASU graduation requirements:

- Any course that transfers to ASU in the SOC prefix and carries the [SB] designation
- Any course that transfers to ASU in the PSY prefix and carries the [SB] designation
- One of the following courses in Oral Communication (COM)
  COM100 Introduction to Human Communication (3) OR
  COM225 Public Speaking (3) OR
  COM230 Small Group Communication (3) OR
  COM259 Communication in Business and Professions (3)

  Note: COM requirements vary by business major. Check ASU's MyPath2ASU or major map for acceptable options.

III. **General Electives**

Select courses 100-level or higher if needed to complete a minimum of 62 semester credits no more than a total of 64 semester credits, which is the maximum number of credits accept toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. See General Associate Degree Academic Policies for further details, limitations, and guidelines MCCCD has established recommended courses and sequencing for the various associate's degrees. See maricopa.edu/degrees-certificates/business-entrepreneurialism-management/associate-busin s-special-requirements-8800-abus-sr for ABUS-SR course sequence.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or better, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer advisement information is accessible on the following websites: aztransfer.com/tools, curriculum.maricopa.edu, as well as those of

individual universities. For appropriate course selection, students should consult with an academic advisor.

TOTAL..... 62**

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information.

Associate in General Studies (AGS) Degree and General Education Requirements

Maricopa County Community College District (MCCCD) 2025-2026
Associate in General Studies (AGS) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AGS.pdf

Description
The Maricopa County Community College District Associate in General Studies degree requires 60-64 semester credits in courses numbered 100 and above. The degree includes the following components:

I. **Required Courses** (1-3 credits)
First Year Experience (all courses completed with a grade of "C" or better)

II. **General Education** (minimum of 35 credits)
Core Areas (all courses completed with a grade of "C" or better)
- First-Year Composition
- Mathematics
- Computer Usage
- Oral Communication
- Critical Reading

Distribution Areas (all courses completed with a grade of "D" or better):
- Humanities, Arts and Design
- Social-Behavioral Sciences
- Natural Sciences
- Literacy and Critical Inquiry

III. **General Electives** (enough additional courses numbered 100 or above, completed with a grade of "D" or better, to bring total credits to at least 60)

Purpose of the Degree
The Associate in General Studies (AGS) degree is recommended for students whose educational goals require flexibility. The degree allows students to apply any course numbered 100 or above, including some that are not transferable to the Arizona public universities and may not be transferable to other universities, toward the credits required for the degree. Therefore, for students who intend to transfer to another college or university to pursue a bachelor's degree, this degree may be less appropriate than other associate degrees offered by the Maricopa Community Colleges: Associate in Arts (AA); Associate in Arts, Elementary Education (AAEE); Associate in Arts, Fine Arts (AAFA); Associate in Business-General Requirements (ABUS-GR); Associate in Business-Special Requirements (ABUS-SR); Associate in Science (AS); and all emphases of these degrees

Academic Policies that Govern the Associate in General Studies Degree:
- The graduation policies within the general catalog must be satisfied. Students must complete FYE 101 (1) or FYE 103 (3) (see General Graduation Requirements Administrative Regulation 2.3.9).
- A single course can simultaneously count toward a Core Area and a Distribution Area requirement. Courses that meet this criterion are bold print and underscored in the Core areas and Distribution areas (on the course list at the conclusion of this document). For example, CRE101 may be used to satisfy both the Literacy and Critical Inquiry requirement of the Distribution area and the Core curriculum's Critical Reading area. While multiple requirements can be met with a single course, the credits are only counted one time toward the required minimum for the degree. A course cannot satisfy more than one Core area, even if it is approved for more than one Core area. A course cannot satisfy more than one Distribution area, even if it is approved for more than one Distribution area.

- Credits transferred from outside of MCCCD must be completed with a grade of "C" (2.0 on a 4.0 scale) or better. Transfer credit graded pass/fail or pass/no credit may be transferred if documentation collected by the community college indicates that this was the only grading option available to the student and that the Pass grade ("P") is equivalent to a "C" or better.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. The recovery of a deficiency in a requirement (Prerequisites, Required Courses, Restricted Electives, or General Education) category due to a quarter-hour or other credit system application will be determined by the college.
- Completion of the AGS with a minimum Grade Point Average (on a 4.0 scale) of at least 2.0 for Arizona residents and 2.50 for non-residents meets Arizona public university general admission requirements. However, meeting all AGS minimums does not ensure admission to specific university majors or programs with selective admission processes and/or limited enrollment. Furthermore, because the AGS is not designed to align with the requirements for bachelor's degrees, not all credits may be transferable and students may have deficiencies in lower division (100- and 200-level) courses for a particular major.

Summary of Degree Requirements:

Details on how to identify courses approved for each of the categories is described following the outline.

I. **Required Courses 1-3**
FYE101 Introduction to College, Career and Personal Success OR
FYE103 Exploration of College, Career and Personal Success

II. **MCCCD General Education 35-48***
Core Areas 13-19

1. First-Year Composition 6*
ENG101 OR ENG107 AND
ENG102 OR ENG108

2. Mathematics 3-6

3. Computer Usage 1

4. Oral Communication 3
COM100 Introduction to Human Communication OR
COM110 Interpersonal Communication OR
COM225 Public Speaking OR
COM230 Small Group Communication (3 credits) OR
COM100AA & COM100AB & COM100AC (3 credits) OR
COM110AA & COM110AB & COM110AC (3 credits)

5. Critical Reading 0-3
Students may demonstrate proficiency through assessment.
CRE101 Critical Reading OR equivalent as indicated by assessment

Distribution Areas 22-39

1. Humanities, Arts and Design 9
Students are encouraged to choose course work from more than one discipline.

2. Social-Behavioral Sciences 6-9
Students are encouraged to choose course work from more than one discipline. If COM100, COM110, or COM230 is shared between the AGS' Core and Distribution areas, the Social-Behavioral Sciences requirements for the degree may be met with just 6 additional credits in this area (see Academic Policies section on prior page). The credits for the shared COM course are only counted once, but they may be applied to meet both Oral Communication and Social-Behavioral Science requirements.

3. Natural Sciences 7-8
Two lecture courses and one corresponding laboratory course are to be selected. Credits for lecture and lab components may be combined or each may carry separate credit. For appropriate course selection students should consult with an academic advisor.

4. Literacy and Critical Inquiry 0-4
The Literacy and Critical Inquiry requirement may be met by CRE101 (which also satisfies Critical Reading) or COM225 (which also satisfies Oral Communication) with a grade of "C" or better. The credits for shared courses are only counted once, but may be applied to meet both a Core (see course list above) and a Distribution Area requirement.

Alternatively, the Literacy and Critical Inquiry requirement may be met with a grade of "D" or better by selecting an additional 3 credits from the list of approved options.

III. General Electives 13-26
Select additional courses 100-level or higher to complete a minimum of 60 semester credits but no more than a total of 64 semester credits. Industry-recognized credentials can be counted as general electives.

Associate in General Studies Total Credits 60-64

*First-Year Composition may be met with fewer than 6 credits if a student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

All courses listed meet AGS requirements as specified. Courses in *Purple Italic Underline* also meet Arizona General Education Curriculum (AGEC) requirements.

AGEC designations are subject to change. See AGEC matrix at aztransfer.com/tools/ for each course's value(s) in the semester it is taken.

Courses in **bold print** and underscored simultaneously count towards a Core Area and a Distribution requirement.

AGS GENERAL EDUCATION CORE
(16 credits - grade of "C" or better)*

First-Year Composition (6 credits)*
ENG English [101, 107] & [102, 108]

Oral Communication (3 credits)
COM Communication ***100, 100AA & 100AB & 100AC, 110, 110AA &110AB & 110AC, 225, 230***

Critical Reading (0-3 credits)
CRE Critical Reading 101 or Equivalent as indicated by assessment

Mathematics (3-6 credits)
MAT Mathematics 112, 114, 115, 120, 121, 122, 126, *140, 141, 142, 145, 146, 150, 150&182, 151, 151&182, 152, 152&182, 155, 155&182, 156, 156&182, 172, 187, 188*, 206, *212, 213*, 217, 218, *220, 221, 225, 227, 230, 231, 240, 241*, 256, 257, *276, 277*, Equivalent course/ Satisfactory completion of a higher level Mathematics course.

Computer Usage (1 credit)
Computer-related course or demonstration of comparable computer skills. Additional courses may be approved by individual colleges. Students should contact their advisor for college-specific courses satisfying the requirement.

ACC Accounting 115
ABS Applied Biological Sciences *283*
AJS Administration of Justice Studies 205
ARC Architecture 243, 244, 245
AVC Art and Visual Communication 100, 169, 170, 173, 175, 177, 179, any 180++ course, 183, 283, 289
BPC Business-Personal Computers Any BPC Course(s), including *110*

CIS Computer Information Systems Any CIS Course(s), including *105, 162AB, 162AD, 163AA* (and except 159, 217AM, 259)
CSC Computer Science Any CSC Course(s), including *100AA, 100AB, 110, 110AA, 110AB, 120, 150, 150AA, 180 180AA, 180AB, 181, 181AA, 181AB, 182, 182AA, 205, 205AA, 205AB, 205AC, 205AD* (and except 200, 200AA, 200AB 210, 210AA, 210AB)
CTR Court Reporting 101, 102
DFT Drafting Technology *105AA***, 254AA ***Must be taken with CSC100AA or AB to meet AGEC value*
EDU Education *115*
EED Early Education *115*
EEE Electrical Engineering 120
ELE Electronic 131, 181, 241, 243, 245
ELT Electronic Technology 131, 243
ENG English 100AE
FON Food & Nutrition 100
GBS General Business *221*
GIS Geographic Information Science *205, 211*
JRN Journalism 133 LAS Paralegal Studies 229
MAT Mathematics *206*
MTC Music Theory/Composition *180*
MUC Music: Commercial/Business 180, 191
NET Networking Technology 181
OAS Office Automation Systems 111AA
PSY Psychology *230, 230WL*
SWU Social Work *225*

AGS GENERAL EDUCATION DISTRIBUTION AREAS
(28-29 credits – grade of "D" or better)

Humanities, Arts and Design (9 credits)
Students are encouraged to choose courses from more than one discipline.

AFR African American Studies *203*
AHU Arabic Humanities *245*
AIS American Indian Studies *213*
AJS Administration of Justice Studies *123*
ARH Art Humanities Any
ARH Course(s), including *100, 101, 102*, 109, 110, *112, 115, 118, 145, 201, 202, 203, 204, 217,* 216, 240, 250
ART Art *131*
ASB Anthropology *211, 214, 220, 222, 223, 253*
AVC Art and Visual Communication *150*
CCS Chicana and Chicano Studies *101*
COM Communication *150, 241*
CON Construction *101*
DAH Dance Humanities *100, 201, 250, 255*
ECE Engineering Science *150*
EDU Education *230, 291, 292, 294*
EED Early Education *225*
ENG English *200, 213, 218*
ENH English Humanities Any ENH Course(s), including *110*, 111, *112, 113, 114*, 117, 130, *140AA, 190, 201, 202, 204, 206, 214, 220, 221, 222, 230, 231, 232, 235, 241, 242, 245, 251, 253, 254, 255, 256, 259, 260, 275*, 277, *277AE, 277AG*, 277AA-AK, *280, 284, 285, 291, 294, 295*
FMT Film, Media, and Theatre *107*
FRE French *265*

GST Game Studies *202*
HCR Health Care Related *210*
HIS History *101, 102, 103, 108, 110, 111, 113, 114, 203, 212, 251, 252*
HON Honors *190*
HUM Humanities Any HUM course(s), including 100, *101, 107, 108, 190AA, 190AB, 190AC, 190AD, 190AE, 190AF, 190AG, 190AH, 190AI, 201, 202, 205, 206, 209, 210, 211AA,* 211AE, *212, 213, 214, 215, 216, 220, 235, 245, 250, 251, 260, 261, 292*, 295 (and except 120, 225)
INT Interior Design *115, 120*
JPH Japanese Humanities *245*
LAT Latin *201, 202*
MHL Music: History/Literature *140, 143, 145, 146, 153, 155, 194, 204, 241, 242, 295*
PHI Philosophy Any PHI Course(s), including *101, 103, 104, 105, 201, 212, 213, 214, 216, 218, 224, 234, 244, 245, 251*
QST Queer Studies *200, 210*
REL Religious Studies Any REL Course(s), *100, 101, 151, 200, 201, 202, 203, 205, 206, 207, 210*, 211, *212*, 213, 214, 218, 223, *225*, 230, *240, 244*, 245, 248, *250, 251, 270, 271*, 277, 294, 295, 282AA-AC, *290, 291*
SLC Studies in Language & Culture *201, 202*
SPA Spanish *241, 242, 265, 266*
SPH Spanish Humanities *241, 245*
SSH Sustainability/Social Sciences and Humanities *111*
STO Storytelling *292, 294, 295*
SWU Social Work 183
TEC Textiles and Clothing *105, 125*
THE Theater *111, 220*
THF Theatre and Film *205, 206, 210*
THP Theater/Performance/Production *217, 241*
WST Women's Studies *209, 284, 285, 290*

Social-Behavioral Sciences (6-9 credits)
Students are encouraged to choose courses from more than one discipline. Social-Behavioral Sciences requirements may be met with 6 credits only if COM100, COM110, or COM230 is shared between Core and Distribution (see Academic Policies section). The credits are only counted once, but may be applied to meet Oral Communication and Social-Behavioral Science requirements.

AFR African American Studies *202, 203, 204*
AIS American Indian Studies *101, 140, 141*,160
AJS Administration of Justice Studies *101*, 119, *200, 225, 258, 270*
ASB Anthropology *100, 102, 202, 211, 222, 223, 226, 230, 235, 252*
ASM Anthropology *104, 275*
BHS Behavioral Health Services Technology *150, 155, 175 210*
CAP Counseling and Applied Psychology *120*
CCS Chicana and Chicano Studies *202*
CFS Child/Family Studies *112, 157, 159, 176, 205, 235, 259*
COM Communication *100, 100AA&100AB&100AC, 110, 110AA&110AB&110AC, 163, 230, 250, 263*
CPD Counseling and Personal Development *102AH, 180*
ECH Early Childhood Education *176*
ECN Economics *160, 211, 212, 213, 250*
EDU Education *221, 222*
EED Early Education *205, 222*
EMT Emergency Medical Technology *258*
ENG English *213*
FSC Fire Science Technology 258
GCU Cultural Geography *102, 113, 121WG, 141, 221*

HES Health Science *100, 120*
HIS History any HIS Course(s), including 100, *101, 102, 103, 104, 105, 106, 108, 1095, 113, 114, 140, 145*, 190, *201*, *203, 204, 209*, 240, 241*, 242, 273, 277* (and except 111, 170, 173, 251, 252)
HON Honors *201*
HUM Humanities *235*
IBS International Business *109*
IFS Information Studies *201, 210, 213*
MCO Mass Communications *120*
MGT Management *229, 230*
PAD Public Administration 200
POS Political Science Any POS course(s), including *100*, 101, *110, 113, 114, 115, 120, 125, 130, 140*, 180, *210*, 221, 222, *223*, 281AB, 282AA-AC, *285*
PSY Psychology *101, 123, 132, 156, 157, 215, 218, 225, 235, 240, 241, 243, 250, 260, 262, 266, 277, 280, 292*
QST Queer Studies *200, 210*
REC Recreation *120*
SBU Society and Business *200*
SLC Studies in Language & Culture 201
SOC Sociology Any SOC course(s), including *101, 110, 130, 141, 157, 180, 212, 220, 241 251, 266, 270* (and except 143, 245, 253, 265)
SSH Sustainability/Social Sciences and Humanities *111*
SUS Sustainability/Natural Sciences *110*
SWU Social Work *171, 182, 250, 258, 295*
TEC Textiles and Clothing *105*
WST Women's Studies *100, 161*
YAQ Yaqui Indian History and Culture 100

Natural Sciences (7-8 credits)
Two lecture courses and one corresponding laboratory course are to be selected. The lecture and corresponding laboratory course(s) may carry separate credit. For appropriate course selection students should consult with an advisor.

AGS Agricultural Science *164, 260*
ASB Anthropology *231*
ASM Anthropology *104, 265, 275*
AST Astronomy *101, 106, 111, 112*
BIO Biology *100, 101, 102, 105, 107, 108, 109, 111, 116 145*, 149AK, 149AL, 149AM, 149AN, *156, 156XT, 160, 181, 181XT, 182, 182XT, 201, 201XT, 202, 205*
CHM Chemistry *107&107LL, 130&130LL, 130AA,140AA 150&151LL,150AA, 151&151LL, 151AA, 152&152LL, 152AA, 230AA, 230&230LL*
CON Construction 106
ENV Environmental Sciences *101*
FON Food and Nutrition *241&241LL*
FOR Forensic Science *105, 106*
GLG Geology *101&103, 101IN, 102&104, 102IN, 105, 106, 110&111, 110IN*, 121, 140, 229AB-AC, 230AA-AC, 231AA-AD, 280, 281, 282AA
GPH Physical Geography 111*&112, 113, 211, 212&214, 213&215*
PHS Physical Science *110, 115, 120*
PHY Physics *101, 111, 112, 121,131*
PSY Psychology *275, 290AB, 290AC*

Literacy and Critical Inquiry (0-3 credits)
Literacy requirements may be met with 0 credits only if CRE101 or COM225 is shared between Core and Distribution (see Academic Policies section). The credits are only counted once, but may be applied to meet

[Critical Reading and Literacy and Critical Inquiry] or [Oral Communication and Literacy and Critical Inquiry] requirements.

AIS American Indian Studies 203,*213*
CAP Counseling and Applied Psychology *260*
COM Communication *222, 225, 241*
CPD Counseling and Personal Development *160*
CRE Critical Reading *101, 201*
CUL Culinary Arts *223*
DAH Dance Humanities *255*
EDU Education *220, 282AC*
ENG English *111, 200, 215, 216, 217, 218*
ENH English Humanities *241,253, 254, 255, 277AE, 277AG*
EXS Exercise Science *290*
FON Food and Nutrition *225*
GBS General Business *233*
GPH Physical Geography *267*
HUM Humanities *212, 225, 235, 250, 251*
IFS Information Studies 201
JRN Journalism *201,234*
MCO Mass Communications 220
MHL Music: History/Literature *204*
PHI Philosophy *103, 214, 218, 224*
POS Political Science *115*
PSY Psychology *290AB, 290AC*
REL Religious Studies *203, 205, 207*
SLC Studies in Language & Culture *202*
TEC Textiles and Clothing *105*
THE Theatre *220*
THP Theatre Performance/Production *241*

Elective Courses (15-22 credits)
May select courses from prefixes already chosen for General Education Distribution requirements in order to develop depth in one or more subject areas.

*First-Year Composition may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full

Associate in Science (AS) Degree

Maricopa County Community College District (MCCCD) 2025-2026
Associate in General Studies (AGS) Degree
https://district.maricopa.edu/sites/default/files/inline-files/25-26%20AS.pdf

Description
The Maricopa County Community College District Associate in Science (AS) degree requires a minimum of 60 semester credits for the program of study; minimum total credits vary by specific emphasis (for example, Associate in Science, Emphasis in Physics). Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis for credit minimums. A minimum grade point average of 2.0 (4.0 scale) and grades of "C" or better are required in all courses to earn the degree. The AS degree is governed by the MCCCD General Academic Policies for Degrees Designed for University Transfer.

The Associate in Science degree includes the following components:

I. Program Prerequisites (as specified by emphasis area)
II. Required Courses
III. Restricted Electives (as specified by emphasis area)
IV. Arizona General Education Curriculum for Science (AGEC-S)
V. MCCCD Additional Requirements (Oral Communication and Critical Reading)
VI. General Electives (if needed to reach minimum credits for degree)

Purpose of the Degree
The Associate in Science (AS) degree is designed for students planning to transfer to four-year colleges and universities. In general, the components of the degree meet requirements for majors with more stringent mathematics and mathematics-based science requirements. Generally, the degree will transfer as a block without loss of credit to Arizona's public universities and other institutions with district-wide articulation agreements.

It does not, however, guarantee acceptance into particular university majors/programs with a limited number of students. Students should consult with their transfer institution for any specific admission requirements (e.g., GPA, letters of reference, work experience).

In most cases, courses used to satisfy the MCCCD Associate in Science (AS) will apply to general university graduation requirements of the majors that align with the AS degree; however, students need to be aware of any specific requirements of their intended major at the university to be sure they select courses that will meet them. Information regarding the articulation of the AS with majors at the Arizona public universities can be accessed via the following website: aztransfer.com/tools

It is recommended that students select courses that meet more than one general education and/or awareness area requirement. Doing so will maximize the number of math and science electives the student can take as part of the Associate in Science degree.

Special Academic Policies that Govern the Associate in Science Degree

- The AGEC-S does not require a course with [CS] Computer/Statistics designation.
- Unlike the AGEC-A and AGEC-B, the same course is allowed to satisfy the ([L] and [HU]) or ([L] and [SB]) areas for the AGEC-S. The credits for such a "shared" course are only counted once toward the required minimum for the degree.

Degree Requirements
The requirements for the Associate in Science (AS) follow. The AS degree requires at least 60 credits; however,

minimum credits for the AS may vary for a specific area of emphasis. Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis and credit minimums. The following websites identify the courses that apply to the different General Education Core and Awareness Areas: AGEC-S and the AGEC Matrix at https://aztransmac2.asu.edu/cgi-bin/WebObjects/agec Industry-recognized credentials can be counted as general electives.

Requirements ***Credits***

I. **Program Prerequisites.....Number varies**
Program prerequisites for the AS degree vary by specific emphasis, and are neither required for all emphases nor for the general AS degree without a specific emphasis. Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

II. **Required Courses .....Number varies**
Students must complete FYE 101 (1) or FYE 103 (3) (see General Graduation Requirements Administrative Regulation 2.3.9) and select the required courses for the specific AS degree emphasis. Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

III. **Restricted Electives .....Number varies**
Restricted electives for the AS degree vary by specific emphasis and are not required for the general AS degree without a specific emphasis. Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

IV. **Arizona General Education Curriculum—Science (AGEC-S).....up to 56**
The AGEC-S requires a minimum of 36 credits (33 if FYC is met by single transfer course)*. Courses applied to meet AGEC-A requirements vary by emphasis. Refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis for specific courses required and credit minimums.

Any prerequisite/required/restricted elective courses that also have one or more AGEC designation(s) may be applied toward both requirements. Credits for such shared courses are only counted once toward the total credits for the degree. AGEC designations are subject to change. See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for each course's value(s) in the semester it is taken. Some of the courses have been approved for more than one designation. Notes below will show how such courses may be used to meet multiple degree requirements.

A. First-Year Composition [FYC] **6***
ENG101 OR ENG107..... (3)*
AND ENG102 OR ENG108..... (3)*

B. Literacy and Critical Inquiry [L] **0-3****
Students are strongly encouraged to choose an [L] course that also has [HU] or [SB] designation or to use CRE101 or COM225 from the Maricopa Additional Requirements Area to satisfy the [L] requirement. It may also have been approved to satisfy one or more Awareness Areas ([C], [G], [H]). (AGEC designations are subject to change. See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for each course's value(s) in the semester it is taken.)

C. Mathematical Applications [MA] **4-5**
The AGEC-S requires the first semester of a calculus sequence designed for scientists and engineers (MAT220 or MAT221) or any other [MA] designated course for which Calculus I is a prerequisite.

The minimum math requirement for graduation defaults to the lowest base-level math, as identified above. Some emphasis may require higher-level math; refer to curriculum.maricopa.edu (click on Current Programs) to search for specific emphasis math requirements.

D. Humanities, Arts and Design [HU] **6**
For the AGEC-S, a single course with both [HU] and [L] designations may satisfy both Areas. Note that some [HU] courses also have Awareness Areas designations and can be used to satisfy [C], [G] and/or [H] requirement(s) as well as their respective Core Area(s). (AGEC designations are subject to change. See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for each course's value(s) in the semester it is taken.

E. Social-Behavioral Sciences [SB] **6**
For the AGEC-S, a single course with both [SB] and [L] designations may satisfy both Areas. Note that some [SB] courses also have Awareness Areas designations and can be used to satisfy [C], [G] and/or [H] requirement(s) as well as their respective Core Area(s). (AGEC designations are subject to change. See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for each course's value(s) in the semester it is taken.)

F. Natural Sciences [SQ/SG] **8-10**
Students must complete eight (8) to ten (10) credits of General Chemistry, University Physics, General Biology for Majors, or Physical and Historical Geology. Consult specific requirements of university transfer major for guidance or refer to curriculum.maricopa.edu and click on Current Programs to search for the corresponding area of emphasis.

[(CHM150 or CHM151) & CHM151LL] or CHM150AA or CHM151AA General Chemistry I AND
[CHM152 & CHM152LL] or CHM152AA General Chemistry II
OR

PHY121 University Physics I
AND
PHY131 University Physics II
OR

BIO181 or BIO181XT General Biology (Majors) I
AND
BIO182 or BIO182XT General Biology (Majors) II
OR

GLG101IN Physical Geology: Dynamic Earth or
GLG101 Physical Geology: Dynamic Earth Lecture and
GLG103 Physical Geology: Dynamic Earth Lab
AND
GLG102IN Historical Geology: Primordial to Present or
GLG102 Historical Geology: Primordial to Present Lecture and
GLG104 Historical Geology: Primordial to Present Lab

G. Subject Options - Math/Science **6-10**
Students should refer to transfer resources, including academic advisement and transfer guides, to select six (6)- ten (10) additional math and/or science credits that meet requirements for the selected major.

This Math/Science requirement can be met by selecting Mathematics course(s) (MAT) that require Calculus I as a prerequisite and/or Computer Science course(s) (CSC) and/or additional Science courses from the following disciplines: Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Physical Geography, Physics, Zoology (MCCCD prefixes AST, BIO, CHM, ECE, EEE, ENV, GLG, GPH, and/or PHY)

H. Awareness Areas 0-6
The same course(s) may be used to satisfy one or more Awareness Area(s) as well as other AGEC requirements. (See AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for current course values). Credits for such shared courses may only be counted once.

1. Cultural Diversity in the United States [C] ..... (0-3)
2. Global Awareness [G] OR Historical Awareness [H] ..... (0-3)

V. **MCCCD Additional Requirements.....0-6**

Some courses in this area have [SB] and [L] designations and may also be applied to the corresponding AGEC requirements. See the AGEC matrix at aztransmac2.asu.edu/cgi-bin/WebObjects/agec for course designations.

A. Oral Communication ..... (0-3)
COM100 [SB] Introduction to Human Communication OR
COM110 [SB] Interpersonal Communication OR
COM225 [L] Public Speaking OR COM230 [SB] Small Group Communication (3 credits) OR
COM100AA & COM100AB & COM100AC [SB] (3 credits) OR
COM110AA & COM110AB & COM110AC [SB] (3 credits)

B. Critical Reading ..... (0-3)
CRE101 [L] Critical Reading OR equivalent as indicated by assessment

VI. **General Electives.....0-28**

Select courses 100-level or higher if needed to complete a minimum of 60 semester credits but no more than a total of 64 semester credits, which is the maximum number of credits accepted toward most degree programs at Arizona's public universities. Ideally, students should select courses that meet requirements for their major/area of interest and transfer institution. MCCCD has established recommended courses and sequencing to align with various "Emphasis Areas" in one of nine different "Fields of Interest." See maricopa.edu/degrees-certificates for links to these transfer pathways.

Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer and major guides are accessible on the following websites: aztransfer.com/tools, maricopa.edu/degrees-certificates/university-transfer/partners as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.

TOTAL..... 60-64**

*FYC may be met with fewer than 6 credits if student has transfer credit from ASU, NAU or UAZ for a single course that meets FYC in full.

**(0 only if shared with HU or SB)

* 64 semester credits is the maximum accepted toward most degree programs at Arizona's public universities. Some exceptions apply; consult with an academic advisor for additional transfer information

Graduation Requirements

First Year Experience

Beginning in the Fall 2022 semester, all new students will be required to take a First Year Experience (FYE) course. These courses are a degree requirement for Maricopa Community Colleges students who are beginning any degree or transfer program.

Which course is right for you? Look at the questions below and determine your best fit!

FYE101 Introduction to College, Career and Personal Success
FYE101 is a 1-credit course designed to help students learn how to succeed at your Maricopa Community College. You will explore your field of interest, confirm your program or degree pathway, understand the financial considerations for your career, and meet with your advising team.

Are you a student who:

- is returning to college and needs to focus on completing a degree or transferring to a 4-year university?
- is transferring from another college but new to Maricopa?
- is confident in your chosen program of study and would like to take a deeper dive into your respective field of interest?
- recently completed high school or another early college program and feels on track for your next steps in Maricopa?
- is paying out of pocket and needs to consider every option?

If the majority of the above apply to you, then FYE 101 is right for you!

FYE103 Exploration of College, Career and Personal Success
FYE103 is a 3-credit course that is similar to FYE101, but it also helps students determine what program is best for them, provides strategies for school/life balance, assists in preparing students for work in a diverse world, and provides opportunities for students to build connections.

Are you a student who:

- is new to college and unsure/anxious around college expectations and available resources?
- is undecided on your major or field of interest and needs some help researching and considering the best options for you and your future?
- is concerned about taking math, English or other pre-requisite courses that align with your major and need to have additional information on how to be successful throughout the first year?
- has been out of school/college for more than 3 years and/or is concerned about your ability to manage work, school, family, and life?
- needs to meet full-time enrollment requirements for financial aid or scholarships and is concerned about taking more than 4 classes?
- would benefit from understanding of how you prioritize your finances while a college student and after you graduate?
- is interested in learning about resources available to support your academic pathway, like transportation, child care, housing, and/or additional financial assistance?
- is interested in understanding your own identity better and how to appreciate differences in your peers?
- If the majority of the above apply to you, then FYE 103 is right for you!

General Graduation Requirements

Administrative Regulation 2.3.9

Note: Also see Catalog Under Which a Student Graduates (AR 2.2.5)

Earning a Certificate or Degree

The Maricopa Community Colleges offers certificates and degrees in a variety of areas. Each certificate and degree has specified program requirements for graduation. See certificate and degree information for specific program requirements. It is the student's responsibility to be aware of these requirements.

Candidates for graduation must satisfy the following requirements:

- Complete a minimum number of credits required for the certificate or degree. MCCCD may waive total credit requirements in limited cases where a course requirement has been waived or credit for a course was increased after the student completed the course, and further, it has been determined by the college that there is no appropriate course substitute or applicable credit to fulfill the requirement (refer to A.R. 2.3.13 Course Substitutions and Waivers). The amount of credit earned toward the program requirements shall not be less than 120 for bachelor's degrees and 60 for associate degrees. No more than 10% of the minimum required number of credits within a certificate of completion credits can be waived. Such cases must have prior written approval of the program director, department/division chair, or designee who has oversight for the degree or certificate and/or in the cases of general education the disciplinary subject matter expert. Documentation of rationale and approval must be included as part of the application to graduate or institutional graduation process.

- Complete the minimum number of credits (i.e. establish institutional residency) at the Maricopa Community College conferring the degree or certificate as follows:

    - For Bachelor's degrees, at least 30 credits applicable to the degree must be completed at the awarding college.

    - For Associate's degrees, at least 15 credits applicable to the degree must be completed at the awarding college.

    - For certificates that are 15 or more credits, at least 6 credits applicable to the certificate must be completed at the awarding college.

    - For certificates that are 14 or fewer credits, at least a quarter of the credits applicable to the certificate must be completed at the awarding college. For certificates, if there is a range of credits to complete the certificate, residency will be calculated on the minimum number of credits required to complete the certificate, and any resulting quarter calculations will be rounded up to the nearest whole number. Certificates that require completion of one course or a single choice of requirements will not be split for purposes of residency determination.

    - Refer to the section on the Arizona General Education Curriculum (AGEC) further in this regulation for specific information regarding the minimum number of credits required at the awarding college.

      Credit awarded for Prior Learning Assessment (PLA) does not count as credits in residence for graduation requirements. Student appeals to residency requirements must have prior written approval of the program director, department/division chair, or designee and documentation of rationale and approval included as part of the admission process and/or application to graduate/institutional graduation process. Exceptions to residency may also be made by the

college for unique programs of study (e.g., educational service agreements).

- All new Maricopa students who declare a degree will be required to successfully complete a first-year experience course (FYE101 or FYE103) within the first two semesters at a MCCCD college. Students who enrolled but did not earn any credit at MCCCD are considered new to MCCCD. Students who have only earned credits via Prior Learning Assessment (Refer to A.R. 2.2.4 Transfer Credit and Prior Learning Assessment), previous Dual Enrollment, or who withdrew from all previously attempted courses at MCCCD are considered new to Maricopa.

- Meet the required certificate or degree requirements (general education, required courses, restricted electives, and/or general electives). Requirements can be satisfied by MCCCD coursework, prior learning assessment, and transfer credit. Transfer credit from outside of MCCCD or from Maricopa Community Colleges not awarding the degree or certificate and prior learning assessment does not count as hours in residence for graduation requirements.

- Earn a minimum grade point average (GPA) of 2.0 on a four-point grading scale in the coursework (100-level and above) used to satisfy degree or certificate requirements completed in residence and accepted in transfer) Some awards may specify additional GPA requirements.

- Remove all deficiencies (e.g. incomplete grades, missing transcripts, national test results, course substitutions, course waivers, etc.) on the record to use those courses toward program completion.

- Fulfill any financial obligations with the college.

- Complete and submit a Petition/Application for Graduation with the Admissions, Records, & Registration/Enrollment Services office with the exception of reverse transfer and proactive graduation programs as outlined further in this policy. Note that commencement ceremonies are a separate process and may include the submission of an additional form for students to participate in the celebration. Participation in commencement (walking/marching) does not guarantee a student has graduated or a degree has been earned.

Appeals to this institutional regulation may be considered prior to the admission process and/or petition to graduate. See the Admissions, Records, & Registration/Enrollment Services Office for a copy of the appeals process.

Multiple Certificates And Degrees

A student may earn a total of one of the same type of degree (AA, AS, AAEE, ABUS, AGS, or BSN) from the colleges in the Maricopa County Community College District regardless of emphasis, if applicable.

Because of the inherent unique required course requirements within, students may earn multiple distinct certificates (AC, CCL, AND CCT) and degrees (AAS, AAFA, BA, BS, and BAS) from the college(s) offering the awards but cannot earn the same certificate or degree at one or more Maricopa Community Colleges.

AWARD TYPE	NUMBER THAT CAN BE EARNED
AA or AA WITH EMPHASIS	One AA with or without emphasis may be awarded across all MCCCD
AS or AS WITH EMPHASIS	One AS with or without emphasis may be awarded across all MCCCD
AAFA	Student may earn multiple distinct AAFA emphasis, but cannot earn the same AAFA emphasis at one or more Maricopa Community Colleges
ABUS	One ABUS either GR or SR may be awarded across all MCCCD
BA	Students may earn multiple distinct BA Degrees, but cannot earn the same BA Degree at one or more Maricopa Community Colleges
BAS	Students may earn multiple distinct BAS Degrees, but cannot earn the same BAS Degree at one or more Maricopa Community Colleges

AWARD TYPE	NUMBER THAT CAN BE EARNED
BS	Students may earn multiple distinct BS Degrees, but cannot earn the same BS Degree at one or more Maricopa Community Colleges
BSN	One may be awarded across all MCCCD
AAEE	One may be awarded across all MCCCD
AGS	One may be awarded across all MCCCD
AAS	Students may earn multiple distinct AAS, but cannot earn the same AAS Degree at one or more Maricopa Community Colleges
AC	Students may earn multiple distinct ACS, but cannot earn the same AC at one or more Maricopa Community Colleges
CCL or CCT	Students may earn multiple distinct CCLS or CCTS, but cannot earn the same CCL or CCT at one or more Maricopa Community Colleges

Historical Replaced Awards
Students may not earn awards that replace historical awards with similar to the same content. Replaced awards are identified in the program notes.

Student-Initiated Graduation
Students should complete a petition for graduation when they intend to graduate and should contact the Admissions & Records office at their college for the deadlines.

Proactive Graduation
In an effort to support students to completion, each of the colleges in MCCCD may elect to confer an award to current and former students who have met graduation requirements for any degree or certificate offered at the Maricopa Community Colleges in a process known as proactive graduation. The proactive graduation process applies to students who meet the following criteria:

- Met all graduation and program requirements for the eligible catalog year used in the proactive graduation process (refer to A.R. 2.2.5 Catalog Under Which a Student Graduate).
- Earned the minimum cumulative credits for institutional residency for the degree(s) or certificate(s) between Maricopa Community Colleges.
- Degree(s) or certificate(s) will be conferred from the Maricopa Community College accredited to offer the program at which the student has completed the greatest number of institutional resident credit hours directly applicable to the degree or certificate.
- Students will be given the opportunity to opt out of the proactive awarding of the degree or certificate by notifying the college prior to the award.
- Students will be awarded the certificate and/or degree on the day, month, and year it is processed. The posting date will not be backdated to when the student completed the last course requirement nor future dated to the next commencement date.
- Students should not depend on this process for graduation. The petition for graduation should always be submitted when a student intends to graduate.

Reverse Transfer Partnership Initiative
In an effort to assist former Maricopa students who have transferred to a university without first completing an Associate degree, coursework can be transferred backward (or in reverse) from a participating institution to the Maricopa Community Colleges for the purpose of fulfilling Associate degree requirements. The reverse transfer initiative applies to students, identified by the partnering university or college, who do not yet have an Associate's degree (or higher), and who meet the following criteria:

- Completed a minimum of 15 credits at one or more Maricopa Community Colleges
- Earned a minimum of 60 cumulative credits between Maricopa Community Colleges and other accredited institutions attended

- Met all requirements for an Associate degree as outlined in the Maricopa Community College catalog, with the exception of the MCCCD additional/specific requirements of the First Year Experience, Reading, and Oral Communication
- Interested students at participating universities must meet university criteria and provide appropriate consent to qualify for free transcript exchange.

If eligible, students will receive their degree from the Maricopa Community College where the majority (greatest amount of credit) of the student's applicable coursework toward the graduating program was completed.

Participation in reverse transfer does not guarantee coursework applicability or degree or certificate eligibility. Students participating in reverse transfer must meet all curriculum and college requirements in order to graduate as outlined in this regulation. Students should not depend on reverse transfer for graduation. The petition for graduation should always be submitted when a student is intending to graduate. Students will be awarded the certificate and/or degree on the day, month, and year it is processed. The posting date will not be backdated to when the student completed the last course requirement nor future dated to the next commencement date.

Students interested in applying university or college credit after transfer toward the completion of a Maricopa Community College degree or certificate outside of a partnership initiative will follow the general graduation requirements outlined previously in this regulation.

Refer to the Reverse Transfer Process for partnering institutions and additional information.

Maricopa Nursing Program
For the Maricopa Nursing program, the cumulative GPA for awarding purposes is calculated based on courses required for the degree or certificate taken at any Maricopa campus and includes pre-requisites, co-requisites, and nursing blocks. Students must apply for graduation from the college where they have successfully completed Block 4 of the Associate in Applied Science in Nursing.

Graduation with Honors
All courses used to fulfill graduation and degree requirements, including courses from other institutions outside of MCCCD are used in the grade point average calculation (GPA) at graduation. Degree-seeking students who have distinguished themselves with GPAs 3.50 and higher are recognized with the following graduation honors*:

- 3.50 to 3.69 graduation “with distinction”
- 3.70 to 3.89 graduation “with high distinction” 3.90 to 4.0 graduation “with highest distinction”

Certificate programs are not eligible for institutional honors.

*GPA for Honors distinction is calculated at the time of graduation application/petition submission and does not include any in-progress grades, grades received after the initial calculation, or grades not on file at the initial calculation. The final GPA and resulting distinction level will not be changed based on new grades.

Degrees and certificates will not be reposted if grades are contested after the initial award posting.

Arizona General Education Curriculum (AGEC)
The Arizona public community and tribal colleges and three public universities have agreed upon a common structure for a transfer general education curriculum. This curriculum provides students attending any Arizona public community or tribal college with the opportunity to build a general education curriculum that is transferable upon completion without loss of credit to another Arizona public community or tribal college or university. This common agreement is called the Arizona General Education Curriculum (AGEC).

Students must earn a minimum of 12 credits in the AGEC at one or any combination of the MCCCD colleges. Students who complete the requirements will have the AGEC posted on their official transcripts. AGEC awards are not printed or sent to students.

Any transfer credit or Prior Learning Assessment (PLA) granted for the AGEC, a limit of up to 20 such credits, is for the purpose of satisfying the AGEC requirements within the Maricopa County Community College District. Although the AGEC will transfer to the Arizona public universities as a whole in order to satisfy their lower-division general education requirements, each course, individually, may not be awarded credit similarly at all public Arizona universities. Students should contact their transferring institution to determine their PLA requirements and policies.

Refer to the Academic Policies
Refer to A.R. 2.2.4 Transfer Credit and Prior Learning Assessment
Refer to the AGEC Policies

Intersegmental General Education Transfer Curriculum (IGETC)
The California public community colleges and state universities have agreed upon a common structure for a general education core curriculum. This common structure is called the Intersegmental General Education Transfer Curriculum (IGETC) or the California State General Education Pattern (CSUGE). The IGETC and the CSUGE are composed of a minimum of 35 - 40 semester units of lower-division general education coursework that prepares the student for transfer.* All transferable coursework must be completed with a grade of -C- or better.

Students transferring to the Maricopa Community Colleges from California with an IGETC certified by a California community college will have completed the majority of the MCCCD's general education and additional requirements. Successful completion of the IGETC will fulfill the following requirements:

- First-Year Composition (6 Credits)
- Oral Communication (3 Credits)
- Mathematics (3 Credits)
- Humanities, Arts, and Design (6 Credits)
- Social-Behavioral Sciences (6 Credits)
- Cultural Diversity in the US (3 Credits)

NOTE: To earn a specific degree, programs may require students to take a designated course to fulfill the general education requirement. Acceptance of the IGETC does not supersede these requirements. Students may request a course substitution (Refer to A.R. 2.3.13 Course Substitutions).

To complete the Natural Sciences (7-8 credits), MCCCD will need to validate the student's completion of two laboratory science courses at the transfer institution or at MCCCD. To satisfy the literacy requirement, the MCCCD will need to verify the student's completion of a course at the transfer institution or at MCCCD that involves the development of competence in written discourse and involves the gathering, interpretation, and evaluation of evidence. To satisfy the historical/global awareness requirement, MCCCD will need to verify the student's completion of a course at the transfer institution or at MCCCD that focuses on contemporary global/international awareness or historical awareness.

Maricopa Community Colleges reserve the right to verify that an IGETC or CSUGE certified by a community college or university conforms to California-approved policy before the IGETC is applied toward a MCCCD degree.

In the absence of a certified IGETC, transfer students from California colleges and universities may meet the MCCCD general education requirements with a combination of courses taken before their initial enrollment at MCCCD subject to the results of a course-by-course evaluation, along with subsequent MCCCD general education course work.

Refer to A.R. 2.2.4 Transfer Credit and Prior Learning Assessment

Maricopa Community Colleges Allied Health or Nursing Program

Students Appendix S-13

Allied Health or Nursing Assumption of Risk/Release of Liability

Most of the allied health or nursing program pathways include a program of study in a clinical training environment that may contain exposures to risks inherent in patient-oriented educational experiences (such as but not limited to bodily injury or communicable and infectious diseases). Students enrolling in clinical educational courses will be asked to sign a statement assuming all risks inherent in their coursework.

Use of Confidential Information

Students enrolled in allied health or nursing program pathways will have learning experiences in a health care setting where they will have access to confidential information. Prior to beginning any clinical studies, the students will be asked to sign an agreement to adhere to the requirements of those clinical sites and applicable law, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

MCCCD Required Background Checks

Students enrolled in an MCCCD allied health or nursing program are required to complete and pass clinical learning experiences, working with children, elderly persons, and other vulnerable populations. MCCCD's major clinical agency partners now mandate that any college students assigned to them for clinical experiences submit to a comprehensive background clearance prior to entering such learning experiences. Because the clinical experience portion of the programs is critical to completing a program of study, MCCCD has instituted two specific background check requirements in order for a student to enroll in a program. First, the student must obtain, at his or her own cost, a Level I Fingerprint Clearance Card from the Arizona Department of Public Safety. Precluding offenses for a Level I card can be found in Arizona Revised Statute § 41-1758.07 (https://www.azleg.gov/viewdocument/?docName=https://www.azleg.gov/ars/41/01758-07.htm). Additionally, students must also obtain a "pass" status on a MCCCD supplemental background check from MCCCD's authorized background check contractor. The student must also pay for this background check. The supplemental check will be based on the most stringent standards of MCCCD's clinical experience partners.

The sole program for which the background check requirements are different is the Emergency Medical Technician program. For that program, students must have obtained a Level 1 Fingerprint Clearance Card from the Arizona Department of Public Safety. They are also required, at the time of their clinical assignments, to submit to, pay for and pass any additional background check requirements of the clinical agencies to which their EMT program places students.

Certain licensing boards may require a separate background check or clearance card upon application for licensure or certification.

The MCCCD supplemental background check review may include searches of the following databases and information but MCCCD reserves the right to change the search criteria and the program background check requirements at any time without notice:

1. *National Federal Health Care and Abuse Databases*
2. *Social Security Verification*
3. *Residency History*
4. *Arizona Statewide Criminal Records*
5. *Nationwide Criminal Databases*
6. *Nationwide Sexual Offender Registry*

7. *Homeland Security Search*

Examples of background information that will result in a "fail" status on the supplemental background check include:

1. Social Security number does not belong to the applicant
2. Any inclusion on any registered sex offender database
3. Any inclusion on any of the Federal exclusion lists or Homeland Security watch lists
4. Any conviction of a felony no matter what age of the convictions
5. Any warrant any state
6. Any misdemeanor conviction for the following no matter how long ago:
   Violent crimes
   A. Sex crime of any kind including non consensual sexual crimes and sexual assault
   B. Murder, attempted murder
   C. Abduction
   D. Assault
   E. Robbery
   F. Arson
   G. Extortion
   H. Burglary
   I. Pandering
   J. Any crime against minors, children, vulnerable adults including abuse, neglect, exploitation
   K. Any abuse or neglect
   L. Any fraud
   M. Illegal drugs
   N. Aggravated DUI
7. Any misdemeanor controlled substance conviction in last 7 years
8. Any other misdemeanor conviction within last 3 years [EXCEPTIONS: Any misdemeanor traffic (DUI is NOT considered traffic).

The information that MCCCD uses for the "pass/fail" background check is subject to change at any time without notice.

MCCCD recommends that students carry proof of the background clearance at all times during any clinical agency learning experience.

Duty to Report Changes; Removal
Students have an obligation to immediately report to the director of their program any change in the information that they supplied on forms submitted to initiate background checks relating to the allied health or nursing program. That includes information provided to the Arizona Department of Public Safety and MCCCD's supplemental background check vendor, as well as that related to the background check required by a clinical agency. Failure to do so will result in removal from the program. Additionally, any change in background check status that would affect the student's clearance under either MCCCD's or a clinical agency's standards will result in removal from a program.

Additional Clinical Agency Background Check
Some clinical agencies require that students assigned to their sites submit to a criminal background check covering other offenses, as well as to a drug screening. Students are required to pay for the additional agency clinical background check. A clinical agency that requires this additional background check may refuse to place a student due to information the clinical agency obtains in its background check even though that student possess a valid Level I Fingerprint Clearance Card and has obtained a "pass" status on the MCCCD supplemental background check.

Some conditions that have resulted in students being denied placement at clinical agencies include pending criminal charges, outstanding warrants, unfinished terms of a sentence (such as unpaid fines), pattern of repeated types of arrests/convictions, and failure to disclose all past arrests/convictions when asked to do so on any background check application.

Inability to Place
MCCCD has no obligation to make repeated attempts to place a student when the reason for MCCCD's inability to place the student is due to background check issues. Since clinical agency assignments are mandatory requirements for completion of a program, a student's inability to complete required clinical experience due to his or her background check issues will result in removal from the program.

Changes to Admission or Background Check Requirements
MCCCD may change its program admission requirements or background check requirements without notice at any time.

No Guarantee of Receipt of Licensure/Certificate
Many of the nursing and allied health programs prepare graduates for application for State or National certificates or licenses. In some professions, such licensure and certification is required prior to employment or practice in the profession. Graduation from a nursing and allied health program does not guarantee the receipt of a license or certificate to practice in the field of study.

Catalog Under Which A Student Graduates

Administrative Regulation 2.2.5

Catalogs for the Maricopa Community Colleges are published each academic year and contain information about courses, certificates, degrees, and academic regulations and procedures. Academic program requirements and academic regulations are updated often and may change.

In determining the catalog under which a student graduates, students maintaining continuous enrollment at any public Arizona community college or university may graduate according to the requirements of the catalog in effect at the time of initial enrollment or according to the requirements of any catalog in effect during subsequent terms of continuous enrollment. Students may maintain continuous enrollment whether attending a public community college or public university or transferring among public institutions in Arizona.

The rules for maintaining continuous enrollment are:

1. A semester in which a student earns course credit will be counted toward continuous enrollment. Enrollment by Arizona community college students in nontransferable courses still constitutes enrollment for purposes of determining whether the student has been continuously enrolled. Noncredit courses, audited courses, failed courses and courses from which the student withdraws do not count toward the determination of continuous enrollment for catalog purposes.
2. Failure to earn course credit in three consecutive regular (Fall/Spring/Fall or Spring/Fall/Spring) semesters at any Arizona community college or public university means students are no longer considered continuously enrolled. Students are not obligated to enroll and earn course credit during summer terms, but summer
enrollment may be used to maintain continuous enrollment status.
3. If continuous enrollment is not maintained, the student must fulfill the requirements for graduation specified in the catalog in effect at the time they readmit/enroll or any single catalog in effect during terms of continuous enrollment after readmitted/re-enrolling.
4. Students who initially admitted/enrolled or readmitted/re-enrolled to an Arizona community college or public university during a summer term must follow the requirements of the catalog in effect for the

following fall semester or of any single catalog in effect during the subsequent terms of continuous enrollment.

Age of Credit

In areas of study in which the subject matter changes rapidly, material in courses taken long before graduation may become obsolete or irrelevant. Coursework that is more than ten years old is applicable to completion of certificate and degree requirements at the discretion of the designated individuals at the college. The college may accept such coursework, reject it, or request that the student revalidate its substance. The ten-year limit on coursework applies except when program accreditation agencies limit the life of coursework to less than ten years. Departments may also require students to satisfy current major requirements rather than major requirements in earlier catalogs, when completing earlier requirements is no longer possible or educationally sound. Exceptions made by a college apply only to the college that made the exception.

Continuous Enrollment Examples

STUDENT'S ACTIVITY	SEMESTER/YEAR	STATUS
EXAMPLE A		
Admitted and Earned Course Credit at an Arizona Community College	Fall 2019	Active
Continued at an Arizona Community College	Spring 2020 Fall 2020	Active
Transferred to an Arizona Public University	Spring 2021	Student Enrolled Under 2019–2020 or any Subsequent Catalog
EXAMPLE B		
Admitted and Earned Course Credit at an Arizona Community College	Fall 2015	Active
Enrolled but Earned all "W"s, "Z"s, or "F"s (0.00)	Spring 2016	Inactive
Enrolled in Audit Courses Only	Fall 2016	Inactive
Nonattendance	Spring 2017	Inactive
Transferred to an Arizona Public University	Fall 2018	Student Enrolled Under 2018–2019 or any Subsequent Catalog
EXAMPLE C		
Admitted and Earned Course Credit at an Arizona Community College	Fall 2018	Active
Nonattendance	Spring 2019 Fall 2019 Spring 2020	Inactive
Readmitted and Earned Course Credit at an Arizona Community College	Fall 2020	Active
Transferred to an Arizona Public University	Spring 2021	Student Enrolled Under 2020-2021 or any Subsequent Catalog
EXAMPLE D		
Admitted and Earned Course Credit at an Arizona Community College	Fall 2018	Active
Nonattendance	Spring 2019	Inactive
Readmitted and Earned Course Credit at an Arizona Community College	Summer 2019	Active
Nonattendance	Fall 2019 Spring 2020	Inactive

Transferred to an Arizona Public University	Fall 2020	Student Enrolled Under 2018-2019 or any Subsequent Catalog
EXAMPLE E		
Admitted and Earned Course Credit at an Arizona Community College	Summer 2017	Active
Continued at an Arizona Community College	Fall 2018 Spring 2019	Active
Nonattendance	Fall 2019	Inactive
Readmitted and Earned Course Credit at an Arizona Community College	Spring 2020	Active
Transferred to an Arizona Public University	Summer 2020	Student Enrolled Under 2017-2018 or any Subsequent Catalog
EXAMPLE F		
Admitted and Earned Course Credit at an Arizona Community College	Summer 2018	Active
Nonattendance	Fall 2018	Inactive
Nonattendance	Spring 2019	Inactive
Readmitted and Earned Course Credit at an Arizona Community College	Fall 2019	Active
Admitted and Earned Course Credit at an Arizona Community College	Spring 2020	Student Enrolled Under 2018-2019 or any Subsequent Catalog

**Please note that the above language is guided by statewide practices.*

University Transfer

General Academic Policies for Associate Degrees Designed For University Transfer

The following academic policies govern the associate degrees designed for university transfer: Associate in Arts (AA); Associate in Arts, Elementary Education (AAEE); Associate in Arts, Fine Arts (AAFA); Associate in Business-General Requirements (ABUS-GR); Associate in Business-Special Requirements (ABUS-SR); and Associate in Science (AS). Note that academic policies that govern the Associate in General Studies (AGS) and Associate in Applied Science (AAS) degrees are listed separately, with the requirements for each of those degrees.

- The graduation policies within the general catalog must be satisfied (administrative regulation 2.3.9).
- First Year Experience required (FYE101 or FYE103)
- Minimum semester credits for completion vary slightly by degree and specific emphasis (when applicable). Refer to the Program (Degree) Search at curriculum.maricopa.edu for credit minimums for individual degree programs.
- Credits completed toward these minimums must be in courses numbered 100 or above with a grade of "C" or better. These credits must include a minimum of 35* in satisfaction of the requirements of the Arizona General Education Curriculum (AGEC) along with a maximum of 6 credits towards MCCCD's Additional Requirements.
- Detailed degree requirements are maintained by the Center for Curriculum and Transfer Articulation (CCTA); refer to the program search at curriculum.maricopa.edu.

General Education Requirements:

- The AGEC requirements include a designated number of courses approved for each of the following areas:
  - First Year Composition [FYC]
  - Mathematical Applications [MA]
  - Computer/Statistics/Quantitative Applications [CS] (not required for Associate in Science)
  - Literacy and Critical Inquiry [L]
  - Humanities, Arts and Design [HU]
  - Social-Behavioral Sciences [SB]
  - Natural Sciences: Science Quantitative [SQ], Science General [SG]
  - Awareness Area: Cultural Diversity in the U.S. [C]
  - Awareness Area: Global [G] or Historical [H] Awareness
- Note that there are three different AGECs each aligning with a different subset of associate
- degrees--AGEC-A for the AA, AAEE, and AAFA degrees; AGEC-B for the ABUS-GR and ABUS-SR degrees; and AGEC-S for the AS degree. For some types of AGECs/Associate degrees, students are allowed to choose from a broad list of courses; for others the courses are more restricted or even specified.
- A single course can simultaneously count toward one or more areas in the following. Awareness Areas of [C]; and/or [H]/[G] may be shared with AGEC requirements. MCCCD Additional Requirements e.g. Oral Communication and Critical Reading may be shared with other AGEC requirements. For example, CRE101 may be used to satisfy both the MCCCD Reading Requirement and [L] in the AGEC core. For some degree types, other lower division courses can be used to meet the degree requirements.
- While multiple requirements can be met with a single course, the credits are only counted one time toward the required minimum for the degree. Except for the AGEC-S, a single course cannot be used to satisfy more than one AGEC core requirement, with the exception of Awareness Areas. For example, a course cannot be used to satisfy [HU] and [SB], but a course can be used to meet [HU] and [C], [G] and/or [H].
- The AGEC-A and AGEC-B require a minimum of 35 credits* and the AGEC-S requires a minimum of 36 credits*; however, the AGEC credit count within the total credits for a degree may be under these

minimums if courses are also applied toward Required Courses or Restricted Electives and the credits are counted in those areas. Awareness Areas and MCCCD's Additional Requirements may also be shared with AGEC Core Areas. Optimizing credits in this way is often recommended because some programs and universities limit transferable credits at 64.

- All MCCCD courses applied to the AGEC must be completed with a grade of "C" or better. All MCCCD courses applied to the AGEC must be accepted for transfer credit as a direct equivalent, departmental elective, or general elective credit at ASU, NAU, and UAZ according to the Course Equivalency Guide for the academic year in which the course was taken. Courses applied exclusively to the Bachelor of Applied Science are ineligible for inclusion in the AGEC.

Coursework beyond General Education:

- For some degree types, the additional coursework required to complete the degree is specified while others offer the student more latitude. See degree check sheets for more complete description. Consultation with an academic advisor about course selection is always recommended.
- Oral Communication and Critical Reading are MCCCD Additional Requirements required for Associate in Arts; Associate in Arts, Elementary Education; Associate in Arts, Fine Arts; and Associate in Science degrees. Refer to the Program (Degree) Search at curriculum.maricopa.edu for acceptable options to meet these requirements for individual degree programs.
- Within the Restricted Electives, course recommendations are made for specific transfer institutions. Students should select a transfer plan (group of courses) based on their intended transfer institution. However, not all transfer institutions are reflected in these recommendations. Therefore, students may instead meet the minimum number of Restricted Elective credits using a combination of courses from the transfer plans listed. Restricted Electives should be selected in consultation with an academic, faculty, or program advisor.
- Note that some majors require up to a 4th semester proficiency (202-course level) in a non-English language. Students should consult with an academic advisor to discuss options to complete these requirements.
- General Electives may need to be selected to meet the minimum total credits required for the degree. Maricopa courses and external courses evaluated as Maricopa equivalents, departmental electives, (e.g., HISELC for a history elective), or general electives (GENELC) that are numbered 100 level or higher, and completed with a grade of "C" or higher, may be applied in the elective area, regardless of potential transferability to other institutions. It is recommended, however, that students planning to transfer to a baccalaureate-granting institution meet these general elective requirements with courses that are transferable and applicable to their intended university degree. Transfer advisement information is accessible on the following websites: aztransfer.com/tools, curriculum.maricopa.edu, as well as those of individual universities. For appropriate course selection, students should consult with an academic advisor.
- Any course cross-referenced under another prefix(es) (for example ENH291/EDU291-Children's Literature) covers identical content and its credits can only be counted once toward requirements.

Transfer Credit from Institutions Outside of MCCCD:

- Credits transferred from outside of MCCCD must be at a grade of "C" (2.0 on a 4.0 scale) or better. Transfer credit graded pass/fail or pass/no credit may be used to satisfy AGEC requirements if documentation collected by the community college indicates that this was the only grading option available and that the Pass grade ("P") is equivalent to a "C" or better.
- External courses evaluated either as equivalent to an MCCCD course or as elective credit may be applied toward the minimum credits for degree completion.

- The AGEC (Arizona General Education Curriculum) designations of courses completed at other Arizona public colleges or universities will be applied as listed on AZTransfer's Course Equivalency Guide (CEG) for the semester(s) in which the course(s) were completed. If a transcript evaluation determines there is no MCCCD direct equivalency to a course from another Arizona public college or university, applicability to AGEC and/or associate degree requirements will be based on the source institution's AGEC designation for the semester in which the course was completed.
- Courses from private, out-of-state, and/or online institutions (i.e., outside of the Arizona Transfer System composed of Arizona's public community colleges, tribal colleges and universities) will be applied toward AGEC and/or associate degree requirements based on the courses' evaluated MCCCD equivalence. If courses are not directly equivalent, the credit may be articulated as a departmental elective, and if deemed appropriate, may have a general education designation applied to the course.
- Courses with different credit systems (quarter hours, trimester, units) are converted to semester credit hours. A deficiency in an AGEC category due to quarter-hour or other credit system application must be recovered by additional credits to a total of 35 AGEC credits overall (or 32 credits overall if a student transfers in a single course from an Arizona public university that fulfills the First Year Composition requirement).
- Credit awarded at a Maricopa Community College through prior learning assessment is transferable to the other colleges in the district but is not necessarily transferable to other colleges and universities. No more than 20 such assessed semester credit hours may be applied toward AGEC, and no more than 30 credits (including up to 20 toward AGEC) may be applied toward a degree.

Completion and Transfer:

- Completion of the AGEC with a minimum Grade Point Average of at least 2.0 on a 4.0 scale for Arizona residents and 2.50 for non-residents meets Arizona public university general admission requirements. It does not ensure admission to specific university majors or programs with selective admission processes and/or limited enrollment.
- While MCCCD's associate degrees are designed to facilitate a seamless transfer to other Arizona institutions, courses may be transferable and/or meet associate degree requirements, but may not necessarily meet the specific requirements of a particular degree, major, or area of emphasis at another institution.
- Students planning to transfer to another college or university are urged to refer to university requirements and academic advisors from both institutions to be certain that all their selected coursework is applicable to the requirements of their intended transfer degree and within their allowed transferable credit limit. For some majors, the statewide Common Course matrix and AZTransfer Major Guides at aztransfer.com/tools/ and/or university transfer guides can also provide some guidance. For appropriate course selection, students should consult with an academic advisor.

*Credit minimums may be lower if students have transfer credit from ASU, NAU or UAZ for a single course that meets First Year Composition in full. See notes on individual degree policies.

Transfer Pathways
Associate in Arts (AA)

- Emphasis in American Indian Studies
- Emphasis in Anthropology
- Emphasis in Communication
- Emphasis in Community Health
- Emphasis in Counseling and Applied Psychological Science
- Emphasis in Criminal Justice

- Emphasis in Early Childhood Education
- Emphasis in Economics
- Emphasis in Educational Studies Early Childhood
- Emphasis in English (Creative Writing)
- Emphasis in English (Literature)
- Emphasis in Exercise Science
- Emphasis in Family Life Education
- Emphasis in Geography
- Emphasis in History
- Emphasis in Humanities
- Emphasis in Information Studies and eSociety
- Emphasis in Japanese
- Emphasis in Journalism and New Media Studies
- Emphasis in Law and Policy
- Emphasis in Mathematics
- Emphasis in Nutritional Science
- Emphasis in Philosophy
- Emphasis in Political Science
- Emphasis in Psychology
- Emphasis in Religious Studies
- Emphasis in Secondary Education
- Emphasis in Social Work
- Emphasis in Sociology
- Emphasis in Spanish
- Emphasis in Speech and Hearing Science
- Emphasis in Sustainability and Environmental Studies
- Emphasis in Women and Gender Studies

Associate in Arts, Fine Arts (AAFA)

- Emphasis in Art
- Emphasis in Dance
- Emphasis in Music
- Emphasis in Musical Theatre
- Emphasis in Theatre

Associate in Science (AS)

- Emphasis in Astronomy
- Emphasis in Biochemistry
- Emphasis in Biological Sciences
- Emphasis in Chemistry
- Emphasis in Computer Science
- Emphasis in Engineering
- Emphasis in Geography - Meteorology
- Emphasis in Geology
- Emphasis in Physics
- Emphasis in Secondary Education

Academic Departments

Art and Humanities

Department Chair: Dr. Brandon Cleworth, Ph.D.
Email: brandon.cleworth@gccaz.edu
Phone: 623-845-4572
Office Location: O3-112

GCC offers a wide range of classes in the study of art and humanities. Students can choose from a number of disciplines in both theoretical and production-based courses. Degrees and certificates are offered in various mediums that focus on traditional skills through the latest technological advances. Non-Degree-seeking students interested in broadening their artistic skills are also encouraged to enroll.

Degrees and Personal Enrichment
GCC offers production classes in ceramics, drawing, life-drawing, 2-D design, color, 3-D design, glass fusing and slumping, jewelry-making, painting, photography, sculpture, watercolor, animation, graphic design, and film/video. Theory courses are offered in Art History and the Humanities. Faculty foster students to develop critical thinking from both a production and aesthetic point of view. Degree-seeking students can choose from two-year degrees and transfer programs in the areas of Animation, Film and Media Production, Digital Media Arts, Photography and Fine Arts.

Dynamic Learning Environments
The Art and Humanities Department is proud to offer students state-of-the-art facilities based on both traditional studio practices and the latest technology trends. From hand-building clay to virtual reality, the student experience is highly valued through customized classroom settings. Many of our classes are currently being offered in Hybrid and Online formats. The Digital Media Arts and Animation Degree programs may be completed entirely Online or in a Hybrid format. The Department's faculty is comprised of scholars and working artists with both local and national recognition.

Art Shows and Events
To find out more about Degree and Certificate programs in the Art and Humanities Department, please subscribe to our Instagram account @gccazart. Please visit the Performing Arts Center's gallery, located in the lobby, for the latest exhibitions. The Student Art Show is an annual event held in the spring semester at Glendale Community College.

Automotive Technology

Department Chair: Joseph Landavazo
Email: joseph.landavazo@gccaz.edu
Phone: 623-845-3189
Office Location: ATC-107

Are you a gear head who loves turning wrenches and fixing your own car? Do you have the mechanical aptitude to become a certified auto mechanic? Are you already in the auto-repair field and want to learn more?

Since 1978, GCC's Automotive Technology program has taught students from the casual, home-based auto mechanic to General Motors, Chrysler and Ford certified automotive repair technicians. You can study a single technical aspect of vehicle repair, or earn a degree that will launch a career at a shop or dealer.

Small class sizes allow for plenty of hands-on shop time with individual attention from instructors who spent careers in the automotive repair industry.

GCC automotive technology programs are certified by the National Institute for Automotive Service Excellence (ASE) and evaluated by the National Automotive Technicians Education Foundation (NATEF).

General Automotive Program
The General Automotive program offers classes in both morning and evening schedules. The morning schedule is a fast track schedule called MAAP (Modular Accelerated Automotive Program) and typically runs from 5-6 hours a day 5 days a week and is designed for students attending full-time. The evening schedule typically runs 3.5 - 4 hours an evening 4 evenings a week and is designed for students wishing to attend college part-time. Students in this program can earn the AAS degree in Automotive or one or all of the automotive Certificates of Completion.

All of GCC automotive programs are Accredited by the ASE Education Foundation and students have the opportunity to earn industry entry level certificates while they learn. Access to a variety of top of the line industry tools/equipment, and a state-of-the-art facility combined with passionate, professional and industry certified faculty make Glendale the clear choice for automotive education in the west valley. The options are many; please make sure to meet with an advisor before choosing a course.

Take the Fast Track to Career Opportunities
The Ford ASSET and General Motors (GM) ASEP factory-sponsored programs focus on brand-specific automotive technology. Within the two-year program, students spend 8 weeks of each semester in the classroom, and the other 8 weeks in a paid internship at a dealership. Many students graduate with job offers in hand.

Follow the MAAP
In the MAAP, Modular Accelerated Automotive Program, students learn "bumper-to-bumper" technology and complete the Automotive Technology portion of the program in less than one year. Most classes are taught 7:30 a.m. to 12:30 p.m. Classes prepare students for ASE testing, and credits transfer to ASU or the GCC associate degree program.

MAAP classes are the same courses that are taught in the regular A.A.S. degree program, on an accelerated learning schedule.

The typical MAAP schedule and courses include two, 5-week summer sessions, a 16-week Fall semester, a 16-week Spring Semester and one 5-week summer session.

Biology

Department Chair: Angela Schwendiman
Email: angela.schwendiman@gccaz.edu
Phone: 623-845-4501
Office Location: LS-260

In brief, biology is the scientific study of living things -- a diverse spectrum of organisms ranging from bacteria to fungi, protozoans, algae, ferns, conifers, flowering plants, flatworms, nematodes, earthworms, insects, arachnids, crustaceans, starfish, sea anemones, sea urchins, jellyfish, reptiles, amphibians, fish, birds, and mammals.

The field of biology is often divided into a variety of areas of specialization including the following:

- **Zoology** - study of animals (often further subdivided into fields like Entomology-study of insects, Ornithology-study of birds, Herpetology-study of amphibians and reptiles)
- **Botany** - study of plants

- **Microbiology** - study of bacteria and other microbes
- **Ecology** - study of the interactions between living things and the environment
- **Evolutionary Biology** - study of changes in organisms over time
- **Developmental Biology** - study of embryonic changes that grow and organize the cells derived from a zygote into a fully formed organism
- **Cell Biology** - study of the structure and function of the smallest units of life
- **Molecular Biology** - study of molecular basis of life, including the chemical reactions of metabolism, the enzymes that control those reactions, the heritable genetic information encoded in DNA, and the nature of gene expression
- **Genetics** - study of inherited physical and biochemical traits and the frequency of those traits in populations
- **Virology** - study of viruses and prions

However, the lines between these disciplines is increasingly quite blurred -- techniques of study and information gathered about one area frequently shed light on others. This connectedness is a reflection of the unifying characteristics of life on Earth.

Careers in Biology

Biologists are teachers, researchers, and health care professionals. Other careers for those with a biology background include science writing, patent law, science/health policy, biotech industry management and eco-tourism. With a bachelor's degree in biology students can expect to teach high school science, work as an entry-level technician. With a master's degree students can pursue college-level teaching and mid-level technical jobs.

Get more information about biology-related careers

- Contact Dr. Erik Gergus, Biology Department Faculty Advisor, to learn more about career opportunities in biology. (erik.gergus@gccaz.edu, 623-845-3614, Office Location: LS-259)
- Contact Dr. Jessica Gano, Pre-med Club Faculty Advisor, to learn more about careers in health care and pre-professional school admission. (jessica.gano@gccaz.edu, 623-845-3192, Office Location: LS-251)

Why Study Biology at GCC?

With small class sizes and hands-on instruction by faculty who are experts in their fields, your introduction to biology will build a strong foundation that will serve you through the rest of your science courses.

To get more complete information on the scope of various BIO courses, you can view their course description, outlines and learning outcomes in our course bank.

GCC students also have the opportunity to put knowledge into practice. They can get their "hands dirty" in the Gaucho Urban Garden, watch life grow in the greenhouse, study our impact on the environment, and conduct independent research projects on aspects of cellular and molecular biology in our biotechnology lab. Learn more about studying biotechnology at GCC on this webpage. You may also be interested in getting involved with Green Efforts, the Biotechnology Club and/or the Environmental club.

Biology Greenhouse & Gaucho Urban Garden
The Biology Department was instrumental in the creation of the GCC Greenhouse that features rare native plants and a freshwater pond and the Gaucho Urban Garden that is used to grow vegetables.

Business and Information Technology

Department Chair: Rachelle Hall, MPA
Email: rachelle.hall@gccaz.edu
Phone: 623-845-3231
Office Location: O1-131

The Business & Information Technology Department (BIT) hosts an array of opportunities for our students. We offer Associate of Arts and Associate of Science degrees and Certificates of Completion (CCL) in multiple fields of interest (FOI).

In the Business, Entrepreneurism, and Management (BEM) FOI, we offer awards in Accounting, Administrative Professional, General Business, Management, Marketing and Sales, Organizational Management, and Retail Management.

In the Computer and Information Technology (CIT) FOI, we offer awards in Cybersecurity, Network and Systems Administration, Programming and Systems Analysis, Video Game Production, and Web Design/Development.

Department Events
Go to our GCC Achieve Events page and check out what's happening in the BIT department.

Chemistry

Department Chair: Debbie Leedy, Ph.D.
Email: debbie.leedy@gccaz.edu
Phone: 623-845-4770
Office Location: PS-124

Why Study Chemistry?
Chemistry, the study of matter and energy and their transformations, helps us understand the physical world and our impact on it. Chemistry answers questions like:

- Why does ice float? Where do the colors in fireworks come from?
- How do electric cars work? Explore a fuel cell.
- What do lumber and pasta have in common?

Enroll in chemistry classes to begin working toward an associate's degree in Biotechnology or Molecular Biosciences, or to finish general science requirements before transferring to a bachelor's degree program.

Employment Outlook
Chemistry is important basic knowledge for many professions. People with chemistry backgrounds become chemistry teachers, scientists, nurses, pharmacists, engineers, veterinarians, and health care professionals. Explore careers in chemistry and learn what chemists do at the American Chemical Society College to Career website. Learn more about chemistry careers and employment trends at ONet Online.

CHM130 or 150/151?
Students often wonder which entry-level chemistry class is the best choice.

Take CHM130 if you:

- Have never taken a Chemistry class
- Have not taken CHM130 or high school chemistry within the last 5 years
- Take the Chemistry assessment test and place into it

Take CHM150/151 if you:

- Have passed CHM130 or high school chemistry with a “C” or better within the last two years and meet minimum requirements
- Take the Chemistry assessment test and place into it

See course descriptions for all CHM classes in the Maricopa Find-a-Class tool, and course outlines and descriptions at the Maricopa Center for Curriculum and Transfer Articulation.

Transfer
CHM courses at GCC transfer to ASU, UofA and NAU, and may fulfill pre-determined requirements. See the AZTransfer.com CHM Course Equivalency Guide for details.

Communication and World Languages

Department Chair: Kimberly Feld, Ph.D.
Email: k.feld@gccaz.edu
Phone: 623-845-4818
Office Location: O2-102

Welcome! ¡Bienvenidos! Bienvenue! 欢迎

Developing skills in oral and written communications, business communications, and public speaking will help you compete in any career field. GCC offers a broad range of communication courses, including interpersonal communication skills, business communication, intercultural and English fluency, public speaking and argumentation and small group communication.

Courses such as Argumentation (COM222), Public Speaking (COM225), and The Art of Storytelling (EDU292) will raise your communication skills to the next level.

National and International Speech Competitions
GCC's award-winning Forensics (Speech) Team travels regularly throughout the nation and competes in national and international tournaments. Communication Activities (COM281AB) is designed to provide students with competence and confidence in a variety of speech situations.

Foreign (World) Language Classes
GCC's world language classes emphasize oral and written proficiency while developing knowledge of related cultures and literature. Choose from Arabic, Chinese, French, German, Japanese, American Sign Language and Spanish. Learn more about Foreign (World) Language Classes.

English Language Fluency Classes
If English is not your first language, you can dramatically improve your oral and written communication skills at GCC. Learn more about English Language Fluency Classes.

Counseling

Department Chair: Lynn Brysacz
Email: lynn.brysacz@gccaz.edu
Phone: 623-845-4570
Office Location: CCS

The GCC Counseling Faculty are teaching faculty and also providers of non-clinical services. For more information about our services, visit the Counseling Services website.

The Counseling Department provides courses under the CPD (Career and Personal Development), BHS (Behavioral Health Sciences) course prefixes, and offers Certifications and Industry Training for First Responders and Health Care providers.

- Career and Personal Development (CPD) courses
- Behavioral Health Sciences (BHS) Courses
- Industry Training for First Responders and Health Care providers

Faculty
BHS instructors at GCC hold master's level and advanced degrees in their fields and bring real-world industry experience to the classroom.

For the BHS program, questions about first responder and health care provider certifications, and mental health internship, please contact

William "Bill" Beverly, Ph.D
Director of Behavioral Health Sciences
623-845-3212
william.beverly@gccaz.edu

English, Reading, ESL, Journalism and Creative Writing

Department Chair: Dr. Jennifer Lane
Email: jennifer.lane@gccaz.edu
Phone: 623-845-3436
Office Location: O5-150

In the English Department at GCC you'll find courses in composition, reading, literature, English as a Second Language, creative writing, journalism, and developmental reading and writing. These classes and others contribute to an Associate in Applied Sciences (AAS) in Public Relations, a Certificate of Completion (CCL) in Journalism, and an Academic Certificate (AC) in Creative Writing.

You'll find traditional and accelerated classes, both in person and online, scheduled at various times, day and night, to provide the flexibility you need to complete your academic goals.

GCC English classes are offered at main campus and GCC North.

Looking for transfer credit information? Search for course competencies at the Center for Curriculum Transfer Articulation website.

We look forward to meeting you in one of our classes.

Fitness and Wellness

Department Chair: Aaron Fried, Ph.D.
Email: aaron.fried@gccaz.edu
Phone: 623-845-3043
Office Location: FW-18

Glendale Community College is a proud Gold-Level Exercise is Medicine campus recognized by the American College of Sports Medicine. Whether you want to become a fitness professional, or just walk on the treadmill, the Fitness and Wellness department has classes to fit your needs - and your lifestyle.

Exercise Science and Personal Training Degrees and Certs
Students have many certification, degree, and transfer opportunities, including NAU@GCC and other partner universities, to prepare for careers in Exercise Science, Personal Training, Athletic Training, Physical Therapy, Occupational Therapy, Sports Medicine and more.

PED Course Offerings
Get fit while earning college credits. Our group fitness classes are open to students as well as community members of any fitness level.

Fitness Centers
The GCC Main and GCC North Fitness Centers are open to students, employees and community members of all fitness levels. You'll find the most current fitness equipment and tools to help you achieve your goals. Group fitness classes are also available in credit and non-credit options. As a fitness center member or fitness center credit student, enjoy a variety of FREE group fitness classes at both locations!

Swim and Aquatics
Take a swim in our Olympic-sized pool! We offer Lap Swimming, Swim Class, Aqua Fitness,

and Private Swim Lessons. Choose between credit and non-credit options.

Library

Department Chair: Sean O'Brien
Email: sean.obrien@gccaz.edu
Phone: 623-845-3120
Office Location: L-125

In addition to our normal library services, the GCC Library offers Information Studies (IFS) courses and an Associate in Arts, Emphasis in Information Studies and eSociety degree.

The Associate in Arts (AA), Emphasis in Information Studies and eSociety degree is an interdisciplinary program designed to prepare you for work in information-rich settings such as marketing, social media, libraries, editing, copywriting, public relations, online content creation and communication. You will examine your role as a content creator and consumer in a global society, critically engage with information, and communicate and collaborate across diverse populations and platforms. This program also provides university transfer options in addition to workforce preparedness.

Mathematics and Computer Science

Department Chair: Krysten Pampel, Ph.D.
Email: krysten.pampel@gccaz.edu
Phone: 623-845-4643
Location: MA-165

GCC will meet all your Math needs. Our students participate in math competitions, STEM (Science, Technology, Engineering & Mathematics) club, and tutoring.

No matter if you are considering math as your major or are trying to complete math requirements for other majors, the GCC Math Department is here to assist you. We offer classes from College Mathematics Prep all the way through Calculus and Differential Equations, and Statistics.

You will succeed in math! We will help.
A placement test will show you where to start. Once enrolled in a class, our dedicated Math department faculty and student tutors provide quality instruction and unlimited FREE drop-in tutoring.

Math courses are offered in a traditional classroom setting, Live/Online or with an online component: either completely online or a hybrid format (blended web-based and face-to-face classes). Some classes are taught with traditional textbook homework while others use web-based homework assignments. You may email your instructor before the semester starts to find out what type of homework is used.

For Mathematics (MAT) course descriptions and availability, please refer to the Maricopa Find A Class tool.

Nursing

Department Chair: Dr. Grace Paul, DNP, M.Phil, MSN, RN, CNE
Email: grace.paul@gccaz.edu
Phone: 623-845-3626
Office Location: LS-205

Effective July 1, 2025 through June 30, 2026, the Nurse Assistant (NA) requirement for application to the MaricopaNursing Registered Nursing (RN) program is no longer required.

Start on the pathway to becoming a nurse today. MaricopaNursing at GCC can show you how to jumpstart your NA/CNA, RN, or BSN education. MaricopaNursing offers a district-wide curriculum that is centered on our core values of caring, critical thinking, holism, nursing role development, safe practice, and information management.

We look forward to working with you to meet your career goals and invite you to be a part of MaricopaNursing at Glendale Community College.

The GCC Nursing program offers:

- Ability to obtain a bachelor's degree in nursing while earning your associate's degree in the Concurrent Enrollment Program (CEP)
- Smaller class sizes than large universities
- Very affordable education
- Financial aid counseling and application assistance

Glendale Community College is fully accredited by the Accreditation Commission for Education in Nursing (ACEN) and GCC's Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing.

Quick Links

- Apply to the Nurse Assistant Program
- Apply to the Registered Nurse Program (as of December 12, 2021, all applicants to the RN program will be required to submit proof of completion of a Nursing Assistant program)

If you wish to speak with an advisor, you must make an appointment through one of the following. Walk-ins are not accepted.

- Self-schedule an appointment in Cranium Cafe
- Attend a Virtual Drop-In on Wednesdays, 9 a.m. to 2 p.m., in the virtual Nursing Advisement Lobby
- For advising assistance, please fill out our GCC Pre-Nursing Advising request form

Performing Arts

Department Chair: Donald Smith, DMA
Email: don.smith@gccaz.edu
Phone: 623-845-3070
Office Location: MU1-119

Welcome to GCC's Performing Arts Department

Whether you are looking to earn an Associate degree in one of our comprehensive performing arts programs, learn a new skill in music, music technology, dance or theatre or participate in one of our many performing groups for majors, non-majors and community members, the Performing Arts Department at Glendale Community College has many options for you to explore.

Degrees and Certificates

The Performing Arts Department offers Associate of Arts, Fine Arts (AA,FA) degrees with an Emphasis in either of following:*

- Dance
- Music
- Theatre
- Musical Theatre

These degrees above can be transferred to Arizona's three state universities.**

The Department's Music Industry Studies program offers Associate of Applied Sciences degrees and Certificates of Completion as following:

- Audio Production Technologies with specializations in Sound Design and Audio Engineering.

Certificates of Completions are also available as following:

- Technical Theatre
- Technical Theatre: Audio Technician

- Technical Theatre: Costuming
- Technical Theatre: Stage Crew Technician

For more information about our Degrees and Certificates, please visit Visual and Performing Arts Fields of Interest page.

Community members are invited to participate in many courses including:

- Theatre productions (THP201AA)
- Community Band (MUP161)
- Community Orchestra (MUP159)
- Community Choir (MUP150)
- Jazz Ensemble (MUP163)
- Class Guitar (MUP127)
- Class Piano (MUP131)
- Class Voice (MUP133)

As well as any of our humanities classes in dance, theatre and music (MHL). Community dancers can audition to become a member of our residential dance company - Verve.

Please use the menu to the left to learn more about our specific programs and the contact information for each. I hope that you'll consider joining us in whatever capacity you wish.

* Music Theatre majors intending to transfer to ASU should follow the Emphasis in Music path.

**See a Performing Arts Department and/or university advisor for information on specific transfer agreements.

Glendale Community College is an accredited institutional member of the National Association of Schools of Music:

National Association of Schools of Music
11250 Roger Bacon Drive, Suite 21
Reston, VA 20190-5248
Phone: 703-437-0700
Fax: 703-437-6312
info@arts-accredit.org

Philosophy and Religious Studies

Department Chair: Peter Lupu, M.A.
Email: peter.lupu@gccaz.edu
Phone: 623-845-3747
Office Location: LA-132

Classes in Philosophy and Religious Studies help students cultivate a mindset of mutual respect and foster the exchange of ideas. Explore interdisciplinary perspectives on religious traditions, eastern and western philosophy and spirituality, ethics, bioethics, logic, and Native American religious traditions. Complimenting these courses are tradition-specific courses in Judaism, Islam and Christianity, as well as thematic courses on women in religion, the philosophy of sexuality, and environmental ethics.

Transfer Credits
Philosophy and religious studies classes transfer as Humanities classes to many four-year institutions. Take introductory, core and elective courses at GCC in a small classroom setting with individual attention before transferring to a university for higher-level courses. Use the Course Equivalency Guide to see which courses transfer.

Outstanding Faculty
All experts in their fields, residential Philosophy and Religious Studies faculty are published authors and researchers who are dedicated to teaching and inspiring students.

Teach Here
Are you qualified to teach religious studies or philosophy classes at GCC? Find out how to become an adjunct faculty member.

Physical Sciences

Department Chair: Pam Nelson
Email: pam.nelson@gccaz.edu
Phone: 623-845-3680
Office Location: PS-102

The study of physical science explores our environment, from the smallest mineral components to the farthest star. We offer first and second-year courses in:

- Geology
- Astronomy
- Physics & Physical Science

Whether you are on a path toward an advanced degree in science, or just want to learn a little more about the physical world we live in, the small class size and personal instructor attention at GCC will help you achieve your learning goals.

We love to teach science! Learn more at our annual campus events: the Arizona SciTech Festival, or Engineer Your Future held in March.

Explore geology on campus at Project Geoscape, or study our state on a field trip with Geology faculty.

Psychology

Department Chair: Julie Morrison, Ph.D.
Email: julie.morrison@gccaz.edu
Phone: 623-845-4761
Office Location: LS-268

Welcome to the GCC Psychology Department
Our department provides students with many unique opportunities to learn about how the brain works, understand other people and our relationships with them, how human beings develop and change over time, how to conduct and evaluate psychological research, ways to establish and maintain good mental health, as well as how to deal with some of the difficulties of mental health that can arise.

We offer a wide variety of interesting classes and many 'out of classroom' experiences for you to explore psychology. You can also meet our faculty and learn more about psychology degrees and careers with the links below.

In the Classroom

- Learn about the Psychology Courses we offer.
- Interested in doing Student Research or Internships?

Outside the Classroom

- Consider Joining Psi Beta or the Psychology Club.

GCC Psychology Faculty and Staff

- The GCC Psychology Faculty and Staff.
- To learn more about Psychology Degrees, Careers and Certificates, visit our Behavioral Science and Human Services Fields of Interest (FOI) page

GCC Developmental Disabilities Specialist CCL

- The Certificate of Completion (CCL) in Developmental Disabilities Specialist is designed for students interested in working in various settings serving children or adults with developmental disabilities.

Public Safety Sciences

Department Chair: Todd Polansky
Email: todd.polansky@gccaz.edu
Phone: 623-845-3908
Office Location: PSS-256

The Public Safety Science department trains students to serve in the public sector or

advance in careers as police officers, firefighters, paramedics, and EMTs. The GCC Law Enforcement Training Academy is certified by the Arizona Peace Officer Standards and Training Board (AzPOST).

Learn about GCC's Public Safety Sciences Department
The two-story PSS building houses classrooms, faculty offices and specialized training facilities like an outer wall for scaling and rappelling practice, and Defensive Tactics and Firearms Simulator classrooms. We also teach civilians how to own, handle and operate firearms safely.

Social Sciences

Department Chair: Reid Leamaster
Email: reid.leamaster@gccaz.edu
Phone: 623-845-3280
Office Location: O5-102

Social science disciplines teach critical thinking and observation skills and challenge us to examine the world around us.

Home to 10 disciplines, the Social Science department offers more than 250 classes each semester. Follow your interest and find your passion, whether in Macroeconomics, Magic or Meteorology!

Choose from:

- Anthropology & Archeology
- American Indian Studies
- Economics
- Environmental Sciences
- Geography
- History
- Political Science
- Social Work, Sociology
- Sustainability
- Teacher Education

Many GCC Social Science courses fulfill Social-Behavioral Sciences (SB), Humanities (HU), Global (G) and other requirements. Classes are offered in-person and online.

Our Faculty
Social Science faculty are leaders in their respective fields, many with advanced degrees, and all with a love of teaching. Among them, you'll find musicians, artists, researchers, published authors and scientists. Their common interest is a dedication to students and learning opening their students to new experiences and ideas, advancing knowledge--their own as well as their students'.

Technology and Consumer Sciences

Department Chair: Tina LeBaron
Email: tina.lebaron@gccaz.edu
Phone: 623-845-3628
Office Location: T1-131

Thank you for visiting us. We are proud to offer high quality occupational and academic transfer programs to our community and welcome the opportunity to help you achieve your dreams and goals. We invite you to use the links on the left to navigate a variety of exciting career fields offered through this department.

Our major areas of focus are Cisco Networking, Computer Aided Drafting, Early Childhood Education, Engineering Science, Family Life Education, Food and Nutrition Science, Welding and Woodworking.

Fields of Interest

Fields of Interest organize degrees and certificates that share similar areas of study, allowing you to identify your skills and interests to find a career path that's best for you.

Applied Technology
Learn how to design, develop, or repair high-tech equipment and processes while getting hands-on, on-the-job experience.

Behavioral Science and Human Services
Help people, serve your community, and improve the lives of those in need with a rewarding career in healthcare, counseling, and more.

Business, Entrepreneurialism and Management
We've designed our Business, Entrepreneurialism, and Management pathway to give you the skills you need to be an economic and social leader.

Computer and Information Technology
Get the knowledge and real-world experience you need to excel in gaming, programming, tech support, web design, and more.

Culture and Society
Tackle complex global issues in a wide range of fulfilling career fields, from communication and sociology to history, economics, and beyond.

Education
If you love learning and want to help students reach their potential, start your career as a teacher, instructional designer, administrator, and more.

Health Sciences
Help people live better, safer, healthier lives when you pursue a career as a nurse, EMT, physical therapist, personal trainer, and more.

Science, Technology, Engineering and Mathematics
Creatively solve problems and explore new frontiers with a challenging STEM career.

Visual and Performing Arts
Unleash your creativity while honing your craft as you pursue a career in visual art, design, dance, music, fashion, film, or theater.

Applied Technology

The Applied Technology Field of Interest programs give you the hands-on skills you need to design, develop, or repair high-tech equipment and processes. Students studying in these areas often find work after completing introductory classes and are able to expand their knowledge, skills, and education while earning a livable wage.

Maricopa Community Colleges offers programs in automotive repair, HVAC, airline operations, CAD, construction, welding, electronics repair, electrical technologies, and much more. Classes are scheduled to accommodate both full-time and working students and align to industry standards.

If you are ready to find the Applied Technology program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Architectural and Civil CAD Technology
- Automotive Service

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Automotive Automatic Transmission and Transaxle
- Automotive Brake Systems
- Automotive Chassis
- Automotive Drive Train
- Automotive Electrical, Heating, Ventilation and Air Conditioning Systems
- Automotive Electronic/Electrical Systems
- Automotive Engine and Operations Management
- Automotive Engine Management and Repair
- Automotive Engine Repair
- Automotive Heating, Ventilation and Air Conditioning Systems
- Automotive Maintenance and Light Repair
- Automotive Manual Drive Train and Axles
- Automotive Service
- Automotive Steering and Suspension
- CAD Application
- CAD Fundamentals

Behavioral Science and Human Services

If you are motivated to help people, serve your community, and improve the lives of those in need, consider the Behavioral Science and Human Services Field of Interest. Professionals in this field typically work with community members to identify problems and create and implement solutions.

If you aspire to be a first responder, work in the court system, or provide counseling or social work/advocacy services, this Field of Interest offers you the training you need. Some Behavioral Science and Human Services students may go directly into positions as EMTs, paralegals, or behavioral health technicians, while others may pursue a bachelor’s degree at a four-year institution.

If you are ready to find the Behavioral Science and Human Services program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the

opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Administration of Justice Studies
- Associate in Arts, Emphasis in Counseling and Applied Psychological Science
- Associate in Arts, Emphasis in Criminal Justice
- Associate in Arts, Emphasis in Family Life Education
- Associate in Arts, Emphasis in Law and Policy
- Associate in Arts, Emphasis in Political Science
- Associate in Arts, Emphasis in Psychology
- Associate in Arts, Emphasis in Social Work
- Behavioral Sciences
- Fire Science
- Fire Service Management
- Forensic Science
- Law Enforcement Training

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Administration of Justice
- Advanced Behavioral Sciences
- Child and Family Organizations Management and Administration
- Corrections
- Crime Scene Investigation
- Developmental Disabilities Specialist
- Driver Operator
- Emergency Management
- Fingerprint Identification and Photography
- Fire Service Management
- Firefighter Operations
- Foundations of Behavioral Sciences
- Homeland Security
- Law Enforcement
- Law Enforcement Investigation
- Law Enforcement Training Academy
- Leadership in Public Safety Organizations
- Legal Studies
- Non-Sworn Fire Service Professional
- Victimology

Business, Entrepreneurialism, and Management

Because our global economy starts with the small business on the corner and extends to the world's most valuable companies, we've designed our business pathway to give you the knowledge and experience you need to be an economic and social leader at every level of your career.

The Business Field of Interest is designed for students who have an interest in business management and administration, finance, hospitality and tourism, culinary arts, and marketing. Programs and majors in this pathway lead to careers in accounting, management, sales, marketing, human resources, owning and operating a small business, and customer service.

If you are ready to find the Business, Entrepreneurialism, and Management program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these,

you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Accounting
- Administrative Professional
- Associate in Business, General Requirements
- Associate in Business, Special Requirements
- General Business
- Management
- Marketing and Sales
- Organizational Management
- Retail Management

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Accounting
- Administrative Professional
- Business Administration Fastrack
- Certified Bookkeeping
- Commercial Real Estate
- Enrolled Agent
- Entrepreneurial Studies Level I
- Entrepreneurial Studies Level II
- Financial Services
- Financial Services: Pre-licensure
- General Business
- Human Resources Management
- Management
- Marketing
- Organizational Leadership
- Real Estate: Prelicense
- Retail Management
- Small Business Management Level I
- Small Business Management Level II
- Social Media Marketing

Computer and Information Technology

As technology evolves and data management systems become increasingly complex, the demand for highly skilled technology professionals continues to grow.

In the Computer and Information Technology Field of Interest, you can explore careers in gaming, programming, technology support, web design and development, cybersecurity, and more. Maricopa Community Colleges offers advanced laboratories, modern equipment, internships, and flexible and specialized classes where you will learn about computing hardware and software, web-based platforms, networks, telecommunications systems, and other innovative technology. Maricopa Community Colleges also makes it easy for you to transfer to a four-year program through our partnerships with over 40 colleges and universities nationwide.

If you are ready to find the Computer and Information Technology program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Associate in Science, Emphasis in Computer Science
- Cybersecurity
- Cybersecurity Management and Information Security
- Information Technology
- Network and Systems Administration
- Programming and Systems Analysis
- Video Game Production
- Web Design/Development

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Adobe Foundations: Animation and Graphics Production
- Amazon Web Services Cloud Associate
- Amazon Web Services Cloud Practitioner
- Amazon Web Services Cloud Specialist
- Cisco Certified Network Professional: Enterprise
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services
- Cisco Certified Network Professional: Enterprise Core
- Cisco Network Administration and Security
- Cisco Network Administration: CCNA
- Cisco Network Administration: CCNP
- Computer System Configuration and Support
- Computer System Configuration and Support, Linux
- Computer System Configuration and Support, Network
- Computer System Configuration and Support, Security
- Critical Infrastructure
- Cyber Engineering
- Cyber Operations
- Cybersecurity Fundamentals
- Cybersecurity Management and Information Security
- Desktop Support
- IT Fundamentals
- Linux Associate
- Linux System Administration
- Microsoft Desktop Associate
- Microsoft Office Professional
- Microsoft Office Specialist
- Microsoft System Administration
- Programming and Systems Analysis Level I
- Programming and Systems Analysis Level II
- Red Hat Linux Administrator
- Red Hat Linux Engineer
- Video Game Production: Audio and Sound
- Video Game Production: Coding and Scripting
- Video Game Production: Game Art
- Video Game Production: Game Narrative
- VMware Foundations
- VMware Network Administrator
- VMware Systems Administrator
- Web App Development
- Web Design
- Web Development
- Web Foundations

Culture and Society

Programs in the Culture and Society Field of Interest are focused on acquiring a deep understanding of humanity, society, and human expression. These programs foster critical and analytical thinking and create flexible problem solvers who are ready to tackle complex global issues.

Our Culture and Society programs are also designed for easy transfer to a four-year college, and our students are prepared for a broad range of careers, including marketing, post-secondary teaching, law, translation, government law agencies, and private and government research groups and think tanks.

If you are ready to find the Culture and Society program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Associate in Arts, Emphasis in American Indian Studies
- Associate in Arts, Emphasis in Anthropology
- Associate in Arts, Emphasis in Communication
- Associate in Arts, Emphasis in Economics
- Associate in Arts, Emphasis in English (Creative Writing)
- Associate in Arts, Emphasis in English (Literature)
- Associate in Arts, Emphasis in History
- Associate in Arts, Emphasis in Humanities
- Associate in Arts, Emphasis in Information Studies and eSociety
- Associate in Arts, Emphasis in Japanese
- Associate in Arts, Emphasis in Journalism and New Media Studies
- Associate in Arts, Emphasis in Philosophy
- Associate in Arts, Emphasis in Religious Studies
- Associate in Arts, Emphasis in Sociology
- Associate in Arts, Emphasis in Spanish
- Associate in Arts, Emphasis in Women and Gender Studies

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Chicana and Chicano Studies
- Communication Competence in the Workplace
- Communication Skills for Non-Native English Speakers
- Creative Writing
- Language Studies
- Oral Communication Fluency for Non-Native English Speakers

Education
If you love learning and want to help students discover their potential, the Education Field of Interest is for you. With so many Education certificates and degrees to choose from at Maricopa Community Colleges, you're sure to discover one that excites you.

Specialize in early childhood education, K-12 education, multicultural education, eLearning design, and more. While studying education can prepare you to be a classroom instructor at virtually any academic level, becoming a teacher isn't your only career option. You can also learn to design instructional media and materials, work as a school administrator, become a librarian, or provide needed training for workers re-entering the workforce. No matter which path you choose, a background in education can prepare you for a rewarding – and meaningful – career.

If you are ready to find the Education program that is right for you, select the option below that meets your current goals.

Bachelor's Degrees
The bachelor's degree(s) listed below cost less than a third of university tuition, and are designed to equip you with the knowledge and skills you need to reach your educational goals and be successful in your career. In many cases, these degrees offer university transfer partnerships to help you move seamlessly from a bachelor's to a master's degree program. Be sure to check with your advisor, as acceptance is not guaranteed.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Elementary Education and Special Education

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Associate in Arts, Elementary Education
- Associate in Arts, Emphasis in Early Childhood Education
- Associate in Arts, Emphasis in Educational Studies Early Childhood
- Associate in Arts, Emphasis in Secondary Education
- Associate in Science, Emphasis in Secondary Education
- Early Childhood Education

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Early Childhood Education
- Foundations of Early Childhood Education
- Infant and Toddler Development

Health Sciences

If you want to help people live better, safer, healthier lives, consider the Health Sciences Field of Interest (FOI).

Our Health Sciences degrees and certificates are designed to give you comprehensive training for health-related work in the hospital, healthcare, or exercise and fitness settings. In addition to preparing you for employment, the Health Sciences FOI also fully prepares you to transfer to a four-year program. So, whether you want to be a nurse, an EMT, a physical therapist, or a personal trainer, Maricopa Community Colleges' programs give you the flexibility you need to pursue your goals.

If you are ready to find the Health Sciences program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Associate in Arts, Emphasis in Community Health
- Associate in Arts, Emphasis in Exercise Science
- Associate in Arts, Emphasis in Nutritional Science
- Associate in Arts, Emphasis in Speech and Hearing Science
- Exercise Science: Health, Fitness, and Sports Performance

- Nursing
- Paramedicine

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Community Health Paramedicine
- Critical Care Paramedicine
- Emergency Medical Technology
- Emergency Medical Technology Comprehensive
- Fast Track Practical Nursing
- Health and Wellness Coaching
- Nurse Assisting
- Paramedicine
- Personal Training
- Personal Training: Advanced
- Tactical Emergency Casualty Care

Science, Technology, Engineering and Mathematics (STEM)

Students with degrees in Science, Technology, Engineering, and Mathematics (STEM) majors are in great demand for a wide variety of often high-paying jobs in pure and applied research, business and industry, education, the military, and even law and policymaking. Many future medical professionals (dentists, doctors, nurses, pharmacists, and veterinarians) establish their foundational knowledge by majoring in STEM. STEM fields cultivate inquiry and investigation, critical and creative thinking, innovation, and problem-solving skills that have enabled humanity to advance our understanding of the natural world, develop strategies to address critical issues, and enhance our quality of life. The more we learn, however, the more we realize there is still much to be discovered—STEM students are needed to address a wide array of challenges that we still face.

There is more to STEM than you might think. What you may have studied in high school was really just the “tip of the iceberg.”

If discovering how nature works and applying that knowledge to engineer solutions to problems and create new technologies to advance humanity appeals to you, your path to a rewarding career in one of the STEM fields starts at Maricopa Community Colleges. Select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Associate in Arts, Emphasis in Geography
- Associate in Arts, Emphasis in Mathematics
- Associate in Arts, Emphasis in Sustainability and Environmental Studies
- Associate in Science, Emphasis in Astronomy
- Associate in Science, Emphasis in Biochemistry
- Associate in Science, Emphasis in Biological Sciences
- Associate in Science, Emphasis in Chemistry
- Associate in Science, Emphasis in Engineering
- Associate in Science, Emphasis in Geography - Meteorology
- Associate in Science, Emphasis in Geology
- Associate in Science, Emphasis in Physics
- Biotechnology and Molecular Biosciences
- Engineering Technology

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Fundamentals of Applied Molecular Bioscience-Level 1
- Sustainability

Visual and Performing Arts

If you are a creative thinker and like to communicate ideas through visual art, design, dance, music, or theatre, the Visual and Performing Arts Field of Interest may be the right choice for you.

Maricopa Community Colleges' Visual and Performing Arts students gain hands-on foundational skills in their chosen mode of expression, including studio art, fashion design, interior design, acting, theatre production, vocal and instrumental performance, and film and audio production. They also develop cultural awareness and the communication, creative, and critical thinking skills necessary for success in a variety of fields. Students in the Visual and Performing Arts FOI may seek direct employment as artists, musicians, designers, actors or audio producers, or they may pursue a bachelor’s or graduate-level degree for a career in teaching, art direction, theatre production, fashion or interior design, media arts, and film.

If you are ready to find the Visual and Performing Arts program that is right for you, select the option below that meets your current goals.

Associate Degrees and University Transfer
The Associate degrees in this list give you the opportunity for an in-depth study of your chosen field.

Many of our Associate degrees will also transfer to a four-year university upon graduation. With these, you can complete most of your general education coursework at Maricopa Community Colleges and have guaranteed acceptance to one of our over 40 university and college partners to complete your Bachelor's degree.

Be sure to check with your advisor if you plan to move on to a four-year university to ensure your degree program credits will successfully transfer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

- Animation and Time-Based Media
- Associate in Arts, Fine Arts, Emphasis in Art
- Associate in Arts, Fine Arts, Emphasis in Dance
- Associate in Arts, Fine Arts, Emphasis in Music
- Associate in Arts, Fine Arts, Emphasis in Musical Theatre
- Associate in Arts, Fine Arts, Emphasis in Theatre
- Audio Production Technologies
- Digital Media Arts
- Film and Media Production
- Photography

Certificates
A certificate prepares you for entry-level work in your chosen field and requires fewer classes than our bachelor's degrees, Associate degrees, or university transfer options. There are several types of certificates available, including career, trade, and academic certificates.

Credits earned in a certificate program can often be used toward an Associate degree. For more information, speak with an advisor.

- Animation
- Ceramics
- Commercial and Freelance Photography
- Documentary Film Production
- Music Industry Studies: Audio Production Technologies
- Technical Theatre: Audio Technician
- Technical Theatre: Costuming
- Technical Theatre: Stage Crew Technician

Programs of Study

A program is a disciplinary area of study that students can specialize in. Most of our programs lead to one or more degrees or certificates, while other programs are designed for personal and professional enrichment only and do not offer any degrees or certificates.

Accounting, Banking, and Finance

Play an important role in the success of any organization. Learn the skills needed to launch a well-paying career in accounting or finance—critically evaluating business practices and making informed decisions to achieve financial goals.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

- Accounting

Certificates

- Accounting
- Certified Bookkeeping
- Enrolled Agent
- Financial Services
- Financial Services: Pre-licensure

Administration of Justice

Prepare for a rewarding career in the criminal justice system. Our program offers a comprehensive education in the study of the criminal justice process, including law enforcement, courts, probation, parole, security, and criminology.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

- Administration of Justice Studies
- Associate in Arts, Emphasis in Criminal Justice
- Forensic Science
- Law Enforcement Training

Certificates

- Administration of Justice
- Corrections
- Crime Scene Investigation
- Fingerprint Identification and Photography
- Homeland Security
- Law Enforcement
- Law Enforcement Investigation
- Law Enforcement Training Academy
- Leadership in Public Safety Organizations
- Legal Studies
- Victimology

Anthropology

Curious about what it means to be human? Anthropology is the study of human kind. This broad discipline includes the study of cultures around the world, remains of past cultures, and the biology of humans and other primates, and is critical to examining and helping solve many of the global issues confronting us today.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

- Associate in Arts, Emphasis in Anthropology

Astronomy

Humans are made to explore. As a student in the Astronomy program at Maricopa Community Colleges, you will get to explore space—from our sister planets in the solar system to the farthest reaches of the universe—and gain hands-on experience using telescopes and computer software to assist you in your studies.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

- Associate in Science, Emphasis in Astronomy

Automotive Service

Develop the diagnostic, maintenance, and repair skills needed for a career in automotive repair. We offer certificates in many mechanical areas and general maintenance, including specialization in heavy equipment maintenance. Our program will prepare you to take the national ASE Certification Tests.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Automotive Service

Certificates

● Automotive Automatic Transmission and Transaxle
● Automotive Brake Systems
● Automotive Chassis
● Automotive Drive Train
● Automotive Electrical, Heating, Ventilation and Air
● Conditioning Systems
● Automotive Electronic/Electrical Systems
● Automotive Engine Management and Repair
● Automotive Engine Repair
● Automotive Engine and Operations Management
● Automotive Heating, Ventilation and Air Conditioning Systems
● Automotive Maintenance and Light Repair
● Automotive Manual Drive Train and Axles
● Automotive Service
● Automotive Steering and Suspension

Behavioral Health Sciences

If you want to make a difference and positively impact people's lives, consider a career in the behavioral health sciences. Our program, which includes practical training and service-learning experiences, will prepare you for a career in counseling, social work, and other support roles in the private and public sectors, including schools and medical or residential facilities.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Behavioral Sciences

Certificates

● Advanced Behavioral Sciences
● Foundations of Behavioral Sciences

Biochemistry

Learn the fundamental theories of chemistry and bioscience in our hands-on program, where you will develop your skills in creative and analytical thinking and problem-solving. Additionally, you will gain lab experience and learn safety protocols with a focus on making informed decisions and practicing ethical and social responsibility.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Associate in Science, Emphasis in Biochemistry

Biological Sciences

The Biological Sciences program is not just about theoretical knowledge—it's a launchpad for a wide range of practical career paths, including medicine, veterinary studies, pharmaceutical research, and public health. Dive into this broad realm of study encompassing genetics, cell and molecular biology, marine biology, neurosciences, anatomy and physiology, plant sciences, conservation biology, ecology, immunology, and biotechnology.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Associate in Science, Emphasis in Biological Sciences
● Biotechnology and Molecular Biosciences

Certificates

● Fundamentals of Applied Molecular Bioscience-Level 1

Business

Earn a marketable degree that comes with competitive earning potential and built-in flexibility. Our program is designed to provide you with the knowledge and training you need for a variety of career paths in the fields of business, accounting,

data analytics, entrepreneurship, finance, marketing, retail management, and supply chain management. Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
- Administrative Professional
- Associate in Business, General Requirements
- Associate in Business, Special Requirements
- General Business

Certificates
- Administrative Professional
- General Business

Glendale Community College Means Business
A degree or certificate can prepare you for a rewarding career in numerous business-related pathways or prepare you for transfer to a university.

GCC instructors have subject matter expertise and real-world experience in the principles, practices, and functions of modern business. Learn how to apply technology to business tasks, effectively communicate, make sound decisions and much more.

Whether you are re-careering, looking to add marketable skills to your resume, or are fresh out of high school, GCC has what you need with nearly thirty business degrees and certificates. Find out how to do it faster with GCC's Fast Track Certificates.

We are flexible and affordable with class times to meet your busy schedule and low tuition that is easy on your pocketbook.

Chemistry
Learn the fundamental theories of chemistry in our hands-on program, where you will gain laboratory and safety protocol experience and learn how to make informed decisions while practicing ethical and social responsibility.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
- Associate in Science, Emphasis in Chemistry

Communication
Expand your career possibilities with a degree in communication, one of the most valued skills in any field. Our program blends theory and practical experience—providing you with a solid foundation of a variety of communication contexts, including interpersonal, intercultural, organizational, and public and professional speaking.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
- Associate in Arts, Emphasis in Communication

Certificates
- Communication Competence in the Workplace
- Communication Skills for Non-Native English Speakers
- Oral Communication Fluency for Non-Native English Speakers

Communication Sciences and Disorders
In a world where communication is key to being successful, personally and professionally, it's more important than ever to be able to effectively communicate and advocate for yourself. Speech Language Pathologists help people of all ages by preventing, assessing, diagnosing, and treating speech, language, social communication, cognitive-communication, and swallowing disorders in children and adults. Our program can prepare you for a career as a Speech Language Pathology Assistant.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
- Associate in Arts, Emphasis in Speech and Hearing Science

Why Glendale Community College?
You can take most of your coursework for this area of emphasis right here at GCC; however, it is important to note that there are approximately 6-9 credits of Speech Language Pathology (SLP)

coursework that is only available at our sister college, Estrella Mountain Community College (EMCC). If you are interested in pursuing this area of emphasis, you will need to enroll for SLP courses at EMCC. Online course options are available.

Computer Assisted Design and Drafting

Positioned at the intersection of technology and art, computer assisted design and drafting (CAD) is critical to planning infrastructure like highways, pipelines, or bridges. Our program will teach you the CAD skills needed to create technical drawings used by architects, surveyors, engineers, or scientists.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Architectural and Civil CAD Technology

Certificates
● CAD Application
● CAD Fundamentals

Computer Information Systems

Learn how to design, develop, and manage sophisticated technologies used everywhere. Our program can prepare you for a rewarding career at the intersection of technology and business—helping organizations rely on solutions to carry out their business operations, interact with suppliers and customers, and excel in the marketplace.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Business, Special Requirements
● Information Technology

Certificates
● Amazon Web Services Cloud Associate
● Amazon Web Services Cloud Practitioner
● Amazon Web Services Cloud Specialist
● IT Fundamentals
● Microsoft Office Professional
● Microsoft Office Specialist

Computer Science

Learn the skills needed to build complex software systems and solve computing problems. Our program can empower you with mathematical foundations, algorithmic principles, and computer science theory—teaching you how to write in a variety of programming languages and computing environments.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Science, Emphasis in Computer Science

Counseling

Growing demand for skilled counselors and psychologists is creating greater professional opportunities in the mental health field. Our program will give you a solid foundation in the field of counseling—preparing you for a rewarding career helping others cope with life's challenges.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Counseling and Applied Psychological Science

Creative Writing

Have you always dreamed of being a published fiction writer? Or are you looking to get a degree and pursue a career as an editor, copywriter, or lyricist? However big your goals are, our Creative Writing program will sharpen your skills and provide you a supportive community of writers and instructors to help you become a strong, confident writer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in English (Creative Writing)

Certificates
● Creative Writing

Dance

If you're considering a career in the performing arts, our program offers two outstanding educational pathways depending on your goals—whether you want to prepare for a career in dance performance, choreography, teaching, or fitness instruction, or whether you're looking to diversify your dance portfolio through technology, kinesiology, performance, and real-world application.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Fine Arts, Emphasis in Dance

Desktop Support

Learn the skills to be competitive in the job market and successful in technology or IT support. Our hands-on Desktop Support program can help prepare you for a variety of careers that require IT training, technology expertise, and creative problem-solving.

Certificates
● Computer System Configuration and Support
● Computer System Configuration and Support, Linux
● Computer System Configuration and Support, Network
● Computer System Configuration and Support, Security
● Desktop Support

Digital Arts

Prepare for a growing career in the digital arts! Our hands-on program can equip you with the training and multi-industry skills to become an expert in fundamental design principles, imaging techniques, graphic design, video production, creative branding, and web and interactive design, among other areas.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Animation and Time-Based Media
● Digital Media Arts

Certificates
● Animation

Early Childhood Education

Early childhood education plays a critical role in supporting the healthy growth and development of children during a unique and pivotal period in their lives: birth through age eight. If you're interested in making a positive impact on the well-being of young children, their families, and their communities, the Early Childhood Education program might be for you.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Early Childhood Education
● Associate in Arts, Emphasis in Educational Studies
● Early Childhood
● Early Childhood Education

Certificates
● Early Childhood Education
● Foundations of Early Childhood Education
● Infant and Toddler Development

Economics

Learn the models and theoretical fundamentals of economics along with in-demand skills that can be applied to a variety of professional fields. Our program, which satisfies the first two years of a four-year program, is geared toward students interested in pursuing a liberal arts degree in economics from a university.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Economics

Education

Prepare for a rewarding career in education. Our hands-on program will empower you with in-depth knowledge of human development, teaching and learning theories, instructional strategies, and inclusive educational practices in addition to real-world classroom experience.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Bachelor's Degrees
● Elementary Education and Special Education

Associate Degrees and University Transfer
● Associate in Arts, Elementary Education
● Associate in Arts, Emphasis in Secondary Education
● Associate in Science, Emphasis in Secondary Education

Emergency Medical Technology

If you want to make a difference in people's lives as a firefighter or licensed emergency medical technician (EMT), our program can empower you with the skills needed to manage a range of emergency situations in a variety of settings, including ambulance service companies, first responder agencies, fire departments, and hospitals.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Certificates
● Emergency Medical Technology
● Emergency Medical Technology Comprehensive

Emergency Response Management

Take the first step toward an exciting career leading efforts in preparing and coordinating emergency management programs at the business, government, and military levels. Our program will teach you the essentials of planning and conducting comprehensive, integrated emergency management programs.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Certificates
● Emergency Management

Engineering

Become a part of the next generation of engineers! Learn the essentials of science, technology, engineering, and math (STEM)—the cornerstones of a good engineer—while developing strong analytical and critical thinking skills that will support you in solving complex problems and creating solutions at all levels in any organization.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Science, Emphasis in Engineering
● Engineering Technology

English as a Second Language (ESL)

"The English as a Second Language (ESL) program helps non-native English speakers improve their language skills for academic, professional, and personal success. The program offers courses that cover different aspects of learning American English, such as oral and written skills and includes interpersonal and small group interactions, problem-solving, and public speaking.

Our ESL program is committed to providing a supportive learning environment to help students achieve their language goals and build a strong foundation for future opportunities and success."

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Certificates
● Communication Skills for Non-Native English Speakers
● Oral Communication Fluency for Non-Native English Speakers

English Literature

A degree in English literature opens the door to unlimited career opportunities in which strong writing, communication, and analytical skills are valued. Our program provides the first two years of a four-year curriculum with a focus on social, cultural, and historical contexts, as well as genres, movements, national traditions, and themes.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Associate in Arts, Emphasis in English (Literature)

Entrepreneurial Studies

Learn how to successfully run a business! Our program can put you on the right path toward creating a strong business plan, evaluating financial opportunities and risks, and building a business from the ground up, while gaining valuable experience in how to develop, pitch, and execute your ideas.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Certificates

● Entrepreneurial Studies Level I
● Entrepreneurial Studies Level II
● Small Business Management Level I
● Small Business Management Level II

Ethnic Studies

Learn how to communicate better, build stronger relationships, and think critically, all while deepening your cultural understanding and discourse. Our program focuses on the interdisciplinary study of race and ethnicity—exploring the unique experiences of cultural groups through literature, religion, histories, cultures, and identities.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Certificates

● Chicana and Chicano Studies

Exercise Science

Prepare for a career in sports and fitness! Our program can prepare you for a variety of career opportunities—everything from entry-level wellness and personal training to a specialized career in occupational therapy or sports medicine.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Associate in Arts, Emphasis in Exercise Science
● Exercise Science: Health, Fitness, and Sports Performance

Certificates

● Health and Wellness Coaching
● Personal Training
● Personal Training: Advanced

Family Studies

Build a rewarding career helping children and families. Our program can give you a solid foundation in human development, early childhood, adolescence, marriage and family relationships, and the dynamic connections between school, community, and family—preparing you for a career working with people of all ages.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer

● Associate in Arts, Emphasis in Family Life Education

Certificates

● Child and Family Organizations Management and Administration

Film

Create a new and exciting future in media and film production. Our program encompasses screenwriting, budgeting, directing, sound design, cinematography, editing, and animation, and can help you get started in this highly competitive

industry—introducing you to the latest technologies and filmmaking techniques.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Film and Media Production

Certificates
● Documentary Film Production

Fine Arts

Cultivate and hone your skills as an artist with the Fine Arts program at Maricopa Community Colleges, preparing you for a variety of careers in education, graphic design, community-based arts organizations, museums, and galleries.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Fine Arts, Emphasis in Art

Certificates
● Ceramics

Fire Science

Gain the skills and knowledge needed to serve the public as an effective firefighter working in a team environment. Our program provides hands-on training to prepare you for the physical demands of the job and both state and national certifications.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Fire Science
● Fire Service Management

Certificates
● Driver Operator
● Fire Service Management
● Firefighter Operations
● Non-Sworn Fire Service Professional

Forensic Science

Embark on a satisfying crime-solving career within the field of law enforcement, where your actions will have a direct impact on public safety. Our program can equip you with the skills and knowledge needed to perform complex lab tests and apply science-based techniques and logical analysis to explore unusual situations and probe mysteries.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Forensic Science

Certificates
● Crime Scene Investigation
● Fingerprint Identification and Photography

Geography

Explore the career possibilities in geography, geospatial technologies, climate science, and meteorology. Our program can equip you with the analytical and research skills that are highly valued by employers—preparing you to work in a range of fields, including government, education, commerce, industry, transit, and tourism.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Geography
● Associate in Science, Emphasis in Geography – Meteorology

Geology

Take the first step toward a career as a geoscientist—a public-serving role with tremendous impact on human life. Our program can empower you the knowledge and skills needed to continue your education in preparing to find and manage natural resources, such as surface and ground water, soils for growing crops and building materials, and fossil and nuclear fuels.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Science, Emphasis in Geology

Why You Should Take Geology at GCC
We, the Geology Faculty, are experienced research, industry, and academic geologists dedicated to community education, offering Geology courses to serve the needs of:

- Geology majors, minors, as well as future and in-service science teachers.
- Students majoring in fields that require or recommend some geology foundation (e.g. civil engineering, forestry, environmental sciences etc. (See our Career & Degree Path Link)
- Students who need to satisfy the Arizona General Education Curriculum (AGEC) for their Associate degrees or certificates, or to transfer to Arizona's public universities. Many GLG courses satisfy SQ and SG science requirements and some can be used to simultaneously satisfy Global and Historical Awareness areas.
- Members of the community interested in geology- from the scale of individual minerals to the solar system itself or anywhere in between.

GCC Geology courses are taught in all modalities (in person and/or online) utilizing advanced instructional technologies and immense collections of minerals, rocks, fossils and a wide variety of demonstration materials. Actual sample kits are available for online courses. We are routinely available outside of class. We also take advantage of Arizona's spectacular geologic setting to provide the opportunity for real-time field observation of many geological features.

History
Gain a deeper and more informed perspective of the world we live in and the cultures that inhabit it. Our History program provides the first two years of a four-year curriculum, preparing students for continued education leading to a variety of careers in post-secondary teaching, law, library and archival studies, and museum studies.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in History

Humanities
Explore diverse disciplines concerned with the human experience. The Humanities program will allow you to sharpen your critical thinking and communication skills, learn how to ask penetrating questions, and develop a more informed and empathetic worldview—preparing you for diverse careers, including education, law, business, and government.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Humanities

Information Studies and eSociety
Learn how to communicate effectively across digital platforms. Our program can equip you with the knowledge and skills to help companies analyze, strategize, and engage with digital media—preparing you for careers in marketing, communications, journalism, social media, publishing, and public relations.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Information Studies and eSociety

Journalism
Take the first step toward a career as a reporter or editor. Our program, taught by trained journalists with real-world experience, can equip you with marketable skills and industry knowledge needed to produce quality content and reporting.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Journalism and New Media Studies

Why You Should Take Journalism at GCC
Choose Glendale Community College for your journalism journey and experience a blend of academic excellence and practical application. Our online Journalism courses offer the flexibility you need to pursue your passion for storytelling while balancing other commitments. Benefit from personalized instruction and support from dedicated faculty who are committed to your success. Moreover, GCC's strong reputation for fostering a vibrant learning community ensures that you'll have access to resources and networking opportunities that will enhance your journalistic skills and career prospects.

Languages
Gain a deeper understanding of the world around you. Studying languages is not just about speaking a different language—it also teaches the intercultural skills necessary to becoming a contributing member of our local and global community. Our program can prepare you for further university studies, travels abroad, transitions into the workforce, or advancement in your current career.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Japanese
● Associate in Arts, Emphasis in Spanish

Certificates
● Language Studies

Law and Policy
Gain marketable skills valued in a variety of fields in which a legal degree is not required, including human resources, finance, insurance, public policy, risk management, compliance, real estate, and city planning. The Law and Policy program can help set you apart from the competition while empowering you with strong critical thinking skills and legal knowledge.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Law and Policy

Management and Leadership
Learn the communication and leadership skills that can be applied across any profession. Our program can empower you with supervisory skills, organizational leadership and business management techniques, and strategies for informed decision-making, conflict negotiation, and human resource issues.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Management
● Organizational Management
● Retail Management

Certificates
● Business Administration Fastrack
● Human Resources Management
● Management
● Organizational Leadership
● Retail Management

Marketing
Gain the knowledge and skills needed to enter or advance your career in the field of marketing and sales. Learn to identify unmet customer needs and new opportunities, evaluate assets, and design value propositions that resonate. The Marketing program can prepare you for a wide range of careers driving success with proven marketing strategies.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Marketing and Sales

Certificates
● Marketing
● Social Media Marketing

Mathematics

Math plays an essential role in our world. If you have a head for numbers and an interest in how math concepts describe real-world phenomena and make important predictions, the Mathematics program can prepare you for further studies leading to careers in a variety of fields, including finance, data science, research, and education.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Mathematics

Music Industry Studies

Do you have a passion for music? Our program can prepare you for a range of careers in music, disc jockeying, and audio production by providing you with a strong foundation in commercial music and technical skills with sound design, recording, and engineering.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Audio Production Technologies

Certificates
● Music Industry Studies: Audio Production Technologies

Music Performance

If you've dreamed of attending music school or performing as a professional, our program can help you hone your skills as a performer and prepare you to transfer to a four-year institution. Areas of emphasis include choral, instrumental, guitar, and popular music performance.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Fine Arts, Emphasis in Music

Musical Theatre

If you have a passion for performing and a desire to master your craft, the Musical Theatre program will provide you with a foundation in performance and production practices in music, theatre, and dance. Our program can prepare you for admission into a performing arts degree program at a four-year university.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Fine Arts, Emphasis in Musical Theatre

Networking and Security

Turn your interest in computers and internet skills into an exciting and profitable career maintaining and ensuring network security. Networking and IT security professionals are indispensable in keeping computer networks protected and users safe, and there is high demand for specialists with IT security skills.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Cybersecurity
● Cybersecurity Management and Information Security
● Network and Systems Administration

Certificates
● Amazon Web Services Cloud Associate
● Amazon Web Services Cloud Practitioner
● Amazon Web Services Cloud Specialist
● Cisco Certified Network Professional: Enterprise
● Cisco Certified Network Professional: Enterprise Advanced Routing and Services
● Cisco Certified Network Professional: Enterprise

Core
● Cisco Network Administration and Security
● Cisco Network Administration: CCNA
● Cisco Network Administration: CCNP
● Critical Infrastructure
● Cyber Engineering
● Cyber Operations
● Cybersecurity Fundamentals
● Cybersecurity Management and Information Security
● Information Security Technology
● Linux Associate
● Linux System Administration
● Microsoft Desktop Associate
● Microsoft System Administration
● Red Hat Linux Administrator
● Red Hat Linux Engineer
● VMware Foundations
● VMware Network Administrator
● VMware Systems Administrator

Nursing

Our Nursing program, approved by the Arizona State Board of Nursing and the Accreditation Commission for Education in Nursing, can equip you with the fundamental skills necessary to be successful as a nurse assistant, licensed practical nurse (LPN), or as a registered nurse (RN) in a variety of acute, long-term, and community-based healthcare settings.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Nursing

Certificates
● Fast Track Practical Nursing
● Nurse Assisting

Nutrition and Dietetics

If you're passionate about food, nutrition, and health, our program can prepare you for a career focused on improving the well-being and healthy lifestyles of others. If you wish to continue your education and specialize in nutrition, this program provides the first two years of a four-year university curriculum.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer7
● Associate in Arts, Emphasis in Nutritional Science

Paramedicine

A paramedic impacts the lives of people in an emergency when they need them most. If you're looking to become a healthcare professional who provides frontline care to the sick and injured, a career as a paramedic or emergency medical technician (EMT) could be your calling.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Paramedicine

Certificates
● Community Health Paramedicine
● Critical Care Paramedicine
● Paramedicine
● Tactical Emergency Casualty Care

Philosophy

Gain valuable skills that can transfer to future studies in other disciplines, such as law, social sciences, the humanities, and public policy. Our program can help open your mind to understanding diverse world views while giving you the tools to examine the human condition in depth.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Philosophy

Photography

Learn the artistic, technical, and business side of photography. Our program can prepare you for a variety of professional positions, including freelance work and photo editing, in addition to further studies.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Photography

Certificates
● Commercial and Freelance Photography

Physics
Take the first step toward a career in physics. Our program is designed to provide you with the first two years of a four-year curriculum—preparing you for future studies that can lead to career paths that include teaching, medicine, patent law, science writing, energy policy, and government.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Science, Emphasis in Physics

Political Science
Take your passion for politics to a new level. Our program can prepare you for a career in law, journalism, government, and research—occupational fields that require effective communication skills and the ability to define, defend, and critique political concepts, systems, and theories.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Political Science

Programming and Mobile Applications
Prepare for a high-growth career as a software developer. Our program can empower you with the skills and training you need for a potentially lucrative and fulfilling career in the business technology field writing programs and designing algorithms.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Programming and Systems Analysis

Certificates
● Programming and Systems Analysis Level I
● Programming and Systems Analysis Level II

Psychology
Take the first step toward a truly limitless future. Our program can prepare you for unlimited career paths—equipping you with the skills and knowledge needed to think critically, communicate effectively, solve problems, and generate new ideas.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Psychology

Certificates
● Developmental Disabilities Specialist

Real Estate and Real Estate Appraisal
Take the first step toward a lucrative career with built-in flexibility and social engagement. Our program can equip you with the skills and training needed to manage real estate and real estate appraisal. Upon program completion, you will be prepared to become a real estate agent or a certified or licensed residential appraiser.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Certificates
● Commercial Real Estate
● Real Estate: Prelicense

Religious Studies
Explore the cultural, social, and psychological aspects of religion, including the history and practice of various world religions. Our program can empower you with the analytical and critical thinking

skills needed for a career or future academic studies in theology.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Religious Studies

Do I have to be religious to study religion?
Students often ask, "Do I have to be religious to study religion?" The short answer is "No."

Religious Studies is the secular, academic study of the world's religions utilizing disciplines such as history, anthropology, psychology, sociology, etc., as lenses through which to study religion. Regardless of your ultimate job or career goal, religious literacy (the understanding of others' religious traditions and practices) is valuable for facilitating cooperative and collaborative relationships with peers and colleagues not only in workplaces but in our local communities as well.

Our courses in Religious Studies allow you to focus on a wide variety of world religions to better understand and appreciate religious traditions, as well as the impacts of their respective cultural contexts. In short, they enable students to discover dynamic ways of thinking through global perspectives, become a scholar of wisdom through the study of sacred texts, and explore hidden worlds found in ritual, symbolism, and art. A truly interesting and useful field, this program is ready for students like you. Make it happen today.

Social Work

Make a real difference in the lives of vulnerable populations, including those affected by war, crime, domestic violence, mental illness, and refugee resettlement. Our program can prepare you for a rewarding career in social work coming to the aid of individuals and families to create a safer and more equitable community.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Social Work

Sociology

Take the first step toward a purposeful career in sociology. Our program can prepare you for a variety of career paths, including research, education, and marketing, conducting research to highlight areas of inequalities, such as class, gender, race, and age.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Sociology

Sustainability

Explore sustainable development at all levels and the best uses of our planet's resources. Our program can prepare you for various professional roles, including sustainability specialists, compliance managers, environmental scientists, and soil and water conservationists, or boost your career in adjacent fields, such as landscape architecture or urban planning.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Sustainability and Environmental Studies

Certificates
● Sustainability

Sustaining and Advancing Indigenous Nations

Explore the political, legal, economic, and social status of Indigenous people and their respective communities, both past and present, and the impact of U.S. laws and American Indian policy on sovereignty and development of indigenous lands.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in American Indian Studies

Theatre

Gain the foundational skills that are necessary for a career in film or theatre, including production design and technique. Aside from the experience you'll gain, you will develop a portfolio of academic work to showcase throughout your artistic career.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Fine Arts, Emphasis in Theatre

Certificates
● Technical Theatre: Audio Technician
● Technical Theatre: Costuming
● Technical Theatre: Stage Crew Technician

Video Game Production

Learn the art and science of video game production. Our program can equip you with the skills needed to plan, design, and produce video games—preparing you for professional roles that include production artist, character animator, and game writer.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Video Game Production

Certificates
● Video Game Production: Audio and Sound
● Video Game Production: Coding and Scripting
● Video Game Production: Game Art
● Video Game Production: Game Narrative

Web Design and Development

Learn how to design and create engaging websites. Our program provides a foundation in graphic design, storyboarding, scripting, UI/UX, content management systems, and e-commerce solutions—preparing you for a rewarding career in a rapidly growing field.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Web Design/Development

Certificates
● Adobe Foundations: Animation and Graphics Production
● Web App Development
● Web Design
● Web Development
● Web Foundations

Women and Gender Studies

Explore cultural and global issues of equality. The Women and Gender Studies program can prepare you to think critically, analyze problems, and communicate effectively—highly valued skills in fields that include education, social work, human resources, and law.

Students at any Maricopa Community College may need to complete courses at more than one of our colleges.

Associate Degrees and University Transfer
● Associate in Arts, Emphasis in Women and Gender Studies

Degrees and Certificates

All information published is subject to change without notice. Every effort has been made to ensure the accuracy of information presented, but based on the dynamic nature of the curricular process, course and program information is subject to change in order to reflect the most current information available.

Bachelor of Arts (BA)

Elementary Education and Special Education

Major: 9301
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: BA
Total Credits: 120
Program Availability: GC, PV, RS
Field of Interest: Education
Instructional Council: Education
GPA: 2.5

CIP Code: 13.1017
SOC Code: Upon completion of a bachelor`s degree and state certification, students may pursue a career as:
25-2012.00 Kindergarten Teachers, Except Special Education
25-2021.00 Elementary School Teachers, Except Special Education
25-2055.00 Special Education Teachers, Kindergarten
25-2056.00 Special Education Teachers, Elementary School
25-2058.00 Special Education Teachers, Secondary School

Upon completion of a graduate degree, students may pursue a career as:
11-9032.00 Educational Administrators, Kindergarten through Secondary
21-1012.00 Educational, Guidance, and Career Counselors and Advisors
25-9031.00 Instructional Coordinators

Description: The Bachelor of Arts (BA) in Elementary Education and Special Education (BAEE/SPED) provides an experiential four-year curriculum in Elementary Education (K-8) and Special Education (K-12). This program prepares pre-service teachers to educate diverse learners. Upon completion of the BAEE/SPED, a student will be eligible to seek the Standard Arizona Teaching Certificate in Elementary Education (K-8), Standard Arizona Teaching Certificate in Special Education (K-12), and the Structured English Immersion Endorsement.

Program Learning Outcomes

1. Synthesize relevant theories and educational practices to create, implement, and evaluate developmentally appropriate instruction that meets the needs of individual learners. (COM225, EDU204, EDU221, EDU222, EDU225, EDU230, EDU337, EDU367, EDU368, EDU372, EDU427, EDU428, EDU429, EDU431, EDU477, EDU487, MAT256, MAT257, SPE341, SPE343, SPE376, SPE409, SPE422, SPE424, SPE477, [CS], [FYC], [HU], [MA], [SB], [SG/SQ])
2. Collaborate with others to create and manage a safe, equitable, and inclusive learning environment for diverse learners. (COM225, EDU204, EDU221, EDU222, EDU225, EDU230, EDU337, EDU367, EDU368, EDU372, EDU427, EDU428, EDU429, EDU431, EDU477, EDU487, MAT256, MAT257, SPE341, SPE343, SPE376, SPE409, SPE422, SPE424, SPE477, [CS], [FYC], [HU], [MA], [SB], [SG/SQ])
3. Analyze data from multiple methods of assessment to monitor learning and guide instruction of general education and special education learners. (COM225, EDU204, EDU221, EDU222, EDU225, EDU230, EDU337, EDU367, EDU368, EDU372, EDU427, EDU428, EDU429, EDU431, EDU477, EDU487, MAT256, MAT257, SPE341, SPE343, SPE376, SPE409, SPE422, SPE424, SPE477, [CS], [FYC], [HU], [MA], [SB], [SG/SQ])
4. Manage the creation and implementation of Individual Educational Programs (IEPs) and 504 plans as necessary for the optimal integration and growth of learners with diverse abilities. (COM225, EDU204, EDU221, EDU222, EDU225, EDU230, EDU337, EDU367, EDU368, EDU372, EDU427, EDU428, EDU429, EDU431,

EDU477, EDU487, MAT256, MAT257, SPE341, SPE343, SPE376, SPE409, SPE422, SPE424, SPE477, [CS], [FYC], [HU], [MA], [SB], [SG/SQ])

5. Collaborate with learners, families, colleagues, and community members in a way that demonstrates professional and ethical standards of behavior. (COM225, EDU204, EDU221, EDU222, EDU225, EDU230, EDU337, EDU367, EDU368, EDU372, EDU427, EDU428, EDU429, EDU431, EDU477, EDU487, FYE101, FYE103, MAT256, MAT257, SPE341, SPE343, SPE376, SPE409, SPE422, SPE424, SPE477, [CS], [FYC], [HU], [MA], [SB], [SG/SQ])
6. Practice culturally relevant pedagogy that encompasses social-emotional, relational, and cognitive aspects of teaching culturally and linguistically diverse students. (COM225, EDU204, EDU221, EDU222, EDU225, EDU230, EDU337, EDU367, EDU368, EDU372, EDU427, EDU428, EDU429, EDU431, EDU477, EDU487, MAT256, MAT257, SPE341, SPE343, SPE376, SPE409, SPE422, SPE424, SPE477, [CS], [FYC], [HU], [MA], [SB], [SG/SQ])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students must complete the lower-division courses with a cumulative GPA of 2.50 or better and upper-division courses with a cumulative GPA of 3.00 or better.

MAT256 (Investigating Quantity: Number, Operations and Numeration Systems) requires an understanding of algebraic concepts that are not among the learning outcomes of MAT14+ (College Mathematics), so to ensure that a student is adequately prepared to be successful in MAT256, prerequisites have been established based on course placement. A student who tests into MAT14+ or lower must take MAT115 (College Algebra Prep) or MAT12+ (Intermediate Algebra) as well as MAT14+ prior to MAT256. Students who test into MAT15+ (College Algebra/Functions) can meet MAT256 prerequisites by taking MAT15+ or MAT14+.

Arizona state teaching certification requirements include courses on the constitutions of the United States and Arizona. Taking GCU/POS113 (United States and Arizona Social Studies) for [SB] fulfills this requirement completely. Students who instead take HIS103 (United States History to 1865) or POS110 (American National Government) for [SB] should consider taking POS221 (Arizona Constitution) as a Content Area Elective so they have completed study of both constitutions. POS220 (U.S. and Arizona Constitution) meets state certification requirements for both constitutions but does not meet [SB].

As indicated in their course notes, students will be required to complete field experiences in K-12 classrooms in select courses. Field experiences are only available during the traditional K-12 public school calendars.

Prior to taking upper-division (300 and 400 level) coursework, students must complete or provide proof of the following:

OPTION 1: Students admitted into the program without prior credits

1. Formal application is required to begin upper-division coursework.
2. Completion of all lower division coursework as specified.
3. Minimum 2.50 cumulative grade point average (GPA). Refer to the program notes for details.
4. Valid Identity Verified Prints (IVP) Fingerprint Clearance Card.
5. Names of two professional or academic references (evaluation forms will be provided to the references directly as a part of the application).
6. Passing score on the Arizona Educator Proficiency Assessments (AEPA), Elementary Subtest 1 and 2.

OPTION 2: Students admitted into the program who have completed the MCCCD Associate in Arts, Elementary Education (AAEE) degree.

1. Formal application is required to begin upper-division coursework.
2. Minimum 2.50 cumulative grade point average (GPA). Refer to the program notes for details.

3. Valid Identity Verified Prints (IVP) Fingerprint Clearance Card.
4. Names of two professional or academic references (evaluation forms will be provided to the references directly as a part of the application).
5. Passing score on the Arizona Educator Proficiency Assessments (AEPA), Elementary Subtest 1 and 2.

OPTION 3: Students who have completed the Arizona General Education Curriculum (AGEC) but have not completed the AAEE.

1. Formal application is required to begin upper-division coursework.
2. Completion of MAT256, MAT257, EDU221, and (EED222 or EDU222).
3. Completion of the Arizona Constitution and United States Constitution course(s). Refer to the program notes for details.
4. Minimum 2.50 cumulative grade point average (GPA). Refer to the program notes for details.
5. Valid Identity Verified Prints (IVP) Fingerprint Clearance Card.
6. Names of two professional or academic references (evaluation forms will be provided to the references directly as a part of the application).
7. Passing score on the Arizona Educator Proficiency Assessments (AEPA), Elementary Subtest 1 and 2.

Students admitted into the program with transfer credit, but who have not earned the Arizona General Education Curriculum (AGEC), will have prior coursework reviewed and may receive course substitutions on a case-by-case basis as outlined in MCCCD Administrative Regulation 2.3.13.

Teacher candidates are encouraged to apply to enroll in the upper-division (300 and 400 level) coursework if they are within fifteen (15) credits of completing lower-division requirements and/or have yet to achieve a passing score on the Arizona Educator Proficiency Assessments (AEPA)/NES Elementary Subtest 1 and 2 (candidates must have attempted the AEPA/NES Elementary Subtest 1 and 2.)

If a student was dismissed from any program for issues relating to academic integrity and/or professional responsibility and ethical standards, the Program reserves the right to deny enrollment or re-enrollment for the upper-division (300 and 400 level) coursework.

Conditional Enrollment into Upper-Division Coursework (300-400): Teacher candidates may be conditionally enrolled in the upper-division coursework if they have not met all admittance requirements, which may include the following:

AEPA/NES Test Scores - If teacher candidates have taken but have yet to pass the Arizona Educator Proficiency Assessments (AEPA)/NES, Elementary Subtest I and II. Conditionally admitted students must earn a passing score on Subtest I and II by the end of their first semester in the program or with permission for an extension. Teacher candidates may not be permitted to Student Teach until passing scores are submitted or permission for an extension has been provided.

Coursework - Teacher candidates who have not completed all prerequisite coursework should work closely with their advisors and program administrators to complete all prerequisite and required coursework. Failure to meet all coursework and program requirements may delay graduation and the Institutional Recommendation (IR) needed for certification.

BAEE Graduation Requirements: Students who have been enrolled in upper-division courses under option 3 (admitted with AGEC but without the AAEE), as outlined above, are not required to complete EDU230 or to take the specific courses outlined in the AGEC or Restricted Elective section of this curriculum.

Licensing Disclosures: The Bachelor of Arts in Elementary Education and Special Education degree is designed to meet the coursework requirements for a certified elementary education, K-8 teacher and special education in mild/moderate disabilities, K-12 teacher in the State of Arizona. This degree is not available for students residing outside the state of Arizona.

Program Prerequisites

None

Required Courses

Credits: 77-79

Students must complete the following lower-division courses with a minimum cumulative grade point average (GPA) of 2.50.

+ EDU204 Fine Arts in Educational Settings 3
EDU221 Introduction to Education 3
EDU222 Introduction to the Exceptional Learner 3
EDU225 Professionalism and Ethics in Education 1
EDU230 Cultural Diversity in Education 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

+ MAT256 Investigating Quantity: Number, Operations and Numeration Systems 4
+ MAT257 Investigating Geometry, Probability and Statistics 4

Students must complete the following upper-division courses with a minimum cumulative grade point average (GPA) of 3.00.

+ EDU337 Structured English Immersion in Grades K-8 3
+ EDU367 Science of Reading with Systematic Phonics Instruction in Grades K-8 3
+ EDU368 Reading Instructional Practices, Interventions, and Assessments in Grades K-8 3
+ EDU372 Educational Psychology for Teachers (Grades K-12) 3
+ EDU427 Social Studies Teaching Methods and Pedagogical Strategies for Grades K-8 3
+ EDU428 English Language Arts Teaching Methods and Pedagogical Strategies for Grades K-8 3
+ EDU429 Science Teaching Methods and Pedagogical Strategies for Grades K-8 3
+ EDU431 Mathematics Teaching Methods and Pedagogical Strategies for Grades K-8 3
+ EDU477 Student Teaching: Elementary (Grades K-8) 6
+ EDU487 Professional Seminar: Current Trends in Elementary and Special Education 2

+ SPE341 Special Education: Language Development and Disorders 2
+ SPE343 Special Education: Effective Collaboration and Communication Practices 1
+ SPE376 Special Education: Classroom Management and Behavioral Analysis 3
+ SPE409 Special Education: Law, Policy, and Practice 3
+ SPE422 Special Education: Mild to Moderate Disabilities 4
+ SPE424 Special Education: Assessment and Eligibility of Exceptional Learners 4
+ SPE477 Student Teaching: Special Education (Mild to Moderate Disabilities) 6

Restricted Electives

Credits: 8

A minimum of eight (8) credits are required to satisfy the Electives for Arizona Professional Teacher Standards: three (3) credits in an additional Education course and a minimum of five (5) credits in Content Area Electives.

Courses must transfer to all public Arizona universities as Elective Credit, Departmental Elective, or Equivalent to a university course as indicated in the Arizona Course Equivalency Guide in effect when the course is taken. Courses identified as Non-transferable in the Arizona Course Equivalency Guide cannot be used to satisfy this requirement.

Select one (1) additional EDU course (except EDU250; may not select courses listed in Required Courses):

Recommended:
EDU220 Introduction to Serving English Language Learners (ELL) (3) OR
EDU236 Classroom Relationships (3) OR
EDU/HUM/STO292 The Art of Storytelling (3) 3

Choose any combination from the following list of courses and prefixes to total a minimum of five (5) credits of additional coursework. Course(s) selected must be different from those used to fulfill a requirement of the AGEC-A and/or those used to fulfill Required Courses.

Content Area Electives: Select a minimum of five (5) credits from the following:
ARH+++ Any ARH Art Humanities course(s) 3
ART+++ Any ART Art course(s) 3
BPC+++ Any BPC Business-Personal Computers course(s) 3
CFS/ECH176 Child Development 3
CFS205 Human Development 3
CIS+++ Any CIS Computer Information Systems course(s) 3
ECN+++ Any ECN Economics course(s) 3
EDU+++ Any EDU Education course(s) 3 (except EDU204, EDU221, EDU222, EDU225, EDU230, and EDU250)
EED215 Early Learning: Health, Safety, Nutrition and Physical Fitness 3
ENG+++ Any ENG English course(s) 3
ENH+++ Any ENH English Humanities course(s) 3
GCU+++ Any GCU Cultural Geography course(s) 3
GPH+++ Any GPH Physical Geography course(s) 3
HIS+++ Any HIS History course(s) 3
MAT+++ Any MAT Mathematics course(s) higher than MAT142 (except MAT256 and MAT257) 3-5
MHL+++ Any MHL Music: History/Literature course(s) 3
MTC+++ Any MTC Music: Theory/Composition course(s) 3
POS+++ Any POS Political Science course(s) 3
THE+++ Any THE Theatre course(s) 3
THF+++ Any THF Theatre and Film course(s) 3
THP+++ Any THP Theatre Performance/Production course(s) 3
Any Foreign Language course 3-5
Any Natural Science course 1-4

Arizona General Education Curriculum (AGEC)

AGEC-A
Credits: 35-38
A single course with an [HU], [SB], [L], or [SG]/[SQ] designation may also be used to satisfy the Oral Communication, Critical Reading, or Awareness Area ([C], [G] and/or [H]) requirement(s).

First-Year Composition [FYC]
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Literacy and Critical Inquiry [L]
Credits: 3
+ COM225 Public Speaking 3

Mathematics [MA]
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6)
OR
+ MAT187 Precalculus (5) OR
+ MAT188 Precalculus (4) OR
Higher approved general education course in the Mathematical Applications [MA] area for which MAT15+ OR MAT187 OR MAT188 is a prerequisite (3-5) 3-6

Note: MAT182, MAT206, MAT256, MAT257 do NOT meet this requirement.

Computer/Statistics/Quantitative Applications [CS]
Credits: 3
BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) OR
EED/EDU115 Digital Literacy for Teaching and Learning in Education (3) 3

(EED/EDU115 recommended)

Humanities, Arts and Design [HU]
Credits: 6
EDU/ENH291 Children`s Literature (3) OR
ENH110 Introduction to Literature (3) OR
+ ENH241 American Literature Before 1860 (3) OR
ENH242 American Literature After 1860 (3) OR
+ HUM250 Ideas and Values in the Humanities: Early Civilizations to the Renaissance (3) OR
+ HUM251 Ideas and Values in the Humanities: Renaissance to the Contemporary World (3)
AND
ARH100 Introduction to Art (3) OR
ARH101 Art from Prehistory Through Middle Ages (3) OR
ARH102 Art from Renaissance to Modernism (3) OR
DAH100 Introduction to Dance (3) OR
DAH201 Dance, Culture, and Global Contexts (3) OR
DAH250 Dance in Popular Culture (3) OR
MHL140 Survey of Music History (3) OR
MHL145 American Jazz and Popular Music (3) OR
MHL146 Survey of Broadway Musicals (3) OR
MHL153 Rock Music and Culture (3) OR
THE111 Introduction to Theatre (3) OR
+ THE220 Modern Drama (3) 6
(EDU/ENH291 recommended)

Social-Behavioral Sciences [SB]
Credits: 6
Select one (1) of the following US History/Government courses. These courses satisfy the United States Constitution requirement for state teacher certification.
GCU/POS113 United States and Arizona Social Studies (3) OR
HIS103 United States History to 1865 (3) OR
POS110 American National Government (3)
AND
CFS205 Human Development (3) OR
CFS/ECH176 Child Development (3) OR
ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
GCU121WG World Geography: People, Places, and Culture (3) OR
HIS104 United States History 1865 to Present (3) OR
PSY101 Introduction to Psychology (3) 6
(CFS/ECH176 recommended)

Natural Sciences [SG]/[SQ]
Credits: 8
The lecture course(s) selected for Natural Sciences must include or be accompanied by the corresponding laboratory course for a total of four (4) credits each. At least four (4) credits must be designated as [SQ]. Eight (8) credits of [SG] will not satisfy this requirement.

Life Sciences: Select four (4) credits of [SQ] or [SG] in any BIO Biology course(s) (4)
AND
Physical Sciences or Earth/Space Sciences: Select four (4) credits of [SQ] or [SG] from one of the following prefixes:
AGS+++ Any AGS Agricultural Science course(s) (4) OR
ASM+++ Any ASM Anthropology course(s) (4) OR
AST+++ Any AST Astronomy course(s) (4) OR
CHM+++ Any CHM Chemistry course(s) (4) OR
GLG+++ Any GLG Geology course(s) (4) OR
GPH+++ Any GPH Physical Geography course(s) (4) OR
PHS+++ Any PHS Physical Science course(s) (4) OR
PHY+++ Any PHY Physics course(s) (4) 8

Awareness Areas
Credits: 0-3
These requirements may be shared with some courses used to meet AGEC Requirements or Restricted Electives area.

Cultural Diversity in the US [C]
Credits: 0
Met by EDU222 and EDU230 in Required Courses area.

Historical/Global Awareness [H]/[G]
Credits: 0-3
Any approved general education course with the Historical [H] or Global [G] awareness area designation.

MCCCD Additional Requirements

MCCCD Additional Requirements
Credits: 0

Courses in this area may also be applied to the AGEC Core Requirements. To minimize total credits required for degree and maximize transferable credits, it is recommended that courses be selected that meet more than one requirement wherever possible.

Oral Communication (COM)
Credits: 0
Met by COM225 in the Literacy and Critical Inquiry [L] area.

General Electives

Select courses 100-level or higher to complete a minimum of 120 semester credits. Consult with a faculty advisor, program director, and/or academic advisor to identify additional coursework that best aligns with academic and professional goals.

MCCCD Governing Board Approval Date: August 23, 2022

Associate in Applied Science (AAS)

Accounting

Major: 3149
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 62-73
CIP Code: 52.0301
Primary/Initiating College: Phoenix College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
13-2011.01 Accountants
43-3011.00 Bill and Account Collectors
43-3031.00 Bookkeeping, Accounting, and Auditing Clerks
13-2031.00 Budget Analysts
13-2041.00 Credit Analysts
13-2081.00 Tax Examiners and Collectors, and Revenue Agents
13-2082.00 Tax Preparers

Description: The Associate in Applied Science (AAS) in Accounting program is designed to provide fundamental skills for individuals planning to enter the field of accounting. Possible entry-level jobs for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, payroll clerk, credit clerk, bookkeeper, accounting intern, tax preparation or comparable positions. This program may prepare students for certification in Certified Bookkeeper (CB), Enrolled Agent (EA), and Certified Payroll Professional (CPP). Certificates of Completion (CCL) in Accounting and Enrolled Agent are available.

Learning Outcomes

1. Apply effective oral, written, and visual business communication skills. (GBS120, GBS233, [FYC], (COM))
2. Use basic mathematics and accounting principles to report the financial position of an organization. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC212, ACC219, ACC221, ACC222, ACC230, ACC240, ACC+++++, GBS131, GBS220, GBS221, GBS261, [MA])
3. Apply current technology to specific business tasks. (ACC115, CIS105, CIS114DE)
4. Evaluate the legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (ACC111, ACC121, ACC221, ECN211, ECN212, GBS151, GBS205, MGT101, MGT175, MGT229, SBU200, [HU])
5. Demonstrate critical thinking through written and oral formats. (ACC+++++, GBS120, GBS151, GBS205, GBS220, GBS233, SBU200, [FYC], [HU], [SG/SQ], (COM),(CRE))
6. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, GBS205, MGT101, MGT175, MGT229)
7. Apply principles and practices of accounting to analyze and interpret general purpose financial statements. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC212, ACC219, ACC221, ACC222, ACC230, ACC240, ACC+++++)
8. Apply basic rules of financial accounting to business transactions. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC212, ACC219, ACC221, ACC222, ACC230, ACC240, ACC+++++)
9. Apply basic rules of managerial accounting to business decision making. (ACC212, ACC240)
10. Apply appropriate procedures to prepare individual, partnership, and corporate taxes, including tax reporting for income, payroll, sales, and personal property. (ACC105, ACC121, ACC221, ACC222)
11. Demonstrate an understanding of compliance in accounting, reporting and tax. (ACC105, ACC121, ACC221, ACC222, GBS205)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites

None

Required Courses

Credits: 34-39

ACC111 Accounting Principles I (3) AND
+ ACC230 Uses of Accounting Information I (3) AND
+ ACC240 Uses of Accounting Information II (3)
OR
ACC111 Accounting Principles I (3) AND
+ ACC112 Accounting Principles II (3) AND
+ ACC212 Managerial Accounting (3)
OR
ACC211 Financial Accounting (3) AND
+ ACC212 Managerial Accounting (3) 6-9

ACC105 Payroll, Sales and Property Taxes (3) OR
+ ACC222 Payroll Accounting (3) 3

ACC115 Computerized Accounting 3

ACC121 Individual Tax Preparation (3) OR
+ ACC221 Tax Accounting (3) 3

+ ACC219 Intermediate Accounting I 3

CIS114DE Excel Spreadsheet 3
CIS105 Survey of Computer Information Systems 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

GBS151 Introduction to Business 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3

GBS120 Workplace Communication Skills (3) OR
+ GBS233 Business Communication (3) 3

Restricted Electives

Credits: 6

Students must select six (6) credits from the list below:
ACC+++ Any additional ACC Accounting course(s) except ACC111, ACC112, ACC211, ACC212, ACC230, ACC240 0-6
GBS131 Business Calculations 3

+ GBS220 Quantitative Methods in Business 3
+ GBS221 Business Statistics 3
GBS261 Investments I 3

MGT101 Techniques of Supervision (3) OR
MGT175 Business Organization and Management (3) OR
MGT229 Management and Leadership I (3) 3

General Education Requirements

General Education Requirements
Credits: 23-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment 0-3

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design [HU] area. 3

Social-Behavioral Sciences
Credits: 3
ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
SBU200 Society and Business (3) 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: June 28, 2022

Administration of Justice Studies

Major: 3181
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 61-65
CIP Code: 43.0104
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administrative of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
23-1012.00 Judicial Law Clerks
33-1012.00 First-Line Supervisors of Police and Detectives
33-3011.00 First-Line Supervisors of Correctional Officers
33-3012.00 Correctional Officers and Jailers
33-3021.00 Detectives and Criminal Investigators
33-3021.01 Police Detectives
33-3021.02 Police Identification and Records Officers
33-3021.03 Criminal Investigators and Special Agents
33-3051.04 Customs and Border Protection Officers
33-3021.06 Intelligence Analysts
33-3051.00 Police and Sheriff`s Patrol Officers
33-3051.01 Police Patrol Officers
33-3052.00 Transit and Railroad Police
33-9032.00 Security Guards
43-5031.00 Police, Fire, and Ambulance Dispatchers

Description: The Associate in Applied Science (AAS) in Administration of Justice Studies provides in-depth preparation for students desiring to be practitioners or pursue continued education and advancement in several fields including local and federal law enforcement, the courts, corrections, security, and investigations. The program also provides criminal justice practitioners with the opportunity to complete the Certificate of Completion (CCL) in Administration of Justice as well as one of five Certificates of Completion (CCLs) in Corrections, Homeland Security, Law Enforcement, Legal Studies, and Victimology. A transfer pathway in Criminal Justice is also available (Associate Arts (AA), Emphasis in Criminal Justice) as well as an Associate in Applied Science (AAS) in Forensics and related Certificates of Completion. Additionally, a transfer pathway is also available for the Bachelor of Applied Science (BAS) Public Safety Administration.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS113, AJS123, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS200, AJS201, AJS205, AJS210, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS270, AJS275, AJS290BN, AJS+++++, (COM), (CRE), [FYC], [MA], [SG], [SQ])
2. Solve problems through logical and sound reasoning. (AJS101, AJS109, AJS113, AJS123, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS201, AJS205, AJS210, AJS212, AJS225, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS260, AJS270, AJS275, AJS290BN, (COM), (CRE), [FYC], [MA], [SG], [SQ])
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS113, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS201, AJS205, AJS210,

AJS212, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS270, AJS275, AJS290BN, (COM), (CRE), [FYC], [MA], [SG], [SQ])

4. Communicate in the language common to the criminal justice system. (AJS101, AJS109, AJS113, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS201, AJS205, AJS210, AJS212, AJS225, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS270, AJS275, AJS290BN, (COM), (CRE), [FYC])
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS113, AJS123, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS200, AJS201, AJS210, AJS212, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS290BN, (COM), (CRE), [FYC])
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS101, AJS109, AJS113, AJS123, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS200, AJS201, AJS210, AJS212, AJS225, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS260, AJS290BN, (CRE), [FYC], [MA])
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS113, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS200, AJS201, AJS210, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS270, AJS275, AJS290BN, (COM), (CRE), [FYC], [MA], [SG], [SQ])
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS109, AJS113, AJS119, AJS123, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS201, AJS210, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS260, AJS270, AJS275, AJS290BN, (COM), (CRE), [FYC], [SG], [SQ])
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS109, AJS113, AJS119, AJS123, AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS162, AJS195, AJS201, AJS210, AJS230, AJS240, AJS255, AJS/EMT/FSC258, AJS260, AJS270, AJS275, AJS290BN, (CRE), [FYC], [SG], [SQ])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 28-30

AJS101 Introduction to Criminal Justice 3
AJS109 Substantive Criminal Law 3
AJS123 Ethics and the Administration of Justice 3

AJS200 Current Issues in Criminal Justice (3) OR
AJS/EMT/FSC258 Victimology and Crisis Management in Public Safety (3) 3

AJS212 Juvenile Justice Procedures 3
AJS225 Criminology 3
AJS230 The Police Function 3
AJS240 The Correction Function 3
AJS260 Procedural Criminal Law 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 12-13

Complete 12-13 credits from the course options below. Some of these options fulfill requirements for one or more related certificates of completion (CCLs). Consult with an AJS faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.

AJS113 Criminal Justice Crime Control Policies and Practices 3
AJS119 Computer Applications in Justice Studies 3
AJS270 Community Relations 3

The following courses fulfill the requirements for the Corrections certificate (5776N):
AJS205 Effective Communication and Report Writing in Criminal Justice 3
AJS255 The Criminal Justice System Handling of the Mentally Ill 3
AJS275 Criminal Investigation I 3

The following course fulfills the requirements for the Crime Scene Investigation (5964) and Fingerprint Identification and Photography (5010N):
AJS290BN Courtroom Testimony Seminar 1

The following courses fulfill the requirements for the Homeland Security (5322N):
AJS/FSC139 Emergency Response to Terrorism 3
AJS/FSC147 Emergency Preparedness 3
AJS/FSC148 Fundamentals of Emergency Management 3
AJS/FSC149 Hazard Mitigation 3
AJS195 International and Domestic Terrorism 3

The following courses fulfill the requirements for the Law Enforcement certificate (5987N):
AJS205 Effective Communication and Report Writing in Criminal Justice 3
AJS275 Criminal Investigation I 3

The following courses fulfill the requirements for the Legal Studies certificate (5966N):
AJS201 Rules of Evidence 3
AJS205 Effective Communication and Report Writing in Criminal Justice 3
AJS210 Constitutional Law 3

The following courses fulfill the requirements for the Victimology certificate (5392N):
AJS162 Domestic Violence 3
AJS255 The Criminal Justice System Handling of the Mentally Ill 3

AJS+++++ Any AJS Administration of Justice Studies course not listed under the Required Courses area 3

General Electives

Credits: 0-6

Select additional courses 100-level or higher to complete the minimum total program credits required for this degree.

Select courses not already listed in Required Courses, Restrictive Electives, or General Education requirements. Consult with an AJS faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.

General Education Requirements

General Education Requirements
Credits: 16-22

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Any higher approved general education course in the Mathematics area 3-6

General Education Distribution
Credits: 4

Humanities, Arts and Design
Credits: 0
Met by AJS123 in the Required Courses area

Social-Behavioral Sciences
Credits: 0
Met by AJS101, AJS200, AJS225 or AJS/EMT/FSC/SWU258 Required Courses area

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

Recommended:
FOR105 Forensic Science: Physical Evidence (4) OR

FOR106 Forensic Science: Biological Evidence (4) OR
a course with the [SQ] or [SG] general education designation (4) 4

MCCCD Governing Board Approval Date: February 28, 2022

Administrative Professional

Major: 3680
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 62-70
CIP Code: 52.0401
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
43-6011 Executive Secretaries and Executive Administrative Assistants
43-6014 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive

Description: The Associate in Applied Science (AAS) in the Administrative Professional degree is designed to provide training for various office positions. The curriculum incorporates people and technological skills essential for job success. Includes instruction in business communications, office procedures, public relations, accounting, records management, and report preparation. A Certificate of Completion (CCL) in Administrative Professional is also available.

Learning Outcomes

1. Apply effective oral, written, and visual business communication skills. (GBS120, FYC, [COM])
2. Apply current technology to specific business tasks. (BPC110, CIS105, CIS113DE, CIS114DE, BPC101AA, BPC/OAS111AA, CIS133AA, CIS121AI, CIS121AE, CIS122AE, MKT110, CIS103, CIS214DE, CIS133DA, CIS117DM, ACC115)
3. Create advanced business documents, reports, spreadsheets, and presentations. (ACC115, BPC101AA, BPC110, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS214DE)
4. Demonstrate critical thinking through written and oral formats. (CIS214DE, GBS120, GBS151, GBS205, MGT251, FYC, [SG/SQ], (CRE))
5. Apply functions of modern business, including business principles and marketing to business situations. (GBS151, MKT271, MKT110)
6. Use the Internet as a communication tool and information resource. (BPC101AA, BPC110, CIS103, CIS105, CIS133AA, CIS133DA, GBS120, GBS205, MKT110)
7. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS151, GBS205, MKT110, SBU200)
8. Apply mathematics to common business calculations. (ACC+++, ACC115, BPC110, CIS105, CIS114DE, CIS214DE, GBS131, [MA])
9. Apply effective interpersonal and customer service skills in the workplace. (GBS120, MGT126, MGT251)
10. Apply professional behavior and ethics. (CIS105, GBS151, GBS205, MGT126, MGT251 SBU200, [HU])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 25-27

ACC115 Computerized Accounting 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

GBS120 Workplace Communication Skills 3
GBS131 Business Calculations 3
GBS151 Introduction to Business 3

Select three (3) of the following courses:
BPC101AA Introduction to Computers I 1
BPC/OAS111AA Computer Keyboarding I 1
CIS121AE Windows Operating System: Level I 1
CIS121AI Mac Operating System 1
+ CIS122AE Windows Operating System: Level II 1
CIS133AA Internet/Web Development Level I-A 1

Restricted Electives

Credits: 15

Students should select 15 credits from the following courses, except courses used to satisfy the Required Courses area, in consultation with a program advisor:

ACC+++ Any ACC Accounting prefixed course (except ACC115) 3
MGT251 Human Relations in Business 3
MGT126 Customer Service Skills and Strategies 3
CIS133DA Internet/Web Development: Level I 3
+ CIS214DE Advanced Excel Spreadsheet: Level II 3
CIS103 Introduction to Social Media 3
MKT110 Marketing and Social Networking 3
CIS117DM Microsoft Access: Database Management 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
MKT271 Principles of Marketing 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR

+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
Any approved general education course from the Critical Reading area OR
Equivalent as indicated by assessment.

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area OR
Equivalent as indicated by assessment.

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
SBU200 Society and Business 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: June 28, 2022

Animation and Time-Based Media

Major: 3199
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 69-77
CIP Code: 10.0304
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
27-1014.00 Special Effects Artists and Animators
27-1013.00 Fine Artists, Including Painters, Sculptors, and Illustrators
27-2012.01 Producers
27-1011.00 Art Directors

27-4032.00 Film and Video Editors
27-4031.00 Camera Operators, Television, Video, and Film

Upon completion of a bachelor`s degree, students may pursue a career as:
27-1011.00 Art Directors

Description: The Associate in Applied Science (AAS) in Animation and Time-Based Media is designed for the student who wishes to develop marketable skills in the area of digital animation and time-based media development. The program provides the student with an understanding of the equipment, operations, and knowledge of the terminology related to still image, video, and animation production. It allows for the exploration of personal interest in this area, prepares students for employment, and upgrades skills of those already employed in this field. Employment opportunities are included in video and multimedia fields, such as digital animator, media production, marketing, publishing, motion graphics, photography, storyboard artist, freelance artist designer, web and interactivity design, and multimedia artist/designer. A Certificate of Completion (CCL) in Animation and in Time-Based Media are also available.

Learning Outcomes

1. Create still, interactive, animation, and time-based images to project specifications demonstrating professional competence in research, planning, production, and presentation. ART111, ART116, ART131, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC174, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC202, AVC240, AVC/THO246, AVC270, AVC273AC, AVC279, AVC280AC, AVC284, AVC/MMT285, AVC287, AVC297AC, CIS133DA, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, MUC122, MUC191, MUC192, MUC195, MUC222, (COM), (CRE), [FYC], [MA], [SB], [SG], [SQ])
2. Apply critical thinking skills, the creative process, and historical and visual literacy to solve visual, technical, and conceptual problems. ARH101, ARH102, ARH115, ART111, ART116, ART131, COM145, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC174, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC/MMT190, AVC191, AVC192, AVC200, AVC240, AVC/THO246, AVC270, AVC279, AVC280AC, AVC284, AVC/MMT285, AVC287, AVC297AC, CIS133DA, CRW150, CRW172, CRW176, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, HUM/THF205, JRN213, MUC122, MUC191, MUC192, MUC195, MUC222, (CRE), [FYC], [SB], [SG], [SQ])
3. Critique narratives and complex still, interactive, time-based, and animation media to evaluate their effectiveness for diverse audiences. (ARH101, ARH102, ARH115, ART111, ART116, ART131, COM145, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC174, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC248, ART255, AVC280AC, AVC297AC, AVC270, AVC284, AVC/MMT285, AVC287, FMP215, FMT121, HUM/THF205, JRN213, (CRE), [FYC])
4. Apply industry standard tools and research to develop effective complex time-based media or animations and workflows. (ART131, COM145, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC202, AVC273AC, AVC240, AVC/THO246, AVC270, AVC279, AVC280AC, AVC284, AVC/MMT285, AVC287, AVC297AC, CIS133DA, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, JRN213, MUC191, MUC192, MUC122, MUC195, MUC222, (CRE), [FYC], [MA], [SB], [SG], [SQ])
5. Demonstrate professional and collaborative practices in diverse settings (e.g., communication, time management, organization, and legal and ethical considerations). (ARH101, ARH102, ARH115, ART111, ART116, COM145, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC248, ART255, AVC270, AVC273AC, AVC280AC, AVC284, AVC/MMT285, AVC287, AVC297AC, CIS133DA, CRW150, CRW172, CRW176, FMP114, FMP/FMT151, FMP204, FMT121, HUM/THF205, JRN213, (CRE), (COM), [FYC], [SB], [SG], [SQ])
6. Communicate narrative through animation, still, and time-based media while recognizing diverse opinions and cultural and individual differences. (ART111, ART116, ART131, COM145, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC192, AVC200, AVC240, AVC/THO246, AVC270, AVC273AC, AVC279, AVC284, AVC/MMT285, AVC287, AVC280AC, AVC297AC, CIS133DA, CRW150, CRW172, CRW176, FMP108, FMP114, FMP/FMT151, FMP204, FMP215,

FMT121, HUM/THF205, JRN213, MUC191, MUC192, MUC122, MUC195, MUC222, ARH101, ARH102, ARH115, (CRE), (COM), [FYC], [SB])

7. Create a collection of works (e.g., capstone, internships, and/or portfolio) that reflect professional competency. (ART111, ART116, ART131, COM145, AVC100, AVC138, AVC140, AVC142, AVC143, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC248, ART255, AVC270, AVC273AC, AVC280AC, AVC284, AVC/MMT285, AVC287, AVC297AC, CRW150, CRW172, CRW176, FMT121, JRN213, [FYC], [MA], [SG], [SQ])
8. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.

Program Prerequisites

None

Required Courses

Credits: 17-19

+ AVC169 2D Media Design (3) OR
+ AVC178 Digital Arts Studies (3) 3

+ AVC177 Digital Photographic Imaging I 3
+ AVC/MMT184 Digital Animation I 3
AVC100 Introduction to Digital Arts 1

AVC248 Design Self Promotion (3) OR
ART255 Art Marketing (3) 3

+ AVC280AC Digital Media Arts and Design Capstone (3) OR
+ AVC297AC Commercial Art Internship (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 30

Specialization 1: Digital Animation
Credits: 30

ART111 Drawing I 3
ART116 Life Drawing I 3

AVC150 Multimedia Storytelling (3) OR
+ AVC191 Storyboarding and Layout (3) OR
CRW150 Introduction to Creative Writing (3) OR
CRW172 Introduction to Comic Book Writing (3) OR
CRW176 Writing Narrative for Video Games (3) OR
FMT121 Story Theory for Film, Television and Media (3) 3

AVC170 3D Computer Design (3) OR
AVC/THO246 Digital Fabrication (3) 3

+ AVC/MMT185 3D Modeling and Animation I 3
+ AVC200 Animation and Interactivity 3
+ AVC240 Cinematography and Directing for 2D/3D Animation 3
+ AVC284 Digital Animation II 3
+ AVC/MMT285 3D Modeling and Animation II 3
+ AVC287 3D Character Animation 3

Specialization 2: Time-Based Media
Credits: 30

ART111 Drawing I (3) OR
ART116 Life Drawing I (3) 3

AVC142 Introduction to Digital Photography 3

AVC150 Multimedia Storytelling (3) OR
+ AVC191 Storyboarding and Layout (3) OR
FMT121 Story Theory for Film, Television and Media (3) OR
JRN213 Writing for Online (3) 3

+ AVC202 Media Productions I (3) OR
FMP108 Video Production (3) 3

+ AVC279 Media Productions II (3) OR
+ FMP215 Digital Video Effects (3) 3

MUC122 Sound Design I (3) OR
MUC191 Electronic Music I (3) 3

Complete 12 credits from courses not already selected in the Required Courses area. Students may choose from one emphasis or from among multiple emphasis areas according to their occupational needs.

Photography Emphasis
ART131 Photography I 3
+ AVC138 Commercial Photography I 3
+ AVC140 Portrait Photography 3
+ AVC143 Intermediate Digital Photography 3
+ AVC270 Digital Photographic Imaging II 3

Audio Emphasis
+ FMP114 Audio Production 3
MUC122 Sound Design I 3
MUC191 Electronic Music I 3
+ MUC192 Electronic Music II 3
MUC195 Studio Music Recording I 3
+ MUC222 Sound Design II 3

Media Production Emphasis
+ AVC/MMT190 Art of Web Site Design 3
+ AVC192 Advanced Web Presentation Design 3
AVC/THO246 Digital Fabrication 3
CIS133DA Internet/Web Development Level I 3
COM145 Digital Storybook 1

+ FMP/FMT151 TV and New Media Production 3
+ FMP204 Advanced Video Production 3
+ FMP215 Digital Video Effects 3

Motion Graphics Emphasis
ART116 Life Drawing I 3
+ AVC174 Electronic Color Principles 1
+ AVC/MMT185 3D Modeling and Animation I 3
+ AVC200 Animation and Interactivity 3
+ AVC240 Cinematography and Directing for 2D/3D Animation 3
+ AVC273AC Special Topics: Multimedia Arts 3
+ AVC287 3D Character Animation 3
+ FMP215 Digital Video Effects 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core:
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment. (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area. 3-6

Recommended for students planning to transfer to a four-year university:
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
ARH101 Art from Prehistory Through Middle Ages (3) OR
ARH102 Art from Renaissance to Modernism (3) OR
ARH115 History of Photography (3) OR
HUM/THF205 Introduction to Cinema (3) 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: February 25, 2025

Architectural and Civil CAD Technology

Major: 3503
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 60-67
CIP Code: 15.1302
Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Applied Technology
Instructional Council: Drafting
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-3011.01 Architectural Drafters
17-3011.02 Civil Drafters
17-3019.00 Drafters, All Other

Upon completion of a bachelor`s degree, students may pursue a career as:
17-1011.00 Architects
27-1021.00 Industrial Designer
17-1012.00 Landscape Architect

Description: The Associate in Applied Science (AAS) in Architectural and Civil CAD Technology degree is designed to prepare students for careers in Computer Aided Design (CAD) and Building Information Modeling (BIM) including, but not limited to, Structural, Mechanical, Electrical, or Civil Engineering offices; Landscape Architects or related fields. The goal of this program is to broaden design exposure and CAD technology skills. Students develop two-dimensional (2D) and three-dimensional (3D) drawings and models utilizing industry standard CAD and BIM software, and learn presentation methods and construction documentation conventions.

Learning Outcomes

1. Apply current standards in dimensioning, symbology, linetypes, lineweights, drawing notes for working drawings, design related drawings to read, interpret, and produce construction documents and portfolio-quality working drawings. (CAD100, CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD235, CAD267, CAD286, CAD287, CAD292, DFT126, CAD+++++, CIS+++++, ECE+++++)
2. Use the latest 2D, 3D, and 3D parametric modeling CAD software to develop technical drawings and solid models in a manner that is efficient and compliant with standard industry practices. (CAD100, CAD101,

CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD235, CAD267, CAD286, CAD287, CAD292, CAD+++++, CIS+++++, ECE+++++)

3. Utilize BIM concepts in project development. (CAD105, CAD106, CAD167, CAD186, CAD235, CAD267, CAD286, CAD287, CAD292, DFT126)
4. Employ the principles and theory of construction processes. (BLT263++, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD235, CAD267, CAD286, CAD287, CAD292, DFT126, PHY101, PHY111, [MA])
5. Apply construction industry codes and standards. (BLT263++, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD235, CAD267, CAD286, CAD287, CAD292, DFT126)
6. Produce sketches, multi-view layouts, sections, details, working drawings, and building components schedules. (CAD100, CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD235, CAD267, CAD286, CAD287, CAD292, DFT126).
7. Utilize traditional modeling techniques and 3D printing for project conceptualization. (CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD235, CAD267, CAD286, CAD287, CAD292)
8. Communicate with others in verbal and in written form to collaboratively solve problems within the discipline. (CAD+++++, CIS+++++, ECE+++++, (COM), (CRE), [FYC], [HU], [SB])
9. Use a fundamental understanding of scientific inquiry to solve basic problems within the discipline of design. (PHY101, PHY111)
10. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 28-30

BLT263++ Any Building Codes course 3
CAD100 Fundamentals of 2D AutoCAD 3
+ CAD101 Elements of CAD Graphics (AutoCAD) 3
+ CAD201 Three-Dimensional (3D) Modeling and Advanced CAD Techniques 3
+ CAD235 Modeling, Rendering and Animation for Technical Presentations 3
DFT126 Building Trades Blueprint Reading 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Students must also complete the courses in one of the following application specializations:

Specialization 1: Architecture
Credits: 9
+ CAD105 Fundamentals of Revit Architecture 3
+ CAD167 Architectural Drawings I (Revit): Residential CAD 3
+ CAD267 Architectural Drawings II (Revit): Commercial CAD 3

Specialization 2: Civil
Credits: 9
+ CAD106 Fundamentals of Civil 3D 3
+ CAD186 Site Development I 3
+ CAD286 Site Development II 3

Restricted Electives

Credits: 10-12

Students must select an additional ten to twelve (10-12) credit hours from the following course options such that the total credits for the degree is a minimum of 60 credits. Selected courses will not apply to both Required Courses and Restricted Electives areas.

+ CAD105 Fundamentals of Revit Architecture 3
+ CAD106 Fundamentals of Civil 3D 3
+ CAD145 Design Principles for Industry 3
+ CAD167 Architectural Drawings I (Revit): Residential CAD 3
+ CAD186 Site Development I 3
+ CAD267 Architectural Drawings II (Revit): Commercial CAD 3
+ CAD286 Site Development II 3
+ CAD287 Advanced Revit Techniques 3
+ CAD292 Current Developments in CAD Technology 1-4
(CAD292 may repeat up to four (4) times on different topics)

Courses selected from the following Restricted Electives options require prior approval by Department Advisor or Program Director
CAD+++++ Any CAD Computer-Aided Drafting course(s) (1-3) OR
CIS+++++ Any CIS Computer Information Systems course(s) (1-3) OR
ECE+++++ Any ECE Engineering Science course(s) (1-3) 1-3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6)
Any higher approved general education course in the Mathematics area 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course in the Humanities, Arts and Design [HU] area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course in the Social Behavioral Sciences [SB] area.

Natural Sciences
Credits: 4
+ PHY101 Introduction to Physics (4) OR
+ PHY111 General Physics I (4) 4

MCCCD Governing Board Approval Date: February 25, 2025

Automotive Service

Major: 3180
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 64-77
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Associate in Applied Science (AAS) in Automotive Service prepares individuals to apply technical knowledge and skills to repair, service, and maintain automobiles. Instruction is in both the theoretical and practical aspects of automotive repair, service and maintenance, and includes brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drivetrains, and heating and air conditioning systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile Certification Tests (A1 - A8).

See program advisor for additional certificate offerings.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
3. Locate and interpret appropriate service information. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)[FYC], (CRE), (COM))
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive systems. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
5. Apply industry relevant procedures to properly repair automotive systems. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
6. Apply industry relevant procedures to properly service automotive systems. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++) [FYC], [HU], (CRE))
9. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++) [FYC], [HU], [SB], (CRE), (COM))
10. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++ ASE290++, ASE296++, ASE298++)[FYC], [HU], [SB], (CRE), (COM)).
11. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)[FYC], [MA], (CRE)).
12. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 43-45

ASE100 Introduction to Automotive Service 2

ASE110 Engine Fundamentals (4) OR
ASE110AU Engine Fundamentals (4) 4

ASE120 Automatic Transmission and Transaxle (4) OR
ASE120AU Automatic Transmission and Transaxle (4) 4

ASE130 Manual Drive Trains and Axles (4) OR
ASE130AU Manual Drive Trains and Axles (4) 4

ASE140 Automotive Steering, Suspension and Alignment (4) OR
ASE140AU Automotive Steering, Suspension and Alignment (4) 4

ASE150 Automotive Brake Systems (4) OR
ASE150AU Automotive Brake Systems (4) 4

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

ASE170 Automotive Heating, Ventilation and Air Conditioning Systems (4) OR
ASE170AU Automotive Heating, Ventilation and Air Conditioning Systems (4) 4

ASE180 Introduction to Engine Management (4) OR
ASE180AU Introduction to Engine Management OR (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

+ ASE280 Engine Management (4) OR
+ ASE280AU Engine Management (4) 4

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 3-8

+ ASE240 Advanced Driver Assistance Systems 2
+ ASE265 Introduction to Electric and Hybrid Vehicles 2
ASE290++ Automotive Service Internship (any suffixed courses) 1-4
ASE296++ Cooperative Education (any suffixed courses) 1-4
ASE298++ Special Projects (any suffixed courses) 1-3

General Education Requirements

General Education Requirements
Credits: 18-24

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3)
AND
+ ENG102 First-Year Composition (3) OR

+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6

GTC107 Technical Mathematics I (3) OR
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
+ Any approved general education course from the Mathematics area 3-6

General Education Distribution
Credits: 6

Humanities, Arts and Design
Credits: 3

Any approved general education course from the Humanities and Fine Arts area

Social-Behavioral Sciences
Credits: 3

Any approved general education course from the Social and Behavioral Sciences area

Natural Sciences
Credits: 0

Area Waived

MCCCD Governing Board Approval Date: February 28, 2023

Behavioral Sciences

Major: 3067
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 63-71
CIP Code: 30.1701
Primary/Initiating College: South Mountain Community College
Program Availability: GC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Counseling
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
31-1133.00 Psychiatric Aides
21-1093.00 Social and Human Service Assistants
29-2053.00 Psychiatric Technicians
21-1099.00 Community and Social Service Specialists, All Other
21-1011.00 Substance Abuse and Behavioral Disorder Counselors
19-3099.00 Social Scientists and Related Workers, All Other
21-1094.00 Community Health Workers

Upon completion of a bachelor`s degree, students may pursue a career as:
21-1021.00 Child, Family, and School Social Workers
21-1020.00 Social Workers
11-9151.00 Social and Community Service Managers
21-1091.00 Health Educators
21-1029.00 Social Workers, All Others
21-1015.00 Rehabilitation Counselors
21-1092.00 Probation Officers and Correctional Treatment Specialists
19-4061.00 Social Science Research Assistants

Upon completion of a graduate degree, students may pursue a career as:
21-1010.00 Counselors
21-1023.00 Mental Health and Substance Abuse Social Workers
21-1014.00 Mental Health Counselors
21-1011.00 Substance Abuse and Behavioral Disorder Counselors
21-1012.00 Educational, Guidance, School, and Vocational Counselors
21-1013.00 Marriage and Family Therapists
21-1022.00 Healthcare Social Workers
19-3033.00 Clinical and Counseling Psychologists
19-3034.00 School Psychologists
19-3032.00 Industrial-Organizational Psychologists
19-3039.00 Psychologists, All Other
19-3099.00 Social Scientists and Related Workers, All Other

Description: The Associate in Applied Science (AAS) in Behavioral Sciences provides a general education as well as focused coursework in human behavior to prepare students to assist, as part of a clinical team, in the care of individuals and families dealing with mental illness, addictions and substance use, trauma, developmental disabilities, comorbid medical conditions, and challenging behaviors. Focuses on the skills necessary to deliver specialized and comprehensive behavioral health and social services. This program prepares students for industry certification and is embedded in the Bachelor of Science (BS) in Behavioral Sciences available at MCCCD.

Learning Outcomes

1. Distinguish the role, function, and responsibilities of various mental health professions. (BHS150, BHS160, BHS170, BHS175, BHS180, BHS190, BHS205, BHS210, BHS215)

2. Assess the comprehensive bio-psycho-social needs of diverse client populations in behavioral health and social service settings. (BHS150, BHS165, BHS170, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210, [FYC], (COM), (CRE), [SG], [SQ])
3. Evaluate evidence-based behavioral health interventions using assessment and outcome measures. (BHS150, BHS160, BHS165, BHS170, BHS175, BHS180, BHS190, BHS205, BHS210, BHS215, [FYC], [MA], (CRE), [HU], [SG], [SQ])
4. Demonstrate ethical interpersonal and communication skills important in establishing and maintaining relationships. (BHS150, BHS155, BHS160, BHS165, BHS170, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210, BHS215, [FYC], (COM), (CRE), [HU])
5. Assist clients with substance use and co-occurring disorders in their recovery. (BHS150, BHS160, BHS165, BHS175, BHS205, BHS210, BHS215)
6. Apply the principles of trauma-informed care with diverse client populations. (BHS150, BHS155, BHS160, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210, BHS215)
7. Practice methods to resolve current symptoms and prevent future effects of burnout, traumatic stress, and compassion fatigue. (BHS155, BHS160, BHS165, BHS175, BHS190, [HU])
8. Manage crisis/trauma situations while engaging in appropriate self care to promote professional resilience and personal safety. (BHS155, BHS160, BHS165, BHS175, BHS185, BHS190, BHS205, BHS210, BHS215)
9. Manage individual cases as part of a multidisciplinary team, in a fashion that best serves the patient and simultaneously protects the practitioner. (BHS155, BHS160, BHS165, BHS170, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210, (COM))
10. Implement treatment plans developed in collaboration with a multidisciplinary team. (BHS160, BHS170, BHS180, BHS185, BHS205, BHS210, [FYC], [MA], (COM), (CRE), [HU])
11. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 35-37

BHS150 Introduction to Behavioral Health and Social Services 3
BHS155 Professional Resiliency and Well-Being 3
BHS160 Ethical, Legal and Professional Issues in Counseling Services 3
BHS165 Applied Therapeutic Communication Skills 3
BHS170 Case Management and Clinical Documentation 3
BHS180 Child, Family, and Adult Advocacy 3
Note: The above courses are required in the Certificate of Completion (CCL) in Foundations of Behavioral Sciences (5522)

BHS175 Trauma-Informed Care and Recovery Treatment 3
BHS185 Cultural Competence in Behavioral Health 3
+ BHS190 Supervised Practice in Behavioral Health and Human Services 1
BHS205 Introduction to Individual Counseling Theories 3
BHS210 Addictions, Substance Use Disorders, and Recovery 3
BHS215 Introduction to Group Therapy 3
Note: The above courses are required in the Certificate of Completion (CCL) in Advanced Behavioral Sciences (5521)

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 6

Students must choose six (6) credits from one of the following specializations:

Specialization 1: Trauma and Crisis Stabilization
BHS230 Crisis and Trauma Stabilization 3
BHS235 Emergency Mental Health Crisis Response and Recovery 3

Specialization 2: Infant and Early Childhood Mental Health
BHS275 Infant and Early Childhood Mental Health (3) OR
CFS177 Parent-Child Interaction (3) 3

BHS272 Child and Adolescent Mental Health and Interventions 3
CFS235 Developing Child: Theory into Practice, Prenatal to Age Eight 3
+ EED210 Creative and Cognitive Play 3
(If EED210 is selected, CFS235 will need to be selected unless another requisite option has been met)

Specialization 3: Addiction and Substance Use Disorders
ASD110 Pharmacology of Substances of Abuse and Dependency 3

ASD245 Co-Occurring Disorders (2) AND
ASD120 Professional Ethics in Addictions and Substance Use Disorders (1) OR
ASD145 AIDS and Addiction (1) 3

BHS251 Harm Reduction in Addiction, Substance Use, and Social Services 3

Specialization 4: Developmental Disabilities
BHS271 Developmental Disabilities Assistance Training 3
+ PSY241 Understanding and Changing Behavior 3
+ PSY243 The Psychology of Developmental Disabilities 3

Specialization 5: Criminal Justice and Forensic Science
+ PSY267 Introduction to Forensic Psychology 3

AJS101 Introduction to Criminal Justice (3) OR
AJS200 Current Issues In Criminal Justice (3) OR
AJS225 Criminology (3) 3

Specialization 6: Mental Health
BHS230 Crisis and Trauma Stabilization (3) OR
BHS235 Emergency Mental Health Crisis Response and Recovery (3) 3

BHS251 Harm Reduction in Addiction, Substance Use, and Social Services 3
BHS255 Health and Wellness Coaching in Professional Resiliency 3
BHS262 Behavioral Health Service Techniques for the Elderly 3
BHS266 Violence and Abuse Services 3
BHS269 Grief Support Techniques 3
BHS271 Developmental Disabilities Assistance Training 3
BHS272 Child and Adolescent Mental Health and Interventions 3

BHS275 Infant and Early Childhood Mental Health 3
CPD180 Human Resilience: Cognitive, Emotional, and Behavioral Applications 3
+ PSY266 Psychological Disorders 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

ENG102 or ENG108 recommended for students considering pursuing a bachelor`s degree.

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Higher level course in the Mathematical Applications [MA] area (3-6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area 3

HCR210 Clinical Health Care Ethics recommended.

Social-Behavioral Sciences
Credits: 3

PSY101 Introduction to Psychology 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area (4)

BIO160 Introduction to Human Anatomy and Physiology recommended for students intending to pursue the MCCCD Bachelor of Science in Behavioral Science.

MCCCD Governing Board Approval Date: November 22, 2022

Biotechnology and Molecular Biosciences

Major: 3034
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 63-72
CIP Code: 41.0101
SOC Code: Upon completion of this degree, students may pursue a career as:
19-4021.00 Biological Technicians

Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Science, Technology, Engineering and Mathematics
Instructional Council: Biology
GPA: 2.00

Description: The Associate in Applied Science (AAS) in Biotechnology and Molecular Biosciences program is designed to give entry-level laboratory technicians skills for application in academic, industrial and commercial research institutions. The exposure to an academic environment that simulates the contemporary biotechnological workplace, inclusive of analytical, critical thinking and problem-solving skills, provides the opportunity to form a strong technical foundation typically sought by employers. The successful completion of the program may also provide the educational background for those wishing to pursue a career in the pharmaceutical industry, clinical laboratory medicine, forensics or environmental testing laboratories and/or a foundation for a student wishing to continue their education at a university.

Learning Outcomes

1. Experience the natural world in an observant, thoughtful, and inquisitive manner, posing questions about unexplained phenomena and formulating multiple hypothetical explanations for each in an open-minded and creative fashion. (ABS175, ABS283, ABS295AA, ABS295AB, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM151, CHM151AA, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL)
2. Accurately perform scientific calculations and measurements typically used in biotechnology laboratory. (ABS173, ABS175, ABS283, ABS295AA, ABS295AB, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM150AA, CHM151, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, [MA])
3. Use appropriate databases to locate primary scientific literature, carefully examine its text and figures, critically evaluate and discuss the experimental design, data analysis and source. (ABS175, ABS295AA, ABS295AB, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, (CRE), [FYC])
4. Utilize written protocols and techniques, including the safe and correct operation of contemporary laboratory equipment to reliably conduct controlled scientific investigations as appropriate for a research, clinical and/or manufacturing environment, including accurately and thoroughly documenting results, analyzing and interpreting data, and reporting results and conclusions effectively in written, graphical, and oral formats. (ABS173, ABS175, ABS283, ABS295AA, ABS295AB, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209,

BIO210, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM150AA, CHM151, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, (COM), (CRE), [FYC], [MA])

5. Design controlled single and multivariable experiments in a socially conscious and ethically responsible manner, including accurately and thoroughly documenting methodology. (ABS173, ABS175, ABS283, ABS295AA, ABS295AB, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM150AA, CHM151, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, PHI105, PHI213, PHI216, [SB])
6. Use relevant software and digital databases to conduct scientific analyses, computer modeling, and information gathering. (ABS283, ABS295AA, ABS295AB, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, [FYC], [MA])
7. Explain biological and chemical principles and their application to biotechnological techniques. (ABS283, ABS295AA, ABS295AB, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM151, CHM151AA, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL)
8. Persistently troubleshoot unanticipated investigative problems by consulting with others, critically analyzing methodology used, revising procedure as necessary and/or seeking alternative strategies to test the hypothesis. (ABS295AA, ABS295AB, BIO195AA, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB)
9. Demonstrate the skills needed to work effectively in a diverse team environment, including the ability to clearly communicate with peers from a variety of backgrounds and levels of experience, collaborate with others and act as a productive contributor to effective group dynamics and the team`s work. (ABS295AA, ABS295AB, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM151, CHM151LL, CHM151AA, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, (COM), [SB])
10. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (BIO211AA, BIO211AB, BIO211AE, BIO215AB, FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 45-48

ABS173 Basic Instrumentation and Lab Math 1
ABS175 Research Methods in Biology 1

+ BIO181 General Biology (Majors) I (4) OR
+ BIO181XT General Biology (Majors) I (4) 4

+ BIO195AA Principles and Practice of Scientific Research 1
+ BIO205 Microbiology 4
+ BIO208 Nucleic Acid Methods 3
+ BIO209 Biomolecular Separation 3
+ BIO210 Advanced Lab Instrumentation 3

BIO211AA Biotechnology Seminar: Biomedical Applications (1) OR

+ BIO211AB Biotechnology Seminar: Laboratory Protocol (1) OR
BIO211AE Biotechnology Seminar: Business and Regulatory Issues (1) 1

Complete four (4) credits from the following course options. Courses may be repeated for credit. ABS295AA and/or BIO295AA must be taken for at least two (2) credits.
+ ABS295AA Independent Research in Applied Biology 1
+ ABS295AB Independent Research in Applied Biology 2
+ BIO215AB Biotechnology Internship 2
+ BIO295AA Independent Research in Biology 1
+ BIO295AB Independent Research in Biology 2

+ ABS283 Bioinformatics and Scientific Computing 3

+ CHM150 General Chemistry I (4) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM151 General Chemistry I (3) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM150AA General Chemistry I (5)
OR
+ CHM151AA General Chemistry I (4) 4-5

+ CHM152 General Chemistry II (3) AND
+ CHM152LL General Chemistry II Laboratory (1)
OR
+ CHM152AA General Chemistry II (4) 4

+ CHM235 General Organic Chemistry I (3) AND
+ CHM235LL General Organic Chemistry I Laboratory (1)
OR
+ CHM235AA General Organic Chemistry I with Lab (4) 4

+ CHM236 General Organic Chemistry IIA (3) AND
+ CHM236LL General Organic Chemistry IIA Laboratory (1)
OR
+ CHM236AA General Organic Chemistry IIA with Lab (4) 4

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

General Education Requirements

General Education Requirements
Credits: 18-24

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR

+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM230 recommended.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) OR
Satisfactory completion of higher level Mathematics course 3-6

General Education Distribution
Credits: 6

Humanities, Arts and Design
Credits: 3
PHI105 Introduction to Ethics (3) OR
PHI213 Medical and Bio-Ethics (3) OR
PHI216 Environmental Ethics (3) 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 4
Met by BIO181 OR BIO181XT in Required Courses area.

MCCCD Governing Board Approval Date: November 26, 2024

Cybersecurity

Major: 3197
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 62-77

Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

CIP Code: 11.1003
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1122.00 Information Security Analysts
15-1142.00 Network and Computer Systems Administrators
15-1152.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Associate in Applied Science (AAS) in Cybersecurity is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. Certificates of Completion (CCLs) are also available in the following areas: Cybersecurity Fundamentals, Cyber Operations, Linux System Administration, Microsoft, Cisco Networking CCNA Security, Cyber Engineering, and Critical Infrastructure. Some of these programs are available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Explain the fundamental components, concepts, and application of cybersecurity principles. (BPC170, BPC270, BPC274, CIS105, CIS126DL, CIS126RH, CIS143, CIS156, CIS162++, CIS201, CIS202, CIS203, CIS227, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS250, CIS262++, CIS270, CIS271DL, CIS271RH, CIS275DL, ITS110, ITS291, ITS292, MST150++, MST160, CLD110 [FYC])
2. Describe cyber defense tools, methods, and components. (CIS156, CIS190, CIS270, CNT140AB, CNT150AB, ITS110, ITS240, ITS291, ITS292, (COM), (CRE))
3. Apply cyber defense methods to prepare a system to repel attacks. (CIS156, CIS201, CIS202, CIS203, CIS270, CIS290AC, CIS298AC, CNT150AB, CNT160AB, CNT202, CNT205, ITS110, ITS240, [SG], [SQ])
4. Analyze common security failures and identify specific design principles that have been violated. (BPC274, CIS121AH, CIS201, CIS202, CIS203, CIS270, CNT202, CNT205, ITS110, MST260, CLD120)
5. Describe the interaction between security and system usability and the importance for minimizing the effects of security mechanisms. (BPC274, CIS201, CIS202, CIS203, CIS270, CNT160AB, ITS110, MST260, CLD120)
6. Apply appropriate protocols, tools, and techniques to maximize security in the network environment. (CIS119DO, CIS156, CIS162++, CIS190, CIS201, CIS202, CIS203, CIS227, CIS262++. CIS270, CIS276++, CIS290AC, CIS298AC, CNT140AB, CNT150AB, CNT160AB, CNT202, CNT205, ITS110, ITS240, ITS291, ITS292, [MA], [SG], [SQ])
7. Describe the fundamental concepts, technologies, components, vulnerabilities, and issues related to networks. (BPC170, CIS105, CIS119DO, CIS143, CIS190, CIS201, CIS202, CIS238DL, CIS238RH, CIS270, CIS276++, CNT140AB, CNT150AB, CNT160AB, CNT202, CNT205, ITS110, (COM))
8. Identify and describe basic security issues of operating systems. (BPC270, BPC274, CIS105, CIS121AH, CIS126DL, CIS126RH, CIS201, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS270, CIS271DL, CIS271RH, CIS275DL, ITS110, ITS240, MST150++, MST160, CLD110)
9. Identify perpetrators, their resources, and their motivations in cyberspace. (BPC274, CIS111, CIS143, CIS203, CIS270, CIS290AC, CIS298AC, ITS110, ITS120, ITS240, MST160, CLD110)
10. Compare and contrast offensive and defensive resources used in cybersecurity ecosystems/environment. (CIS201, CIS202, CIS203, CIS270, CIS290AC, CIS298AC, ITS110, ITS240, (COM), (CRE), [FYC])
11. Delineate differences between the moral, behavioral, ethical, and legal ramifications found in the cybersecurity world. (CIS105, CIS111, CIS143, CIS156, ITS120, (CRE) [FYC], [HU], [SB], [SG], [SQ])
12. Apply knowledge of regulatory and legal requirements to ensure compliance. (CIS111, CIS143, CIS202, CIS290AC, CIS298AC, ITS120, ITS240, (CRE), [FYC])

13. Apply risk analysis methodologies to identify potential vulnerabilities, associated impacts, and recommend appropriate responses. (BPC274, CIS111, CIS143, CIS121AH, CIS201, CIS202, CIS203, CIS238DL, CIS238RH, CIS270, CIS290AC, CIS298AC, CNT150AB, CNT160AB, CNT202, CNT205, ITS110, ITS120, ITS240, ITS291, ITS292, MST160, MST260, CLD110, CLD120 [MA])
14. Communicate professionally in formal and informal situations to diverse audiences. (BPC270, CIS105, CIS111, CIS143, CIS156, CIS201, CIS202, CIS203, CIS270, CIS271DL, CIS271RH, CIS275DL, CIS290AC, CIS298AC, ITS110, ITS120, ITS240, (COM), [FYC], [HU], [SB], [SG], [SQ])
15. Collaborate with others to solve cybersecurity problems. (CIS105, CIS111, CIS143, CIS201, CIS202, CIS203, CIS270, CIS271DL, CIS271RH, CIS275DL, CIS290AC, CIS298AC, ITS110, ITS120, ITS240, ITS291, ITS292, (COM), [SG], [SQ])

Program Notes

Students must earn a grade of C or better in all courses within the program.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 25-28

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3
(MST150++ required for Cloud System Administration specialization and Critical Infrastructure specialization)

CIS105 Survey of Computer Information Systems 3

CIS111 Ethics in Information Technology (3) OR
ITS120 Legal, Ethical and Regulatory Issues (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS156 Python Programming: Level I 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4
(CNT140AB required for Cisco Network Administration and Security specialization and Critical Infrastructure specialization)

+ CIS270 Essentials of Network and Information Security (3) OR
+ ITS110 Information Security Fundamentals (3) 3
(ITS110 required for Cyber Operations specialization; CIS270 required for Critical Infrastructure specialization)

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

+ ITS240 Ethical Hacking and Network Defense 3

Restricted Electives

Credits: 12-18

Students must complete 12-18 credits from the following list of courses. Courses that are required for a specialization in Cyber Operations, Linux System Administration, Cloud System Administration, Cisco Network Administration and Security, Cyber Engineering, and/or Critical Infrastructure are noted. Courses cannot be repeated for credit.

Specialization 1: Cyber Operations
Credits: 17
BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3

+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS290AC Computer Information Systems Internship (3) OR
+ CIS298AC Special Projects (3) 3

+ ITS291 Computer Forensics Foundations 4
+ ITS292 Advanced Computer Forensics 4

Specialization 2: Linux System Administration
Credits: 15
+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS239DL Linux Shell Scripting 3

+ CIS240DL Linux Network Administration (3) OR
+ CIS240RH Red Hat System Administration III (3) 3

+ CIS271DL Linux Security (3) OR
+ CIS271RH Red Hat System Administration IV (3) 3

+ CIS275DL Linux Capstone 3

Specialization 3: Cloud System Administration
Credits: 15-16
+ BPC274 Advanced Server Computer Maintenance: Server+ Prep 3
CIS121AH Microsoft PowerShell/Command Line Operations 3
+ CIS239DL Linux Shell Scripting 3

+ MST160 Azure Administrator (4), OR
+ CLD110 Amazon Web Services Cloud Foundations (3) 3-4

+ MST260 Microsoft Azure Cloud Development and Operations (3), OR
+ CLD120 Amazon Web Services Cloud Architect Associate (3) 3

Specialization 4: Cisco Network Administration and Security
Credits: 12
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
+ CNT205 Cisco Certified Network Associate Security (4) 4

Specialization 5: Cyber Engineering
Credits: 18
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276++ Any SQL Database course (3) 3

+ CIS162++ Any C Programming: Level I course 3
(Students intending to transfer to U of A South should take CIS162 C Programming)

+ CIS227 Assembler Language 3

+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS250 Management of Information Systems 3
+ CIS262++ Any C Programming: Level II course 3

Specialization 6: Critical Infrastructure
Credits: 16
+ CIS143 Introduction to Critical Infrastructure Protection 3
+ CIS201 Introduction to Operational Technology 3
+ CIS202 Introduction to Smart Grid Security 3
+ CIS203 Principles of the Risk Management Framework 3
+ CNT150AB Switching, Routing, and Wireless Essentials 4

General Electives
Credits: 0-3

Select additional courses 100-level or higher to complete the minimum total program credits required for this degree. It is recommended to select from the Restricted Elective options. Consult with a faculty advisor, program director, and/or academic advisor to identify coursework that best aligns with academic and professional goals.

General Education Requirements
General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR

COM230 Small Group Communication (3) 3

COM100 required for students intending to transfer to ASU West to earn a Bachelor of Science in Applied Computing (Cybersecurity).

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course in the Mathematics area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course(s) in the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course(s) in the Social-Behavioral Sciences area.

Natural Sciences
Credits: 4
Any approved general education course(s) from the Natural Sciences area.

MCCCD Governing Board Approval Date: June 27, 2023

Cybersecurity Management and Information Security

Major: 3039
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 63-75
CIP Code: 11.1003
Primary/Initiating College: Glendale Community College
Program Availability: College-specific: GC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1122.00 Information Security Analysts
15-1141.00 Database Administrators
15-1142.00 Network and Computer Systems Administrators
15-1143.00 Computer Network Architects
15-1152.00 Computer Network Support Specialists

Description: The Associate in Applied Science (AAS) in Cybersecurity Management and Information Security degree is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs function. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical data and systems. The program is designed to meet the training needs of government

and industry employees. The program covers a variety of information security disciplines which include both vendor-neutral and vendor-specific information technology (IT) security training. The Cybersecurity Management and Information Security program prepares students for internationally recognized IT certifications and high demands in business, industry and government. This program has been designated as a National Center of Academic Excellence in Cyber Defense (CAE-CD) by the National Security Administration and the Department of Homeland Security. A Certificate of Completion (CCL) in Cybersecurity Management and Information Security is also available.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 29-31

BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
CIS105 Survey of Computer Information Systems 3
CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3
CNT140AB Introduction to Networks 4
+ ITS110 Information Security Fundamentals 3
ITS120 Legal, Ethical and Regulatory Issues 3
+ ITS240 Ethical Hacking and Network Defense 3
+ MST150++ Any Microsoft Windows Operating System course 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 12-16

Students should select at least four (4) courses from the list below. A minimum of six (6) credits must be ITS prefixed course.

+ CIS1++++ Any CIS programming Level I course 3
+ CIS271DL Linux Security 3
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4
+ CNT205 Cisco Certified Network Associate Security 4

ITS+++++ Any ITS Information Technology Security course except courses used to satisfy Required Courses area 6-16

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
Any approved general education course in the Oral Communications area 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course in the Mathematics area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area 4

Program Competencies

1. Demonstrate how to install, configure, administer, use, and maintain a Red Hat operating system. (CIS126RH, CIS238RH)
2. Define common network terminology and protocols to include local area network (LAN) and wide-area network (WAN) topologies, the Open System Interconnection reference (OSI) model and communication cabling standards. (CNT140AB)
3. Use appropriate equations to solve basic Internet Protocol (IP) addressing and subnetting problems associated with designing a network. (CNT140AB)
4. Apply basic security techniques such as password protection and access control lists (ACLs). (MST150++)
5. Explain a broad, cross-section of information security concepts including authentication methods, access control, cryptography, public key infrastructure (PKI), network attack and defense methods, operating systems and network device hardening, securing remote access and wireless technologies including viruses and worms. (CIS105, ITS110)

6. Define workstations, servers, network storage devices, routers, switches, gateways, guards, Virtual Private Networks (VPNs), firewalls, Internet Protocol Security (IPSec), Intrusion Detection Systems (IDSs), mobile devices, peripheral devices and security peripherals. (BPC170, CIS105, ITS110)
7. Identify the ethical and legal aspects of information security including government regulatory requirements impacting network and information security professionals. (ITS120)
8. Implement in-depth security systems, for multiple operating systems, from initial design to sustained monitoring and continuous improvement. (ITS240)
9. Examine the techniques for defending LAN and WAN networks including firewalls, IDSs and VPNs. (ITS110)
10. Perform day-to-day administration tasks in a Microsoft Windows-based network. (MST150++)
11. Perform day-to-day administration tasks in a UNIX/Linux-based network. (CIS126RH, CIS238RH)

MCCCD Governing Board Approval Date: April 23, 2024

Digital Media Arts

Major: 3567
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 66-74
CIP Code: 50.0409
Primary/Initiating College: Phoenix College
Program Availability: GC, PC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
27-1014.00 Multimedia Artists and Animators
27-1024.00 Graphic Designers

Upon completion of a bachelor`s degree, students may pursue a career as:
25-1121.00 Art, Drama, and Music Teachers, Postsecondary
27-1011.00 Art Directors

Description: The Associate in Applied Science (AAS) in Digital Media Arts is designed for the student who wishes to develop skills in the area of graphic design, imaging, photography, animation, time-based, interactivity, and media production. The program emphasizes critical thinking, written communication, and teamwork by challenging students to develop their own design method, production workflow, and conceptual aesthetic. The program provides students with a broad understanding of media design and its place in society as a means to communicate. It allows for the development of an individual`s personal interest in this area, prepares students for employment, and upgrades skills of those already employed in this field. Upon completion of the program, students will have compiled a professional portfolio. Employment opportunities include, but are not limited to, graphic design, animation, web design, and video production. Based on course selections, students may also pursue transfer opportunities.

Learning Outcomes

1. Create media designs to project specifications demonstrating professional competence in research, planning, production, and presentation. (AVC169, AVC177, AVC/MMT184, AVC100, ART111, ART116, AVC142, AVC181, AVC200, JRN213, AVC182, AVC/MMT185, AVC240, FMP108, FMP215, MUC111, MUC122, MUC191, (COM), (CRE), [FYC], [MA], [SB], [SG], [SQ])
2. Apply critical thinking skills, the design process, and historical and media literacies to solve design problems. (AVC169, AVC177, AVC100, JRN213, AVC/MMT185, AVC210, CIS133DA, ARH102, ARH110, HUM/THF105, (CRE), [FYC], [HU], [MA], [SB], [SG], [SQ])
3. Critique media designs to evaluate their effectiveness. (AVC169, AVC177, AVC100, ART111, ART116, AVC248, JRN213, ARH102, ARH110, HUM/THF105, (CRE), [FYC], [HU])

4. Research and apply industry standard tools to develop effective media, designs, and workflows. (AVC169, AVC177, JRN213, AVC/MMT185, AVC210, AVC240, CIS133DA, FMP108, FMP215, MUC111, MUC122, MUC191, (CRE) [FYC], [MA], [SB], [SG], [SQ])
5. Demonstrate professional and collaborative practices, such as communication, time management, organization, and legal and ethical considerations, in diverse settings. (AVC169, AVC177, AVC100, AVC248, JRN213, (COM), (CRE), [FYC], [HU], [SB], [SG], [SQ])
6. Communicate design ideas and solutions that recognize diverse opinions and cultural and individual differences. (AVC169, AVC177, AVC100, ART111, ART116, JRN213, ARH102, ARH110, HUM/THF105, (COM), (CRE), [FYC], [HU], [SB])
7. Create a portfolio of work that reflects current industry practices. (AVC169, AVC177, AVC248, JRN213, AVC280AC, AVC297++, [FYC], [MA], [SG], [SQ])
8. Contribute to a client-based comprehensive project for industry, organization, or community use. (AVC280AC, AVC297++, [MA], [SG], [SQ])
9. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 32-34

ART111 Drawing I (3) OR
ART116 Life Drawing I (3) 3

AVC100 Introduction to Digital Arts 1
AVC142 Introduction to Digital Photography 3
+ AVC169 2D Media Design 3
+ AVC177 Digital Photographic Imaging I 3
+ AVC/MMT184 Digital Animation I 3
+ AVC181 Graphic Design I 3
+ AVC200 Animation and Interactivity 3
AVC248 Design Self Promotion 3

+ AVC297++ Computer Graphic Design Internship (3) OR
+ AVC280AC Digital Media Arts and Design Capstone (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

JRN213 Writing for Online 3

Restricted Electives

Credits: 12

Complete 12 credits from the following courses:
+ AVC/MMT185 3D Modeling for Animation I 3
+ AVC182 Graphic Design II 3
+ AVC210 Design Tools for Imagery, Production, and Publishing 3

+ AVC240 Cinematography and Directing for 2D/3D Animation 3
CIS133DA Internet/Web Development Level I 3
FMP108 Video Production 3
+ FMP215 Digital Video Effects 3
MUC122 Sound Design I 3
MUC191 Electronic Music I 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area. 3-6

Recommended for students planning to transfer to a four-year university:
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Students who intend to transfer should choose either ARH102 or HUM/THF205 to fulfill the [HU] requirement for transfer.

ARH102 Art from Renaissance to Modernism (3) OR
ARH110 History of Graphic Design (3) OR
HUM/THF205 Introduction to Cinema (3) 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Early Childhood Education

Major: 3186
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 60-74
CIP Code: 13.1210
Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, MC, PC, PV, RS
Field of Interest: Education
Instructional Council: Early Childhood Education
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
25-2011.00 Preschool Teachers, Except Special Education
11-9031.00 Education and Childcare Administrators, Preschool and Daycare
25-9042.00 Teaching Assistants, Preschool, Elementary, Middle, and Secondary School, Except Special Education
25-9043.00 Teaching Assistants, Special Education
25-9049.00 Teaching Assistants, All Other

Upon completion of a bachelor`s degree, students may pursue a career as:
25-2012.00 Kindergarten Teachers, Except Special Education
25-2051.00 Special Education Teachers, Preschool
25-2055.00 Special Education Teachers, Kindergarten
25-2056.00 Special Education Teachers, Elementary School

Description: The Associate in Applied Science (AAS) in Early Childhood Education (ECE) is designed to prepare individuals for employment as early childhood professionals in a variety of educational settings. The AAS program includes courses based on current ECE theory and practice as well as general education classes to broaden a student`s base of knowledge. Certificates of Completion are also available. Some of these programs are available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Design developmentally, culturally, and linguistically appropriate learning experiences that promote each child`s growth and development in the following domains: Social-Emotional, Physical, Cognitive, and Language and Literacy. (CFS101AH, CFS/ECH176, CFS235, CFS/ECH284AA, CFS/ECH284AB, ECH128, ECH281, EED200, EED205, EED210, EED225, EED260, EED261, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [HU])
2. Implement developmentally, culturally, and linguistically appropriate learning experiences. (CFS101AH, CFS/ECH284AA, CFS/ECH284AB, ECH128, ECH272, CFS/ECH273, CFS/ECH275, ECH279, ECH281, EED210, EED260, EED261, EED278, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, (COM), [HU], [MA], [SG], [SQ])
3. Maintain a safe, caring, inclusive, and healthy learning environment according to best practices and local, state, and national standards. (CFS123, CFS125, CFS/ECH271, CFS282, CFS/ECH284AA, CFS/ECH284AB,

CFS/ECH269, ECH280, ECH282, EED212, EED215, EED222, EED255, EED260, EED261, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [HU], [SG], [SQ])

4. Assess children`s learning and development through observation and documentation, using guidelines established by the profession. (CFS/ECH176, CFS235, CFS/ECH284AA, CFS/ECH284AB, ECH140, CFS/ECH269, ECH270, EED200, EED205, EED255, EED260, EED261, EED280, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [FYC], (CRE), [MA], [SG], [SQ])
5. Establish reciprocal, culturally responsive relationships with families and communities. (CFS123, CFS125, CFS/ECH271, CFS282, ECH280, ECH282, EED212, EED215, EED225, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, (COM), [HU])
6. Utilize communication skills to advocate for children and their families. (CFS/ECH269, CFS/ECH287, EED200, EED222, EED225, EED255, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [FYC], (COM), (CRE), [HU])
7. Practice ethical and professional standards and behavior. (CFS/ECH284AA, CFS/ECH284AB, CFS/ECH269, CFS/ECH287, EED200, EED255, EED260, EED261, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [FYC], (COM), (CRE), [HU])
8. Advocate for an ethical, equitable, diverse, and effective early childhood education profession. (CFS/ECH269, CFS/ECH287, EED200, EED222, EED225, EED255, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [FYC], (COM), (CRE), [HU])
9. Engage in reflective practice and continuous learning through education and research. (CFS/ECH271, CFS282, CFS/ECH284AA, CFS/ECH284AB, ECH140, CFS/ECH269, ECH270, ECH272, CFS/ECH273, CFS/ECH275, ECH279, ECH282, CFS/ECH287, EED212, EED222, EED255, EED260, EED261, EED278, EED280, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [FYC], (CRE), [MA], [SG], [SQ])
10. Collaborate with peers to problem solve within early childhood education and other disciplines. (CFS/ECH284AA, CFS/ECH284AB, CFS/ECH269, ECH272, CFS/ECH273, CFS/ECH275, ECH279, CFS/ECH287, EED222, EED255, EED260, EED261, EED278, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++, [FYC], (COM), (CRE), [HU], [MA], [SG], [SQ])
11. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

Required Courses

Credits: 30-37

CFS101AH Art Activities for the Young Child (1) AND
ECH281 Movement/Music for the Young Child (1) OR
ECH128 Early Learning: Play and the Arts (3) OR
+ EED210 Creative and Cognitive Play (3) 2-3

CFS123 Health and Nutrition In Early Childhood Settings (1) AND
CFS125 Safety in Early Childhood Settings (1) AND
ECH280 Food Experiences With Young Children (1) OR
EED215 Early Learning: Health, Safety, Nutrition and Physical Fitness (3) 3

CFS/ECH176 Child Development (3) OR
CFS235 Developing Child: Theory into Practice, Prenatal to Age Eight (3) OR
EED205 The Developing Child: Prenatal to Age Eight (3) 3

+ CFS/ECH269 Child Care Seminar (1) AND
CFS/ECH287 Professional Development in Early Childhood Education (1) OR
+ EED255 Portfolio Development and Writing for the Profession (3) 2-3

CFS/ECH271 Arranging the Environment (1) AND
CFS282 Mainstreaming The Young Child with A Disability (1) AND
ECH282 Discipline/Guidance of Child Groups (1) OR
EED212 Guidance, Effective Interactions and the Environment (3) 3

+ CFS/ECH284AB Early Childhood Teaching Internship (3) OR
+ EED260 Early Childhood Infant/Toddler Internship (1) AND
+ EED261 Early Childhood Preschool Internship (1) OR
+ CFS/ECH284AA Early Childhood Teaching Internship (1) 2-3

ECH140 Learning Made Visible Through Documentation (1) AND
ECH270 Observing Young Children (1) OR
+ EED280 Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth Age Eight (3) 2-3

CFS/ECH273 Math for the Young Child (1) AND
CFS/ECH275 Literacy Development and the Young Child (1) AND
ECH272 Science for the Young Child (1) AND
ECH279 Early Childhood Curriculum Development (1) OR
+ EED278 Early Learning Curriculum and Instruction - Birth to Age Eight (3) 3-4

EED200 Foundations of Early Childhood Education 3
EED222 Introduction to the Exceptional Young Child: Birth to Age Eight 3
EED225 Language and Literacy in the Context of Culture and Relationships 3

FYE101 Introduction to College, Career and Personal Success (1) or
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 9-12

Students must select 9-12 credits from the following to complete the minimum total program credits required for this degree. Students are encouraged to consult with a faculty advisor or student services analyst to identify the requirements for their desired academic and professional goals:

CFS+++ Any CFS Child/Family Studies course(s)
ECH+++ Any ECH Early Childhood Education course(s)
EDU+++ Any EDU Education course(s)
EED+++ Any EED Early Education course(s)
FCS+++ Any FCS Family and Consumer Science course(s)
ITD+++ Any ITD Infant/Toddler Development course(s)

General Education Requirements

General Education Requirements
Credits: 19-25

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
Any approved general education course from the Oral Communication area. 3

Note: COM225 Public Speaking is recommended for students who wish to transfer to the BAE at ASU.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT112 Mathematical Concepts and Applications (3) OR
Satisfactory completion of a higher-level mathematics course (3-6) 3-6

Note: MAT14+ College Mathematics or any approved general education course in the Mathematical Application [MA] area may be required for students intending to transfer to a bachelor's degree program.

General Education Distribution
Credits: 7

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area. 3

Social-Behavioral Sciences
Credits: 0
Recommend: EDU/ENH291 Children`s Literature OR EDU/HUM/STO292 The Art of Storytelling

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area. 4

MCCCD Governing Board Approval Date: August 23, 2022

Engineering Technology

Major: 3187
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 61-70
CIP Code: 15.0000

Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, EM, GC, PV, SM
Field of Interest: Science, Technology, Engineering and Mathematics
Instructional Council: Engineering
GPA: 2.00

SOC Code: Upon completion of this degree, students may pursue a career as:
17-3021.00 Aerospace Engineering and Operations Technicians
17-3022.00 Civil Engineering Technicians
17-3026.00 Industrial Engineering Technicians
17-3027.00 Mechanical Engineering Technicians
17-3027.01 Automotive Engineering Technicians
17-3024.00 Electro-Mechanical Technicians
17-3024.01 Robotics Technicians

Description: The Associate in Applied Science (AAS) in Engineering Technology program prepares students as entry-level engineering technicians. They will apply basic engineering principles and technical skills to support engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions, including preparation in the areas of research, production, and operations. This degree will prepare highly skilled and needed workers for area manufacturers and the tech industry.

Learning Outcomes

1. Use computer programming, computer tools, and computer modeling as applied to engineering analysis and design. (ECE102, ECE103, ECE216, ECE216AA, ECE216LL, CIS105, CIS150, CIS150AB, CIS156, CIS159, CIS162AB, CIS162AD, CIS163AA, CSC100, CSC100AA, CSC100AB, CSC110, CSC110AA, CSC110AB)
2. Analyze engineering designs as a member of an engineering project team. (ECE102, ECE103, ECE104, ECE216, ECE216AA, ECE216LL, ECE294++, ECE298++, PHY111, PHY121, (COM))
3. Apply principles of engineering, science, and mathematics to solve engineering problems. (ECE102, ECE103, ECE104, ECE105, ECE216, ECE216AA, ECE216LL, CHM130, CHM130LL, CHM140AA, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY121, PHY112, PHY131, ECE294++, ECE298++, [MA])
4. Apply visual and spatial reasoning to create and interpret engineering diagrams. (ECE102, ECE103, ECE216, ECE216AA, ECE216LL, CAD100, CAD101, CAD145, DFT110, DFT126, CON241)
5. Safely and correctly use tools and equipment for industrial and lab applications. (ECE102, ECE103, CHM130, CHM130LL, CHM140AA, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY121, PHY112, PHY131)
6. Conduct appropriate experimentation and testing. (CHM130, CHM130LL, CHM140AA, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY121, PHY112, PHY131)
7. Employ appropriate engineering principles to collect and interpret data. (ECE102, ECE103, ECE104, ECE105, ECE294++, ECE298++, MAT206, CHM130, CHM130LL, CHM140AA, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY121, PHY112, PHY131)
8. Write technical reports consistent with engineering analysis and engineering design. (ECE102, ECE103, CHM130, CHM130LL, CHM140AA. CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY121, PHY112, PHY131, [FYC])
9. Demonstrate effective collaboration and participation on a diverse and inclusive team to establish goals, plan tasks, and meet objectives. (ECE102, ECE103, ECE104, ECE294++, ECE298++, CHM130, CHM130LL, CHM140AA, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY121, PHY112, PHY131, (COM), [HU], [SB])
10. Use effective written, visual, and oral strategies to communicate to a range of audiences. (ECE102, ECE103, ECE104, ECE294++, ECE298++, (COM), (CRE), [FYC])
11. Recognize ethical and professional responsibilities in engineering situations and the implications for society at large. (ECE102, ECE103, ECE104, ECE296++, [FYC], [HU], [SB])
12. Demonstrate creativity, curiosity, and adaptability in a variety of contexts. (ECE102, ECE103, ECE104, ECE294++, ECE298++, (CRE), [FYC])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 27-35

+ CHM130 Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1)
OR
+ CHM130AA Fundamental Chemistry with Lab (4)
OR
+ CHM140AA General Chemistry for Engineers with Lab (6)
OR
+ CHM150 General Chemistry I (4) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM150AA General Chemistry I with Lab (5)
OR
+ CHM151 General Chemistry I (3) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM151AA General Chemistry I (4) 4-6

CIS105 Survey of Computer Information Systems 3

+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162AB C++: Level I (3) OR
+ CIS162AD C#: Level I (3) OR
+ CIS163AA Java Programming: Level I (3) OR
+ CSC100 Introduction to Computer Science (C++) (3) OR
+ CSC100AA Introduction to Computer Science (C++) (3) OR
+ CSC100AB Introduction to Computer Science (C++) (4) OR
+ CSC110 Introduction to Computer Science (Java) (3) OR
+ CSC110AA Introduction to Computer Science (Java) (3) OR
+ CSC110AB Introduction to Computer Science (Java) (4) 3-4

+ ECE102 Engineering Analysis Tools and Techniques 2
+ ECE103 Engineering Problem Solving and Design 2

ECE216 Computer-Aided Engineering (2) AND
+ ECE216LL Computer Aided Engineering Laboratory (1) OR
+ ECE216AA Computer Aided Engineering (3) 3

+ ECE104 EPICS Gold I (2) OR
+ ECE294++ Special Topics in Engineering (1-4) OR
+ ECE296++ Cooperative Education (1-3) OR
+ ECE298++ Special Projects (1-3) 1-4

FYE101 Introduction to College, Career and Personal Success (1) OR*
FYE103 Exploration of College, Career and Personal Success (3) 1-3

+ PHY111 General Physics I (4) OR
+ PHY121 University Physics I: Mechanics (4) 4

+ PHY112 General Physics II (4) OR
+ PHY131 University Physics II: Electricity and Magnetism (4) 4

Restricted Electives

Credits: 10-14

In consultation with an Academic, Faculty, or Program Advisor, complete 10-14 credits of coursework from any of the areas below that best align with academic and professional goals. Students may select courses from multiple areas.

General Application
Select one of the following programming courses not already taken in required courses:
+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162AB C++: Level I (3) OR
+ CIS162AD C#: Level I (3) OR
+ CIS163AA Java Programming: Level I (3) OR
+ CSC100 Introduction to Computer Science (C++) (3) OR
+ CSC100AA Introduction to Computer Science (C++) (3) OR
+ CSC100AB Introduction to Computer Science (C++) (4) OR
+ CSC110 Introduction to Computer Science (Java) (3) OR
+ CSC110AA Introduction to Computer Science (Java) (3) OR
+ CSC110AB Introduction to Computer Science (Java) (4) 3-4

Select one of the following courses not already taken in required courses:
+ ECE104 EPICS Gold I (2) OR
+ ECE294++ Special Topics in Engineering (1-4) OR
+ ECE296++ Cooperative Education (1-3) OR
+ ECE298++ Special Projects (1-3) 1-4

+ ECE105 MATLAB Programming 1

ECE106 Survey of Nanotechnology (1) OR
MNT110 Nanotechnology: What It Is and Why It Matters (3) 1-3

AIT100 Industrial Safety (1) OR
CON271 Construction Safety (3) OR
GTC/MIT/OSH106 Industrial Safety (2) 1-3

+ MAT206 Elements of Statistics 3

Biomedical Engineering Technician
BIO160 Introduction to Human Anatomy and Physiology (4) OR
+ BIO201 Human Anatomy and Physiology I (4) 4

ABS175 Research Methods in Biology 1
BIO211AA Biotechnology Seminar: Biomedical Applications 1
ECE111 Bioengineering Systems 3

Civil Engineering Technician
+ CET211 Strength of Materials (3) OR
CON223 Strength of Materials (3) 3

+ CON241 Surveying 3

ECE216 Computer-Aided Engineering (2) AND
+ ECE216LL Computer Aided Engineering Laboratory (1) OR
+ ECE216AA Computer Aided Engineering (3) 3

GLG101 Physical Geology: Dynamic Earth Lecture (3) AND
GLG103 Physical Geology: Dynamic Earth Lab (1) OR
GLG101IN Physical Geology: Dynamic Earth (4) 4

Drafting for Engineering Technician
CAD100 Fundamentals of 2D AutoCAD 3
+ CAD101 Elements of CAD Graphics (AutoCAD) 3
+ CAD145 Design Principles for Industry 3
DFT110 Introduction to Drafting 3
DFT126 Building Trades Blueprint Reading 3

ECE216 Computer-Aided Engineering (2) AND
+ ECE216LL Computer Aided Engineering Laboratory (1) OR
+ ECE216AA Computer Aided Engineering (3) 3

General Education Requirements

General Education Requirements
Credits: 19-23

General Education Core
Credits: 13-17

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Recommend COM225 or COM230

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 4-5
+ MAT187 Precalculus (5) OR
+ MAT220 Calculus with Analytic Geometry I (5) OR
+ MAT221 Calculus with Analytic Geometry I (4) 4-5

General Education Distribution
Credits: 6

Humanities, Arts and Design
Credits: 3
Any approved general education course in the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course in the Social-Behavioral Sciences area.

Recommend ECN211 or ECN212

Natural Sciences
Credits: 0
Met by CHM or PHY in Required Courses.

MCCCD Governing Board Approval Date: February 25, 2025

Exercise Science: Health, Fitness, and Sports Performance

Major: 3059
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 62-74.5
CIP Code: 31.0507
Primary/Initiating College: Glendale Community College
Program Availability: CG, GC, MC, PV, SC, SM
Field of Interest: Health Sciences
Instructional Council: Exercise Science, Health & Physical Education, Recreation & Wellness
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
39-9031.00 Exercise Trainers and Group Fitness Instructors

Description: The Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance prepares students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM) and the American Council on Exercise (ACE) personal trainer certifications. The curriculum is designed to prepare students for employment in positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. The curriculum includes the foundational courses required for the Certificate of Completion (CCL) in Personal Training coupled with advanced hands-on courses required for the CCL in Personal Training: Advanced that foster the development of critical thinking, leadership, and communication skills important for developing, implementing and leading exercise programs. This curriculum also provides a good foundation for transfer to a four-year bachelor

program. Students who complete this AAS also qualify for the CCL in Personal Training and Personal Training: Advanced. An Associate in Arts (AA), Emphasis in Exercise Science is also available for students interested in continuing their studies in this field.

Learning Outcomes

1. Apply a fundamental understanding of the relevant scientific concepts of human anatomy and physiology, biomechanics and psychology. (BIO160, BIO181++, BIO201++, EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, FON100, FON241, PSY101)
2. Locate and evaluate relevant scholarly literature. (EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS290, FON100, FON241, HES100, [FYC], (COM), (CRE))
3. Conduct advanced evidence-based assessments of health and human movement. (EMT101, EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, WED106, [MA])
4. Design evidence-based physical activity programs tailored to client goals and needs. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, FON100, FON241, HES100, PED101ST, PED101RT) [MA])
5. Implement evidence-based physical activity programs tailored to client goals and needs. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, FON100, FON241, PED101ST, PED101RT)
6. Apply theories of motivation and behavior change to develop and implement basic strategies for improving exercise adoption and adherence. (EXS101, EXS215, EXS217, EXS257, EXS270++, HES100, PSY101)
7. Adapt instructional techniques to ensure client safety and goal attainment. (EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, HES210, PED101ST, PED101RT PED101++)
8. Apply industry standards of care to mitigate risk and ensure the safety of clients. (EMT101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, WED106, HES210)
9. Communicate through a variety of written and spoken modalities within diverse contexts. (EMT101, EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, HES100, WED106, HES210, [FYC], (COM), (CRE), [HU])
10. Demonstrate industry-accepted professional, ethical, and business standards. (EMT101, EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, WED106, PED101ST, PED101RT, PED101++, [FYC], (COM), (CRE), [HU])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 46-52.5

+ BIO181++ General Biology (Majors) I (4) OR
One (1) year of high school biology (0) 0-4

BIO160 Introduction to Human Anatomy and Physiology (4) OR
+ BIO201++ Human Anatomy and Physiology I (4) 4

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR
WED106 Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR
Current CPR/AED certification (0) 0-0.5

EXS101 Introduction to Exercise Science 3
+ EXS125 Introduction to Exercise Physiology 3
+ EXS146 Introduction to Exercise Testing 1

+ EXS215 Resistance Training and Recovery Techniques 3
+ EXS217 Cardiorespiratory and Flexibility Training 3
+ EXS246 Advanced Exercise Testing 2
+ EXS255 Program Design: Muscular Fitness and Performance 3
+ EXS257 Program Design: Cardiorespiratory Fitness 3

Student must complete three (3) credits from the following EXS internship course options:
+ EXS270 Exercise Science Internship (3) OR
+ EXS270AA Exercise Science Internship (1) AND
+ EXS270AB Exercise Science Internship (2) 3

+ EXS290 Introduction to Evidence Based Practice 3

FON100 Introductory Nutrition (3) OR
FON241 Principles of Human Nutrition (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

HES100 Healthful Living 3
HES210 Cultural Aspects of Health and Illness 3

PED101RT Resistance Training for Improved Sports Performance (1) OR
PED101ST Strength Training (1) 1

PED101BC Boot Camp (1) OR
PED101BS Body Sculpting (1) OR
PED101CY Cycling - Indoor (1) OR
PED101GF Group Fitness/Aerobics (1) OR
PED101KB Kickboxing (1) OR
PED101LD Latin Dancing (1) OR
PED101PC Physical Conditioning (1) OR
PED101PS Pilates (1) OR
PED101SR Stretch and Relaxation (1) OR
PED101TC Tai Chi (1) OR
PED101TX Suspension Training (1) OR
PED101YG Gentle Yoga (1) OR
PED101YH Hatha Yoga (1) OR
PED101YO Yoga (1) OR
PED101YP Power Yoga (1) OR
PED101YR Restorative Yoga (1) OR
PED101ZU Zumba Fitness (1) 1

PSY101 Introduction to Psychology 3

Restricted Electives

Credits: 1

Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.

EXS+++++ Any EXS Exercise Science course 1

FON+++++ Any FON Food and Nutrition course 1
HES+++++ Any HES Health Science course 1
PED+++++ Any PED Physical Education course 1
IFS110 Critical Research for College Success 1

General Education Requirements

General Education Requirements
Credits: 15-21

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6)
OR
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) OR
Higher level course in the Mathematical Applications [MA] area (3-6) 3-6

General Education Distribution
Credits: 3

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 0
Met by HES100 in Required Courses.

Natural Sciences
Credits: 0
Met by BIO160 or BIO201++ in Required Courses.

MCCCD Governing Board Approval Date: February 25, 2025

Film and Media Production

Major: 3570
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 61-71
CIP Code: 50.0699
Primary/Initiating College: Glendale Community College
Program Availability: College-specific: GC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
27-2012.00 Producers and Directors
27-2012.01 Producers
27-2012.02 Directors- Stage, Motion Pictures, Television, and Radio
27-4031.00 Camera Operators, Television, Video, and Motion Picture
27-4032.00 Film and Video Editors

Description: The Associate in Applied Science (AAS) in Film and Media Production is designed to help students develop the creative and technical skills needed to work in the competitive film and video industry. Students receive comprehensive training in the craft, process, and theory behind visual storytelling. The program uses the latest technologies and provides opportunities for students to develop their skills and professionalism with real world projects, both in the laboratory and on location. This program is focused on independent filmmaking with the spirit of entrepreneurship in the field. A Certificate of Completion (CCL) in Documentary Film Production is also available.

Learning Outcomes

1. Produce independent media using digital tools and technologies according to industry standards. (AVC142, FMP105, FMP108, FMP114, FMP115, FMP/FMT117, FMP125, FMP134, FMP/FMT151, FMP204, FMP215, FMP260, FMP/FMT270, FMP275, FMT217, MUC122, [MA])
2. Synthesize principles of story, cinematography, sound, editing, and art in the development of film and media productions. (AVC142, FMP105, FMP108, FMP111, FMP111AA, FMP114, FMP115, FMP/FMT117, FMP125, FMP134, FMP/FMT151, FMP170, FMP204, FMP211, FMP214AC, FMP215, FMP260, FMP/FMT270, FMP275, FMP/FMT294AC, FMT217, HUM/THF205, HUM/THF206, HUM/THF210, HUM211AA, HUM212, HUM213, MUC122, (CRE), [FYC])
3. Integrate critical thinking skills and knowledge of historical and current trends in film in the production of current and future work. (AVC280AC, FMP108, FMP111, FMP111AA, FMP/FMT117, FMP125, FMP134, FMP/FMT151, FMP170, FMP208, FMP211, FMP215, FMP260, FMP/FMT270, FMP275, FMP/FMT294AC, HUM/THF205, HUM/THF206, HUM/THF210, HUM212, HUM213, (CRE), [FYC], [SG/SQ])
4. Employ industry standards for safety and set etiquette in a production environment. (AVC142, FMP105, FMP108, FMP114, FMP115, FMP/FMT117, FMP125, FMP134, FMP/FMT151, FMP204, FMP215, FMP/FMT270, FMP275, FMP/FMT294AC, FMT217, MUC122)

5. Apply knowledge of industry roles and techniques for each stage of the production cycle, from development through distribution. (AVC142, FMP105, FMP108, FMP114, FMP115, FMP/FMT117, FMP125, FMP134, FMP/FMT151, FMP170, FMP204, FMP215, FMP260, FMP/FMT270, FMP275,FMT217, MUC122, [MA])
6. Demonstrate collaboration and inclusivity to promote an ethical and diverse work environment. (AVC142, FMP105, FMP108, FMP111, FMP111AA, FMP114, FMP115, FMP/FMT117, FMP125, FMP134, FMP/FMT151, FMP170, FMP204, FMP208, FMP211, FMP214AC, FMP215, FMP260, FMP275, FMP/FMT294AC, FMP/FMT270, FMT217, HUM/THF205, HUM/THF206, HUM/THF210, HUM211AA, HUM212, HUM213, MUC122, (COM), (CRE), [FYC], [SB])
7. Demonstrate qualifications and experience as a competitive film and media industry professional in written and oral communication. (AVC280AC, FMP134, FMP170, FMP208, FMP214AC, FMP260, FMP/FMT270, FMP275, FMP/FMT294AC, (COM), [FYC])
8. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 10-12

FMP108 Video Production 3
+ FMP114 Audio Production 3
FMP115 Introduction to Editing for Media 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 25-31

In addition to completing the Required Courses, students must select one (1) of the following specializations:

Specialization 1: Film and Media Production
Credits: 30-31
Film and Media Production Core Credits: 18
MUC122 Sound Design I 3
FMP105 Studio Production 3

FMP111 Screenwriting I (3) OR
FMP111AA Scripting for the Media (3) 3

+ FMP/FMT117 Introduction to Cinematography 3
+ FMP134 Pre-Production for Film and Media 3

FMP208 Production Company Management (3) OR
FMP260 Film and Media Producing and Financing (3) 3

Film and Media Production Related Area
Credits: 12-13
Complete two (2) production courses for a total of six (6) credits from the following list of options. (Note: Students planning to take FMT217 as their Capstone/Internship course should select FMP204):
AVC142 Introduction to Digital Photography 3
+ FMP/FMT151 TV and New Media Production 3
+ FMP204 Advanced Video Production 3
+ FMP215 Digital Video Effects 3

Complete one (1) Humanities Film course for a total of three (3) credits from the following:
HUM/THF206 Introduction to Television Arts 3
HUM/THF210 Contemporary Cinema 3
HUM211AA Foreign Films: Classics 3
+ HUM212 Documentary Film 3
HUM213 Hispanic Film 3

Complete one (1) Capstone/Internship course for a total of 3-4 credits based on career goals:
+ AVC280AC Digital Media Arts and Design Capstone 3
+ FMP211 Screenwriting II 3
+ FMP214AC Video Production Internship 3
+ FMP/FMT270 Documentaries for Social Change 4
+ FMP275 Advanced Portfolio Production 4
+ FMT217 Advanced Cinematography 3

Specialization 2: Documentary Film Production
Credits: 25
Documentary Film Production Core - Credits: 19
AVC142 Introduction to Digital Photography 3
FMP125 Podcasting 3
FMP111AA Scripting for the Media 3
+ FMP204 Advanced Video Production 3
+ FMP/FMT270 Documentaries for Social Change 4

FMP170 Introduction to Documentary Filmmaking (3) OR
+ HUM212 Documentary Film (3) 3

Documentary Film Production Related Area
Credits: 6
In consultation with Advisor or Program Director, choose two (2) courses for a total of six (6) credits:
+ FMP/FMT117 Introduction to Cinematography 3
FMP208 Production Company Management 3
FMP260 Film and Media Producing and Financing 3
+ FMP/FMT294AC Special Topics in Motion Picture, Television, Documentary, and New Media Production 3

General Electives
Credits: 0-4

Students must complete 0-4 additional credits to complete the minimum total program credits required for this degree.

General Education Requirements
General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area. 3-6

Students who want to transfer to university recommend the following:
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
HUM/THF205 Introduction to Cinema 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area.

Recommended: PSY101 Introduction to Psychology 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Fire Science

Major: 3205
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 82-92
CIP Code: 43.0203
SOC Code: Upon completion of this degree, students may pursue a career as:
33-2011.01 Municipal Firefighters

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Associate in Applied Science (AAS) in Fire Science provides the opportunity for individuals seeking careers in the fire service to acquire standard firefighting skills and prepare for state and/or national certifications, including the Firefighter I and II Certification. Students will gain broad knowledge and skills necessary to work effectively in the fire service as firefighters. A Certificate of Completion (CCL) in Firefighter Operations is also available.

Learning Outcomes

1. Apply the basic theories of fire behavior and methods of fire control and prevention in a variety of fire operations. (FSC102, FSC108, FSC110, FSC113, FSC118, FSC208, (CRE), [MA])
2. Demonstrate the appropriate and safe use of personal firefighting equipment and fire apparatus. (FSC101, FSC102, FSC110, FSC113, FSC117, FSC118, FSC134, FSC234, (CRE), (COM), [MA])
3. Demonstrate the knowledge of the professional and organizational structures, processes, and policies that guide fire departments. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC105, FSC108, FSC110, FSC113, FSC117, FSC118, FSC119, FSC208, FSC215, (CRE), (COM), [MA], [SB], [SG], [SQ])
4. Demonstrate physical tasks, proper tool selection, and knowledge of operating procedures in accordance with the standards of the profession. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC108, FSC110, FSC118, FSC130, FSC134, FSC174, FSC208, FSC234, (CRE), [MA])
5. Mitigate hazards to health and safety by assessing, planning and responding to emergency situations. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC110, FSC113, FSC174, FSC208, (CRE), (COM), [MA], [SG], [SQ])
6. Demonstrate the critical thinking, mental, and emotional skills needed to perform firefighting tasks and services. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC110, FSC117, FSC118, FSC130, FSC134, FSC174, FSC215, FSC234, (CRE), (COM), [FYC], [MA], [SB], [SG], [SQ])
7. Practice industry accepted professional and ethical behavior related to fire service. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC108, FSC110, FSC118, FSC119, FSC215, (CRE), (COM), [FYC], [SB], [HU])
8. Collaborate effectively with members of a team to achieve goals. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC110, FSC119, FSC174, FSC215, (CRE), (COM), [FYC], [HU], [SB], [SG], [SQ])
9. Communicate efficiently and effectively with members of diverse populations in a culturally responsive manner. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC108, FSC110, FSC119, FSC215, (CRE), (COM), [FYC], [HU], [SB])
10. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consult with your faculty mentor or academic advisor to determine educational requirements, including possible university transfer options, for your chosen career field.
Prior Learning Assessment Credit (PLA) is available for the following:

- Current Employment as a Firefighter
- BLS
- EMT
- Fire I and II
- Hazmat
- Wildland Redcard

Admission Criteria

See Program Director for details.

Program Prerequisites

None

Required Courses

Credits: 59-61

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5)
OR
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0) AND
Credit By Evaluation or Prior Learning Assessment credit (0.5) 0.5

+ EMT104 Emergency Medical Technology (10) AND
+ EMT104AB Applied Practical Studies for Emergency Medical Technology (0.5) AND
+ EMT104LL Emergency Medical Technology Practicum (2)
OR
Prior Learning Assessment for Arizona State EMT Certification or Arizona State Paramedic Certification or equivalent (12.5) 12.5

FSC101 Introduction to Fire Service Selection and Entry (4) OR
Prior Learning Assessment for Current employment as a firefighter (4) 4

+ FSC102 Fire Department Operations (11) OR
Prior Learning Assessment for Firefighter I and II certifications or completion of a Regional Fire Academy (11) 11

FSC105 Hazardous Materials Awareness and Operations (3) OR
Prior Learning Assessment (3) for Hazardous Materials Awareness and Operations certification 3

FSC108 Fundamentals of Fire Prevention (3) OR
FSC110 Wildland Firefighter (3)
OR
Prior Learning Assessment for Wildland Red Card OR S-130 and S-190 Course Completion Certificate (3)
(FSC110 is recommended)

FSC113 Introduction to Fire Suppression 3
FSC117 Fire Apparatus 3
FSC118 Fire Hydraulics 3
FSC119 Introduction Fire Service Ethics 3

FSC130 Fitness for Firefighters/CPAT (1) OR
Prior Learning Assessment for CPAT completion or completion of a Regional Fire Academy (1) 1

FSC134 Fitness and Conditioning for Firefighters (3) OR
+ FSC234 Fitness and Wellness for Firefighter Candidates (3) OR
Prior Learning Assessment for completion of Regional Fire Academy (3) 3
(FSC234 is recommended for students who have already completed the Fire Academy equivalent of FSC102)

+ FSC174 Functions of Command 2
+ FSC208 Firefighter Safety and Building Construction 3
FSC215 Customer Service in the Public Sector 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 1-3

FSC+++++ Any Fire Science Technology course.

Recommend the following:
FSC202 Supervisory Training for Firefighters 3
+ FSC204 Firefighting Tactics and Strategy 3
+ FSC282AC Service-Learning Experience in Fire Science 3
+ FSC296WC Cooperative Education 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM100 is recommended.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level general education course from the Mathematics area. (3-6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: December 10, 2024

Fire Service Management

Major: 3207
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 67-72
CIP Code: 43.0202
Primary/Initiating College: Paradise Valley Community College
Program Availability: GC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
33-1021.00 First-Line Supervisors of Fire Fighting and Prevention Workers

Description: The Associate in Applied Science (AAS) in Fire Service Management can be used by professional firefighters for promotional opportunities within the Fire Services. The program provides courses for experienced professional firefighters who desire to learn advanced fireground tactics and strategy, building construction, practical incident command, supervisory training of personnel, public administration, basic finance, and human resource management. Students can select from a variety of fire science electives to meet their professional goals. The Certificate of Completion (CCL) in Fire Service Management is also available.

Learning Outcomes

1. Demonstrate management principles as they pertain to evaluation, supervision, discipline, delegation, and assignments. (FSC119, FSC167, FSC202, FSC214, FSC215, FSC220, FSC231, FSC+++++, (CRE), (COM), [HU], [SB])
2. Manage a variety of emergency incidents based on standard procedures.(FSC113,FSC119, FSC167, FSC204, FSC220, FSC231, FSC+++++, (CRE), (COM), [MA], [SG], [SQ])

3. Evaluate human resource practices including recruitment and selection, evaluation, compensation, supervision, and discipline of fire service personnel. (FSC119, FSC167, FSC214, FSC215, FSC220, FSC+++++, (CRE), (COM), [HU], [SB])
4. Analyze the methods of providing for firefighter safety in a variety of incidents. (FSC113, FSC119, FSC167, FSC208, FSC220, FSC231, FSC+++++, (CRE), (COM), [MA], [SG], [SQ])
5. Demonstrate the critical thinking, mental, and emotional skills needed to manage emergency incidents. (FSC119, FSC167, FSC202, FSC204, FSC208, FSC215, FSC220, FSC+++++, (CRE), (COM), [FYC], [MA], [SB], [SG], [SQ])
6. Practice industry accepted professional and ethical behavior related to fire service. (FSC119, FSC167, FSC202, FSC214, FSC215, FSC220, FSC+++++, (CRE), (COM), [FYC], [SB], [HU])
7. Collaborate effectively with members of a team to achieve goals. (FSC119, FSC167, FSC202, FSC208, FSC215, FSC220, FSC231, FSC+++++, (CRE), (COM), [FYC], [HU], [SB], [SG], [SQ])
8. Communicate efficiently and effectively with members of diverse populations in a culturally responsive manner. (FSC215, FSC119, FSC167, FSC220, FSC+++++, (CRE), (COM), [FYC], [HU], [SB])
9. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Permission of the Program Director.

Program Prerequisites

None

Required Courses

Credits: 36-38

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

FSC113 Introduction to Fire Suppression 3
FSC119 Introduction Fire Service Ethics 3
+ FSC167 Fire Captain Academy 6
FSC202 Supervisory Training for Firefighters 3
+ FSC204 Firefighting Tactics and Strategy 3
+ FSC208 Firefighter Safety and Building Construction 3
+ FSC214 Human Resource Management in Fire Service 3
FSC215 Customer Service in the Public Sector 3
FSC220 Fire Officer 5
FSC231 Battalion Chief Academy 3

Restricted Electives

Credits: 3-9

Students should select 3-9 credit hours from the following courses in consultation with a Program Director.
wFSC+++++ Any Fire Science Technology course(s)

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3)
AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM100 is recommended.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level mathematics course in the Mathematics area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social and Behavioral Sciences area.
SOC101 is recommended.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

BIO100, OR BIO160, OR (CHM130 AND CHM130LL) is recommended.

MCCCD Governing Board Approval Date: June 27, 2023

Forensic Science

Major: 3183
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 60-64
CIP Code: 43.0406
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00

SOC Code: Upon completion of this degree, students may pursue a career as:
19-4092.00 Forensic Science Technicians
13-1041.06 Coroners
33-1012.00 First-Line Supervisors of Police and Detectives
33-3021.01 Police Detectives
33-3021.02 Police Identification and Records Officers
33-3051.00 Police and Sheriff`s Patrol Officers
33-3051.01 Police Patrol Officers
33-3021.00 Detectives and Criminal Investigators
33-3021.06 Intelligence Analysts
33-3021.03 Criminal Investigators and Special Agents

Description: The Associate in Applied Science (AAS) in Forensic Science provides the student with a specialization in forensic investigation as it relates to crime. The curriculum presents a specialized scope of knowledge about photography, collection and preservation of evidence, and investigative strategies. The program provides students with an important knowledge base for investigative specialization in a wide range of disciplines and careers. This degree pathway also provides students with the opportunity to complete two Certificates of Completion (CCL) in Crime Scene Investigation, and Fingerprint Identification and Photography.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS123, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, BPC110, FOR286, [FYC], [MA], [SQ])
2. Solve problems through logical and sound reasoning. (AJS101, AJS109, AJS123, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, BPC110, CIS105, FOR286, [COM], [FYC], [MA], [SQ])
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, BPC110, CIS105, FOR286, [COM], [FYC], [MA], [SQ])
4. Communicate in the language common to the criminal justice system. (AJS101, AJS109, AJS210, AJS215, AJS219, AJS213, AJS214, AJS216, AJS260, AJS290BN, FOR286, [COM], [FYC], [MA], [SQ])
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS123, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, FOR286, [COM], [FYC], [SQ])
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS101, AJS109, AJS123, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, FOR286, [FYC], [MA], [SQ])
7. Use technology to collect, analyze and communicate data. (AJS101, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, BPC110, CIS105, FOR286, [COM], [FYC], [MA], [SQ])
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS109, AJS123, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, FOR286, [COM], [FYC], [SQ])

9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS109, AJS210, AJS213, AJS214, AJS215, AJS216, AJS219, AJS260, AJS290BN, FOR286, [FYC], [MA], [SQ])
10. Collect, identify, classify, and analyze physical evidence related to criminal investigations. (AJS101, AJS213, AJS214, AJS215, AJS216, AJS219, AJS290BN, FOR286, [FYC], [MA], [SQ])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 32-44

AJS101 Introduction to Criminal Justice 3
AJS123 Ethics and the Administration of Justice 3
AJS275 Criminal Investigation I 3
AJS290BN Courtroom Testimony Seminar 1

AJS215 Criminalistics: Physical Evidence (3) OR
AJS219 Crime Scene Technology: Physical Evidence (3) OR
FOR105 Forensic Science: Physical Evidence (4) 3-4

AJS216 Criminalistics: Biological Evidence (3) OR
FOR106 Forensic Science: Biological Evidence (4) 3-4

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Students should select courses from one of the following specializations based on career goals.

Specialization 1: Crime Scene
Credits: 15
AJS109 Substantive Criminal Law 3
AJS210 Constitutional Law 3
AJS213 Evidence Technology: Fingerprints 3
AJS214 Evidence Technology/Photography 3
AJS260 Procedural Criminal Law 3

Specialization 2: Lab Science
Credits: 23

+ BIO181 General Biology (Majors) I 4
+ BIO182 General Biology (Majors) II 4
+ CHM151 General Chemistry I 3
+ CHM151LL General Chemistry I Laboratory 1
+ CHM152 General Chemistry II 3
+ CHM152LL General Chemistry II Laboratory 1
+ FOR286 Principles of Forensic Science 4

Any course or combination of courses that include HU, C, and either G or H General Education designations. 3

Restricted Electives

Credits: 3

Students must complete three (3) credits of restricted electives.

Students interested in Specialization 1: Crime Scene
CIS105 Survey of Computer Information Systems (3) OR
BPC110 Computer Usage and Applications (3) OR
AJS+++++ Any AJS Administration of Justice Studies course not listed in the required courses area. (3) 3

Students interested in Specialization 2: Lab Science
CIS105 Survey of Computer Information Systems (3) OR
BPC110 Computer Usage and Applications (3) 3

General Electives

Credits: 0-13

Students must choose zero to thirteen (0-13) additional credits of General Elective courses. Total number of General Electives required will largely depend upon specialization selected.

General Education Requirements

General Education Requirements
Credits: 12-21

General Education Core
Credits: 12-17

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
+ COM225 Public Speaking 3

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-5

For Specialization 1: Crime Scene
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR

+ MAT142 College Mathematics (3) OR
Higher course with an [MA] general education designation 3-5

For Specialization 2: Lab Science
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
Higher course with an [MA] general education designation 3-5

General Education Distribution
Credits: 0-4

Humanities, Arts and Design
Credits: 0
Met by AJS123 in Required Courses area

Social-Behavioral Sciences
Credits: 0
Met by AJS101 in Required Courses area

Natural Sciences
Credits: 0-4

For Specialization 1: Crime Scene
Any approved general education course from the Natural Sciences area (4) OR
May be met by FOR105 or FOR106 in Required Courses area (0) 0-4

Recommended
+ CHM130 Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1) OR
+ CHM151 General Chemistry I (3) AND
+ CHM151LL General Chemistry I Laboratory (1) OR
FOR105 Forensic Science: Physical Evidence (4) OR
FOR106 Forensic Science: Biological Evidence (4) 4

For Specialization 2: Lab Science
Met by CHM151 and CHM151LL in Required Courses area

MCCCD Governing Board Approval Date: February 27, 2024

General Business

Major: 3148
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 62-69
CIP Code: 52.0101
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
11-1021.00 General and Operations Managers
11-3012.00 Administrative Services Managers

11-9199.07 Security Managers
11-3071.02 Storage and Distribution Managers
11-3071.01 Transportation Managers
11-2022.00 Sales Managers
13-1199.00 Business Operations Specialists, All Other
13-1041.08 Customs Brokers
13-1199.04 Business Continuity Planners

Description: The Associate in Applied Science (AAS) in General Business program is designed to meet the needs of students who wish a broad overview of business and desire not to enroll in a specialized curriculum in business. The program is designed to acquaint students with major subject areas of business, to improve the student`s business vocabulary, and to provide students with an understanding of influencing factors in business decision making and activities. In addition, this program may aid a student in recognizing a specific business field to be pursued in future studies. A Certificate of Completion (CCL) in General Business is available.

Program Competencies

1. Apply effective oral, written, and visual business communication skills. (GBS120, GBS233, (COM), [FYC])
2. Demonstrate critical thinking through written and oral formats. (GBS120, GBS151, GBS205, GBS233, EPS+++, GBS+++, SBU200, (COM), [FYC], [HU], [SG], [SQ])
3. Use basic mathematics and accounting principles to manage the financial health of an organization. (ACC111, ACC+++, [MA])
4. Apply current technology to specific business tasks. (CIS105, CIS114DE, CIS117DM, CIS133DA, TQM+++)
5. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (ACC111, ECN211, ECN212, GBS151, GBS205, MGT175, MGT251, MKT271, SBU200, [HU])
6. Apply basic principles and techniques of management to recruit, select, hire, train, supervise, and evaluate employees. (GBS151, MGT175, MGT251)
7. Evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting (GBS151, MGT175, MGT251, MGT+++, TQM+++)
8. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, GBS205, IBS+++, MGT175, MGT251, MKT271, MKT+++, REA+++, SBS+++, TQM+++)
9. Analyze marketing research to create marketing plans and forecasts. (GBS151, MGT175, MGT251, MKT271, MKT+++)

Required Courses

Credits: 22-24

ACC111 Accounting Principles I 3
CIS105 Survey of Computer Information Systems 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

GBS120 Workplace Communication Skills (3) OR
+ GBS233 Business Communication (3) 3

GBS151 Introduction to Business 3
GBS205 Legal, Ethical and Regulatory Issues in Business 3

MGT175 Business Organization and Management (3) OR
MGT251 Human Relations in Business (3) 3

MKT271 Principles of Marketing 3

Restricted Electives

Credits: 18

Students should select 18 credits from the following courses/subjects. Any 100/200 level courses in the following subjects can be used, except courses used to satisfy the Required Courses area.

ACC+++ Any ACC Accounting course(s)
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS133DA Internet/Web Development Level I 3
EPS+++ Any EPS Entrepreneurial Studies course(s)
GBS+++ Any GBS General Business course(s)
IBS+++ Any IBS International Business course(s)
MGT+++ Any MGT Management course(s)
MKT+++ Any MKT Marketing course(s)
REA+++ Any REA Real Estate course(s)
SBS+++ Any SBS Small Business Management course(s)
TQM+++ Any TQM Total Quality Management course(s)

General Education Requirements

General Education Requirement
Credits: 22-27

General Education Core
Credits: 12-17

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3)

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3)
COM110 Interpersonal Communication (3)
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment 0-3

Mathematics
Credits: 3-5
Any approved general education course from the Mathematics area.

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course in the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
SBU200 Society and Business (3) 3

Natural Sciences
Credits: 4
Any approved general education course in the Natural Sciences area.

MCCCD Governing Board Approval Date: June 28, 2022

Information Technology

Major: 3196
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 60-69
CIP Code: 11.0103
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1151 Computer User Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11.3021 Computer and Information Systems Managers
15-1121 Computer Systems Analysts
15-1122 Information Security Analysts

Description: The Associate in Applied Science (AAS) in Information Technology (IT) program is designed to provide students with skills to meet information technology needs across industries. This program includes instruction in the principles of computer hardware components and business software, programming, databases, networking, customer service, web development, and information systems and project management. Coursework helps prepare students for a variety of industry-recognized examinations and certifications. This degree also provides students with the opportunity to earn one of the following Certificate of Completion (CCL): Cybersecurity Fundamentals, Database Development, Desktop Support, Foundations of Mobile App Development, Microsoft Office Professional, Microsoft System Administration, Programming and Systems Analysis Level I, Oracle Database Operations, Red Hat Linux Engineer, and Web Foundations.

Learning Outcomes

1. Apply current technical concepts and practices in the core information technologies to effectively integrate IT-based solutions into the business environment. (BPC/OAS111AA, BPC170, BPC270, CIS102DA, CIS105, CIS117DM, CIS119DO, CIS119DP, CIS120DF, CIS121AH, CIS126DL, CIS126RH, CIS133DA, CIS136, CIS150++, CIS154, CIS156, CIS159, CIS162++, CIS163AA, CIS164AB, CIS165++, CIS166++, CIS190, CIS217AM, CIS235, CIS238RH, CIS240RH, CIS276DA, CIS276DB, CIS113DE, CIS114DE, CIS118DB, CIS224, CIS225AB, CIS233DA, CIS250, CIS270, CNT140AB, ITS110, MST150++, MST155DC, MST157DC, MST158DC, [MA])
2. Analyze business requirements to identify and define appropriate technology solutions. (BPC/OAS111AA, BPC170, BPC270, CIS102DA, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS118DB, CIS119DO, CIS119DP,

CIS120DF, CIS121AH, CIS126DL, CIS126RH, CIS133DA, CIS136, CIS150++, CIS154, CIS156, CIS159, CIS162++, CIS163AA, CIS164AB, CIS165++, CIS166++, CIS190, CIS217AM, CIS225AB, CIS233DA CIS235, CIS270, CIS276DA, CIS276DB, CIS224, CIS238RH, CIS240RH, CIS250, CNT140AB, GBS151, ITS110, MST150++, MST155DC, MST157DC, MST158DC, [MA], [SG], [SQ])

3. Demonstrate effective written, oral, visual, and interpersonal communication skills with multiple stakeholders. (BPC/OAS111AA, BPC170, BPC270, CIS102DA, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS118DB, CIS119DO, CIS119DP, CIS120DF, CIS126DL, CIS126RH, CIS133DA, CIS136, CIS150++, CIS154, CIS156, CIS159, CIS162++, CIS163AA, CIS164AB, CIS165++, CIS166++, CIS190, CIS217AM, CIS225AB, CIS235, CIS276DA, CIS276DB, CIS224, CIS233DA, CIS250, CNT140AB, GBS151, MST150++, [FYC], (COM) [HU], [MA], [SB], [SG], [SQ])
4. Collaborate in a culturally responsive manner in a team environment. (CIS102DA, CIS118DB, CIS154, CIS224, CIS250, GBS151, [FYC], (COM), (CRE), [HU], [SB])
5. Integrate professional, social, and ethical responsibility in decision-making and actions. (BPC170, BPC270, CIS102DA, CIS105, CIS111, CIS133DA, CIS233DA, CIS235, CIS250, GBS151, ITS120, ITS240, [HU], [SB])
6. Manage ongoing documentation of information systems according to business standards. (CIS102DA, CIS111, CIS117DM, CIS118DB, CIS119DO, CIS119DP, CIS133DA, CIS136, CIS150++, CIS154, CIS156, CIS159, CIS162++, CIS163AA, CIS164AB, CIS165++, CIS166++, CIS190, CIS217AM, CIS225AB, CIS238RH, CIS240RH, CIS276DA, CIS276DB, CIS233DA, CIS224, CIS250, CNT140AB, GBS151, ITS120, ITS240)
7. Apply project management skills to ensure successful completion of projects. (CIS102DA, CIS118DB, CIS120DF, CIS136, CIS224, CIS233DA, CIS250, GBS151)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 33-41

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.

Specialization 1: Cybersecurity Fundamentals
Credits: 33-34

Information Technology Core Credits: 24-25
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3

CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3) OR
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

CIS133DA Internet/Web Development Level I 3
+ CIS156 Python Programming: Level I 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Cybersecurity Fundamentals Credits: 9
CIS111 Ethics in Information Technology (3) OR
+ ITS120 Legal, Ethical and Regulatory Issues (3) 3

+ CIS270 Essentials of Network and Information Security (3) OR
+ ITS110 Information Security Fundamentals (3) 3

+ ITS240 Ethical Hacking and Network Defense 3

Related Area Credits: 0-5
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 2: Database Development
Credits: 36-38

Information Technology Core Credits: 21-22
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
MST150++ Microsoft Windows (3) 3

CIS105 Survey of Computer Information Systems 3
+ CIS119DO Introduction to Oracle: SQL 3
CIS133DA Internet/Web Development Level I 3

+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
CIS250 Management of Information Systems (3) 3

Database Development Credits: 15
CIS117DM Microsoft Access: Database Management (3) OR
+ CIS154 Database Modeling and Design (3) 3

+ CIS150++ Programming Fundamentals 3

+ CIS164AB Oracle: PL/SQL Programming (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

+ CIS217AM Advanced Microsoft Access: Database Management (3) OR
+ CIS276DB SQL Server Database (3) 3

+ CIS225AB Object-Oriented Analysis and Design 3

Related Area Credits: 0-2
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 3: Desktop Support
Credits: 32-38

Information Technology Core Credits: 24-25
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3) OR
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

CIS133DA Internet/Web Development Level I 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Desktop Support Credits: 6
+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
CIS102DA Customer User Support 3

Related Area Credits: 2-8
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 4: Foundations of Mobile App Development
Credits: 33-38

Information Technology Core Credits: 21-22
CIS105 Survey of Computer Information Systems 3

+BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
MST150++ Microsoft Windows (3) 3

CIS117DM Microsoft Access: Database Management (3) OR
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS133DA Internet/Web Development Level I 3
+ CIS162++ Any C Programming: Level I course 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Foundations of Mobile App Development Credits: 12
CIS120DF Introduction to Adobe Photoshop 3
+ CIS165 Introduction to IOS Application Development 3
+ CIS165DA Introduction to Android Application Development 3

+ CIS165DB C#/VB.NET: Windows 8 App Development (3) OR
+ CIS165DC Xamarin/C# Cross Platform Development (3) 3

Related Area Credits: 0-5
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 5: Microsoft Office Professional
Credits: 31-38

Information Technology Core Credits: 18-19
CIS105 Survey of Computer Information Systems 3
CIS117DM Microsoft Access: Database Management 3
CIS133DA Internet/Web Development Level I 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

MST150++ Microsoft Windows (3) OR
BPC270 A+ Exam Prep: Operating System Configuration and Support (3) 3

Microsoft Office Professional Credits: 11-13
BPC/OAS111AA Computer Keyboarding (1) OR
Permission of Program Director (0) 0-1

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS118DB Desktop Presentation: PowerPoint 3

CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

Related Area Credits: 0-8
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 6: Microsoft Server
Credits: 36-38

Information Technology Core Credits: 21-22
CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3) OR
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS133DA Internet/Web Development Level I 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

MST150++ Microsoft Windows 3

Microsoft Server Credits: 15
CIS121AH Microsoft PowerShell/Command Line Operations 3
+ MST155DC Installation, Storage, and Compute with Windows Server 4
+ MST157DC Networking with Windows Server 4
+ MST158DC Identity Management with Windows Server 2016 4

Related Area Credits: 0-2
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 7: Oracle Database Operations
Credits: 32-38

Information Technology Core Credits: 21-22
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
MST150++ Microsoft Windows (3) 3

CIS105 Survey of Computer Information Systems 3

+ CIS119DO Introduction to Oracle: SQL 3
CIS133DA Internet/Web Development Level I 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Oracle Database Operations Credits: 9
+ CIS119DP Oracle: Database Administration 3
+ CIS154 Database Modeling and Design 3
+ CIS164AB Oracle: PL/SQL Programming 3

Related Area Credits: 2-8
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 8: Programming and Systems Analysis Level 1 Courses
Credits: 32-38

Information Technology Core Credits: 21-22
CIS105 Survey of Computer Information Systems 3

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
MST150++ Microsoft Windows (3) 3

CIS133DA Internet/Web Development Level I 3
+ CIS150AB Object-Oriented Programming Fundamentals 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Programming and Systems Analysis
Credits: 9
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+CIS163AA Java Programming: Level I (3) OR
+ CIS165++ Any Mobile Application Development course (3) 3

+ CIS166++ Any Web Scripting course 3
GBS151 Introduction to Business 3

Related Area Credits: 1-8
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 9: Redhat Linux Engineer
Credits: 32-38

Information Technology Core Credits: 21-22
CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3) OR
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS126RH Red Hat System Administration I 3
CIS133DA Internet/Web Development Level I 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Redhat Linux Engineer Credits: 6
+ CIS238RH Red Hat System Administration II 3
+CIS240RH Red Hat System Administration III 3

Related Area Credits: 5-11
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses
MST+++++ Any MST Microsoft Technology courses

Specialization 10: Web Foundations
Credits: 36-38

Information Technology Core Credits: 21-22
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
MST150++ Microsoft Windows (3) 3

CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3) OR
+CIS119DO Introduction to Oracle: SQL (3) OR
+CIS276DA MySQL Database (3) OR
+CIS276DB SQL Server Database (3) 3

CIS133DA Internet/Web Development Level I 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS224 Project Management Microsoft Project for Windows (3) OR
+ CIS250 Management of Information Systems (3) 3

Web Foundation Credits: 15
CIS120DF Introduction to Adobe Photoshop 3
CIS136 Content Management Systems: WordPress 3
+ CIS166AA Introduction to Javascript 3
+ CIS233DA Internet/Web Development Level II 3
+ CIS235 e-Commerce 3

Related Area Credits: 0-2
Select courses with one of the following prefixes to complete the minimum total program credits required for this degree:

BPC+++++ Any BPC Business-Personal Computers courses
CIS+++++ Any CIS Computer Information Systems courses
CLD+++++ Any CLD Cloud Computing courses
CNT+++++ Any CNT Cisco Network Technology courses
ITS+++++ Any ITS Information Technology Security courses

MST+++++ Any MST Microsoft Technology courses

Specialization 11: A related Certificate of Completion (CCL) at the discretion of the Program Director (minimum of 11 credits) AND the following core courses with permission of the Program Director

Information Technology Core Credits: 21-22
CIS105 Survey of Computer Information Systems 3

CIS117DM Microsoft Access: Database Management (3) OR
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
MST150++ Microsoft Windows (3) 3

+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) 3

CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

CIS133DA Internet/Web Development Level I 3

+ CIS224 Project Management Microsoft Project for Windows (3) OR
CIS250 Management of Information Systems (3) 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3)
AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3)

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level mathematics course in the Mathematical area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

Any approved general education course from the Humanities, Arts and Design area. 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Science area. 4

MCCCD Governing Board Approval Date: June 27, 2023

Law Enforcement Training

Major: 3188
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 63-71
CIP Code: 43.0107
Primary/Initiating College: Rio Salado College
Program Availability: CG, GC, RS
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
33-3021.00 Detectives and Criminal Investigators
33-3051.00 Police and Sheriff`s Patrol Officers
33-9021.00 Private Detectives and Investigators
33-3011.00 Bailiffs

Upon completion of a graduate degree, students may pursue a career as:
25-1111.00 Criminal Justice and Law Enforcement Teachers, Postsecondary

Description: The Associate in Applied Science (AAS) in Law Enforcement Training is designed to provide students with up-to-date industry specific training that will enhance their professional opportunities. Courses are also

designed to teach students how to handle the challenges of the law enforcement profession. A Certificate of Completion (CCL) in Law Enforcement Training Academy is also available.

Learning Outcomes

1. Practice professional standards of policing. (AJS101, AJS113, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)
2. Apply the principles and processes of law and legal matters to policing. (AJS101, AJS109, AJS113, AJS151, AJS153, AJS154, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275, AJS290BN)
3. Apply principles of patrol procedures to maintain best practices of contemporary policing. (AJS101, AJS113, AJS151, AJS153, AJS154, AJS162, AJS201, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)
4. Demonstrate proficiency in conducting practical investigations in traffic collisions, traffic direction, and impaired driver cases. (AJS101, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275, AJS290BN)
5. Apply principles of law and best practices to criminal investigations and crime scene management. (AJS101, AJS109, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)
6. Collaborate with others to establish shared vision and effective relationships. (AJS101, AJS113, AJS162, AJS230, AJS270, AJS275, AJS290BN)
7. Engage in appropriate interactions. (AJS101, AJS151, AJS153, AJS154, AJS162, AJS230, AJS270, AJS275, AJS290BN)
8. Apply aspects of mental and physical conditioning for personal safety in law enforcement activities. (AJS101, AJS230, AJS290BN)
9. Synthesize relevant sources of information to prepare comprehensive police reports. (AJS101, AJS109, AJS113, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275, AJS290BN)
10. Demonstrate the police proficiency skills that meet the standards set forth by the Arizona Peace Officer Standards and Training Board. (AJS101, AJS151, AJS153, AJS154, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275)
11. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS109, AJS113, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This program replaces: AAS/3385 Law Enforcement Technology

Admission Criteria

Must meet AZPOST minimum requirements for a law enforcement officer and meet any physical requirements by the Academy Director.

Program Prerequisites

None

Required Courses

Credits: 41-43

AJS101 Introduction to Criminal Justice 3
AJS109 Substantive Criminal Law 3
AJS113 Criminal Justice Crime Control Policies and Practices 3
AJS151 Firearms I 1
+ AJS153 Firearms II/Handguns 1
AJS154 Firearms III/Long Weapons 1
AJS162 Domestic Violence 3

AJS201 Rules of Evidence 3
AJS205 Effective Communication and Report Writing in Criminal Justice 3
AJS210 Constitutional Law 3
AJS215 Criminalistics: Physical Evidence 3
AJS230 The Police Function 3
AJS260 Procedural Criminal Law 3
AJS270 Community Relations 3
AJS275 Criminal Investigation I 3
AJS290BN Courtroom Testimony Seminar 1

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

Recommend for transfer to a university or MCCCD bachelor's program:
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Recommended: COM110 or COM230

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course in the Mathematics area 3-6

Recommend for transfer:

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
Any higher approved general education course in the Mathematical Applications [MA] area (3-6)

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course in the Humanities, Arts and Design area 3
Recommended: AJS123 Ethics and the Administration of Justice 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course in the Social-Behavioral Sciences area 3

Natural Sciences
Credits: 4

Any approved general education course in the Natural Sciences area 4

MCCCD Governing Board Approval Date: August 23, 2022

Management

Major: 3070
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 62-69
CIP Code: 52.0201
Primary/Initiating College: Phoenix College
Program Availability: CG, GC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
11-1021.00 General and Operations Managers
11-2022.00 Sales Managers
11-3012.00 Administrative Services Managers
11-3050.00 Industrial Production Managers
11-3071.00 Transportation, Storage, and Distribution Managers
11-3111.00 Compensation and Benefits Managers
11-9021.00 Construction Managers
11-3071.04 Supply Chain Managers
11-9151.00 Social and Community Service Managers
11-1011.00 Chief Executives
25-1011.00 Business Teachers, Postsecondary
13-1111.00 Management Analysts

Description: The Associate in Applied Science (AAS) in Management program is designed to provide skills for management careers. Students completing this program are better equipped to apply competencies needed for successful performance in management occupations such as manufacturing, wholesaling, retailing, and service industries. The Certificate of Completion (CCL) in Management is fully embedded in this AAS. The following Certificates of Completion (CCL) are also available based on chosen restricted electives: Human Resources

Management, Project Management, Business Administration, Supervision and Management, and Organizational Leadership. Some of these programs are available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Use basic accounting principles to develop and maintain business financial records. (ACC110, ACC111, ACC112)
2. Solve basic mathematical problems including discounts, markups, interest, credit, payroll, simple income tax, depreciation, financial statement, and insurance. (ACC110, ACC111, ACC112, GBS131, [MA])
3. Apply current technology to specific business tasks. (BPC110, CIS105, CIS114DE, CIS224)
4. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, IBS101, MKT271, MGT+++, TQM230, TQM240)
5. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS205, SBU200)
6. Create and use effective oral, written, and visual business communication skills. (GBS120, MGT229, CRE101, (COM), [FYC], [HU])
7. Evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting. (GBS151, MGT229, MGT+++, TQM230, TQM240)
8. Apply basic principles and techniques of management to recruit, select, hire, train, supervise, and evaluate employees. (GBS151, MGT251)
9. Critically evaluate the alternatives faced in business decision making to select the most effective and efficient solution. (GBS151, MGT229, MGT251, MGT+++, TQM230, TQM240, CRE101, [MA], [SG], [SQ])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 22-24

ACC111 Accounting Principles I 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

GBS120 Workplace Communication Skills 3
GBS151 Introduction to Business 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
MGT229 Management and Leadership I 3
MGT251 Human Relations in Business 3

Restricted Electives

Credits: 18

Students should select 18 credits from the following courses in consultation with a Department Advisor. Courses cannot be shared with Required Courses.

ACC110 Understanding and Using Accounting Systems (3) OR
+ ACC112 Accounting Principles II (3) 3

CIS114DE Excel Spreadsheet 3
CIS224 Project Management Microsoft Project for Windows 3
GBS131 Business Calculations 3
IBS101 Introduction to International Business 3
MKT271 Principles of Marketing 3
MGT+++ Any MGT Management course(s) (except courses used to satisfy Required Courses area) 3
TQM230 Teamwork Dynamics 2
TQM240 Project Management in Quality Organizations 3

General Education Requirements

General Education Requirements
Credits: 22-27

General Education Core
Credits: 12-17

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-5
Any approved general education course from the Mathematics [MA] area. 3-5

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design [HU] area. 3

Social-Behavioral Sciences
Credits: 3
SBU200 Society and Business 3

Natural Sciences
Credits: 4
Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Marketing and Sales

Major: 3094
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 62-69
CIP Code: 52.1401
Primary/Initiating College: Phoenix College
Program Availability: GC, GW, MC, PC, PV, SC
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
11-2011 Advertising and Promotions Managers
11-2022 Sales Managers
41-1011 First-Line Supervisors of Retail Sales Workers
41-3011 Advertising Sales Agents
41-4012 Sales Representatives, Wholesale and Manufacturing

Description: The Associate in Applied Science (AAS) in Marketing and Sales program is designed to develop competencies essential for success in marketing and personal selling. By completing this program, students will be better equipped for successful performance in a variety of marketing/management occupations, including wholesaling, retailing, professional sales, and entrepreneurship. Certificates of Completion (CCL) in Marketing and Social Media Marketing are available.

Learning Outcomes

1. Use basic mathematics and accounting principles to manage the financial health of an organization. (ACC111, [MA])
2. Apply current technology to specific business tasks. (CIS105, BPC110, CIS103)
3. Apply effective oral, written, and visual business communication skills. (GBS120, GBS233, [FYC], (COM))
4. Demonstrate critical thinking through written and oral formats. (GBS120, GBS151, GBS205, GBS233, SBU200, [FYC], [HU], [SG], [SQ], (COM))
5. Apply functions of modern business, including business principles, marketing, labor relations, and risk analysis to business situations. (GBS151, IBS101, MGT251)
6. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (ACC111, GBS151, GBS205, MGT251, MKT271, MKT+++, SBU200, [HU])
7. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, GBS205, MGT251, MKT271, MKT+++)
8. Analyze marketing research to create marketing plans and forecasts. (GBS151, MGT251, MKT271, MKT+++)
9. Create an ethically and socially responsible social media campaign. (MKT110, MKT271, MKT263, MKT+++)
10. Analyze business advertising scenarios in the context of target markets. (MKT263, MKT271, MKT+++)
11. Evaluate customers, company, product and/or service, competitor and marketplace information in order to facilitate the selling process. (MGT126, MKT267, MKT271, MKT+++)
12. Apply techniques for negotiating, overcoming objections, and customer service activities. (MKT110, MKT267)

Program Notes

Students must earn a grade of C or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 25-27

ACC111 Accounting Principles I 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

GBS151 Introduction to Business 3

GBS120 Workplace Communication Skills (3) OR
+ GBS233 Business Communication (3) 3

MKT110 Marketing and Social Networking 3
MKT263 Advertising Principles 3
MKT267 Principles of Sales 3
MKT271 Principles of Marketing 3

Restricted Electives

Credits: 15

Students should select 15 credits from the following courses in consultation with a Department Advisor.

CIS103 Introduction to Social Media 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
IBS101 Introduction to International Business 3
MGT126 Customer Service Skills and Strategies 3
MGT251 Human Relations in Business 3
MKT+++ Any MKT Marketing courses except courses used to satisfy the Required Courses area. 3-15

General Education Requirements

General Education Requirements
Credits: 22-27

General Education Core
Credits: 12-17

First-Year Composition
Credits: 6
Any approved general education courses from the First-Year Composition area.

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR

+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-5
Any approved general education course from the Mathematics area.

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
SBU200 Society and Business 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Music Industry Studies: Audio Production Technologies

Major: 3024
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 63-71
CIP Code: 10.0203
Primary/Initiating College: Phoenix College
Program Availability: GC, MC, PC, PV
Field of Interest: Visual and Performing Arts
Instructional Council: Music
GPA: 2.00
SOC Code: Upon completion of an associate degree, students may pursue a career as:
27-4011.00 Audio and Video Equipment Technicians
27-4012.00 Broadcast Technicians

Upon completion of a bachelor`s degree, students may pursue a career as:
27-2012.05 Technical Directors/Managers

Description: The Associate in Applied Science (AAS) in Music Industry Studies: Audio Production Technologies offers students hands-on study of audio engineering and related media fields. Students learn and apply the concepts and theories associated with music recording, live sound reinforcement, and sound design. The program is designed to give students foundational knowledge and experience essential in the field of audio production. An embedded Certificate of Completion (CCL) in Music Industry Studies: Audio Production Technologies is also available.

Learning Outcomes

1. Utilize appropriate campus resources, tools, and opportunities to support building connections and achieving individual educational goals. (FYE101, FYE103)
2. Demonstrate an understanding of the fundamentals of music and sound. (MTC101, MUC191, MUC193, MUC111, MUC195, MUC195AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC122)
3. Apply audio engineering and/or sound design techniques using current industry standard technologies. (MUC191, MUC192, MUC281, MUC111, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
4. Demonstrate effective written, oral, visual, interpersonal and collaborative skills to build relationships and network with diverse clients, colleagues, and organizations. (MTC101, MUC193, MUC109, MUC110, MUC145, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC296WA, MUC297AA, MUC298AA, MUC122, MUC222, MUC292, MUC295, (COM), [FYC], [SB])
5. Employ basic computer literacy skills to general and audio-specific applications. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
6. Demonstrate the initiative and ability to adapt to new technologies. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC297AA, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
7. Demonstrate effective troubleshooting methods in a variety of contexts. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295, [MA], [SG], [SQ])
8. Demonstrate an understanding of professional ethics, relevant intellectual property laws, rights management, publishing, licensing, and contracts. (MUC109, MUC110, MUC145, MUC296WA, MUC297AA, MUC298AA, (CRE), [SB])
9. Critically analyze media for their social, cultural, aesthetic, and historical significance. (MUC191, MUC192, MUC195, MUC195AA, MUC109, MUC110, (CRE), [HU])
10. Using a fundamental understanding of scientific inquiry, solve problems within the discipline. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC112, MUC122, MUC198, MUC218, MUC222, MUC289, MUC292, MUC295, [MA], [SG], [SQ])

Program Notes

Students must earn a grade of C or better for all courses required within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 32-34

In addition to the required course work, students must consult with a program advisor to select nine (9) credits within the Restricted Electives area.

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

MTC101 Introduction to Music Theory 3
MUC109 Music Business: Content Creation and Copyright 3

MUC110 Music Business: Marketing and Monetization (3) OR
MUC145 Recording Studio Business Operations (3) 3

+ MUC111 Digital Audio Workstation I (DAW I) 3
MUC122 Sound Design I 3
MUC191 Electronic Music I 3
+ MUC218 Audio Mixing Techniques 3

MUC195 Studio Music Recording I (3) OR
MUC195AA Studio Music Recording I (3) 3

+ MUC196 Studio Music Recording II (3) OR
+ MUC196AA Studio Music Recording II (3) 3

MUC197 Live Sound Reinforcement I 3

+ MUC297AA Audio Production Internship (1) OR
+ MUC296WA Cooperative Education (1) OR
+ MUC298AA Special Projects (1) 1

Restricted Electives

Credits: 9

Students must select a total of nine (9) credits from the list below in consultation with an academic advisor.
NOTE: at least one (1) of the following courses must be completed: MUC281, MUC289, MUC292, or MUC295.

+ MUC112 Digital Audio Workstation II (DAW II) 3
+ MUC192 Electronic Music II 3
+ MUC193 Computer-Based Sound Synthesis 3
+ MUC198 Live Sound Reinforcement II 3
+ MUC222 Sound Design II 3
+ MUC281 Electronic Music III 3
+ MUC289 Live Sound Reinforcement III 3
+ MUC292 Sound Design III 3
+ MUC295 Studio Music Recording III 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR

COM230 Small Group Communication (3) 3

COM110 is recommended.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area.

Students who intend to transfer must take:
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education courses from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: February 25, 2025

Network and Systems Administration

Major: 3189
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 61-74
CIP Code: 11.1001
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists
15-1232.00 Computer User Support Specialists

43-9011.00 Computer Operators
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Associate in Applied Science (AAS) in Network and Systems Administration program provides students with a solid, hands-on skill set of computer, networking, and internetworking systems technology principles and desktop support. Students gain an understanding of the interaction between microcomputer software and hardware, network and internetworking operating systems software and hardware, local area network administration and management, the use of troubleshooting techniques, troubleshooting hardware and software tools, as well as interpersonal/customer service skills. Students have the opportunity to specialize in specific information technology areas based on their interests and professional goals and leading to industry recognized certifications through an embedded Certificate of Completion (CCL) including, but not limited to, Desktop (Desktop Support, Computer System Configuration and Support, Computer System Configuration and Support, Network, Computer System Configuration and Support, Security, Computer System Configuration and Support, Linux), Cisco (Cisco Network CCNA, Cisco Network CCNP, Cisco Network CCNA Security), Linux (Red Hat Linux Engineer, Linux Associate, Red Hat Linux Administrator, Linux System Administration), Microsoft (Microsoft System Administration, Microsoft Desktop Associate), and VMware (VMware Network Administrator, VMware Foundations, VMware System Administrator). Graduates may pursue employment in a variety of information technology environments and/or transfer to a university.

Learning Outcomes

1. Update hardware and software as needed to maintain fully functional systems. (BPC170, BPC270, BPC274, CIS126DL, CIS126RH, CIS238DL, CIS238RH, BPC171, CIS290++, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)
2. Apply knowledge of operating systems to manage system hardware, security protocols, and software technologies. (BPC270, BPC274, CIS102DA, CIS121AB, CIS121AH, CIS126DL, CIS126RH, CIS293, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CNT202, CNT205, ITS110, CIS290++, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)
3. Design, maintain, and revise systems to meet desired specifications. (BPC170, BPC270, BPC274, CIS121AB, CIS121AH, CIS126DL, CIS126RH, CIS293, CIS294, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CNT140AB, CNT150AB, CNT160AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, BPC171, CIS290++, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)
4. Manage administrative access and user security policies within systems. (BPC270, BPC274, CIS121AH, CIS126DL, CIS126RH, CIS190, CIS293, CIS294, CIS2295, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CNT150AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, MST160, MST260, CLD110, CLD120, BPC171, CIS290++, CIS296++, CIS298++)
5. Organize and prioritize workload to ensure successful completion of projects. (CIS102DA, CIS124AA, CIS124BA, CIS224, CIS250, CIS266, CIS275DL, CIS290++, BPC171, CIS296++, CIS298++, [FYC])
6. Integrate social and ethical responsibility in decision-making and actions. (CIS102DA, CIS105, CIS111, CIS250, CIS270, CIS272DB, CNT202, CNT205, ITS110, BPC171, CIS290++, CIS296++, CIS298++, ITS120, CRE101, [HU], [SB])
7. Continuously adapt to an ever-changing technical environment. (BPC170, BPC270, BPC274, CIS102DA, CIS105, CIS111, CIS121AH, CIS124AA, CIS124BA, CIS126DL, CIS126RH, CIS156, CIS190, CIS293, CIS294, CIS295, CIS224, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS250, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CIS290++, CNT150AB, CNT160AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, ITS120, BPC171, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)

8. Demonstrate professional behaviors and abide by norms and conventions appropriate to the field. (CIS102DA, CIS105, CIS111, CIS250, CIS270, CIS272DB, CIS290++, CNT202, CNT205, CNT171, ITS110, BPC171, CIS296++, CIS298++, ITS120, CRE101, [HU], [SB])
9. Apply critical thinking skills and problem-solving to configure and troubleshoot systems to ensure proper operation. (BPC170, BPC270, BPC274, CIS102DA, CIS105, CIS121AH, CIS126DL, CIS126RH, CIS156, CIS190, CIS293, CIS294, CIS295, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CIS290++, CNT150AB, CNT160AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, MST160, CLD110, BPC171, CIS296++, CIS298++, CRE101, [MA], [SG], [SQ])
10. Utilize effective written and oral communication with multiple stakeholders in formal and informal settings. (CIS102DA, CIS124AA, CIS124BA, CIS224, CIS250, CIS290++, CIS296++, CIS298++, CRE101, (COM), [FYC])
11. Demonstrate the ability to work with others individually and as a team. (CIS102DA, CIS124AA, CIS124BA, CIS224, CIS250, CIS290++, BPC171, CIS296++, CIS298++, CRE101, (COM), [SB])
12. Create and maintain proper documentation of design, implementation, validation, workflow processes, troubleshooting, and revisions of systems. (BPC274, CIS102DA, CIS121AH, CIS124AA, CIS124BA, CIS156, CIS224, CIS239DL, CIS250, CIS266, CIS275DL, CIS290++, CNT140AB, CNT150AB, CNT160AB, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, BPC171, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120, CRE101, [FYC], [MA], [SG], [SQ])
13. Maintain, update, and monitor networks and computer systems using automation and scripting. (BPC274, CIS121AB, CIS121AH, CIS156, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, CIS271DL, CIS271RH, CIS290++, CIS296++, CIS298++, CIS266, CIS275DL, MST160, MST260, CLD110, CLD120)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CLD, CNT, ITS, and MST.

Students may receive credit for courses within the program based on current industry certifications.

This program replaces:
AAS/3013 Linux Networking Administration
AAS/3095 Information Technology: Cisco Networking
AAS/3096 Information Technology: Network Server
AAS/3208 Networking System Administration
AAS/3312 Computer and Networking Technology
AAS/3778 Microsoft Networking Technology
AAS/3794 Network Administration
AAS/3816 Networking Technology: Cisco

Program Prerequisites

None

Required Courses

Credits: 31-46

BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
CIS102DA Customer User Support 3
CIS105 Survey of Computer Information Systems 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4
(CNT140AB is required for students on the Cisco specialization)

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Students must also select from one of the following specializations based on their career goals.

Specialization 1: Cisco System Administration (CCNA) and Security
Credits: 12
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
+ CNT205 Cisco Certified Network Associate Security (4) 4

Specialization 2: Cisco System Administration (CCNP)
Credits: 24
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR
+ CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND
+ CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8

+ CNT250 Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR
+ CNT250AA Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND
+ CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4) 8

Specialization 3: Linux System Administration
Credits: 15
+ CIS238DL Linux System Administration 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240DL Linux Network Administration 3
+ CIS271DL Linux Security 3
+ CIS275DL Linux Capstone 3

Specialization 4: Red Hat Enterprise Linux Administration
Credits: 15
+ CIS238RH Red Hat System Administration II 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240RH Red Hat System Administration III 3
+ CIS271RH Red Hat System Administration IV 3
+ CIS275DL Linux Capstone 3

Specialization 5: Cloud System Administration
Credits: 15-16
+ BPC274 Advanced Server Computer Maintenance: Server+ Prep 3

CIS121AH Microsoft PowerShell/Command Line Operations 3
+ CIS239DL Linux Shell Scripting 3

+ MST160 Azure Administrator (4) OR
+ CLD110 Amazon Web Services Cloud Foundations (3) 3-4

+ MST260 Microsoft Azure Cloud Development and Operations (3) OR
+ CLD120 Amazon Web Services Cloud Architect Associate (3) 3

Specialization 6: VMware Network Administrator
Credits: 12
+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

Restricted Electives

Credits: 0-8

Students must select enough Restricted Elective credits to meet the minimum total program credits. Students may not select the same courses used to satisfy Required Courses or specializations within the Required Courses. Consult with an Academic, Program, or Faculty Advisor to pick courses that align with your career goals.

Cisco Electives
CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4
+ CNT171 CCNA Exam Prep 1

+ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
+ CNT205 Cisco Certified Network Associate Security (4) 4

+ CNT206 Cisco Certified Network Associate Wireless 4

Linux Electives
+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS239DL Linux Shell Scripting 3

+ CIS240DL Linux Network Administration (3) OR
+ CIS240RH Red Hat System Administration III (3) 3

+ CIS275DL Linux Capstone 3

Microsoft Electives
MST+++++ Any MST Microsoft Technology course
CIS121AB Microsoft Command Line Operations 1
CIS121AH Microsoft PowerShell/Command Line Operations 3

Security Electives
+ CIS270 Essentials of Network and Information Security 3
+ ITS110 Information Security Fundamentals 3

VMware Electives
+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

Other Information Technology Electives
+ BPC171 Recycling Used Computer Technology 1-3
CIS111 Ethics in Information Technology 3
CIS124AA Project Management Software: Level I 1
+ CIS124BA Project Management Software: Level II 1
+ CIS156 Python Programming: Level I 3
+ CIS190 Introduction to Networking 3
CIS224 Project Management Microsoft Project for Windows 3
+ CIS250 Management of Information Systems 3
+ CIS266 Network Integration Capstone 4
+ CIS290++ Computer Information Systems Internship 1-3
+ CIS296++ Cooperative Education 2-3
+ CIS298++ Special Projects 1-3
ITS120 Legal, Ethical, and Regulatory Issues 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3)
AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6
(ENG111 does not count as an ENG Transfer option)

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM225 is recommended for students transferring to Northern Arizona University.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level mathematics course in the Mathematical Applications area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area. 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area. 4

MCCCD Governing Board Approval Date: November 28, 2023

Nursing

Major: 3812
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 62-75
CIP Code: 51.3801
SOC Code: Upon completion of this degree, students may pursue a career as:
29-1141.00 Registered Nurses

Primary/Initiating College: Gateway Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, SC
Field of Interest: Health Sciences
Instructional Council: Nursing Program
GPA: 2.00

Description: The Associate in Applied Science (AAS) in Nursing Program is available at eight of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. Nursing Program graduates are eligible to apply for the national exam for the registered nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326; (404-975-5000); email: info@acennursing.org.

Program offerings:

- This program is offered at the following sites:
- Chandler-Gilbert Community College
- Estrella Mountain Community College

- GateWay Community College
- Glendale Community College
- Mesa Community College
- Paradise Valley Community College
- Phoenix College
- Scottsdale Community College

Waiver of Licensure/Certification Guarantee: Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. For a Department of Public Safety Fingerprint Clearance Card application, contact MCCCD Healthcare/Nursing Advisor. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-771-7800).

Health Declaration: It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients` lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application. All must provide documentation of compliance with all health and safety requirements required to protect patient safety. Only students in compliance are permitted to enroll in nursing courses. Students will meet these requirements by providing the required documentation for the Health/Safety Requirements Documentation Checklist and the signed Health Declaration Form.

Health and Safety Requirements for the MaricopaNursing Program:

1. Students must submit a Health and Safety Documentation Checklist verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.
4. Admission to an Allied Health program requires that students be in compliance with the Maricopa County Community College District Supplemental Background Check policy. Program applications will not be accepted without a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Upon conditional program admission, the student must comply with all requirements of the current MCCCD background check policy.

University Transfer Students: Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at the Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

REGISTERED NURSE PATHWAY

Associate in Applied Science Degree in Nursing Program: The Associate in Applied Science (AAS) degree in Nursing graduate is eligible to apply for licensure as a Registered Nurse (RN). The RN is educated as a generalist who delivers health care to clients and family groups and has competencies related to the art and science of nursing. The RN may be employed in a variety of acute, long term, and community-based healthcare settings. The AAS degree in Nursing provides the graduate with an educational foundation for articulation into the university setting.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students must complete the following general education and introductory courses with a 2.0 GPA to be added to the queue of those waiting for an available cohort space to begin the core curriculum. BIO156 or BIO181, BIO201, CHM130 and CHM130LL, CHM130AA, ENG101 or ENG107, MAT140 or MAT141 or MAT142.

Course Fee Information: Please see class schedule for information regarding course fees.

MaricopaNursing is aligned with Nurse of the Future Competencies: Person-Centered Care, Professionalism, Leadership, Systems-Based Practice, Informatics and Technology, Communication, Teamwork and Collaboration, Safety, Quality Improvement, and Evidence-Based Practice. These competencies focus on key stakeholders of healthcare clients, colleagues and communities. Demonstration of the competencies will signify preparation for successful transition into nursing practice and further professional development.

Admission Criteria

High school diploma or GED is required for the Associate in Applied Science degree in Nursing. Applicants must signify that they meet this requirement by providing high school diploma/transcripts or GED completion OR by signing the nursing application page containing the 'Declaration of High School Graduation or GED Completion.' In some instances, high school diploma/transcripts or proof of GED completion may be required.

Formal application and admission to the program is required. There are limited spaces available in the Nursing program. Only students who have completed all of the general education and introductory courses noted above may have their name added to the queue of those waiting for an available space in a cohort. A passing score on a nursing program admission test is required to complete an application.

Applicants for Advanced Placement must receive a passing score on a practical nursing content exam for placement into Block 3. The final placement decision rests with the Nursing Program Chair at the college to which the student is accepted. Advanced placement applications are maintained for two years from the date of application. After two years, the applicant is required to review, update, and resubmit the application.

The Nursing Program Chair reserves the right to deny acceptance of an admission application if the applicant was previously dismissed for issues relating to academic integrity, unsafe patient care, and/or two (2) or more failures from any nursing program.

All applicants holding or receiving a certificate or license as a Nursing Assistant and/or license as a Practical Nurse must remain in good standing with the Regulatory Board. Once enrolled, students receiving any disciplinary actions against their certificate or license must notify the Nursing Program Chair within five (5) school days. The Nursing

Program Chair reserves the right to restrict the student`s participation in clinical experiences and involvement in patient care until the certificate and/or license is valid and unrestricted.

Program Prerequisites

None

Required Courses

Credits: 40-48

+ BIO156 Introductory Biology for Allied Health (4) OR
+ BIO181 General Biology (Majors) I (4) OR
One year of high school biology (0) 0-4

+ BIO201 Human Anatomy and Physiology I 4

+ CHM130 Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1) OR
+ CHM130AA Fundamental Chemistry with Lab (4) OR
Satisfactory completion of higher level college-level chemistry course and corresponding lab OR
One year of high school chemistry (0) 0-4

+ NUR152 Nursing Theory and Science I 9
+ NUR172 Nursing Theory and Science II 9
+ NUR252 Nursing Theory and Science III 9
+ NUR283 Nursing Theory and Science IV 9

General Education Requirements

General Education Requirements
Credits: 22-27

General Education Core
Credits: 9-14

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 3

Oral Communication
Credits: 0
Waived

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-5
+ MAT140 College Mathematics (5) OR

+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
Satisfactory completion of higher level math course 3-5

General Education Distribution
Credits: 13

Humanities, Arts and Design
Credits: 2
Any approved general education course in the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
PSY101 Introduction to Psychology 3

Natural Sciences
Credits: 8
+ BIO202 Human Anatomy and Physiology II (4) AND
+ BIO205 Microbiology (4) 8

Program Competencies

1. Provide advocacy and individualized care for diverse populations. (NUR152, NUR172, NUR252, NUR283)
2. Demonstrate accountability for legal and ethical behaviors that reflect standards of professional nursing practice. (NUR152, NUR172, NUR252, NUR283)
3. Coordinate nursing care for multiple patients in collaboration with health team members for the acquisition/achievement of shared outcomes. (NUR152, NUR172, NUR252, NUR283)
4. Discuss healthcare micro and macro systems and their impact on patient care. (NUR152, NUR172, NUR252, NUR283)
5. Integrate technology to provide safe quality care and improve patient outcomes, managing information confidentially and effectively. (NUR152, NUR172, NUR252, NUR283)
6. Demonstrate effective communication skills while fostering mutual respect and shared decision making with patients, families and colleagues. (NUR152, NUR172, NUR252, NUR283)
7. Function effectively within interdisciplinary teams fostering open communication, shared decision-making and team development. (NUR152, NUR172, NUR252, NUR283)
8. Provide safe, quality care while minimizing risk of harm to patients and providers. (BIO156, BIO181, BIO201, CHM130, CHM130LL, CHM130AA, NUR152, NUR172, NUR252, NUR283)
9. Demonstrate accountability for quality improvement of personal performance, patient care and health care systems. (NUR152, NUR172, NUR252, NUR283)
10. Utilize evidence-based practice to meet individualized needs across the health care continuum. (NUR152, NUR172, NUR252, NUR283)

MCCCD Governing Board Approval Date: February 25, 2025

Organizational Management

Major: 3727
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Total Credits: 61-68
CIP Code: 52.1003
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00

SOC Code: Upon completion of this degree, students may pursue a career as:
11-1021.00 General and operations manager

Description: The Associate in Applied Science (AAS) in Organizational Management program is designed with a customized curriculum specific to the student`s individual needs in addition to the knowledge and skills needed in today`s changing workplace. The program provides leadership and communication skills and techniques for planning, organizing, leading and controlling business situations. This program also emphasizes procedures for effective resource allocation. A Certificate of Completion (CCL) in Organizational Leadership is fully embedded in this AAS.

Learning Outcomes

1. Create and use effective oral, written, and visual business communication skills. (GBS120, (COM), (CRE), [FYC], [HU])
2. Critically evaluate the alternatives faced in business decision making to select the most effective and efficient solution. (GBS110, GBS151, MGT101, MGT175, MGT229, MGT251, TQM240, (CRE), [MA], [SG], [SQ])
3. Recognize ethical, legal, and global dimensions in business practice and how business integrates social responsibility into operations/decision making. (BPC110, CIS105, GBS110, GBS151, MGT101, MGT175, MGT229, MGT251, TQM240, [SB])
4. Research, locate, and evaluate business information in order to support evidence-based decisions. (BPC110, CIS105, GBS110 , GBS120, GBS151, MGT101, MGT175, MGT229, MGT251, TQM240, [FYC], [SB])
5. Use team collaboration to solve business problems. (BPC110, CIS105, GBS110, GBS151, MGT101, MGT229, MGT251,(COM), [HU])
6. Apply current technology to specific business tasks. (BPC110, CIS105)
7. Evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting. (GBS151, MGT175, MGT101, MGT229, TQM240)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 19-22

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Certificate of Completion in Organizational Leadership (5731) - Requirements listed below

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

GBS110 Human Relations in Business and Industry (3) OR
MGT251 Human Relations in Business (3) 3

GBS120 Workplace Communication Skills 3
GBS151 Introduction to Business 3

MGT175 Business Organization and Management (3) OR
TQM240 Project Management in Quality Organizations (3) 3

MGT101 Techniques of Supervision (3) OR
MGT229 Management and Leadership I (3) 3

Restricted Electives

Credits: 20

Students must choose 20 industry/job related course credits from any MCCCD occupational program and/or Academic Certificate.

Industry/job related course credits must include a minimum of 9 credits with a common subject or theme. Program of study must be approved by the business department chair or designee.

General Education Requirements

General Education Requirements
Credits: 22-27

General Education Core
Credits: 12-17

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
Any approved general education course from the Oral Communication area.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-5
Any approved general education course from the Mathematics area. 3-5

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area. 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences [SB] area. 3

Natural Sciences
Credits: 4
Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Paramedicine

Major: 3889
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 63.5-75.5
CIP Code: 51.0904
SOC Code: Upon completion of this degree, students may pursue a career as 29-2041.00 Emergency Medical Technicians and Paramedic

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC, PV
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology / Fire Science Technology
GPA: 2.00

Description: The Associate in Applied Sciences (AAS) in Paramedicine is a nationally accredited program designed to prepare students to become Paramedics. This program is a formal education in such paramedicine topics as anatomy and physiology, pathophysiology, cardiology, pulmonary, pharmacology, pediatrics, geriatrics hematology, toxicology. Paramedicine builds upon EMT education and includes paramedic scope of practice. Paramedicine is integrated with fire service, law enforcement, ground transport services, flight transport services, search and rescue, hospitals, clinical setting, community paramedicine, and EMS education. There is a Certificate of Completion (CCL) in Paramedicine available.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Learning Outcomes

1. Maintain patient, public, personnel, and personal health, wellness and safety. (EMT101, PME201, PME202, PME203, PME204, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289)
2. Demonstrate personal behaviors consistent with professional standards. (EMT101, PME201, PME202, PME203, PME204, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [HU], [SB])
3. Communicate efficiently and effectively with members of diverse populations in a culturally responsive manner. (EMT101, PME190, PME191, PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, CRE101, [FYC], [COM], [HU], [SB])
4. Effectively function within a multi-disciplinary healthcare system, recognizing roles, responsibilities and scope of practice. (PME190, PME191, PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [COM], [HU], [SB])
5. Efficiently synthesize and evaluate multiple sources of information. (BIO160, EMT101, PME190, PME191, PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, CRE101, [MA], [COM], [FYC], [HU], [SB])

6. Perform comprehensive patient assessment. (BIO160, PME190, PME191, PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [MA], [SB])
7. Develop a working differential diagnosis using multiple sources of information. (BIO160, PME190, PME191, PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [SB])
8. Make informed, autonomous decisions in both clinical and uncontrolled settings. (BIO160, PME190, PME191, PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [MA])
9. Guide and support the healthcare team, navigating interpersonal dynamics. (PME201, PME202, PME203, PME205, PME206, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [COM], [HU], [SB])
10. Effectively manage patients. (EMT101, PME201, PME202, PME203, PME205, PME206, PME245, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289, [COM], [HU], [SB])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Students must be current and in good standing with the Arizona Department of Health Services Bureau of Emergency Medical Services-Certified as an Emergency Medical Technician. EMT certification preparatory courses are available at Maricopa County Community Colleges. Contact an academic advisor for details.

Students must complete an application and selection process.

Program Prerequisites

None

Required Courses

Credits: 45.5-51.5

BIO160 Introduction to Human Anatomy and Physiology 4

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers 0.5

PME190 Introduction to ECG Rhythm Analysis and Interpretation for EMS Professionals (3) OR
Permission of Program Director (0) 0-3

PME191 Introduction to Pharmacology for EMS Professionals (3) OR
Permission of Program Director (0) 0-3

+ PME201 Advanced Cardiac Life Support (ACLS) Initial Provider in Paramedicine 1
+ PME202 Pediatric Advanced Life Support (PALS) Initial Provider in Paramedicine 1
+ PME203 Pediatric Emergencies for Prehospital Professionals (PEPP) Initial Provider in Paramedicine 1
+ PME204 Neonatal Resuscitation Provider (NRP) in Paramedicine 0.5
+ PME205 Advanced Medical Life Support (AMLS) Initial Provider in Paramedicine 1
+ PME206 International Trauma Life Support (ITLS) Provider/Pre-Hospital Trauma Life Support (PHTLS) 1
+ PME240 Pharmacology in Paramedicine 3
+ PME245 Airway and Ventilatory Management in Paramedicine 3

+ PME250 Comprehensive Patient Assessment in Paramedicine 1
+ PME251 Medical Emergencies in Paramedicine I 4
+ PME252 Medical Emergencies in Paramedicine II 4
+ PME253 Medical Emergencies in Paramedicine III 4
+ PME254 Technical Operations in Paramedicine 2.5
+ PME260 Trauma Patient Management in Paramedicine 2
+ PME270 Immersive Total Patient Management Experience (ITPME) 2
+ PME280 Preparation for Paramedicine Practicum 1

+ PME281 Paramedicine Clinical Practicum: Comprehensive (2) OR
+ PME281AA Paramedicine Clinical Practicum: Phase I (1) AND
+ PME281AB Paramedicine Clinical Practicum: Phase II (1) 2

+ PME288 Paramedicine Comprehensive Field Internship Practicum 5
+ PME289 Preparation for Paramedic National Credentialing 2

General Education Requirements

General Education Requirements
Credits: 18-24

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

+ COM225 recommended for students who intend to transfer to satisfy the AGEC-A literacy requirement
COM110 or COM230 recommended for students who do not intend to transfer.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
MAT126 Intermediate Algebra with Review (6) OR
+ MAT120 Intermediate Algebra (5) OR
+ MAT121 Intermediate Algebra (4) OR
+ MAT122 Intermediate Algebra (3) 3-6

MAT150, or MAT151, or MAT152 recommended for students who intend to transfer

General Education Distribution
Credits: 6

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area.

Natural Sciences
Credits: 0
Met by BIO160 in the Required Courses area.

MCCCD Governing Board Approval Date: February 27, 2024

Photography

Major: 3195
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 61-67
CIP Code: 50.0605
Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, MC, PC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
27-4021.00 Photographers
51-9151.00 Photographic Process Workers and Processing Machine Operators
25-3021.00 Self-Enrichment Teachers

Upon completion of a bachelor`s degree, students may pursue a career as:
27-1013.00 Fine Artists, Including Painters, Sculptors, and Illustrators

Upon completion of a graduate degree, students may pursue a career as:
25-1121.00 Art, Drama, and Music Teachers, Postsecondary

Description: The Associate in Applied Science (AAS) in Photography program is designed for the student who wishes to pursue a career in photography, either commercial or fine arts. Students will study digital and traditional film-based (darkroom) media, content and image selection, and the theory and practice of visual communication.

Learning Outcomes

1. Demonstrate knowledge of principles of design, aesthetics, and visual communication. (ARH101, ARH102, ARH115, ART111, ART112, ART113, ART116, ART131, ART132, ART133, ART134, ART137, ART234, ART250, ART255, ART255AB, AVC100, AVC142, AVC143, AVC169, AVC177, AVC178, AVC181, AVC270, AVC274, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, FMP108, (COM), (CRE), [MA])
2. Create original still and time based images. (ART131, ART132, ART133, ART134, ART137, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC100, AVC138, AVC139, AVC140, AVC142, AVC143, AVC169, AVC177, AVC178, AVC232, AVC237, AVC270, AVC274, AVC297AA, AVC297AB, FMP108)
3. Demonstrate a thorough knowledge and application of camera techniques. (ART131, ART132, ART133, ART134, ART137, ART234, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC138,

AVC139, AVC140, AVC142, AVC143, AVC232, AVC237, AVC297AA, AVC297AB, FMP108, (COM), (CRE), [MA], [SQ])

4. Demonstrate a thorough and adaptable knowledge of software used in digital imaging and contemporary media. (ART131, ART234, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC297AA, AVC100, AVC138, AVC139, AVC140, AVC142, AVC143, AVC169, AVC177, AVC178, AVC181, AVC232, AVC237, AVC270, AVC274, AVC297AB, FMP108, (COM), (CRE))
5. Create digital imaging workflow. (ART131, ART234, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC100, AVC138, AVC139, AVC140, AVC142, AVC143, AVC169, AVC177, AVC178, AVC181, AVC232, AVC237, AVC270, AVC274, AVC297AA, AVC297AB, FMP108)
6. Utilize effective lighting techniques in natural, artificial and mixed lighting in photography (e.g., product, still life and portraiture). (ART132, ART133, ART234, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC138, AVC139, AVC140, AVC142, AVC143, AVC232, AVC237, AVC297AA, AVC297AB, [SG], [SQ])
7. Analyze trends and influences in contemporary and historical photography. (ARH101, ARH102, ARH115, ART131, ART132, ART133, ART134, ART137, ART234, ART250, AVC138, AVC142, AVC143, AVC232, (CRE), [FYC], [SB])
8. Critically evaluate photographic works. (ARH101, ARH102, ARH115, ART131, ART132, ART255, ART133, ART134, ART137, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC142, AVC143, AVC297AA, AVC297AB, (COM), (CRE), [FYC], [SB])
9. Develop a professional body of work and appropriate support material to showcase personal vision and technical skills. (ART132, ART133, ART134, ART137, ART234, ART250, ART255, ART255AB, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC138, AVC139, AVC140, AVC143, AVC169, AVC177, AVC178, AVC181, AVC232, AVC237, AVC270, AVC274, AVC297AA, AVC297AB, FMP108, (COM), [FYC], [MA], [SB])
10. Identify professional practices in diverse settings (e.g., communication, time management, pricing, and legal and ethical considerations). (ART132, ART133, ART134, ART255, ART255AB, AVC138, AVC139, AVC140, AVC143, AVC169, AVC177, AVC178, AVC181, AVC232, AVC237, AVC270, AVC274, AVC297AA, AVC297AB, MKT110, MKT263, MKT271, SBS200, SBS204, (COM), [FYC], [MA])
11. Use visual, verbal, and written communication skills to interact with diverse audiences. (ARH101, ARH102, ARH115, ART131, ART132, ART133, ART134, ART137, ART234, ART255, ART290AC, ART290EC, AVC290DP, ART295DA, ART295DB, ART295DC, AVC138, AVC139, AVC142, AVC143, AVC232, AVC297AA, AVC297AB, (COM), (CRE), [FYC], [SB])
12. Apply historical, cultural, and social contextual perspectives to evaluate a body of work. (ARH101, ARH102, ARH115, ART131, ART132, ART133, ART134, ART137, ART234, ART250, AVC138, AVC139, AVC142, AVC143, AVC232, (COM), (CRE), [FYC], [SB])
13. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

There will be costs for supplies and equipment in this program.

Required Courses

Credits: 27-31

ARH101 Art from Prehistory Through Middle Ages (3) OR
ARH102 Art from Renaissance to Modernism (3) 3

ARH115 History of Photography 3
ART112 Two-Dimensional Design 3
ART113 Color 3
ART131 Photography I 3

+ ART132 Photography II 3

ART255 Art Marketing (3) OR
ART255AB The Portfolio (1) 1-3

AVC100 Introduction to Digital Arts 1
AVC142 Introduction to Digital Photography 3
+ AVC143 Intermediate Digital Photography 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 8-20

Complete all courses in the specialization below that best aligns with your academic and professional goals.

Specialization 1: Commercial Photography
Credits: 13-20
+ AVC138 Commercial Photography I 3
+ AVC139 Commercial Photography II 3

+ AVC140 Portrait Photography (3) OR
+ AVC237 Fashion Photography (3) 3

MKT110 Marketing and Social Networking (3) OR
MKT263 Advertising Principles (3) OR
MKT271 Principles of Marketing (3) OR
SBS204 Small Business Marketing and Advertising (2) 2-3

SBS200 Small Business Operations 2

In consultation with advisor or program coordinator, choose up to six (6) credits of coursework from the following list to best fulfill goals and complete the minimum total program credits required for this degree.

ART111 Drawing I 3
ART116 Life Drawing I 3
ART137 Alternative Photographic Processes 3
+ ART234 Color Photography 3
+ ART290AC Studio Art 3
+ ART290EC Studio Art: Photography 3
+ ART295DA Art Workshop/Seminar: Photography 1
+ ART295DB Art Workshop/Seminar: Photography 2
+ ART295DC Art Workshop/Seminar: Photography 3
+ AVC169 2D Media Design 3
+ AVC177 Digital Photographic Imaging I 3
+ AVC178 Digital Arts Studies 3
+ AVC181 Graphic Design I 3
+ AVC232 Studio Lighting 3
+ AVC270 Digital Photographic Imaging II 3
+ AVC290DP Art Studio: Digital Photography 3
+ AVC297AA Commercial Art Internship (1) OR
+ AVC297AB Commercial Art Internship (2) 1-2

FMP108 Video Production 3

Specialization 2: Fine Art Photography
Credits: 8-15
+ ART133 Photography III 3
ART137 Alternative Photographic Processes 3

Select 2-9 credits from the following:
ART111 Drawing I 3
ART116 Life Drawing I 3
+ ART134 Photography IV 3
+ ART234 Color Photography 3
+ ART250 Introduction to Printmaking 3
+ ART290AC Studio Art 3
+ ART290EC Studio Art: Photography 3
+ ART295DA Art Workshop/Seminar: Photography 1
+ ART295DB Art Workshop/Seminar: Photography 2
+ ART295DC Art Workshop/Seminar: Photography 3
+ AVC169 2D Media Design 3
+ AVC177 Digital Photographic Imaging I 3
+ AVC178 Digital Arts Studies 3
+ AVC232 Studio Lighting 3
+ AVC270 Digital Photographic Imaging II 3
+ AVC274 Digital Photographic Imaging III 3
+ AVC290DP Art Studio: Digital Photography 3
+ AVC297AA Commercial Art Internship 1
SBS200 Small Business Operations 2
SBS204 Small Business Marketing and Advertising 2

General Electives

Credits: 0-7

Select courses 100-level or higher to complete the minimum total program credits required for this degree. Consult with the Program Director or an Academic Advisor.

Recommend that students interested in transferring to a four-year institution to earn a bachelor`s degree take courses that fulfill any unmet Arizona General Education Curriculum (AGEC) requirements.

General Education Requirements

General Education Requirements
Credits: 19-25

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Any higher approved general education course in the Mathematics area. (3-6) 3-6

General Education Distribution
Credits: 7

Humanities, Arts and Design
Credits: 0
Met by ARH101 OR ARH102 OR ARH115 OR ART131 in Required Courses.

Social-Behavioral Sciences
Credits: 3
Any approved general education courses in the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 4
Any approved general education course in the Natural Sciences area. 4

MCCCD Governing Board Approval Date: February 27, 2024

Programming and Systems Analysis

Major: 3844
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 62-71
CIP Code: 11.0501
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
15-1211.00 Computer Systems Analyst

Description: The Associate in Applied Science (AAS) in Programming and Systems Analysis program provides an in-depth exploration of different computer language and technical skills. The AAS includes, but is not limited to the

following: operating systems, local area networks, business communication, team roles, and dynamics. Certificate of Completions (CCLs) in Programming and Systems Analysis Level I and Level II and iOS App Development are also available.

Learning Outcomes

1. Analyze business requirements using critical thinking skills. (CIS105, CIS133DA, CIS150++, CIS151, CIS159, CIS156, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225AB, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, GBS211, GBS151, CRE101, ECN211, ECN212, SBU200, CRE101, [FYC], [MA], [SG], [SQ])
2. Use computer systems and networks in a responsible and ethical manner. (CIS105, CIS190, CIS225AB, CIS250, CNT140AB, GBS151, MST140++)
3. Design, develop and implement database solutions to effectively manage data. (CIS119DO, CIS276++)
4. Develop and implement well-structured computer programs that solve business problems. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS251, CIS259, CIS256, CIS262++, CIS263AA, CIS265, [MA])
5. Utilize the software development lifecycle for application development. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225AB, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, [MA])
6. Test and debug computer programs. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS251, CIS259, CIS256, CIS262++, CIS263AA, CIS265, [MA])
7. Leverage the functions and architecture of an operating system to achieve business objectives. (CIS105, CIS126DL, CIS126RH, CIS165++, CIS265, MST150++)
8. Communicate professionally in formal and informal situations to diverse audiences. (CIS133DA, CIS166++, CIS225AB, CIS250, CIS256, GBS211, CRE101, (COM), [FYC], [HU])
9. Write effective documentation according to industry standards. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225AB, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, CRE101, [FYC], [SG], [SQ])
10. Collaborate effectively with diverse teams. (GBS151, SBU200, CRE101, (COM), [HU])
11. Apply an understanding of characteristics and principles of business processes to software application development. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS224, CIS225AB, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, GBS151, CRE101, [MA])
12. Design web-based applications using client-side and server-side scripting. (CIS133DA, CIS166++, CIS262++, CIS263AA)
13. Develop a project scope while considering factors such as customer requirements, project costs, return on investment, and internal/external business objectives. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS224, CIS225AB, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, GBS151, GBS211, [MA])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consultation with an Academic Advisor is recommended for course selection.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 34-37

CIS105 Survey of Computer Information Systems 3
GBS151 Introduction to Business 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
+ MST150++ Any Microsoft Windows course (3) 3

CIS133DA Internet/Web Development Level I 3

Students interested in pursuing an iOS Certificate of Completion (CCL) are recommended to take CIS150AB

+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) 3

+ CIS166++ Any Web Scripting course(s) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) OR
+ MST140 Microsoft Networking Essentials (3) 3-4

+ CIS225AB Object-Oriented Analysis and Design (3) OR
+ CIS250 Management of Information Systems (3) 3

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Select a programming language from below that best aligns with academic and professional goals (2 courses for a total of 6 credits) in one of the following areas:

+ CIS156 Python Programming: Level I (3) AND
+ CIS256 Python Programming: Level II (3) OR

+ CIS159 Visual Basic Programming I (3) AND
+ CIS259 Visual Basic Programming II (3) OR

+ CIS162++ Any C Programming: Level I course (3) AND
+ CIS262++ Any C Programming: Level II course (3) OR

+ CIS163AA Java Programming: Level I (3) AND
+ CIS263AA Java Programming: Level II (3) OR

+ CIS165++ Any Mobile Application Development course (3) AND
+ CIS265 Advanced iOS Application Development (3) 6

Restricted Electives

Credits: 6

Students may not use courses from the Required Courses Area.

CIS224 Project Management Microsoft Project for Windows 3
+ CIS151 Computer Game Development-Level I 3

+ CIS156 Python Programming: Level I 3
+ CIS159 Visual Basic Programming I 3
+ CIS162++ Any C Programming: Level I course 3
+ CIS163AA Java Programming: Level I 3
+ CIS165++ Any Mobile Application Development course 3
+ CIS251 Computer Game Development-Level II 3
+ CIS256 Python Programming: Level II 3
+ CIS259 Visual Basic Programming II 3
+ CIS262++ Any C Programming: Level II course 3
+ CIS263AA Java Programming: Level II 3
+ CIS265 Advanced iOS Application Development 3
GBS211 Legal, Ethical and Regulatory Issues of the Internet Studies 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
Any approved general education course in the Oral Communication area.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education courses in the Humanities, Arts and Design [HU] area. 3

Social-Behavioral Sciences
Credits: 3

ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
SBU200 Society and Business (3) 3

Natural Sciences
Credits: 4
Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Retail Management

Major: 3048
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AAS
Total Credits: 62-67
CIP Code: 52.0212
Primary/Initiating College: South Mountain Community College
Program Availability: EM, GC, PC, RS, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
41-1011.00 First Line Supervisor of Retail Sales
11-2022.00 Sales Managers

Description: The Associate in Applied Science (AAS) in Retail Management degree is designed to prepare individuals working in the retail management, food industry, and related fields, for the mid-level management position challenges of the future. The curriculum encompasses business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment. Instruction will provide the background and knowledge necessary for students to develop the judgment skills they must exercise as business managers. A Certificate of Completion (CCL) in Retail Management is also available.

Learning Outcomes

1. Demonstrate skills in leading, negotiating, and working in harmony with others in a business setting. (MGT101, MGT229, MGT251, GBS+++, MGT+++, SBU200, [HU])
2. Apply fundamental concepts to perform basic computing skills and technology operations. (BPC110, CIS105)
3. Demonstrate communication principles and critical thinking through written and oral formats. (COM100, SBU200, (CRE), [FYC], [HU], [SG/SQ], GBS+++)
4. Evaluate various leadership styles and management techniques and explain their use in contemporary business settings. (MGT101, MGT229, MGT251, MGT+++, SBU200)
5. Apply marketing principles to the development of a marketing strategy. (MKT271, MKT+++, GBS+++)
6. Evaluate current trends in human resource management and human resource needs to develop a human resource plan. (MGT251, MGT276, MGT+++)
7. Interpret and analyze financial information and financial performance measures to make business decisions. (ACC111, ACC112, ACC211, ACC212, ACC230, ACC240, [MA])
8. Evaluate merchandising, financial planning, and strategy in the industry to make business decisions. (MGT180)
9. Create and present a strategic plan for a business, including financial strategy and financial performance measures. (MGT180)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 28-33

Choose one of the following three accounting sequences:

ACC111 Accounting Principles I (3) AND
+ ACC230 Uses of Accounting Information I (3) AND
+ ACC240 Uses of Accounting Information II (3)
OR
ACC111 Accounting Principles I (3) AND
+ ACC112 Accounting Principles II (3) AND
+ ACC212 Managerial Accounting (3)
OR
ACC211 Financial Accounting (3) AND
+ ACC212 Managerial Accounting (3) 6-9

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

MGT101 Techniques of Supervision (3) OR
MGT229 Management and Leadership I (3) 3

MGT180 Retail Management 3

MGT251 Human Relations in Business 3
MGT276 Human Resources Management 3
MKT271 Principles of Marketing 3
SBU200 Society and Business 3

Restricted Electives

Credits: 9-15

Student must complete an additional 9-15 credits from GBS, MGT, and/or MKT prefixed courses (except courses used to satisfy Required Courses area) to complete the minimum total program credits required for this degree. Must include at least one MKT course.

GBS+++ Any GBS General Business course(s)
MGT+++ Any MGT Management course(s)
MKT+++ Any MKT Marketing course(s)

General Education Requirements

General Education Requirements
Credits: 19-25

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

ENG102 or ENG108 recommended for students considering pursuing a bachelor's degree at an Arizona university.

Oral Communication
Credits: 3
COM100 Introduction to Human Communication 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course from the Mathematics area.

General Education Distribution
Credits: 7

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 0
Met by SBU200 in Required Courses area.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: June 28, 2022

Video Game Production

Major: 3890
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AAS
Total Credits: 62-79
CIP Code: 50.0411
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV
Field of Interest: Computer and Information Technology
Instructional Council: Video Game Production
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1255.01 Video Game Designers

27-1014.00 Multimedia Artists and Animators
27-4014.00 Sound Engineering Technicians

Description: The Associate in Applied Science (AAS) in Video Game Production provides students with the essential skill sets needed to plan, design, and produce video games. The program features interdisciplinary coursework and related studies to build a strong foundation bridging the art and science of video game production. The Associate in Applied Science in Video Game Production`s curriculum brings together business concepts, game technology, game narrative, music, sound design, and animation to prepare students for entry-level careers as a Level Designer, Environment Artist, Production Artist, Character Modeler, Character Animator, Game Designer, Game Developer, Mobile Game Developer, Commercial Artist, Game Writer, Composer and/or Sound Designer. Embedded Certificates of Completion (CCL) are available in Video Game Production: Game Art, Video Game Production: Audio and Sound and Video Game Production: Narrative and Video Game Production: Scripting and Coding.

Learning Outcomes

1. Analyze the electronic game industry, including history, markets, distribution, publishing channels, business models, team roles, and career landscape. (CIS107, GST202, CRW176, AVC200, AVC240, CIS230DB, VGP298AB)
2. Analyze commonly used game components and mechanics. (CIS107, CIS130DA, CIS151, CIS251, GST202, CRW176, AVC200, AVC240, AVC287, CIS120DC, CIS130DB, CIS150AB, CIS156, CIS163AA, CIS230DB, CRW190, MUC222, VGP298AB)
3. Manage game development project resources, budgets, goals, and tasks. (CIS105, CIS107, CIS151, CIS251, CRW176, AVC150, AVC200, AVC240, AVC287, CIS120DC, CIS230DB, VGP298AB, [MA])
4. Evaluate software and hardware used for game design, development, and production. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS151, CIS251, GST202, MUC122, AVC/MMT184, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS230DB, MUC111, MUC191, MUC195, MUC222, VGP298AB)
5. Apply advanced scripting and programming concepts in the creation and manipulation of interactive applications. (AVC/MMT185, CIS107, CIS130DA, CIS151, CIS251, MUC122, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS150AB, CIS156, CIS163AA, CIS230DB, MUC222, VGP298AB, [MA])
6. Create planning materials such as sketches, character sheets, storyboards, prototypes, narrative scripts, audio, and design documents. (AVC177, AVC100, AVC/MMT185, CIS107, CIS120DF, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, ART116, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS230DB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC192, MUC195, MUC222, VGP298AB)
7. Create a variety of media resources such as images, narratives, 3D models, animations, and audio. (AVC177, AVC100, AVC/MMT185, CIS107, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, ART116, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS230DB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC192, MUC195, MUC222, VGP298AB, [MA], [SG], [SQ])
8. Construct a cohesive game experience using planning materials and media resources. (CIS107, CIS130DA, CIS151, CIS251, AVC150, AVC200, AVC240, CIS120DC, CIS130DB, CIS230DB, VGP298AB)
9. Demonstrate effective written, oral, visual, and interpersonal communication skills. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS230DB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC195, MUC222, VGP298AB, (COM), (CRE), [FYC], [SB], [SG], [SQ])
10. Collaborate in a culturally responsive manner in a team environment. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS130DA, CIS151, CIS251, CRW176, AVC150, GST202, MUC122, AVC/MMT184, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS230DB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC195, MUC222, VGP298AB, (COM), (CRE), [FYC], [SB], [SG], [SQ])
11. Engage in ethical personal and professional creative practices, in accordance with copyright laws, intellectual property, civic responsibility, and standards of the field. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, CIS120DC, CIS130DB, CIS230DB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC192, MUC195, MUC196, MUC222, VGP298AB, (COM), [FYC], [SB], [SG], [SQ], [MA])

12. Examine the implications of cultural values, individual beliefs, and biases as applied to game design, development, and production. (CIS107, CRW176, GST202, AVC150, VGP298AB, (COM), [SB])
13. Create a portfolio of work. (VGP298AB)

Program Notes

Students must earn a grade of C or better in each course in the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students interested in transferring should meet with an Academic, Faculty, or Program Director.
GST201 Game Studies is recommended for students who intend to transfer to Arizona State University.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 31-33

AVC100 Introduction to Digital Arts 1

+ AVC177 Digital Photographic Imaging I (3) OR
CIS120DF Introduction to Adobe Photoshop (3) 3

AVC/MMT185 3D Modeling for Animation I (3) OR
CIS130DA 3D Studio Max: Modeling (3) 3

Note: AVC/MMT185 is recommended for students interested in the Game Art Emphasis and CIS130DA is recommended for students interested in the Coding and Scripting Emphasis

CIS105 Survey of Computer Information Systems 3
+ CIS107 The Electronic Game Industry 3
+ CIS151 Computer Game Development -Level I 3
+ CIS251 Computer Game Development -Level II 3
CRW176 Writing Narrative for Video Games 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

+ GST202 Games, Culture and Aesthetics 3
MUC122 Sound Design I 3
VGP298AB Special Projects 2

Restricted Electives

Credits: 12-21

Students must select 1 of the following 4 specializations.

Specialization 1: Game Art
Credits: 21
ART116 Life Drawing I 3
AVC150 Multimedia Storytelling 3
+ AVC/MMT184 Digital Animation I 3
+ AVC200 Animation and Interactivity 3

+ AVC240 Cinematography and Directing for 2D/3D Animation (3) OR
+ CIS230DB 3D Studio Max: Lighting and Rendering (3) 3

+ AVC/MMT285 3D Modeling and Animation II (3) OR
+ CIS130DB 3D Studio Max: Animation (3) 3

AVC247 High Resolution Digital Model Making through 3D Laser Scanning and Photogrammetry (3) OR
+ AVC287 3D Character Animation (3) 3

Specialization 2: Game Narrative
Credits: 15
AVC150 Multimedia Storytelling 3
CRW160 Introduction to Writing Poetry 3
CRW170 Introduction to Writing Fiction 3
CRW190 Introduction to Screenwriting 3
+ CRW270 Intermediate Fiction Writing 3

Specialization 3: Coding and Scripting Emphasis
Credits: 12
CIS120DC Introduction to Adobe Animate 3
+ CIS150AB Object-Oriented Programming Fundamentals 3
+ CIS156 Python Programming: Level I 3
+ CIS163AA Java Programming: Level I 3

Specialization 4: and Music
Credits: 15
+ MUC111 Digital Audio Workstation I (DAW I) (3) OR
+ MUC192 Electronic Music II (3) 3

MUC191 Electronic Music I 3
MUC195 Studio Music Recording I 3
+ MUC222 Sound Design II 3
+ MUC292 Sound Design III 3

General Education Requirements

General Education Requirements
Credits: 19-25

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR

+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
+ MAT120 Intermediate Algebra (5) OR
+ MAT121 Intermediate Algebra (4) OR
+ MAT122 Intermediate Algebra (3) OR
MAT126 Intermediate Algebra with Review (6) OR
satisfactory completion of a higher level mathematics course 3-6

MAT14+ recommended for students who intend to transfer to Arizona State University in the Game Arts, Narrative for Games, or Audio and Music emphases.

MAT15+ recommended for students who intend to transfer to Arizona State University in the Scripting and Coding emphasis.

General Education Distribution
Credits: 7

Humanities, Arts and Design
Credits: 0
Met by GST202 in Required Courses

Social-Behavioral Sciences
Credits: 3
Any approved Social and Behavioral Sciences.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences Area.

MCCCD Governing Board Approval Date: February 25, 2025

Web Design/Development

Major: 3185
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: AAS
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems

Total Credits: 61-74 **GPA**: 2.00
CIP Code: 11.0801
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1254.00 Web Developers
15-1255.00 Web and Digital Interface Designers
27-1014.00 Special Effects Artist and Animators
27-1024.00 Graphic Designers

Description: The Associate in Applied Science (AAS) in Web Design/Development prepares students to design, create, and administer interactive and professional web sites. Courses focus on "hands-on" experience with web publishing, web graphics preparation, scripting, content management systems and e-commerce solutions. The program provides students a pathway to either develop advanced skills in Web Design or Web Development. Certificates of Completion (CCLs) in Foundational Web Technologies, Web Design and Web Development are also available. Some of these programs are available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Design websites using knowledge of computer information systems, including security, computer concepts, web delivery system architecture, and file management. (AVC100, ART112, CIS105, CIS119DO, CIS126DL, CIS126RH, CIS133DA, CIS136, CIS138DA, CIS150AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS220DF, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++, CIS276++, [MA])
2. Research, plan, design, develop, test, publish, and maintain websites. (AVC100, ART112, CIS105, CIS119DO, CIS120DA, CIS120DB, CIS120DF, CIS120DK, CIS126DL, CIS126RH, CIS133DA, CIS136, CIS138DA, CIS150AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++, CIS276++, (CRE), [FYC], [MA], [SG], [SQ])
3. Create complex websites using current standards in Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and Javascript. (AVC100, ART112, CIS105, CIS119DO, CIS120DA, CIS120DB, CIS120DC, CIS120DK, CIS133DA, CIS138DA, CIS150AB, CIS163AA, CIS166AA, CIS166AE, CIS220DF, CIS233DA, CIS262AD, CIS263AA, CIS265++, CIS276++, [HU], [MA], [SB])
4. Research and utilize best practices in user interface, user experience, accessibility and search engine optimization to build complex websites. (AVC183, AVC100, ART112, AVC181, CIS119DO, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS120DA, CIS120DK, CIS133DA, CIS136, CIS138DA, CIS166AE, CIS220DF, CIS233DA, CIS276++, (COM), (CRE), [FYC], [MA])
5. Design and implement e-commerce solutions. (AVC183, AVC100, ART112, AVC181, CIS105, CIS119DO, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS150AB, CIS166AA, CIS166AE, CIS220DF, CIS233DA, CIS235, CIS262AD, CIS276++, (CRE), [MA], [SG], [SQ])
6. Construct a website using a content management system. (AVC183, AVC100, ART112, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS166AA, CIS166AE, CIS220DF, CIS233DA, [MA], [SG], [SQ])
7. Apply project management skills to prioritize projects and meet deadlines. (CIS120DA, CIS120DB, CIS120DF, CIS120DK, CIS136, CIS166AA, CIS220DF, CIS235, (CRE), [SG], [SQ])
8. Adhere to industry accepted professional, legal, and ethical practices. (CIS105, CIS120DB, CIS120DF, CIS133DA, CIS136, CIS220DF, CIS233DA, CIS235, [HU], [SB], [SG], [SQ])
9. Communicate professionally in formal and informal situations to diverse audiences. (CIS105, CIS120DA, CIS120DB, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS166AA, CIS220DF, CIS233DA, CIS235, (COM), (CRE), [FYC], [HU], [SB], [SG], [SQ])
10. Collaborate with others to address web design challenges. (CIS133DA, CIS233DA, CIS235, (COM), [HU], [SB])

Web Design Emphasis Learning Outcomes

1. Create digital media content using principles of design. (AVC183, AVC100, ART112, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS138DA, CIS220DF, [FYC], [HU], [SB], [SG], [SQ])
2. Select design elements and composition appropriate to the project. (AVC183, AVC100, ART112, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS138DA, CIS220DF, (COM), [FYC], [HU], [SB])

3. Manipulate digital media content. (CIS120DA, CIS120DB, CIS120DF, CIS120DK, CIS136)

Web Development Emphasis Learning Outcomes

1. Design websites using knowledge of programming. (CIS105, CIS133DA, CIS136, CIS150AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++, (COM), [FYC], [HU], [MA], [SB], [SG], [SQ])
2. Develop and deploy secure database solutions that use web-based protocols. (CIS119DO, CIS276++)
3. Implement security solutions to diminish or counter threats against web delivery systems. (CIS119DO, CIS126RH, CIS133DA, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++, CIS276++, [MA], [SG], [SQ])
4. Use server-side scripting languages to create secure, dynamic web pages. (CIS133DA, CIS166AE, CIS233DA, (COM), [FYC], [MA], [SG], [SQ])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 17-22

In addition to the required course work students must consult with a program advisor to select one of the specializations within the Restricted Electives area.

CIS105 Survey of Computer Information Systems 3
CIS120DF Introduction to Adobe Photoshop 3
CIS133DA Internet/Web Development Level I 3
CIS136 Content Management Systems: WordPress 3
+ CIS166AA Introduction to Javascript 3
+ CIS233DA Internet/Web Development Level II 3
+ CIS235 e-Commerce 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3
Credits: 22-24
Restricted Electives
Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.

Specialization 1: Web Design
Credits: 17-22
ART112 Two-Dimensional Design (3)
OR
AVC100 Introduction to Digital Arts (1) AND
AVC181 Graphic Design I (3)
OR
AVC183 Digital Graphic Arts I (3) 3-4

CIS120DA Introduction to Adobe Premiere (3) OR
CIS120DK Introduction to Digital Video Editing (3) 3

CIS120DB Introduction to Adobe Illustrator 3

CIS120DC Introduction to Adobe Animate (3) OR
+ CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging (3) 3

+ CIS138DA Desktop Design and Publishing Using Adobe InDesign 3

Students must select 2-6 credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business and/or Multimedia.

Specialization 2: Web Development
Credits: 18
+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276++ Any Database Management Systems course (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS166AE Web Scripting with PHP: Hypertext Preprocessor (PHP) 3

Programming Language: Select two courses for a total of 6 credits
+ CIS150AB Object-Oriented Programming Fundamentals 3
+ CIS156 Python Programming: Level I 3
+ CIS159 Visual Basic Programming I 3
+ CIS162++ Any C Programming course 3
+ CIS163AA Java Programming: Level I 3
+ CIS165++ Any Mobile Application Development course 3
+ CIS256 Python Programming: Level II 3
+ CIS262AD C# Level II 3
+ CIS263AA Java Programming: Level II 3
+ CIS265++ Any Advanced Application Development 3

Students must select 3 credits of any course with a CIS prefix in consultation with their program advisor to further develop skills in the areas of Databases, Information Systems, Programming, and/or Operating Systems.

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
Any approved general education course from the Oral Communication area.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6
Any approved general education course in the Mathematics Area.

(MAT140, MAT141, MAT142, MAT145, MAT146 College Mathematics) OR (MAT150, MAT151, MAT152, MAT155, MAT156 College Algebra/Functions) OR higher math course with the Mathematical Applications [MA] general education designation recommended for students intending to transfer to a four-year institution.

MAT187 Precalculus is recommended for students intending to transfer to ASU (Tempe campus) to earn a BS in Graphic Information Technology.

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area.

PSY101 Introduction to Psychology is recommended for students intending to transfer to ASU (Polytechnic campus) to earn a BS in Technical Communication (User Experience) or to ASU (Tempe campus) to earn a BS in Graphic Information Technology.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area

MCCCD Governing Board Approval Date: June 28, 2022

Certificate of Completion

Accounting

Major: 5665
Catalog Year: 2024-2025
Effective Term: 2021 Spring
Award: CCL
Total Credits: 24-27
CIP Code: 52.0301

Primary/Initiating College: Phoenix College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00

SOC Code: Upon completion of this certificate, students may pursue a career as:
43-3011.00 Bill and Account Collectors
43-3031.00 Bookkeeping, Accounting, and Auditing Clerks
13-2041.00 Credit Analysts
13-2081.00 Tax Examiners and Collectors, and Revenue Agents

Description: The Certificate of Completion (CCL) in Accounting program is designed for students seeking to gain skills and knowledge in the field of accounting and tax. Possible entry-level positions for this program include accounting clerk, accounts payable/receivable clerk, claims clerk, credit clerk, bookkeeper, accounting intern, or comparable positions. An Associate in Applied Science (AAS) in Accounting and a Certificate of Completion (CCL) in Enrolled Agent are also available.

Learning Outcomes

1. Use basic mathematics and accounting principles to report the financial position of an organization. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC212, ACC221, ACC222, ACC230, ACC240)
2. Apply current technology to specific business tasks. (ACC115, CIS105, CIS114DE)
3. Evaluate the legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (ACC111, ACC121, ACC221, GBS151)
4. Demonstrate critical thinking through written and oral formats. (GBS151)
5. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151)
6. Apply principles and practices of accounting to analyze and interpret general purpose financial statements. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC212, ACC221, ACC222, ACC230, ACC240)
7. Apply basic rules of financial accounting to business transactions. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC212, ACC221, ACC222, ACC230, ACC240)
8. Apply basic rules of managerial accounting to business decision making. (ACC212, ACC240)
9. Apply appropriate procedures to prepare individual, partnership, and corporate taxes, including tax reporting for income, payroll, sales, and personal property. (ACC105, ACC121, ACC221, ACC222)
10. Demonstrate an understanding of compliance in accounting, reporting and tax. (ACC105, ACC121, ACC221, ACC222)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites

None

Required Courses

Credits: 24-27

Required Courses
ACC111 Accounting Principles I (3) AND
+ ACC230 Uses of Accounting Information I (3) AND
+ ACC240 Uses of Accounting Information II (3)
OR
ACC111 Accounting Principles I (3) AND
+ ACC112 Accounting Principles II (3) AND
+ ACC212 Managerial Accounting (3)

OR
ACC211 Financial Accounting (3) AND
+ ACC212 Managerial Accounting (3) 6-9

ACC105 Payroll, Sales and Property Taxes (3) OR
+ ACC222 Payroll Accounting (3) 3

ACC121 Individual Tax Preparation (3) OR
+ ACC221 Tax Accounting (3) 3

ACC115 Computerized Accounting 3
CIS114DE Excel Spreadsheet 3
CIS105 Survey of Computer Information Systems 3
GBS151 Introduction to Business 3

MCCCD Governing Board Approval Date: November 26, 2019

Administration of Justice

Major: 5007N
Catalog Year: 2024-2025
Effective Term: 2019 Fall
Award: CCL
Total Credits: 15
CIP Code: 43.0104
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: 33-1012.00, 33-1012.00, 33-3052.00, 33-3021.00, 33-3021.02, 33-3051.01, 33-3051.00, 33-3012.00, 33-9032.00, 33-3051.04, 33-3021.00, 33-3021.06, 33-3031.00, 33-3021.03, 43-5031.00

Description: The Certificate of Completion (CCL) in Administration of Justice program is designed to be interdisciplinary by nature and provides students with foundational knowledge of the criminal justice system and operational processes for addressing crime within society. This program also examines diverse populations and communities, and their effects on relationships with the criminal justice system. In addition, this program allows students to familiarize themselves with and evaluate various career opportunities in the criminal justice field and is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS123, AJS230, AJS240)
2. Solve problems through logical and sound reasoning. (AJS101, AJS109, AJS123, AJS230, AJS240, AJS260)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS230, AJS240)
4. Communicate in the language common to the criminal justice system. (AJS101, AJS109, AJS230, AJS240)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS123, AJS230, AJS240)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS101, AJS109, AJS123, AJS230, AJS240, AJS260)
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS230, AJS240)
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS109, AJS123, AJS230, AJS240, AJS260)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS109, AJS230, AJS240, AJS260)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

AJS101 Introduction to Criminal Justice 3

AJS109 Substantive Criminal Law (3) or
AJS260 Procedural Criminal Law (3) 3

AJS123 Ethics and the Administration of Justice 3
AJS230 The Police Function 3
AJS240 The Correction Function 3

MCCCD Governing Board Approval Date: December 11, 2018

Administrative Professional

Major: 5677
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 18
CIP Code: 52.0401
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM, GC, PC, PV, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
43-6011 Executive Secretaries and Executive Administrative Assistants
43-6014 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive

Description: The Certificate of Completion (CCL) in the Administrative Professional program is designed to provide students with basic office skills. This program is recommended for students with little or no office-related work experience or college experience. Includes instruction in business communications, office procedures, and report preparation. An Associate in Applied Science (AAS) in Administrative Professional is available.

Learning Outcomes

1. Apply effective oral, written, and visual business communication skills. (GBS120)
2. Apply current technology to specific business tasks. (BPC110, CIS105, CIS113DE, BPC101AA, BPC/OAS111AA, CIS133AA, CIS121AI, CIS121AE, CIS122AE)
3. Create basic business documents, reports, spreadsheets, and presentations. (BPC101AA, BPC110, CIS105, CIS113DE, GBS120)
4. Describe basic business principles. (GBS151)

5. Use the Internet as a communication tool and information resource. (BPC101AA, BPC110, CIS105, CIS133AA, GBS120)
6. Apply mathematics to common business calculations. (BPC110, CIS105, GBS131)
7. Demonstrate effective interpersonal and customer service skills in the workplace. (GBS120)
8. Apply professional behavior and ethics. (CIS105, GBS151)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

CIS113DE Microsoft Word: Word Processing 3
GBS120 Workplace Communication Skills 3
GBS131 Business Calculations 3
GBS151 Introduction to Business 3

Select three (3) of the following courses:
BPC101AA Introduction to Computers I 1
BPC/OAS111AA Computer Keyboarding I 1
CIS121AE Windows Operating System: Level I 1
CIS121AI Mac Operating System 1
+ CIS122AE Windows Operating System: Level II 1
CIS133AA Internet/Web Development Level I-A 1

MCCCD Governing Board Approval Date: November 26, 2019

Adobe Foundations: Animation and Graphics Production

Major: 5167N
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 9
CIP Code: 11.0801
Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, MC, PV, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
43-9031.00 Desktop Publishers

Upon completion of an associate degree, students may pursue a career as:
15-1254.00 Web Developers
27-1014.00 Multimedia Artists and Animators
27-1024.00 Graphic Designers

Description: The Certificate of Completion (CCL) in Adobe Foundations: Animation and Graphics Production program helps prepare students to create, edit, and enhance digital images, graphics, and animation for use in web, print, and video. A Certificate of Completion in Adobe Foundations: Video and Audio Production and an Associate in Applied Science (AAS) in Web Design and Development are also available.

Learning Outcomes

1. Edit digital images and visual assets. (CIS120DB, CIS120DF)
2. Create animation and graphics in a variety of formats for use in web, print, and video. (CIS120DB, CIS120DF, CIS120DC)
3. Develop interactive digital animation. (CIS120DC)
4. Practice legal and ethical standards related to the creation and use of animation and graphics. (CIS120DB, CIS120DC, CIS120DF)
5. Prepare visual assets to address audience needs. (CIS120DB, CIS120DC, CIS120DF)
6. Describe project management tasks, responsibilities, and communication workflow. (CIS120DB, CIS120DC, CIS120DF)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 9

CIS120DB Introduction to Adobe Illustrator 3
CIS120DC Introduction to Adobe Animate 3
CIS120DF Introduction to Adobe Photoshop 3

MCCCD Governing Board Approval Date: February 25, 2020

Advanced Behavioral Sciences

Major: 5521
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 40
CIP Code: 30.1701
Primary/Initiating College: South Mountain Community College
Program Availability: GC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Counseling
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
31-1133.00 Psychiatric Aides
21-1093.00 Social and Human Service Assistants
29-2053.00 Psychiatric Technicians
21-1099.00 Community and Social Service Specialists, All Other

21-1011.00 Substance Abuse and Behavioral Disorder Counselors
19-3099.00 Social Scientists and Related Workers, All Other
21-1023.00 Mental Health and Substance Abuse Social Workers
21-1094.00 Community Health Workers

Upon completion of a graduate degree, students may pursue a career as:
21-1011.00 Substance Abuse and Behavioral Disorder Counselors
21-1092.00 Probation Officers and Correctional Treatment Specialists
21-1093.00 Social and Human Service Assistants
29-2053.00 Psychiatric Technicians
21-1023.00 Mental Health and Substance Abuse Social Workers
21-1014.00 Mental Health Counselors
21-1012.00 Educational, Guidance, School, and Vocational Counselors
21-1013.00 Marriage and Family Therapists
21-1019.00 Counselors, All Others
21-1022.00 Healthcare Social Workers
19-3039.00 Psychologists, All Other
19-3031.03 Counseling Psychologists
19-3032.00 Industrial-Organizational Psychologists
19-3031.00 Clinical, Counseling, and School Psychologists
29-1223.00 Psychiatrists
19-3039.01 Neuropsychologists and Clinical Neuropsychologists
25-1066.00 Psychology Teachers, Postsecondary
19-3034.00 School Psychologists
29-1071.00 Physician Assistant

Description: The Certificate of Completion (CCL) in Advanced Behavioral Sciences prepares students to assist, as part of a clinical team, in the care of individuals and families dealing with mental illness, addictions and substance use, trauma, developmental disabilities, comorbid medical conditions, and challenging behaviors. The program includes courses designed to provide students with the skills necessary to deliver behavioral health and social services through supervised field experience. This program prepares students for industry certification and is embedded in the Associate in Applied Science (AAS) in Behavioral Sciences, and the Bachelors of Science (BS) in Behavioral Sciences available at MCCCD.

Learning Outcomes

1. Apply the principles of trauma-informed care with diverse client populations. (BHS150, BHS155, BHS160, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210, BHS215)
2. Demonstrate ethical interpersonal and communication skills important in establishing and maintaining relationships. (BHS150, BHS155, BHS160, BHS165, BHS170, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210, BHS215)
3. Practice evidence-based behavioral health interventions using assessment and outcome measures. (BHS150, BHS160, BHS165, BHS170, BHS175, BHS180, BHS190, BHS205, BHS210, BHS215)
4. Assist clients with substance use and co-occurring disorders in their recovery. (BHS150, BHS160, BHS165, BHS175, BHS205, BHS210, BHS215)
5. Determine the role, function, and responsibilities of various mental health professions. (BHS150, BHS160, BHS170, BHS175, BHS180, BHS190, BHS205, BHS210, BHS215)
6. Examine the comprehensive bio-psycho-social needs of diverse client populations in behavioral health and social service settings. (BHS150, BHS165, BHS170, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210)
7. Identify methods to resolve current symptoms and prevent future effects of burnout, traumatic stress, and compassion fatigue. (BHS155, BHS160, BHS165, BHS175, BHS190)
8. Manage crisis/trauma situations while engaging in appropriate self care to promote professional resilience and personal safety. (BHS155, BHS160, BHS165, BHS175, BHS185, BHS190, BHS205, BHS210, BHS215)

9. Manage individual cases as part of a multidisciplinary team in a fashion that best serves the patient and simultaneously protects the practitioner. (BHS155, BHS160, BHS165, BHS170, BHS175, BHS180, BHS185, BHS190, BHS205, BHS210)
10. Document treatment plans in collaboration with a multidisciplinary team. (BHS160, BHS170, BHS180, BHS185, BHS205, BHS210)

Program Notes

Students must earn a grade of C or better in each course in the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 34

BHS150 Introduction to Behavioral Health and Social Services 3
BHS155 Professional Resiliency and Well-Being 3
BHS160 Ethical, Legal, and Professional Issues in Counseling Services 3
BHS165 Applied Therapeutic Communication Skills 3
BHS170 Case Management and Clinical Documentation 3
BHS180 Child, Family, and Adult Advocacy 3
Note: The above courses are required in the Certificate of Completion (CCL) in Foundations of Behavioral Sciences (5522)

BHS175 Trauma-Informed Care and Recovery Treatment 3
BHS185 Cultural Competence in Behavioral Health 3
+ BHS190 Supervised Practice in Behavioral Health and Human Services 1
BHS205 Introduction to Individual Counseling Theories 3
BHS210 Addictions, Substance Use Disorders, and Recovery 3
BHS215 Introduction to Group Therapy 3

Restricted Electives

Credits: 6

Student must choose six (6) credits from one (1) of the following specializations:

Specialization 1: Trauma and Crisis Stabilization
BHS230 Crisis and Trauma Stabilization 3
BHS235 Emergency Mental Health Crisis Response and Recovery 3

Specialization 2: Infant and Early Childhood Mental Health
BHS275 Infant and Early Childhood Mental Health (3) OR
CFS177 Parent-Child Interaction (3) 3

BHS272 Child and Adolescent Mental Health and Interventions 3
CFS235 Developing Child: Theory into Practice, Prenatal to Age Eight 3
+ EED210 Creative and Cognitive Play 3
(If EED210 is selected, CFS235 will need to be selected (unless another requisite option has been met.)

Specialization 3: Addiction and Substance Use Disorders
ASD110 Pharmacology of Substances of Abuse and Dependency 3

ASD245 Co-Occurring Disorders (2) AND
ASD120 Professional Ethics in Addictions and Substance Use Disorders (1) OR
ASD145 AIDS and Addiction (1) 3

BHS251 Harm Reduction in Addiction, Substance Use, and Social Services 3

Specialization 4: Developmental Disabilities
BHS271 Developmental Disabilities Assistance Training 3
+ PSY241 Understanding and Changing Behavior 3
+ PSY243 The Psychology of Developmental Disabilities 3

Specialization 5: Criminal Justice and Forensic Science
+ PSY267 Introduction to Forensic Psychology 3

AJS101 Introduction to Criminal Justice (3) OR
AJS200 Current Issues In Criminal Justice (3) OR
AJS225 Criminology (3) 3

Specialization 6: Mental Health
BHS230 Crisis and Trauma Stabilization (3) OR
BHS235 Emergency Mental Health Crisis Response and Recovery (3) 3

BHS251 Harm Reduction in Addiction, Substance Use, and Social Services 3
BHS255 Health and Wellness Coaching in Professional Resiliency 3
BHS262 Behavioral Health Service Techniques for the Elderly 3
BHS266 Violence and Abuse Services 3
BHS269 Grief Support Techniques 3
BHS271 Developmental Disabilities Assistance Training 3
BHS272 Child and Adolescent Mental Health and Interventions 3
BHS275 Infant and Early Childhood Mental Health 3
CPD180 Human Resilience: Cognitive, Emotional, and Behavioral Applications 3
+ PSY266 Psychological Disorders 3

MCCCD Governing Board Approval Date: November 22, 2022

Amazon Web Services Cloud Associate

Major: 5330N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 3-6
CIP Code: 11.0902
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, GW, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1299.00 Computer Occupations, All Other

Description: The Certificate of Completion (CCL) in Amazon Web Services (AWS) Cloud Associate builds the knowledge and skills to design, plan, and implement a cloud solution architecture. Students will be introduced to

concepts and hands-on opportunities to manage cloud systems/architectures for real world-applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the AWS Certified Solutions Architect – Associate examination, which is the second level of the AWS certifications.

Learning Outcomes

1. Integrate Amazon Web Services cloud technologies and services to transform IT Systems. (CLD110, CLD120)
2. Configure Amazon Web Services cloud systems for high availability, fault tolerance, and scalability. (CLD110, CLD120)
3. Utilize the appropriate tools and services to provide multi-layered security for content in the cloud. (CLD110, CLD120)
4. Design well-architected cloud solutions to meet business needs. (CLD110, CLD120)
5. Configure storage, compute, database, networking resources and troubleshoot to improve performance and evaluate metrics for applications. (CLD110, CLD120)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CLD, CNT, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 3-6

CLD110 Amazon Web Services Cloud Foundations (3)
OR
Certificate of Completion in Amazon Web Services Cloud Practitioner (5141N) (3)
OR
AWS Certified Cloud Practitioner certification badge (0)
OR
Permission of Program Director (0) 0-3
(CCL/5141N is not eligible for Title IV Federal Financial Aid.)

+ CLD120 Amazon Web Services Cloud Architect Associate 3

MCCCD Governing Board Approval Date: March 25, 2025

Amazon Web Services Cloud Practitioner

Major: 5141N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 3
CIP Code: 11.0902
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, GW, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Students with this Certificate of Completion and requisite industry experience can pursue careers as: 15-1299.00 Computer Occupations, All Other

Description: The Certificate of Completion (CCL) in Amazon Web Services Cloud Practitioner builds the practical knowledge and skills of cloud computing. Cloud computing provides reliable, scalable, secure, and flexible technology solutions for personal and business use. This CCL will introduce students new to or interested in cloud computing to the fundamental concepts of cloud services as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Amazon Web Services (AWS) Certified Cloud Practitioner exam, which is the first level of the AWS certification.

Learning Outcomes

1. Define the different types of cloud services and their benefits including economic advantages. (CLD110)
2. Execute a variety of cloud services within Amazon Web Services (AWS). (CLD110)
3. Manage basic cloud security. (CLD110)
4. Design basic cloud service architectures using industry best practices. (CLD110)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 3

CLD110 Amazon Web Services Cloud Foundations 3

MCCCD Governing Board Approval Date: March 25, 2025

Amazon Web Services Cloud Specialist

Major: 5331N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 3-9
CIP Code: 11.0902
Primary/Initiating College: Glendale Community College
Program Availability: CG, GC, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as an:
15-1299.00 Computer Occupations, All Other

Description: The Certificate of Completion (CCL) in Amazon Web Services (AWS) Cloud Specialist builds the requisite knowledge and skills to perform core Amazon Web Services (AWS) services in a manner that is based on compute, data, security and requirements as well as AWS best practices. Students select a specialization in either Developer or SysOps. Developer focuses on developing, deploying and debugging cloud based applications using AWS. SysOps focuses on deploying, managing and operating scalable, highly available, and fault tolerant systems on AWS.

Students will have hands-on opportunities to manage cloud systems/architectures for real world-scenarios. Students with the requisite prior experience in the field who complete this CCL can pursue employment in a variety of information technology jobs.

This CCL also helps to prepare students for industry-standard certification as either AWS Certified Developer - Associate or AWS Certified SysOps Administrator - Associate based on their emphasis.

Learning Outcomes

1. Integrate Amazon Web Services (AWS) cloud technologies and services to transform IT Systems. (CLD110, CLD120, CLD130, CLD140)
2. Configure AWS cloud systems for high availability, fault tolerance, and scalability. (CLD110, CLD120, CLD140)
3. Utilize the appropriate tools and services to provide multi-layered security for content in the cloud. (CLD110, CLD120)
4. Design well-architected cloud solutions to meet business needs. (CLD110, CLD120, CLD140)
5. Configure storage, compute, database, networking resources and troubleshoot to improve performance and evaluate metrics for applications. (CLD110, CLD120, CLD140)
6. Develop, deploy and debug cloud based applications using AWS. (CLD130)
7. Deploy, manage and operate scalable, highly available, and fault tolerant systems on AWS. (CLD140)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience such as database, Linux, information security, networking, programming, and DevOps who are interested in expanding their knowledge in the area of cloud computing to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the CCL to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 3-9

CLD110 Amazon Web Services Cloud Foundations (3) OR
AWS Cloud Practitioner Certification (0) OR
Permission of Program Director (0) 0-3

+ CLD120 Amazon Web Services Cloud Architect Associate (3) OR
AWS Certified Solutions Architect - Associate certification (0) OR
Permission of Program Director (0) 0-3

Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.

Specialization 1: AWS Certified Developer - Associate
+CLD130 Amazon Web Services Cloud Developing 3

Specialization 2: AWS Certified SysOps Administrator - Associate
+ CLD140 Amazon Web Services Cloud Operations 3

MCCCD Governing Board Approval Date: June 22, 2021

Animation

Major: 5169
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 40
CIP Code: 10.0304
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
27-1014.00 Special Effects Artists and Animators
27-1013.00 Fine Artists, Including Painters, Sculptors, and Illustrators
27-2012.01 Producers

Upon completion of a postsecondary degree, students may pursue a career as:
27-1011.00 Art Directors
27-4032.00 Film and Video Editors
27-4031.00 Camera Operators, Television, Video, and Film

Description: The Certificate of Completion (CCL) in Animation develops knowledge and skills in the area of digital animation, including but not limited to the production of still and time-based media, animation techniques, narrative development, character design, compositing, motion graphics, and interactive design. The curriculum is designed to provide the student with an understanding of animation techniques, use of production equipment, animation terminology, media and interactivity applications, and industry practices. This certificate prepares students for employment and upgrades the skills of persons employed in occupations such as digital animators, media producers, storyboard artists, media artist/designers, and interaction designers. Certificates of Completion (CCL) in Video Game Production, and Associate in Applied Science (AAS) degrees in Animation and

Time-Based Media and Video Game Production, are also available. Some of these programs are available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Create still, interactive, and time-based images to project specifications, demonstrating professional competence in research, planning, production, and presentation. (ART111, ART116, AVC100, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287)
2. Apply critical thinking skills, animation processes, and historical and media literacies to solve design problems. (AVC100, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287, CRW150, CRW172, CRW176, FMT121)
3. Analyze still, interactive, and time-based images to evaluate their effectiveness. (ART111, ART116, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287)
4. Apply industry standard tools and research to develop effective animations, media, designs, and workflows. (AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287)
5. Demonstrate professional and collaborative practices. (ART111, ART116, AVC100, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287)
6. Communicate still, interactive, and time-based image solutions that recognize cultural and individual differences. (ART116, AVC100, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287, CRW150, CRW172, CRW176, FMT121)
7. Create a portfolio of work that reflects current industry practices. (ART111, ART116, AVC150, AVC169, AVC170, AVC177, AVC178, AVC/MMT184, AVC/MMT185, AVC191, AVC200, AVC240, AVC/THO246, AVC284, AVC/MMT285, AVC287, CRW150, CRW172, CRW176, FMT121)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This CCL is designed for individuals who are new to the field, as well as to those who already have relevant experience or are employed in the field.

Program Prerequisites

None

Required Courses

Credits: 40

ART111 Drawing I 3
ART116 Life Drawing I 3
AVC100 Introduction to Digital Arts 1

AVC150 Multimedia Storytelling (3) OR
AVC191 Storyboarding and Layout (3) OR
CRW150 Introduction to Creative Writing (3) OR
CRW172 Introduction to Comic Book Writing (3) OR
CRW176 Writing Narrative for Video Games (3) OR
FMT121 Story Theory for Film, Television and Media (3) 3

+ AVC169 2D Media Design (3) OR
+ AVC178 Digital Arts Studies (3) 3

+ AVC170 3D Computer Design (3) OR
AVC/THO246 Digital Fabrication (3) 3

+ AVC177 Digital Photographic Imaging I 3
+ AVC/MMT184 Digital Animation I 3
+ AVC/MMT185 3D Modeling for Animation I 3
+ AVC200 Animation and Interactivity 3
+ AVC240 Cinematography and Directing for 2D/3D Animation 3
+ AVC284 Digital Animation II 3
+ AVC/MMT285 3D Modeling and Animation II 3
+ AVC287 3D Character Animation 3

MCCCD Governing Board Approval Date: February 25, 2025

Automotive Automatic Transmission and Transaxle

Major: 5930N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 4
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Automatic Transmission and Transaxle provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of automatic transmission and transaxle. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A2 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE120++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE120++)
3. Locate and interpret appropriate service information. (ASE120++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automatic transmission/transaxle. (ASE120++)
5. Apply industry relevant procedures to properly repair automatic transmission/transaxle. (ASE120++)
6. Apply industry relevant procedures to properly service automatic transmission/transaxle. (ASE120++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE120++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE120++)
9. Practice industry accepted ethical behavior. (ASE120++)

10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE120++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE120++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE120++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 4

ASE120 Automatic Transmission and Transaxle (4) OR
ASE120AU Automatic Transmission and Transaxle (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Brake Systems

Major: 5936N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 4
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Brake Systems provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of brake systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A5 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE150++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE150++)
3. Locate and interpret appropriate service information. (ASE150++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive brake systems. (ASE150++)
5. Apply industry relevant procedures to properly repair automotive brake systems. (ASE150++)

6. Apply industry relevant procedures to properly service automotive brake systems. (ASE150++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE150++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE150++)
9. Practice industry accepted ethical behavior. (ASE150++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE150++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE150++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE150++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 4

ASE150 Automotive Brake Systems (4) OR
ASE150AU Automotive Brake Systems (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Chassis

Major: 5952
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 16
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Chassis provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of suspension, steering, brakes and electrical systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A4, A5 and A6 Tests.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE140++, ASE150++, ASE160++, ASE260++)

2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE140++, ASE150++, ASE160++, ASE260++)
3. Locate and interpret appropriate service information. (ASE140++, ASE150++, ASE160++, ASE260++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive suspension, steering, brakes and electrical systems. (ASE140++, ASE150++, ASE160++, ASE260++)
5. Apply industry relevant procedures to properly repair automotive suspension, steering, brakes and electrical systems. (ASE140++, ASE150++, ASE160++,ASE260++)
6. Apply industry relevant procedures to properly service automotive suspension, steering, brakes and electrical systems. (ASE140++, ASE150++, ASE160++, ASE260++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE140++, ASE150++, ASE160++, ASE260++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE140++, ASE150++, ASE160++, ASE260++)
9. Practice industry accepted ethical behavior. (ASE140++, ASE150++, ASE160++, ASE260++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE140++, ASE150++, ASE160++, 240++, ASE260++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE140++, ASE150++, ASE160++,ASE260++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE140++, ASE150++, ASE160++, ASE260++)

Program Notes

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 16

ASE140 Automotive Steering, Suspension and Alignment (4) OR
ASE140AU Automotive Steering, Suspension and Alignment (4) 4

ASE150 Automotive Brake Systems (4) OR
ASE150AU Automotive Brake Systems (4) 4

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Drive Train

Major: 5950
Catalog Year: 2024-2025
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC

Effective Term: 2023 Fall
Award: CCL
Total Credits: 16
CIP Code: 47.0604
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Drive Train provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of automatic and manual transmissions and drivetrains and electrical systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A2, A3 and A6 Tests.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE120++, ASE130++, ASE160++, ASE260++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE120++, ASE130++, ASE160++, ASE260++)
3. Locate and interpret appropriate service information. (ASE120++, ASE130++, ASE160++, ASE260++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automatic and manual transmissions and drivetrains and electrical systems. (ASE120++, ASE130++, ASE160++, ASE260++)
5. Apply industry relevant procedures to properly repair automatic and manual transmissions and drivetrains and electrical systems. (ASE120++, ASE130++, ASE160++, ASE260++)
6. Apply industry relevant procedures to properly service automatic and manual transmissions and drivetrains and electrical systems. (ASE120++, ASE130++, ASE160++, ASE260++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE120++, ASE130++, ASE160++, ASE260++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE120++, ASE130++, ASE160++, ASE260++)
9. Practice industry accepted ethical behavior. (ASE120++, ASE130++, ASE160++, ASE260++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE120++, ASE130++, ASE160++, ASE260++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE120++, ASE130++, ASE160++, ASE260++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE120++, ASE130++, ASE160++, ASE260++)

Program Notes

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 16

ASE120 Automatic Transmission and Transaxle (4) OR
ASE120AU Automatic Transmission and Transaxle (4) 4

ASE130 Manual Drive Trains and Axles (4) OR
ASE130AU Manual Drive Trains and Axles (4) 4

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Electrical, Heating, Ventilation and Air Conditioning Systems

Major: 5948N
Catalog Year: 2024-2025
Effective Term:
Award: CCL
Total Credits: 2023 Fall
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Electrical, Heating, Ventilation and Air Conditioning Systems provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of electrical systems and heating, ventilation and air conditioning. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A7 and A6 Tests.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE160++, ASE170++, ASE260++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE160++, ASE170++, ASE260++)
3. Locate and interpret appropriate service information. (ASE160++, ASE170++, ASE260++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive electrical systems and heating, ventilation and air conditioning. (ASE160++, ASE170++, ASE260++)
5. Apply industry relevant procedures to properly repair automotive electrical systems and heating, ventilation and air conditioning. (ASE160++, ASE170++, ASE260++)
6. Apply industry relevant procedures to properly service automotive electrical systems and heating, ventilation and air conditioning. (ASE160++, ASE170++, ASE260++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE160++, ASE170++, ASE260++)

8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE160++, ASE170++, ASE260++)
9. Practice industry accepted ethical behavior. (ASE160++, ASE170++, ASE260++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE160++, ASE170++, ASE260++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE160++, ASE170++, ASE260++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE160++, ASE170++, ASE260++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This program replaces: CCL/5860 Automotive Heating, Ventilation and Air Conditioning (HVAC)

Program Prerequisites

None

Required Courses

Credits: 12

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

ASE170 Automotive Heating, Ventilation and Air Conditioning Systems (4) OR
ASE170AU Automotive Heating, Ventilation and Air Conditioning Systems (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Electronic/Electrical Systems

Major: 5938N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 8
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Electronic/Electrical Systems provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of

electronic/electrical systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A6 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE160++, ASE260++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE160++, ASE260++)
3. Locate and interpret appropriate service information. (ASE160++, ASE260++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive electronic/electrical systems. (ASE160++, ASE260++)
5. Apply industry relevant procedures to properly repair automotive electronic/electrical systems. (ASE160++, ASE260++)
6. Apply industry relevant procedures to properly service automotive electronic/electrical systems. (ASE160++, ASE260++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE160++, ASE260++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE160++, ASE260++)
9. Practice industry accepted ethical behavior. (ASE160++, ASE260++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE160++, ASE260++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE160++, ASE260++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE160++, ASE260++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This program replaces: CCL/5449 Automotive Electrical Systems

Program Prerequisites

None

Required Courses

Credits: 8

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Engine and Operations Management

Major: 5942N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 8
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Engine and Operations Management provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of engine performance. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A8 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE180++, ASE280++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE180++, ASE280++)
3. Locate and interpret appropriate service information. (ASE180++, ASE280++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive engine performance and control systems. (ASE180++, ASE280++)
5. Apply industry relevant procedures to properly repair emission, combustion and engine computer control systems in automobiles. (ASE180++, ASE280++)
6. Apply industry relevant procedures to properly service fuel, combustion, and associated systems affecting automobile performance. (ASE180++, ASE280++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE180++, ASE280++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE180++, ASE280++)
9. Practice industry accepted ethical behavior. (ASE180++, ASE280++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE180++, ASE280++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE180++, ASE280++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE180++, ASE280++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 8

ASE180 Introduction to Engine Management (4) OR
ASE180AU Introduction to Engine Management (4) 4

+ ASE280 Engine Management (4) OR
+ ASE280AU Engine Management (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Engine Management and Repair

Major: 5954
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 22
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Engine Management and Repair provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of engine repair and performance and electrical systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A1, A6 and A8 Tests.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
3. Locate and interpret appropriate service information. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive systems. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
5. Apply industry relevant procedures to properly repair automotive systems. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
6. Apply industry relevant procedures to properly service automotive systems. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
9. Practice industry accepted ethical behavior. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)

12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE100, ASE110++, ASE160++, ASE180++, ASE260++, ASE280++)

Program Notes

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 22

ASE100 Introduction to Automotive Service 2

ASE110 Engine Fundamentals (4) OR
ASE110AU Engine Fundamentals (4) 4

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

ASE180 Introduction to Engine Management (4) OR
ASE180AU Introduction to Engine Management OR (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

+ ASE280 Engine Management (4) OR
+ ASE280AU Engine Management (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Engine Repair

Major: 5928N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 6
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Engine Repair provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of engine repair. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A1 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE100, ASE110++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE100, ASE110++)
3. Locate and interpret appropriate service information. (ASE100, ASE110++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive engine systems. (ASE100, ASE110++)
5. Apply industry relevant procedures to properly repair automotive engine systems. (ASE100, ASE110++)
6. Apply industry relevant procedures to properly service automotive engine systems. (ASE100, ASE110++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE100, ASE110++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE100, ASE110++)
9. Practice industry accepted ethical behavior. (ASE100, ASE110++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication, and customer service. (ASE100, ASE110++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE100, ASE110++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE100, ASE110++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 6

ASE100 Introduction to Automotive Service 2

ASE110 Engine Fundamentals (4) OR
ASE110AU Engine Fundamentals (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Heating, Ventilation and Air Conditioning Systems

Major: 5940N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 4
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles

49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Heating, Ventilation and Air Conditioning (HVAC) Systems provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of HVAC systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A7 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE170++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE170++)
3. Locate and interpret appropriate service information. (ASE170++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive electrical systems and heating, ventilation and air conditioning. ASE170++)
5. Apply industry relevant procedures to properly repair automotive electrical systems and heating, ventilation and air conditioning. (ASE170++)
6. Apply industry relevant procedures to properly service automotive electrical systems and heating, ventilation and air conditioning. (ASE170++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE170++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE170++)
9. Practice industry accepted ethical behavior. (ASE170++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE170++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE170++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE170++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 4

ASE170 Automotive Heating, Ventilation and Air Conditioning Systems (4) OR
ASE170AU Automotive Heating, Ventilation and Air Conditioning Systems (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Maintenance and Light Repair

Major: 5946
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 22
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Maintenance and Light Repair provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of basic electrical and mechanical maintenance and repair. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification Tests.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
3. Locate and interpret appropriate service information. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in performing "quick service" and repair of automobiles. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
5. Apply industry relevant procedures to properly repair air conditioning and perform routine automotive maintenance. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
6. Apply industry relevant procedures to properly service normal wear items in automobiles. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
9. Practice industry accepted ethical behavior. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE100, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++)

Program Notes

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This program replaces:
CCL/5597N Workforce Development: Automotive Technology Level II
CCL/5856 Automotive Maintenance and Light Repair

Program Prerequisites

None

Required Courses

Credits: 22

ASE100 Introduction to Automotive Service 2

ASE140 Automotive Steering, Suspension and Alignment (4) OR
ASE140AU Automotive Steering, Suspension and Alignment (4) 4

ASE150 Automotive Brake Systems (4) OR
ASE150AU Automotive Brake Systems (4) 4

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

ASE170 Automotive Heating, Ventilation and Air Conditioning Systems (4) OR
ASE170AU Automotive Heating, Ventilation and Air Conditioning Systems (4) 4

ASE180 Introduction to Engine Management (4) OR
ASE180AU Introduction to Engine Management (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Manual Drive Train and Axles

Major: 5932N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 4
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Manual Drive Train and Axles provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of manual drive train and axles. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A3 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE130++)

2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE130++)
3. Locate and interpret appropriate service information. (ASE130++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive manual drive train and axles. (ASE130++)
5. Apply industry relevant procedures to properly repair automotive manual drive train and axles. (ASE130++)
6. Apply industry relevant procedures to properly service automotive manual drive train and axles. (ASE130++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE130++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE130++)
9. Practice industry accepted ethical behavior. (ASE130++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE130++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE130++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE130++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 4

ASE130 Manual Drive Trains and Axles (4) OR
ASE130AU Manual Drive Trains and Axles (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Service

Major: 5956
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 45-48
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Service prepares individuals to apply technical knowledge and skills to repair, service, and maintain automobiles. Instruction is in both the theoretical and practical aspects of automotive repair, service and maintenance, and includes brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and

drivetrains, and heating and air conditioning systems. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile Certification Tests (A1 - A8).

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
3. Locate and interpret appropriate service information. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive systems. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++)
5. Apply industry relevant procedures to properly repair automotive systems. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
6. Apply industry relevant procedures to properly service automotive systems. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++)
9. Practice industry accepted ethical behavior. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE100, ASE110++, ASE120++, ASE130++, ASE140++, ASE150++, ASE160++, ASE170++, ASE180++, ASE240++, ASE260++, ASE265, ASE280++, ASE290++, ASE296++, ASE298++)

Program Notes

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 42

ASE100 Introduction to Automotive Service 2

ASE110 Engine Fundamentals (4) OR
ASE110AU Engine Fundamentals (4) 4

ASE120 Automatic Transmission and Transaxle (4) OR
ASE120AU Automatic Transmission and Transaxle (4) 4

ASE130 Manual Drive Trains and Axles (4) OR
ASE130AU Manual Drive Trains and Axles (4) 4

ASE140 Automotive Steering, Suspension and Alignment (4) OR
ASE140AU Automotive Steering, Suspension and Alignment (4) 4

ASE150 Automotive Brake Systems (4) OR
ASE150AU Automotive Brake Systems (4) 4

ASE160 Introduction to Automotive Electrical (4) OR
ASE160AU Introduction to Automotive Electrical (4) 4

ASE170 Automotive Heating, Ventilation and Air Conditioning Systems (4) OR
ASE170AU Automotive Heating, Ventilation and Air Conditioning Systems (4) 4

ASE180 Introduction to Engine Management (4) OR
ASE180AU Introduction to Engine Management (4) 4

+ ASE260 Advanced Automotive Electrical (4) OR
+ ASE260AU Advanced Automotive Electrical (4) 4

+ ASE280 Engine Management (4) OR
+ ASE280AU Engine Management (4) 4

Restricted Electives

Credits: 3-8

+ ASE240 Advanced Driver Assistance Systems 2
+ ASE265 Introduction to Electric and Hybrid Vehicles 2
ASE290++ Automotive Service Internship (any suffixed courses) 1-4
ASE296++ Cooperative Education (any suffixed courses) 1-4
ASE298++ Special Projects (any suffixed courses) 1-3

MCCCD Governing Board Approval Date: February 28, 2023

Automotive Steering and Suspension

Major: 5934N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 4
CIP Code: 47.0604
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC
Field of Interest: Applied Technology
Instructional Council: Automotive/Diesel-Heavy Equipment Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.00 Automotive Service Technicians and Mechanics

Description: The Certificate of Completion (CCL) in Automotive Steering and Suspension provides individuals with the technical knowledge and skills needed by automotive technicians specializing in the area of steering and suspension. The curriculum within this certificate aligns with the Automotive Service Excellence (ASE) Automobile and Light Truck Certification A4 Test.

See program advisor for additional certificate offerings. An Associate in Applied Science (AAS) in Automotive Service is also available.

Learning Outcomes

1. Demonstrate safe personal and workplace habits according to industry standards. (ASE140++)
2. Comply with federal, state and local regulations with respect to the handling, storage, recycling and disposal of hazardous and toxic materials. (ASE140++)
3. Locate and interpret appropriate service information. (ASE140++)
4. Apply industry relevant strategies to properly diagnose the root cause of customer reported concerns in automotive steering and suspension. (ASE140++)
5. Apply industry relevant procedures to properly repair automotive steering and suspension. (ASE140++)
6. Apply industry relevant procedures to properly service automotive steering and suspension. (ASE140++)
7. Prepare the vehicle for delivery to the customer according to industry standards. (ASE140++)
8. Use, maintain, and store automotive tools, equipment and workspace according to professional standards. (ASE140++)
9. Practice industry accepted ethical behavior. (ASE140++)
10. Demonstrate industry standard professionalism that includes dress, attendance, communication and customer service. (ASE140++)
11. Effectively communicate with diverse audiences orally, visually, and in writing. (ASE140++)
12. Demonstrate the ability to learn and adapt in an evolving technical environment. (ASE140++)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for each course listed in the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 4

ASE140 Automotive Steering, Suspension and Alignment (4) OR
ASE140AU Automotive Steering, Suspension and Alignment (4) 4

MCCCD Governing Board Approval Date: February 28, 2023

Business Administration Fastrack

Major: 5152
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 27
CIP Code: 52.0101
Primary/Initiating College: Glendale Community College
Program Availability: GC, PC, SC
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-1021.00 General and Operations Manager
11-3012.00 Administrative Services Managers

Description: The Certificate of Completion (CCL) in Business Administration Fastrack program provides opportunities for individuals to update, upgrade, or develop essential business skills. The program`s focus is preparing students for job advancement and career opportunities in today`s business environment as defined by industry practitioners. Each course includes learning activities and projects which may be offered in an accelerated five-week or eight-week format. Additional features of the program include: student directed learning stressing the dynamic business environment, communication skills, leadership development, and performing effectively within a team environment.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Required Courses

Credits: 27

ACC110 Understanding and Using Accounting Systems (3) OR
ACC111 Accounting Principles I (3) 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

GBS120 Workplace Communication Skills 3
GBS151 Introduction to Business 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
MGT126 Customer Service Skills and Strategies 3
MGT175 Business Organization and Management 3
MGT251 Human Relations in Business 3
MKT271 Principles of Marketing 3

Program Competencies

1. Use basic accounting principles to develop and maintain business financial records. (ACC110, ACC111)
2. Create and use effective oral, written, and visual business communication skills. (GBS120)
3. Analyze external environmental factors in terms of their impact on a business, domestically and globally. (GBS151, GBS205)

4. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS205)
5. Recommend techniques for measuring, managing, and monitoring internal and external customer expectations and services. (MGT126)
6. Evaluate human relations problems as they arise in work situations. (GBS151, MGT175, MGT251)
7. Apply basic principles and techniques of management to recruit, select, hire, train, supervise, and evaluate employees. (MGT251)
8. Evaluate marketing strategies as presented in case studies. (MKT271)
9. Apply current technology to specific business tasks. (BPC110, CIS105)

MCCCD Governing Board Approval Date: May 28, 2019

CAD Application

Major: 5410N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 12-34
CIP Code: 15.1302
Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Applied Technology
Instructional Council: Drafting
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-3019.00 Drafters, All Other

Upon completion of an associate degree, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-3011.01 Architectural Drafters
17-3011.02 Civil Drafters
17-3019.00 Drafters, All Other

Upon completion of a bachelor`s degree, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-1011.00 Architects
27-1021.00 Industrial Designer
17-1012.00 Landscape Architect

Description: The Certificate of Completion (CCL) in CAD Application program is designed to broaden students` design exposure and Computer-Aided Design (CAD) technology skills. Students will utilize industry standard CAD and building information modeling (BIM) software to produce three-dimensional (3D) drawings and parametric models. This will include presentation methods and construction documentation conventions for either the architecture or civil design fields. Students may apply these courses toward the Associate in Applied Science (AAS) degree in Architectural and Civil CAD Technology.

Learning Outcomes

1. Apply current standards in dimensioning, symbology, linetypes, lineweights, drawing notes for working drawings, design related drawings to read, interpret, and produce construction documents and portfolio-quality working drawings. (CAD100, CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD267, CAD286, CAD287, CAD292, CAD235, CAD+++++, DFT126)
2. Use the latest two-dimensional (2D), three-dimensional (3D), and 3D parametric modeling computer-aided drafting (CAD) software to develop technical drawings and solid models in a manner that is efficient and

compliant with standard industry practices. (CAD100, CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD267, CAD286, CAD287, CAD292, CAD+++++, CAD235, DFT126)

3. Utilize building information modeling (BIM) concepts in project development. (CAD105, CAD106, CAD167, CAD186, CAD267, CAD286, CAD287, CAD292, CAD+++++, CAD235, DFT126)
4. Employ the principles and theory of construction processes. (CAD105, CAD106, CAD145, CAD167, CAD186, CAD267, CAD286, CAD287, CAD292, MAT150, MAT151, MAT152, MAT155, MAT156, BLT263++, CAD+++++, CAD235, DFT126)
5. Apply construction industry codes and standards. (CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD267, CAD286, CAD287, CAD292, CAD235, CAD+++++, DFT126)
6. Produce sketches, multi-view layouts, sections, details, working drawings, and building components schedules. (CAD100, CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD267, CAD286, CAD287, CAD292, CAD235, CAD+++++, DFT126)
7. Utilize traditional modeling techniques and 3D printing for project conceptualization. (CAD101, CAD105, CAD106, CAD145, CAD167, CAD186, CAD201, CAD267, CAD286, CAD287, CAD292, CAD235, CAD+++++, DFT126)
8. Communicate with others in verbal and in written form to collaboratively solve problems within the discipline. (CAD167, CAD186, CAD267, CAD286, CAD235, CAD+++++, CAD287, DFT126)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 6-28

CAD100 Fundamentals of 2D AutoCAD (3) AND
+ CAD101 Elements of CAD Graphics (AutoCAD) (3) AND
+ CAD105 Fundamentals of Revit Architecture (3) OR
+ CAD106 Fundamentals of Civil 3D (3) AND
+ CAD201 Three-Dimensional (3D) Modeling and Advanced CAD Techniques (3) AND
+ CAD235 Modeling, Rendering and Animation for Technical Presentations (3) AND
+ CAD292 Current Developments in CAD Technology (1) OR
Permission of Program Director based on equivalent industry experience. (0) 0-16

Students must complete one of the following math requirements:
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) OR
+ Higher (3-6) OR
Permission of Program Director based on equivalent industry experience. (0) 0-6

+ CAD167 Architectural Drawings I (Revit): Residential CAD (3) OR
+ CAD186 Site Development I (3) 3

+ CAD267 Architectural Drawings II (Revit): Commercial CAD (3) OR
+ CAD286 Site Development II (3) 3

Restricted Electives

Credits: 6

BLT263++ Any Building Codes course 3
+ CAD145 Design Principles for Industry 3
+ CAD167 Architectural Drawings I (Revit): Residential CAD 3
+ CAD186 Site Development I 3
+ CAD267 Architectural Drawings II (Revit): Commercial CAD 3
+ CAD286 Site Development II 3
+ CAD287 Advanced Revit Techniques 3
+ CAD292 Current Developments in CAD Technology (1) 1-4
(CAD292 may be repeated up to four (4) times on different topics)
CAD+++++ Any other CAD Computer-Aided Drafting course(s) 1-3
DFT126 Building Trades Blueprint Reading 3

MCCCD Governing Board Approval Date: February 25, 2025

CAD Fundamentals

Major: 5409
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 16
CIP Code: 15.1302
Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Applied Technology
Instructional Council: Drafting
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-3019.00 Drafters, All Other

Upon completion of an associate degree, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-3011.01 Architectural Drafters
17-3011.02 Civil Drafters
17-3019.00 Drafters, All Other

Upon completion of a bachelor`s degree, students may pursue a career as:
17-3011.00 Architectural and Civil Drafters
17-1011.00 Architects
27-1021.00 Industrial Designer
17-1012.00 Landscape Architect

Description: The Certificate of Completion (CCL) in CAD Fundamentals program is designed to provide students with the Computer-Aided design (CAD) skills and competence in two-dimensional (2D) and three-dimensional (3D) documentation and modeling typical of entry level CAD operators. Students may apply these courses toward the Associate in Applied Science (AAS) degree in Architectural and Civil CAD Technology.

Learning Outcomes

1. Apply current standards in dimensioning, symbology, linetypes, lineweights, drawing notes for working drawings, design related drawings to read, interpret, and produce construction documents and portfolio-quality working drawings. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)
2. Use the latest 2D, 3D, and 3D parametric modeling CAD software to develop technical drawings and solid models in a manner that is efficient and compliant with standard industry practices. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)
3. Demonstrate an awareness of introductory BIM concepts. (CAD105, CAD292)
4. Employ the principles and theory of construction processes and properties of materials. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)
5. Apply construction industry codes and standards. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)
6. Produce sketches, multi-view layouts, sections, details, working drawings, and building components schedules. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)
7. Utilize traditional modeling techniques and 3D printing for project conceptualization. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)
8. Communicate with others in verbal and in written form to collaboratively solve problems within the discipline. (CAD100, CAD101, CAD105, CAD106, CAD201, CAD235, CAD292)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 16

CAD100 Fundamentals of 2D AutoCAD 3
+ CAD101 Elements of CAD Graphics (AutoCAD) 3

+ CAD105 Fundamentals of Revit Architecture (3) OR
+ CAD106 Fundamentals of Civil 3D (3) 3

+ CAD201 Three-Dimensional (3D) Modeling and Advanced CAD Techniques 3
+ CAD235 Modeling, Rendering and Animation for Technical Presentations 3
+ CAD292 Current Developments in CAD Technology 1

MCCCD Governing Board Approval Date: February 25, 2025

Certified Bookkeeping

Major: 5977N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 9
CIP Code: 52.0302
SOC Code: Upon completion of this program, students may pursue a career as:

Primary/Initiating College: Rio Salado College
Program Availability: GC, PC, PV, RS, SC
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00

43-3031.00 Bookkeeping, Accounting, and Auditing Clerks
43-3051.00 Payroll and Timekeeping Clerks
43-3021.00 Billing and Posting Clerks
43-3061.00 Procurement Clerks

Description: The Certificate of Completion (CCL) in Certified Bookkeeping program helps to prepare students for a Certified Bookkeeper Examination. This program is designed to prepare students to work for CPA firms, tax preparation firms, corporate accounting departments, and small businesses or offer freelance bookkeeping services. The Certificate of Completion (CCL) in Accounting and the Associate in Applied Science (AAS) in Accounting are also available.

Learning Outcomes

1. Apply the fundamental principles and practices of accounting. (ACC105, ACC111, ACC222, ACC260)
2. Identify the financial statements and other records that a business is required to maintain. (ACC105, ACC111, ACC222, ACC260)
3. Explain the importance of effective internal controls in an organization. (ACC105, ACC111, ACC222, ACC260)
4. Calculate the necessary month-end adjustments. (ACC105, ACC111, ACC222, ACC260)
5. Record adjusting journal entries. (ACC105, ACC111, ACC222, ACC260)
6. Correct common accounting errors. (ACC105, ACC111, ACC222, ACC260)
7. Prepare bank and account reconciliations. (ACC105, ACC111, ACC222, ACC260)
8. Calculate wages, withholdings, deductions, and related payroll taxes. (ACC105, ACC111, ACC222, ACC260)
9. Record payroll entries. (ACC105, ACC111, ACC222, ACC260)
10. Demonstrate the ability to prepare payroll reports. (ACC105, ACC111, ACC222, ACC260)
11. Calculate payroll liabilities including employer and employee. (ACC105, ACC111, ACC222, ACC260)
12. Explain the importance of timely payment of payroll tax obligations. (ACC105, ACC111, ACC222, ACC260)
13. Apply various inventory costing systems. (ACC111, ACC260)
14. Describe inventory valuation methods. (ACC111, ACC260)
15. Calculate depreciation using a variety of methods. (ACC111, ACC260)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 9

ACC105 Payroll, Sales and Property Taxes (3) OR
+ ACC222 Payroll Accounting (3) 3

ACC111 Accounting Principles I 3
+ ACC260 Certified Bookkeeper (CB) Preparation 3

MCCCD Governing Board Approval Date: February 28, 2023

Child and Family Organizations Management and Administration

Major: 5401
Catalog Year: 2024-2025
Effective Term: 2020 Fall
Award: CCL
Total Credits: 16
CIP Code: 19.0708
Primary/Initiating College: Glendale Community College
Program Availability: GC, RS
Field of Interest: Behavioral Science and Human Services
Instructional Council: Family and Consumer Sciences
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
25-2011.00 Preschool Teachers, Except Special Education
25-1192.00 Home Economics Teachers, Postsecondary

Description: The Certificate of Completion (CCL) in Child and Family Organizations Management and Administration is designed to prepare individuals to enter the family life education, human development, early childhood settings, or child and family organizations field at the paraprofessional level. Students at a paraprofessional level may seek employment opportunities within management and administration of programs such as: early childhood settings, adoption and foster care, adult day care centers, crisis intervention programs, group and halfway houses, hospice care, senior citizen centers, social service agencies (both private and State/local government), facilities for the disabled and developmentally challenged individuals, community mental health clinics, psychiatric facilities, shelters and other child and family, community-based organizations.

Learning Outcomes

1. Define the issues of managing a diverse workforce. (CFS206)
2. Define organizational behavior and management. (CFS206)
3. Describe the functions of Human Service administration. (CFS206)
4. Identify leadership strategies for Human Service organizational and community change. (CFS207)
5. Describe government and private funding sources for Human Service, community-based family service organizations. (CFS208)
6. Explain the meaning and importance of fiscal accountability and risk management as it applies to human service, community-based family service organizations. (CFS208)
7. Define project management. (CFS209)
8. Develop the components of a professional portfolio. (FCS250)
9. Apply program knowledge, skills, and habits of mind to work experiences within child and family organizations. (FCS260)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

For some occupations within this field, students may be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB vaccination. Please consult with your faculty mentor to discuss these and other occupational requirements.

Program Prerequisites

None

Required Courses

Credits: 16

CFS206 Child and Family Organizations: Management and Administration 3
CFS207 Organization and Community Leadership in Child and Family Organizations 3
CFS208 Child and Family Organizations: Fiscal Management and Grant Writing 3

CFS209 Child and Family Organizations: Project Management 3
+ FCS250 Portfolio Development and Professional Writing 3
+ FCS260 Family and Consumer Science Internship 1

MCCCD Governing Board Approval Date: December 10, 2019

Cisco Certified Network Professional: Enterprise

Major: 5190
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 16
CIP Code: 11.0901
Primary/Initiating College: Paradise Valley Community College
Program Availability: GC, GW, MC, PV, SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Students with this Certificate of Completion and requisite industry experience can pursue careers as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise builds the advanced knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes fundamental concepts of virtualization, network assurance, security, automation, and the implementation and troubleshooting of advanced routing technologies, as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Cisco Enterprise Network Core Technologies (ENCOR) certification and Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) exams aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core, CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.

Multi-credential Award Opportunities (Please check with your advisor for availability)

Multi-credential Award(s):
CCL/5037 Cisco Network Administration: CCNP

Optional Additional Award(s):
CCL/5187N Cisco Certified Network Professional: Enterprise Advanced Routing and Services
CCL/5189N Cisco Certified Network Professional: Enterprise Core

Learning Outcomes

1. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT240, CNT240AA, CNT240AB)
2. Design, configure, and troubleshoot a campus network using advanced and multi-layer switching technologies and automation. (CNT240, CNT240AA, CNT240AB)
3. Configure Layer 2 and Layer 3 traffic forwarding. (CNT240, CNT240AA, CNT240AB)
4. Configure and troubleshoot wireless technologies. (CNT240, CNT240AA, CNT240AB)
5. Explain multicast protocols and Quality of Service (QoS) models. (CNT240, CNT240AA, CNT240AB)
6. Configure different routing protocols and various overlay tunnels. (CNT240, CNT240AA, CNT240AB)
7. Explain the characteristics of scalable network architectures. (CNT240, CNT240AA, CNT240AB)
8. Analyze how fabric networks allow traditional networks to be more manageable and secure. (CNT240, CNT240AA, CNT240AB)

9. Configure and troubleshoot enterprise networks. (CNT240, CNT240AA, CNT240AB)
10. Explain the purpose and characteristics of network and server virtualization. (CNT240, CNT240AA, CNT240AB)
11. Explain common network programmability concepts and programmatic methods of management. (CNT240, CNT240AA, CNT240AB)
12. Apply basic programming and automation. (CNT240, CNT240AA, CNT240AB)
13. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT250, CNT250AA, CNT250AB)
14. Design, configure, and troubleshoot a network using advanced routing. (CNT250, CNT250AA, CNT250AB)
15. Configure, manage, secure, troubleshoot and integrate advanced routing protocols and tunneling in a complex scalable internetwork. (CNT250, CNT250AA, CNT250AB)
16. Configure and troubleshoot route maps, conditional forwarding, and route redistribution. (CNT250, CNT250AA, CNT250AB)
17. Implement a selection of WAN tunneling protocols. (CNT250, CNT250AA, CNT250AB)
18. Describe IPV6 first-hop security features. (CNT250, CNT250AA, CNT250AB)
19. Troubleshoot security threats to a network. (CNT250, CNT250AA, CNT250AB)
20. Troubleshoot device management and management tools. (CNT250, CNT250AA, CNT250AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director:

CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

Program Prerequisites

None

Required Courses

Credits: 16

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR
+ CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND

+ CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8

+ CNT250 Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR
+ CNT250AA Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND
+ CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4) 8

MCCCD Governing Board Approval Date: June 23, 2020

Cisco Certified Network Professional: Enterprise Advanced Routing and Services

Major: 5187N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 8
CIP Code: 11.0901
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Students with this Certificate of Completion and requisite industry experience can pursue careers as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise Advanced Routing and Services builds the advanced knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes concepts of implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services, as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications. Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise Core, Cisco Certified Network Professional: Enterprise, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT250, CNT250AA, CNT250AB)
2. Design, configure, and troubleshoot a network using advanced routing. (CNT250, CNT250AA, CNT250AB)
3. Configure, manage, secure, troubleshoot and integrate advanced routing protocols and tunneling in a complex scalable internetwork. (CNT250, CNT250AA, CNT250AB)
4. Configure and troubleshoot route maps, conditional forwarding, and route redistribution. (CNT250, CNT250AA, CNT250AB)
5. Implement a selection of WAN tunneling protocols. (CNT250, CNT250AA, CNT250AB)
6. Describe IPV6 first-hop security features. (CNT250, CNT250AA, CNT250AB)
7. Troubleshoot security threats to a network. (CNT250, CNT250AA, CNT250AB)
8. Troubleshoot device management and management tools. (CNT250, CNT250AA, CNT250AB)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director:

CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

Program Prerequisites

None

Required Courses

Credits: 8

+ CNT250 Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR
+ CNT250AA Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND
+ CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4) 8

MCCCD Governing Board Approval Date: June 23, 2020

Cisco Certified Network Professional: Enterprise Core

Major: 5189N
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 8
CIP Code: 11.0901
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Students with this Certificate of Completion and requisite industry experience can pursue careers as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators

15-1231.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in Cisco Certified Network Professional: Enterprise Core builds the knowledge and skills needed for professional-level networking technologies and architecture. This CCL includes the fundamental concepts of virtualization, network assurance, security, and automation, as well as hands-on opportunities to apply these concepts to real-world applications. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of information technology jobs. This CCL also helps to prepare students for the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.

Additional Certificates of Completion (CCLs) in Cisco Certified Network Security (CCNA Security), Cisco Certified Network Professional: Enterprise, Cisco Certified Network Professional: Enterprise Core and Advanced Routing and Services, Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT240, CNT240AA, CNT240AB)
2. Design, configure, and troubleshoot a campus network using advanced and multi-layer switching technologies and automation. (CNT240, CNT240AA, CNT240AB)
3. Configure Layer 2 and Layer 3 traffic forwarding. (CNT240, CNT240AA, CNT240AB)
4. Configure and troubleshoot wireless technologies. (CNT240, CNT240AA, CNT240AB)
5. Explain multicast protocols and Quality of Service (QoS) models. (CNT240, CNT240AA, CNT240AB)
6. Configure different routing protocols and various overlay tunnels. (CNT240, CNT240AA, CNT240AB)
7. Explain the characteristics of scalable network architectures. (CNT240, CNT240AA, CNT240AB)
8. Analyze how fabric networks allow traditional networks to be more manageable and secure. (CNT240, CNT240AA, CNT240AB)
9. Configure and troubleshoot enterprise networks. (CNT240, CNT240AA, CNT240AB)
10. Explain the purpose and characteristics of network and server virtualization. (CNT240, CNT240AA, CNT240AB)
11. Explain common network programmability concepts and programmatic methods of management. (CNT240, CNT240AA, CNT240AB)
12. Apply basic programming and automation. (CNT240, CNT240AA, CNT240AB)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for industry professionals with the requisite skills aligned with the Cisco Certified Network Associate (CCNA) industry certification who are interested in expanding their knowledge in the area in professional-level networking or to enhance their employment opportunities. Speak to a program director for additional information.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the following prerequisites to the courses within the Required Course area as follows with a C or better OR have a Cisco Certified Network Associate (CCNA) industry certification OR receive permission of the Program Director:

CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

Students also have the option to complete the full CCL in this program, Cisco Network Administration: CCNP (major code 5037), that includes the prerequisites and required courses.

Program Prerequisites

None

Required Courses

Credits: 8

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR
+ CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND
+ CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8

MCCCD Governing Board Approval Date: June 23, 2020

Cisco Network Administration and Security

Major: 5036
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 16-19
CIP Code: 11.0901
Primary/Initiating College:
Program Availability: CG, EM, GC, GW, MC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1244.00 Network and Computer Systems Administrators
15-1212.00 Information Security Analysts
15-1231.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in Cisco Network Administration and Security provides training for those interested in working with Cisco network and Internet hardware with a particular emphasis on securing networks from threats and vulnerabilities. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure routing protocols, and Local Area Networks (LANs); troubleshoot problems with various hardware and software configurations; perform administrative tasks in a network. Specific skills in maintaining integrity, accountability, and confidentiality of data are also developed. Taught by Cisco Certified professionals using the Cisco Network Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) and Security examinations. Students who complete this program may seek employment in a variety of environments. An additional Certificate of Completion (CCL) in Cisco Certified Network Professional (CCNP), as well as an Associate in Applied Science (AAS) in Network and Systems Administration are also available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Demonstrate knowledge of network terminology, media, topologies, reference and protocol models including Ethernet. (CIS105, CNT140AB)
2. Describe and demonstrate network segmentation including IP addressing and subnetting. (CNT140AB, CNT150AB)
3. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT140AB, CNT150AB, CNT160AB)
4. Design, configure, manage, and troubleshoot Local Area Networks (LANs) applying industry best practices and standards. (CNT150AB, CNT160AB)
5. Monitor, detect, analyze, and mitigate a variety of security threats applying industry best practices, tools, and standards. (CNT202, CNT205)
6. Demonstrate knowledge of establishing a secure network. (CNT202, CNT205)
7. Describe and configure security tools including access control lists, firewalls, VPNs, Intrusion Prevention Systems (IPS), and Authorization Authentication and Accounting (AAA). (CNT202, CNT205)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 16-19

CIS105 Survey of Computer Information Systems (3) OR
Permission of the Program Director (0) 0-3

CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
+ CNT205 Cisco Certified Network Associate Security (4) 4

MCCCD Governing Board Approval Date: December 10, 2019

Cisco Network Administration: CCNA

Major: 5969N
Catalog Year: 2024-2025
Effective Term: 2022 Fall
Award: CCL
Total Credits: 12-15

Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

CIP Code: 11.0901
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of an associate degree, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts

Description: The Certificate of Completion (CCL) in Cisco Network Administration: CCNA provides training for those interested in working with network and Internet hardware. Knowledge and skills are developed to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, and Local Area Networks (LANs); troubleshoot hardware and software configurations; perform administrative tasks in a network. Taught by Cisco Certified professionals using the Cisco Networking Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) examination. Students who complete this program may seek employment in a variety of environments. Additional Certificates of Completion (CCLs) in Cisco Network Administration and Security and Cisco Network Administration: CCNP, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Demonstrate knowledge of network terminology, media, topologies, reference and protocol models including Ethernet. (CIS105, CNT140AB)
2. Describe and demonstrate network segmentation including IP addressing and subnetting. (CNT140AB, CNT150AB)
3. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT140AB, CNT150AB, CNT160AB)
4. Design, configure, manage, and troubleshoot Local Area Networks (LANs) applying industry best practices and standards. (CNT150AB, CNT160AB)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces: CCL/5967 Networking Technology: Cisco

Program Prerequisites

None

Required Courses

Credits: 12-15

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

MCCCD Governing Board Approval Date: May 24, 2022

Cisco Network Administration: CCNP

Major: 5037
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 28-31
CIP Code: 11.0901
Primary/Initiating College: Phoenix College
Program Availability: GC, MC, PC, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Students with this Certificate of Completion and requisite industry experience can pursue careers as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of an associate degree, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1299.08 Computer Systems Engineers/Architects

Description: The Certificate of Completion (CCL) in Cisco Network Administration: CCNP provides students with advanced knowledge and skills to install, configure, and maintain Cisco routers and switches; configure advanced routing protocols, Local Area Networks (LANs), and Wide Area Networks (WANs); troubleshoot complex hardware and software configurations; and perform administrative tasks in a network at the professional level. Taught by Cisco Certified professionals using the Cisco Network Academy program curriculum, courses are designed to help prepare students for the Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional Certifications (CCNP) examinations. Students who complete this program may seek employment in a variety of environments. An additional Certificate of Completion (CCL) in Cisco Network Administration and Security, as well as an Associate in Applied Science (AAS) in Network and Systems Administration, are also available.

Learning Outcomes

1. Demonstrate knowledge of network terminology, media, topologies, reference and protocol models including Ethernet. (CIS105, CNT140AB)
2. Describe and demonstrate network segmentation including IP addressing and subnetting. (CNT140AB, CNT150AB)
3. Configure, manage, and troubleshoot Cisco intermediary network devices applying industry best practices and standards. (CNT140AB, CNT150AB, CNT160AB, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB)
4. Design, configure, manage, and troubleshoot Local Area Networks (LANs) applying industry best practices and standards. (CNT150AB, CNT160AB)
5. Configure, manage, secure, troubleshoot and integrate advanced routing protocols in a complex scalable internetwork. (CNT250, CNT250AA, CNT250AB)

6. Design, configure, and troubleshoot a campus network using advanced and multi-layer switching technologies and automation. (CNT240, CNT240AA, CNT240AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 28-31

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR
+ CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND
+ CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8

+ CNT250 Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR
+ CNT250AA Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND
+ CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4) 8

MCCCD Governing Board Approval Date: May 24, 2022

Commercial and Freelance Photography

Major: 5784
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 35-36
CIP Code: 50.0406
Primary/Initiating College: Glendale Community College
Program Availability: GC, PC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
27-4021.00 Photographers
51-9151.00 Photographic Process Workers and Processing Machine Operators
25-3021.00 Self-Enrichment Teachers

Description: The Certificate of Completion (CCL) in Commercial and Freelance Photography includes the study of both the digital and film aspects of photography. The program is structured to help students develop an

understanding of exposure principles, camera operations and functions, digital photographic materials, film-based strategies, studio lighting, and the basics of running a freelance photography business. This certificate is designed to provide knowledge and experience important to those hoping to work as freelance photographers, wedding photographers, commercial photographers, photography editors, photography assistants, or photo lab technicians. An Associate in Applied Science (AAS) in Photography is also available.

Learning Outcomes

1. Demonstrate knowledge of principles of design, aesthetics, and visual communication. (ARH115, ART112, ART116, ART131, ART132, ART137, ART234, ART255, AVC100, AVC142, AVC143, AVC181, FMP108)
2. Create original still and time based images. (ART131, ART132, ART137, AVC100, AVC138, AVC139, AVC140, AVC142, AVC143, AVC232, AVC237, FMP108)
3. Demonstrate a thorough knowledge and application of camera techniques. (ART131, ART132, ART137, ART234, AVC138, AVC139, AVC140, AVC142, AVC143, AVC232, AVC237, FMP108)
4. Demonstrate a thorough and adaptable knowledge of software used in digital imaging and contemporary media. (ART131, ART234, AVC100, AVC138, AVC139, AVC140, AVC142, AVC143, AVC181, AVC232, AVC237, FMP108)
5. Create digital imaging workflow. (ART131, ART234, AVC100, AVC138, AVC139, AVC140, AVC142, AVC143, AVC181, AVC232, AVC237, FMP108)
6. Utilize effective lighting techniques in natural, artificial and mixed lighting in photography (e.g., product, still life and portraiture). (ART132, ART234, AVC138, AVC139, AVC140, AVC142, AVC143, AVC232, AVC237)
7. Analyze trends and influences in contemporary and historical photography. (ARH115, ART131, ART132, ART137, ART234, AVC138, AVC142, AVC143, AVC232, ENG101, ENG107)
8. Critically evaluate photographic works. (ARH115, ART131, ART132, ART137, ART255, AVC142, AVC143, ENG101, ENG107)
9. Develop a professional body of work and appropriate support material to showcase personal vision and technical skills. (ART132, ART137, ART234, ART255, AVC138, AVC139, AVC140, AVC143, AVC232, AVC237, ENG101, ENG107, FMP108)
10. Identify professional practices in diverse settings for operating and marketing a photography business (e.g., communication, time management, pricing, and legal and ethical considerations). (ART132, ART255, AVC138, AVC139, AVC140, AVC143, AVC232, AVC237, ENG101, ENG107, SBS200, SBS204)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

There will be costs for supplies and equipment in this program.

Program Prerequisites

None

Required Courses

Credits: 27

ART112 Two-Dimensional Design 3
ART131 Photography I 3
+ ART132 Photography II 3
AVC100 Introduction to Digital Arts 1
+ AVC138 Commercial Photography I 3

+ AVC140 Portrait Photography (3) OR
+ AVC237 Fashion Photography (3) 3

AVC142 Introduction to Digital Photography 3
+ AVC143 Intermediate Digital Photography 3

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

SBS200 Small Business Operations 2

Restricted Electives

Credits: 8-9

Students must complete one (1) of the two (2) following specializations:

Specialization 1: Freelance Photography
Credits: 8

SBS204 Small Business Marketing and Advertising 2

In consultation with an advisor or program coordinator, choose two (2) courses from the following list to best fulfill goals:
ARH115 History of Photography 3
ART116 Life Drawing I 3
ART137 Alternative Photographic Processes 3
+ ART234 Color Photography 3
ART255 Art Marketing 3
+ AVC139 Commercial Photography II 3
+ AVC181 Graphic Design I 3
+ AVC232 Studio Lighting 3
FMP108 Video Production 3

Specialization 2: Commercial Photography
Credits: 8-9

+ ART234 Color Photography 3
+ AVC139 Commercial Photography II 3

In consultation with an advisor or program coordinator, choose one (1) course from the following list to best fulfill goals:
ARH115 History of Photography 3
ART116 Life Drawing I 3
ART137 Alternative Photographic Processes 3
ART255 Art Marketing 3
+ AVC181 Graphic Design I 3
+ AVC232 Studio Lighting 3
FMP108 Video Production 3
SBS204 Small Business Marketing and Advertising 2

MCCCD Governing Board Approval Date: October 24, 2023

Commercial Real Estate

Major: 5229N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 7-8
CIP Code: 52.1501
Primary/Initiating College: South Mountain Community College
Program Availability: GC, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
41-9022.00 Real Estate Sales Agents
41-9021.00 Real Estate Brokers
11-9141.00 Property, Real Estate, and Community Association Managers

Description: The Certificate of Completion (CCL) in Commercial Real Estate is designed for additional preparation for the new agent or broker and to provide specialized professional development for the experienced professional agent or broker. The CCL includes a core of classes in the foundations of commercial real estate, ethics, and the required research and computational skills in the field. The program also offers the opportunity to explore specializations within the industry. A CCL in Real Estate: Prelicense (5139N) is also available.

Learning Outcomes

1. Demonstrate knowledge of key features of the commercial real estate industry. (REA205, REA208, REA211, REA214, REA220, REA225, REA230, REA235, REA240)
2. Apply ethical standards in commercial real estate transactions. (REA205, REA208, REA211, REA214, REA220, REA225, REA230, REA240)
3. Conduct research relevant to environmental, regulatory, and legal compliance in the commercial real estate industry. (REA205, REA211, REA220, REA225, REA230, REA235, REA240)
4. Analyze research relevant to environmental, regulatory, and legal compliance in the commercial real estate industry. (REA205, REA211, REA220, REA225, REA230, REA235, REA240)
5. Employ the necessary financial analysis and mathematical computations required in the commercial real estate industry. (REA205, REA214, REA220, REA225, REA230, REA235, REA240)
6. Evaluate the key aspects of at least one commercial real estate industry vertical. (REA205, REA220, REA225, REA230, REA235, REA240)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 5

REA205 Introduction to Commercial Real Estate 2
REA208 Ethics in Commercial Real Estate 1
REA211 Compliance in Commercial Real Estate 1
REA214 Finances in Commercial Real Estate 1

Restricted Electives

Credits: 2-3

Students must select two of the following options:
REA220 Multiunit Properties in Commercial Real Estate 1
REA225 Industrial Properties in Commercial Real Estate 1
REA230 Land Properties in Commercial Real Estate 1
REA235 Commercial Real Estate Essential Tools 1
+ REA240 Introduction to Commercial Property Management 2

MCCCD Governing Board Approval Date: April 23, 2024

Community Health Paramedicine

Major: 5017N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 8
CIP Code: 51.0904
SOC Code: Upon completion of this certificate, students may pursue a career as
29-2041.00 Paramedicine

Primary/Initiating College: Glendale Community College
Program Availability: College Specific: GC
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Community Health Paramedicine is designed to provide the knowledge, skills and ability to synthesize standard of care and expanded scope of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence-based paramedicine in the community setting. This certificate prepares students for a community health paramedic credential.

Learning Outcomes

1. Synthesize Community Paramedicine standard of care and expanded scope of practice to perform comprehensive patient assessment. (PME291)
2. Demonstrate patient advocacy within the Community Paramedicine standard of care and expanded scope of practice. (PME291)
3. Demonstrate ethical and professional behaviors consistent with the Community Paramedicine standard of care and expanded scope of practice. (PME291)
4. Synthesize Community Paramedicine standard of care and expanded scope of practice to perform a differential diagnosis (PME291)
5. Synthesize Community Paramedicine standard of care and expanded scope of practice to manage medical conditions, behavioral health, end of life situations, special needs, and home health care. (PME291)
6. Navigate social service resources and referrals as part of the management plan. (PME291)
7. Utilize types of health information technology. (PME291)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria
Current state Paramedic certification.

Program Prerequisites
None

Required Courses
Credits: 8

PME291 Community Health Paramedicine 8

MCCCD Governing Board Approval Date: October 22, 2019

Computer System Configuration and Support

Major: 5038N
Catalog Year: 2024-2025
Effective Term: 2020 Fall
Award: CCL
Total Credits: 6-9
CIP Code: 47.0104
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career with the following job fields:
15-1232.00 Computer User Support Specialists
43-9011.00 Computer Operators
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs. The classes focus on the development of knowledge and skills in computer technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on hardware installation, maintenance, mobile devices, hardware troubleshooting, proper use of tools, safety procedures, and professionalism. This program helps prepare students for the CompTIA A+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available at select colleges. Please check with your local college for program availability.

Learning Outcomes
1. Assess computer hardware and software using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC170, BPC270, CIS105)
2. Demonstrate proficiency in word processing, spreadsheet, database, and presentation applications. (CIS105)
3. Assess operating systems using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC270, CIS105)

Program Notes
This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.

++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 6-9

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3

MCCCD Governing Board Approval Date: November 26, 2019

Computer System Configuration and Support, Linux

Major: 5039N
Catalog Year: 2024-2025
Effective Term: 2020 Fall
Award: CCL
Total Credits: 9-12
CIP Code: 11.1006
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career with the following job fields:
15-1232.00 Computer User Support Specialists
43-9011.00 Computer Operators
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support, Linux program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on Linux. The classes focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on the Linux Operating system including knowledge and skills required to install, configure and troubleshoot a Linux-based workstation. This program helps prepare students for the CompTIA A+ and Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Assess computer hardware and software using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC170, BPC270, CIS105, CIS126DL, CIS126RH)
2. Demonstrate proficiency in word processing, spreadsheet, database, and presentation applications. (CIS105)
3. Assess operating systems using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC270, CIS105, CIS126DL, CIS126RH)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 9-12

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

MCCCD Governing Board Approval Date: February 25, 2020

Computer System Configuration and Support, Network

Major: 5044N
Catalog Year: 2024-2025
Effective Term: 2020 Fall
Award: CCL
Total Credits: 9-13
CIP Code: 11.1006
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

15-1232.00 Computer User Support Specialists
43-9011.00 Computer Operators
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support, Network program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on networking. The courses focus on the development of knowledge and skills in computer and network technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on elements of a data network, network components, and use of a network. This program helps prepare students for the CompTIA A+ and Network+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Assess computer hardware and software using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC170, BPC270, CIS105)
2. Demonstrate proficiency in word processing, spreadsheet, database, and presentation applications. (CIS105)
3. Assess operating systems using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC270, CIS105)
4. Explain networking concepts including topologies, IP addressing, protocols, and basic design. (CIS190, CNT140AB)
5. Demonstrate the skills required to install, configure, administer and troubleshoot a data network. (CIS190, CNT140AB)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces: CCL/5909 Computer Hardware and Network Support

Program Prerequisites

None

Required Courses

Credits: 9-13

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

MCCCD Governing Board Approval Date: December 10, 2019

Computer System Configuration and Support, Security

Major: 5040N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 9-16
CIP Code: 11.1006
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career with the following job fields:
15-1212.00 Information Security Analysts
15-1150.00 Computer User Support Specialists
43-9011.00 Computer Operators
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Description: The Certificate of Completion (CCL) in Computer System Configuration and Support, Security program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs with an emphasis on security. The courses focus on the development of knowledge and skills in computer and security technologies including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis is placed on preventing, identifying, and mitigating threats to the security of information systems and utilizing the basic tools for information security. This program helps prepare participants for the CompTIA A+, Security+, and certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. The Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Assess computer hardware and software using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, and service. (BPC170, BPC270, CIS105, CIS126DL, CIS126RH, CIS190, CNT140AB)
2. Assess operating systems using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, and service. (BPC270, CIS105, CIS126DL, CIS126RH)
3. Integrate social and ethical responsibility in decision-making and actions. (CIS270, ITS110)
4. Manage administrative access and user security policies within systems. (CIS270, ITS110)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 9-16

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3

Select from one of the following areas of specialization.

Specialization 1
Credits: 3-6

+ CIS270 Essentials of Network and Information Security (3)
OR
+ ITS110 Information Security Fundamentals (3) AND
CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3-6

Specialization 2
Credits: 6-7

CNT140AB Introduction to Networks (4) OR
CIS190 Introduction to Networking (3) 3-4

+ CIS270 Essentials of Network and Information Security 3

MCCCD Governing Board Approval Date: June 27, 2023

Corrections

Major: 5776N
Catalog Year: 2024-2025
Effective Term: 2019 Fall
Award: CCL
Total Credits: 15
CIP Code: 43.0102
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
33-3012.00 Correctional Officers and Jailers
33-9032.00 Security Guards

33-3021.00 Detectives and Criminal Investigators
33-3051.04 Customs and Border Protection Officers
33-3021.06 Intelligence Analysts

Description: The Certificate of Completion (CCL) in Corrections program is designed for students intending to pursue careers in various correctional components of the justice system, including parole, probation, jail, and prisons. Focus is broader learning about the correction function in the context of overall administration of justice system.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS123, AJS240, AJS255, AJS275)
2. Solve problems through logical and sound reasoning. (AJS101, AJS123, AJS205, AJS212, AJS240, AJS255, AJS275)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS212, AJS240, AJS255, AJS275)
4. Communicate in the language common to the criminal justice system. (AJS101, AJS212, AJS240, AJS255, AJS275)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS123, AJS212, AJS240, AJS255)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS101, AJS123, AJS212, AJS240, AJS255)
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS240, AJS255, AJS275)
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS123, AJS240, AJS255, AJS275)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS123, AJS240, AJS255, AJS275)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

AJS101 Introduction to Criminal Justice 3

AJS123 Ethics and the Administration of Justice (3) OR
AJS255 The Criminal Justice System Handling of the Mentally Ill (3) 3

AJS212 Juvenile Justice Procedures 3
AJS240 The Correction Function 3

AJS205 Effective Communication and Report Writing in Criminal Justice (3) OR
AJS275 Criminal Investigation I (3) 3

MCCCD Governing Board Approval Date: January 22, 2019

Crime Scene Investigation

Major: 5964
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 16-18
CIP Code: 43.0406
Primary/Initiating College: Phoenix College
Program Availability: CG, EM, GC, MC, PC, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
19-4092.00 Forensic Science Technicians
13-1041.06 Coroners
33-1012.00 First-Line Supervisors of Police and Detectives
33-3021.01 Police Detectives
33-3021.02 - Police Identification and Records Officers
33-3051.00 - Police and Sheriff`s Patrol Officers
33-3051.01 - Police Patrol Officers
33-3021.00 - Detectives and Criminal Investigators
33-3021.06 - Intelligence Analysts
33-3021.03 - Criminal Investigators and Special Agents

Description: The Certificate of Completion (CCL) in Crime Scene Investigation is designed to develop knowledge and skills required to investigate and reconstruct crime scenes using scientific evidence and logical analysis. The program provides instruction in criminal investigation procedures, collection and preservation of physical and biological evidence, death investigation techniques, crime scene reconstruction methodology and presentation of testimony in court.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
2. Solve problems through logical and sound reasoning. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
4. Communicate in the language common to the criminal justice system. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR106)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR106)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
7. Utilize technology to collect, analyze and communicate data. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
8. Practice professional standards appropriate to the field of criminal justice. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)
10. Collect, identify, classify, and analyze physical evidence related to criminal investigations. (AJS213, AJS214, AJS215, AJS219, AJS216, AJS243, AJS275, AJS290BN, FOR105, FOR106)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 16-18

AJS213 Evidence Technology: Fingerprints (3) OR
AJS243 Crime Scene Reconstruction (3) 3

AJS215 Criminalistics: Physical Evidence (3) OR
AJS219 Crime Scene Technology: Physical Evidence (3) OR
FOR105 Forensic Science: Physical Evidence (4) 3-4

AJS216 Criminalistics: Biological Evidence (3) OR
FOR106 Forensic Science: Biological Evidence (4) 3-4

AJS214 Evidence Technology/Photography 3
AJS275 Criminal Investigation I 3
AJS290BN Courtroom Testimony Seminar 1

MCCCD Governing Board Approval Date: February 27, 2024

Critical Care Paramedicine

Major: 5003N
Catalog Year: 2024-2025
Effective Term: 2020 Fall
Award: CCL
Total Credits: 8
CIP Code: 51.0904
SOC Code: Upon completion of this certificate, students may pursue a career as
29-2041.00 Emergency Medical Technicians and Paramedics

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC, PV
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Critical Care Paramedicine is designed to provide the knowledge, skills and ability to synthesize standard of care and expanded scope of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence based paramedicine in the clinical, out-of-hospital, and inter-facility transport settings. This certificate prepares students for a critical care paramedic credential.

Learning Outcomes

1. Explain the standard of care and expanded scope of practice in critical care settings in Paramedicine. (PME292)
2. Demonstrate ethical and professional behaviors consistent with Critical Care Paramedicine and expanded scope of practice. (PME292)
3. Describe factors of effective communication and decision-making in critical care team dynamics. (PME292)

4. Describe the Paramedic`s roles and responsibilities in medical and legal issues. (PME292)
5. Demonstrate patient advocacy. (PME292)
6. Apply strategies of safety and survival in Critical Care Paramedicine. (PME292)
7. Apply principles of flight physiology. (PME292)
8. Integrate the pathophysiological significance of comprehensive assessment findings to manage Critical Care and high-risk patients. (PME292)
9. Synthesize Critical Care Paramedicine standard of care and expanded scope of practice to perform comprehensive patient assessment. (PME292)
10. Integrate pathophysiologic principles, epidemiology, and comprehensive assessment to formulate a differential diagnosis for patients in critical care settings. (PME292)
11. Utilize diagnostic technology and resources to interpret lab values of Critical Care and high-risk patients. (PME292)
12. Integrate the pathophysiological significance of comprehensive patient assessment findings to implement a management plan according to Critical Care Paramedicine expanded scope of practice. (PME292)
13. Utilize types of health information technology. (PME292)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Current state Paramedic certification.

Program Prerequisites

None

Required Courses

Credits: 8

PME292 Critical Care Paramedicine 8

MCCCD Governing Board Approval Date: October 22, 2019

Critical Infrastructure

Major: 5150
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 41
CIP Code: 11.1003
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM, GC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1122.00 Information Security Analysts
15-1142.00 Network and Computer Systems Administrators
15-1152.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in Critical Infrastructure program provides students with the skills required to secure, protect and identify vulnerabilities in a network with a focus on the cross-domain

security concerns between information technology and operational technology systems. This program is designed to prepare students for a variety of industry-recognized information technology (IT) security certification exams. The Associate in Applied Science (AAS) in Cybersecurity is also available.

Learning Outcomes

1. Explain the fundamental components, concepts, and application of cybersecurity principles. (CIS105, CIS126DL, CIS126RH, CIS143, CIS156, CIS201, CIS202, CIS203, CIS270, ITS110, MST150++)
2. Describe cyber defense tools, methods, and components. (CIS156, CIS270, ITS110, CNT140AB, CNT150AB, ITS240)
3. Apply cyber defense methods to prepare a system to repel attacks. (CIS156, CIS201, CIS202, CIS203, CIS270, ITS110, CNT150AB, ITS240)
4. Analyze common security failures and identify specific design principles that have been violated. (CIS201, CIS202, CIS203, CIS270, ITS110)
5. Describe the interaction between security and system usability and the importance for minimizing the effects of security mechanisms. (CIS201, CIS202, CIS203, CIS270, ITS110)
6. Apply appropriate protocols, tools, and techniques to maximize security in the network environment. (CIS156, CIS201, CIS202, CIS203, CIS270, ITS110, CNT140AB, CNT150AB, ITS240)
7. Describe the fundamental concepts, technologies, components, vulnerabilities, and issues related to networks. (CIS105, CIS143, CIS201, CIS202, CIS270, ITS110, CNT140AB, CNT150AB)
8. Identify and describe basic security issues of operating systems. (CIS105, CIS126DL, CIS126RH, CIS201, CIS270, ITS110, ITS240, MST150++)
9. Identify perpetrators, their resources, and their motivations in cyberspace. (CIS111, CIS143, CIS203, CIS270, ITS110, ITS240)
10. Compare and contrast offensive and defensive resources used in cybersecurity ecosystems/environment. (CIS201, CIS202, CIS203, CIS270, ITS110, ITS240)
11. Delineate differences between the moral, behavioral, ethical, and legal ramifications found in the cybersecurity world. (CIS105, CIS111, CIS143, CIS156)
12. Apply knowledge of regulatory and legal requirements to ensure compliance. (CIS111, CIS143, CIS202, ITS240)
13. Apply risk analysis methodologies to identify potential vulnerabilities, associated impacts, and recommend appropriate responses. (CIS111, CIS143, CIS201, CIS202, CIS203, CIS270, ITS110, CNT150AB, ITS240)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 41

Required Courses
The following courses are required and included in the CCL in Cybersecurity Fundamentals
MST150++ Any Microsoft Windows course 3

CIS105 Survey of Computer Information Systems 3
CIS111 Ethics in Information Technology 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS156 Python Programming: Level I 3

+ CIS270 Essentials of Network and Information Security (3) OR
+ ITS110 Information Security Fundamentals (3) 3

CNT140AB Introduction to Networks 4
+ ITS240 Ethical Hacking and Network Defense 3

The following courses are required for CCL in Critical Infrastructure
+ CIS143 Introduction to Critical Infrastructure Protection 3
+ CIS201 Introduction to Operational Technology 3
+ CIS202 Introduction to Smart Grid Security 3
+ CIS203 Principles of the Risk Management Framework 3
+ CNT150AB Switching, Routing, and Wireless Essentials 4

MCCCD Governing Board Approval Date: June 27, 2023

Cyber Engineering

Major: 5149
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 42-43
CIP Code: 11.1003
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in Cyber Engineering program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cyber Engineering program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. The Associate in Applied Science (AAS) in Cybersecurity is also available.

Learning Outcomes

1. Explain the fundamental components, concepts, and application of cybersecurity principles. (BPC270, CIS105, CIS126DL, CIS126RH, CIS156, CIS162++, CIS227, CIS238DL, CIS238RH, CIS250, CIS262++, CIS270, ITS110, MST150++)

2. Describe cyber defense tools, methods, and components. (CIS156, CIS190, CIS270, CNT140AB, ITS110, ITS240)
3. Apply cyber defense methods to prepare a system to repel attacks. (CIS156, CIS270, ITS110, ITS240)
4. Analyze common security failures and identify specific design principles that have been violated. (CIS270, ITS110)
5. Describe the interaction between security and system usability and the importance for minimizing the effects of security mechanisms. (CIS270, ITS110)
6. Apply appropriate protocols, tools, and techniques to maximize security in the network environment. (CIS119DO, CIS156, CIS162++, CIS190, CIS227, CIS262++, CIS270, CIS276++, CNT140AB, ITS110, ITS240)
7. Describe the fundamental concepts, technologies, components, vulnerabilities, and issues related to networks. (CIS105, CIS119DO, CIS190, CIS238RH, CIS238DL, CIS270, CIS276++, CNT140AB, ITS110)
8. Identify and describe basic security issues of operating systems. (BPC270, CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS270, ITS110, ITS240, MST150++)
9. Identify perpetrators, their resources, and their motivations in cyberspace. (CIS111, CIS270, ITS110, ITS120, ITS240)
10. Compare and contrast offensive and defensive resources used in cybersecurity ecosystems/environment. (CIS270, ITS110, ITS240)
11. Delineate differences between the moral, behavioral, ethical, and legal ramifications found in the cybersecurity world. (CIS105, CIS111, CIS156, ITS120)
12. Apply knowledge of regulatory and legal requirements to ensure compliance. (CIS111, ITS120, ITS240)
13. Apply risk analysis methodologies to identify potential vulnerabilities, associated impacts, and recommend appropriate responses. (CIS111, CIS238DL, CIS238RH, CIS270, ITS110, ITS120, ITS240)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 42-43

The following courses are required and included in the CCL in Cybersecurity Fundamentals.

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3

CIS105 Survey of Computer Information Systems 3

CIS111 Ethics in Information Technology (3) OR
ITS120 Legal, Ethical and Regulatory Issues (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS156 Python Programming: Level I 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

+ CIS270 Essentials of Network and Information Security (3) OR
+ ITS110 Information Security Fundamentals (3) 3

+ ITS240 Ethical Hacking and Network Defense 3

The following courses are required in the CCL in Cyber Engineering.

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276++ Any SQL Database course (3) 3

+ CIS162++ Any C Programming: Level I course 3
CIS227 Assembler Language 3

+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS250 Management of Information Systems 3
+ CIS262++ Any C Programming: Level II course 3

MCCCD Governing Board Approval Date: June 27, 2023

Cyber Operations

Major: 5165
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 41-42
CIP Code: 11.1003
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, GW, MC, PV, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in Cyber Operations program is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cyber Operations program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. An Associate in Applied Science (AAS) in Cybersecurity is also available.

Learning Outcomes

1. Explain the fundamental components, concepts, and application of cybersecurity principles. (BPC170, BPC270, CIS105, CIS126DL, CIS126RH, CIS156, CIS156, CIS238DL, CIS238RH, ITS110, ITS291, ITS292, MST150++)
2. Describe cyber defense tools, methods, and components. (CIS156, CIS190, CNT140AB, ITS110, ITS291, ITS292)
3. Apply cyber defense methods to prepare a system to repel attacks. (CIS156, ITS110, ITS240)
4. Analyze common security failures and identify specific design principles that have been violated. (ITS110)
5. Understand the interaction between security and system usability and the importance for minimizing the effects of security mechanisms. (ITS110)
6. Apply appropriate protocols, tools, and techniques to maximize security in the network environment. (CIS156, CIS190, CNT140AB, ITS110, ITS240, ITS291, ITS292)
7. Describe the fundamental concepts, technologies, components, vulnerabilities, and issues related to networks. (BPC170, CIS105, CIS190, CIS238DL, CIS238RH, CNT140AB, ITS110)
8. Identify and describe basic security issues of operating systems. (BPC270, CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, ITS110, ITS240, MST150++)
9. Identify perpetrators, their resources, and their motivations in cyberspace. (CIS111, CIS290AC, CIS298AC, ITS110, ITS120, ITS240)
10. Compare and contrast offensive and defensive resources used in cybersecurity ecosystems/environment. (CIS290AC, CIS298AC, ITS110, ITS240)
11. Delineate differences between the moral, behavioral, ethical, and legal ramifications found in the cybersecurity world. (CIS105, CIS111, CIS156, ITS120)
12. Apply knowledge of regulatory and legal requirements to ensure compliance. (CIS111, CIS290AC, CIS298AC, ITS120, ITS240)
13. Apply risk analysis methodologies to identify potential vulnerabilities, associated impacts, and recommend appropriate responses. (CIS111, CIS238DL, CIS238RH, CIS290AC, CIS298AC, ITS110, ITS120, ITS240)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 41-42

The following courses are required and included in CCL Cybersecurity Fundamentals.

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3

CIS105 Survey of Computer Information Systems 3

CIS111 Ethics in Information Technology (3) OR
ITS120 Legal, Ethical and Regulatory Issues (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS156 Python Programming: Level I 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

+ ITS110 Information Security Fundamentals 3
+ ITS240 Ethical Hacking and Network Defense 3

The following courses are required in Cyber Operations
+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3

+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS290AC Computer Information Systems Internship (3) OR
+ CIS298AC Special Projects (3) 3

+ ITS291 Computer Forensics Foundations 4
+ ITS292 Advanced Computer Forensics 4

MCCCD Governing Board Approval Date: February 25, 2025

Cybersecurity Fundamentals

Major: 5154
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 24-25
CIP Code: 11.1003
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in Cybersecurity Fundamentals is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to provide applied skills necessary for government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. The Associate in Applied Science (AAS) in Cybersecurity is also available.

Learning Outcomes

1. Explain the fundamental components, concepts, and application of cybersecurity principles. (BPC270, CIS105, CIS126DL, CIS126RH, CIS156, CIS270, ITS110, MST150++)
2. Describe cyber defense tools, methods, and components. (CIS156, CIS190, CIS270, CNT140AB, ITS110, ITS240)
3. Apply cyber defense methods to prepare a system to repel attacks. (CIS156, CIS270, ITS110, ITS240)
4. Analyze common security failures and identify specific design principles that have been violated. (CIS270, ITS110)
5. Describe the interaction between security and system usability and the importance for minimizing the effects of security mechanisms. (CIS270, ITS110)
6. Apply appropriate protocols, tools, and techniques to maximize security in the network environment. (CIS156, CIS190, CIS270, CNT140AB, ITS110, ITS240)
7. Describe the fundamental concepts, technologies, components, vulnerabilities, and issues related to networks. (CIS105, CIS190, CIS270, CNT140AB, ITS110)
8. Identify and describe basic security issues of operating systems. (BPC270, CIS105, CIS126DL, CIS126RH, CIS270, ITS110, ITS240, MST150++)
9. Identify perpetrators, their resources, and their motivations in cyberspace. (CIS111, CIS270, ITS110, ITS120, ITS240)
10. Compare and contrast offensive and defensive resources used in cybersecurity ecosystems/environment. (CIS270, ITS110, ITS240)
11. Delineate differences between the moral, behavioral, ethical, and legal ramifications found in the cybersecurity world. (CIS105, CIS111, CIS156, ITS120)
12. Apply knowledge of regulatory and legal requirements to ensure compliance. (CIS111, ITS120, ITS240)
13. Apply risk analysis methodologies to identify potential vulnerabilities, associated impacts, and recommend appropriate responses. (CIS111, CIS270, ITS110, ITS120, ITS240)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 24-25

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Microsoft Windows course (3) 3

CIS105 Survey of Computer Information Systems 3

CIS111 Ethics in Information Technology (3) OR
ITS120 Legal, Ethical and Regulatory Issues (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS156 Python Programming: Level I 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

+ CIS270 Essentials of Network and Information Security (3) OR
+ ITS110 Information Security Fundamentals (3) 3

+ ITS240 Ethical Hacking and Network Defense 3

MCCCD Governing Board Approval Date: June 27, 2023

Cybersecurity Management and Information Security

Major: 5347
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 28
CIP Code: 11.1003
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1212.00 Information Security Analysts

Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

Description: The Certificate of Completion (CCL) in Cybersecurity Management and Information Security program is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs function, as well as, how to protect them. Emphasis is placed on developing the knowledge and skills to maintain security on mission-critical data and computer systems. The program is designed to meet the training needs of employees in both public and private sectors. The program covers a variety of information security disciplines that include both vendor-neutral and vendor-specific security training. The Cybersecurity Management and Information Security program is designed to help prepare students for internationally recognized industry certifications. This program has been designated as a National Center of Academic Excellence in Cyber Defense (CAE-CD) by the National Security Administration and the Department of Homeland Security. The Associate in Applied Science (AAS) in Cybersecurity Management and Information Security is also available.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 28

BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
CIS105 Survey of Computer Information Systems 3
CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3

CNT140AB Introduction to Networks 4
+ ITS110 Information Security Fundamentals 3
ITS120 Legal, Ethical and Regulatory Issues 3
+ ITS240 Ethical Hacking and Network Defense 3
+ MST150++ Any Microsoft Windows Operating System course 3

Program Competencies

1. Demonstrate how to install, configure, administer, use, and maintain a Red Hat operating system. (CIS126RH, CIS238RH)
2. Define common network terminology and protocols to include local area network (LAN) and wide-area network (WAN) topologies, the Open System Interconnection reference (OSI) model and communication cabling standards. (CNT140AB)
3. Use appropriate equations to solve basic Internet Protocol (IP) addressing and subnetting problems associated with designing a network. (CNT140AB)
4. Apply basic security techniques such as password protection and access control lists (ACLs). (MST150++)
5. Explain a broad, cross-section of information security concepts including authentication methods, access control, cryptography, public key infrastructure (PKI), network attack and defense methods, operating systems and network device hardening, securing remote access and wireless technologies including viruses and worms. (CIS105, ITS110)
6. Define workstations, servers, network storage devices, routers, switches, gateways, guards, Virtual Private Networks (VPNs), firewalls, Internet Protocol Security (IPSec), Intrusion Detection Systems (IDSs), mobile devices, peripheral devices and security peripherals. (BPC170, CIS105, ITS110)
7. Identify the ethical and legal aspects of information security including government regulatory requirements impacting network and information security professionals. (ITS120)
8. Implement in-depth security systems, for multiple operating systems, from initial design to sustained monitoring and continuous improvement. (ITS240)
9. Examine the techniques for defending LAN and WAN networks including firewalls, IDSs and VPNs. (ITS110)
10. Perform day-to-day administration tasks in a Microsoft Windows-based network. (MST150++)
11. Perform day-to-day administration tasks in a UNIX/Linux-based network. (CIS126RH, CIS238RH)

MCCCD Governing Board Approval Date: April 23, 2024

Desktop Support

Major: 5043
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 19-22
CIP Code: 11.1006
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career with the following job fields:
15-1232.00 Computer User Support Specialists
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Description: The Certificate of Completion (CCL) in Desktop Support program is designed to prepare students for entry-level computer maintenance, help desk, and network technician jobs. The classes focus on the development of knowledge and skills in computer, network, and security technologies, as well as the interpersonal skills in customer service/technical support needed to be successful within the industry. Depending on course selection, this program helps prepare students for the CompTIA A+, CompTIA Network+, and/or CompTIA Linux+ certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of

specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Assess computer hardware and software using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC170, BPC270, CIS126DL, CIS126RH, BPC171, CIS290AA, CIS290AB, CIS290AC, CIS296WB, CIS296WC, CIS298AA, CIS298AB, CIS298AC)
2. Demonstrate effective customer service, teamwork, and communication skills in accordance with the professional and ethical conventions within the field of information technology. (CIS102DA, CIS290AA, CIS290AB, CIS290AC)
3. Demonstrate proficiency in word processing, spreadsheet, database, and presentation applications. (CIS105)
4. Assess operating systems using critical thinking, industry standard tools, and best practices to demonstrate proper installation, configuration, maintenance, troubleshooting, and service. (BPC270, CIS126DL, CIS126RH, BPC171, CIS290AA, CIS290AB, CIS290AC, CIS296WB, CIS296WC, CIS298AA, CIS298AB, CIS298AC)
5. Explain networking concepts including topologies, IP addressing, protocols, and basic design. (CIS190, CNT140AB)
6. Demonstrate the skills required to install, configure, administer and troubleshoot a data network. (CIS190, CNT140AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces CCL/5841 Microsoft Technical Specialist

Program Prerequisites

None

Required Courses

Credits: 18-19

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
CIS102DA Customer User Support 3
CIS105 Survey of Computer Information Systems 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4
(Note: CNT140AB is recommended for students interested in pursuing their Cisco Network Administration Certification)

Restricted Electives

Credits: 1-3

Students must select one to three (1-3) credits from the following:
BPC171 Recycling Used Computer Technology 1
+ CIS290AA Computer Information Systems Internship 1
+ CIS290AB Computer Information Systems Internship 2
+ CIS290AC Computer Information Systems Internship 3
+ CIS296WB Cooperative Education 2
+ CIS296WC Cooperative Education 3
+ CIS298AA Special Projects 1
+ CIS298AB Special Projects 2
+ CIS298AC Special Projects 3

MCCCD Governing Board Approval Date:

Developmental Disabilities Specialist

Major: 5034
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 16-17
CIP Code: 51.1599
Primary/Initiating College: Glendale Community College
Program Availability: College Specific: GC
Field of Interest: Behavioral Science and Human Services
Instructional Council: Psychology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
21-1093.00 Social and Human Service Assistants

Description: The Certificate of Completion (CCL) in Developmental Disabilities Specialist is designed for students interested in working in various settings serving children or adults with developmental disabilities. The coursework combines theory and application. Academic preparation focuses on the physical and emotional correlates of developmental disability. The students also complete an internship, gaining experience working in a school or agency supporting persons with developmental disability.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 13

EDU222 Introduction to the Exceptional Learner (3) OR
+ PSY243 The Psychology of Developmental Disabilities (3) 3

PSY101 Introduction to Psychology 3

+ PSY240 Developmental Psychology (3) OR
+ PSY266 Psychological Disorders (3) 3

+ PSY241 Understanding and Changing Behavior 3
+ PSY244 Internship in Psychology 1

Restricted Electives

Credits: 3-7

Complete one (1) of the courses listed below. Course selection must be different from courses counted in the Required Courses area.

ASL101 American Sign Language I 4
BHS170 Case Management and Clinical Documentation 3
BHS175 Trauma-Informed Care and Recovery Treatment 3
BHS180 Child, Family, and Adult Advocacy 3
BHS275 Infant and Early Childhood Mental Health 3
CFS112 Personal Growth and Family Relations 3
CFS/ECH176 Child Development 3
CFS205 Human Development 3
CFS235 Developing Child: Theory into Practice, Prenatal to Age Eight 3
COM110 Interpersonal Communication 3
FON100 Introductory Nutrition 3
+ PSY240 Developmental Psychology 3
+ PSY266 Psychological Disorders 3
SPA115 Beginning Spanish Conversation I 3
SWU171 Introduction to Social Work 3

Program Competencies

1. Describe the physiological, emotional, behavioral, and cognitive processes associated with human behavior. (CFS112, CFS/ECH176, CFS205, CFS235, PSY101, PSY240, PSY266)
2. Describe techniques to modify human behavior, with a focus on the behavior of persons with various developmental disabilities. (PSY241)
3. Describe the physical, intellectual, social, and psychological aspects of various developmental disabilities. (BHS175, BHS275, EDU222, PSY243)
4. Describe current research in the area of cause, treatment approach and service delivery which impact individuals with developmental disabilities. (BHS175, BHS275, EDU222, PSY243, SWU171)
5. Describe various community resources available to individuals with developmental disabilities. (BHS175, BHS180, BHS275, EDU222, PSY243, SWU171)
6. Demonstrate the ability to interact appropriately in a setting providing services and supports to individuals with developmental disabilities. (ASL101, BHS170, BHS175, BHS180, BHS275, COM110, FON100, PSY244, SPA115, SWU171)

MCCCD Governing Board Approval Date: October 25, 2022

Documentary Film Production

Major: 5059
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 31-34
CIP Code: 50.0607
Primary/Initiating College: Glendale Community College
Program Availability: College Specific: GC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00

SOC Code: Upon completion of this certificate, students may pursue a career as:
27-2012.00 Producers and Directors
27-2012.01 Producers
27-2012.02 Directors- Stage, Motion Pictures, Television, and Radio
27-4031.00 Camera Operators, Television, Video, and Motion Picture
27-4032.00 Film and Video Editors

Description: The Certificate of Completion (CCL) in Documentary Film Production introduces the fundamentals of nonfiction filmmaking in a small, supportive setting with industry professionals as mentors. Includes technical aspects of documentary filmmaking (producing, camera, and audio) and exposure to the history and theory behind the art. Students will develop, shoot, and edit an original short documentary film, as well as collaborate on various non-fiction productions, which can include work for clients, non-profits, and new media. An Associate in Applied Science (AAS) in Film and Media Production is also available.

Learning Outcomes

1. Produce independent nonfiction media using digital tools and technologies according to industry standards. (AVC142, FMP108, FMP114, FMP115, FMP/FMT117, FMP125, FMP204, FMP/FMT270)
2. Apply principles of story, cinematography, sound, editing, and art in the development of film and media productions. (AVC142, ENG101, ENG107, FMP108, FMP111AA, FMP114, FMP115, FMP/FMT117, FMP125, FMP170, FMP260, FMP/FMT270, FMP/FMT294AC, HUM212)
3. Integrate knowledge of historical and current trends in documentary film in the production of nonfiction work. (FMP108, FMP111AA, FMP/FMT117, FMP125, FMP170, FMP208, FMP260, FMP/FMT270, FMP/FMT294AC, HUM212)
4. Employ industry standards for safety and set etiquette in a production environment. (AVC142, FMP108, FMP114, FMP115, FMP/FMT117, FMP125, FMP204, FMP/FMT270, FMP/FMT294AC)
5. Apply knowledge of industry roles and techniques for each stage of the documentary production cycle, from development through distribution. (AVC142, FMP108, FMP114, FMP115, FMP/FMT117, FMP125, FMP170, FMP204, FMP260, FMP/FMT270)
6. Demonstrate collaboration and inclusivity to promote an ethical and diverse work environment. (AVC142, ENG101, ENG107, FMP108, FMP111AA, FMP114, FMP115, FMP/FMT117, FMP125, FMP170, FMP204, FMP208, FMP260, FMP/FMT270, FMP/FMT294AC, HUM212)
7. Demonstrate qualifications and experience as a competitive film and media industry professional through a portfolio. (ENG101, ENG107, FMP208, FMP260, FMP/FMT270, FMP/FMT294AC)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 31-34

AVC142 Introduction to Digital Photography 3
FMP125 Podcasting 3

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) OR
Equivalent coursework and/or experience approved by Program Director 0-3

FMP108 Video Production 3
FMP111AA Scripting for the Media 3
+ FMP114 Audio Production 3
FMP115 Introduction to Editing for Media 3
+ FMP204 Advanced Video Production 3
+ FMP/FMT270 Documentaries for Social Change 4

FMP170 Introduction to Documentary Filmmaking (3) OR
+ HUM212 Documentary Film (3) 3

In consultation with Advisor or Program Director, choose one (1) course from the following:
+ FMP/FMT117 Introduction to Cinematography 3
FMP208 Production Company Management 3
FMP260 Film and Media Producing and Financing 3
+ FMP/FMT294AC Special Topics in Motion Picture, Television, Documentary, and New Media Production 3

MCCCD Governing Board Approval Date: June 28, 2022

Driver Operator

Major: 5418N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL

Total Credits: 8
CIP Code: 43.0203
SOC Code: 33-2011.01

Primary/Initiating College: Glendale Community College
Program Availability: GC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Driver Operator program is designed for students who need (1) advanced training as professional firefighters, (2) preparation courses for career advancement opportunities in fire services, and/or (3) more comprehensive information about the role and function of an emergency vehicle driver/operator.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Acceptance into the program and permission of Program Director is required.

Program Prerequisites

None

Required Courses

Credits: 8

FSC111 Emergency Vehicle Driver Operator 2
FSC117 Fire Apparatus 3
FSC118 Fire Hydraulics 3

Program Competencies

1. Perform the necessary math calculations to determine water supply and hydraulics and technical requirements of pumper trucks. (FSC118)
2. Explain the process for handling hazardous material spills, leaks, fires, and explosions, and describe common hazardous materials carriers. (FSC111)
3. Describe the principles of care, maintenance, and operation of fire apparatus and pumper trucks. (FSC117)

MCCCD Governing Board Approval Date: March 22, 2011

Early Childhood Education

Major: 5056
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 36 **GPA**: 2.00
CIP Code: 13.1210
Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, MC, PC, PV, RS
Field of Interest: Education
Instructional Council: Early Childhood Education
SOC Code: Upon completion of this certificate, students may pursue a career as:
25-2011.00 Preschool Teachers, Except Special Education
25-9042.00 Teaching Assistants, Preschool, Elementary, Middle, and Secondary School, Except Special Education
25-9043.00 Teaching Assistants, Special Education
25-9049.00 Teaching Assistants, All Other

Description: The Certificate of Completion (CCL) in Early Childhood Education is designed to prepare students for employment as early childhood teachers in a variety of educational programs. Students learn effective teaching skills as they apply developmentally appropriate early childhood educational theory in the classroom setting. Courses have been selected with a focus on developing an educational career ladder. An Associate in Applied Science (AAS) in Early Childhood Education is also available and includes additional early childhood electives and general education classes to broaden the student`s base of knowledge.

Multi-credential Award Opportunities (Please check with your advisor for availability)

Multi-credential Award(s):
AAS/3186 Early Childhood Education
BA/9304 Early Childhood Education - Dual Language

Optional Additional Award(s):
CCL/5054 Foundations of Early Childhood Education

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

Program Prerequisites

None

Required Courses

Credits: 29-34

CFS101AH Art Activities for the Young Child (1) AND
ECH281 Movement/Music for the Young Child (1) OR
ECH128 Early Learning: Play and the Arts (3) OR
+ EED210 Creative and Cognitive Play (3) 2-3

CFS123 Health and Nutrition In Early Childhood Settings (1) AND
CFS125 Safety in Early Childhood Settings (1) AND
ECH280 Food Experiences With Young Children (1) OR
EED215 Early Learning: Health, Safety, Nutrition and Physical Fitness (3) 3

CFS/ECH176 Child Development (3) OR
CFS235 Developing Child: Theory into Practice, Prenatal to Age Eight (3) OR
EED205 The Developing Child: Prenatal to Age Eight (3) 3

+ CFS/ECH269 Child Care Seminar (1) AND
CFS/ECH287 Professional Development in Early Childhood Education (1) OR
+ EED255 Portfolio Development and Writing for the Profession (3) 2-3

CFS/ECH271 Arranging the Environment (1) AND
CFS282 Mainstreaming The Young Child with A Disability (1) AND
ECH282 Discipline/Guidance of Child Groups (1) OR
EED212 Guidance, Effective Interactions and the Environment (3) 3

CFS/ECH273 Math for the Young Child (1) AND
CFS/ECH275 Literacy Development and the Young Child (1) AND
ECH272 Science for the Young Child (1) AND
ECH279 Early Childhood Curriculum Development (1) OR
+ EED278 Early Learning Curriculum and Instruction - Birth to Age Eight (3) 3-4

+ CFS/ECH284AB Early Childhood Teaching Internship (3) OR
+ EED260 Early Childhood Infant/Toddler Internship (1) AND
+ EED261 Early Childhood Preschool Internship (1) OR
CFS/ECH284AA Early Childhood Teaching Internship (1) 2-3

ECH140 Learning Made Visible Through Documentation (1) AND
ECH270 Observing Young Children (1) OR
+ EED280 Standards, Observation and Assessment of Typical/Atypical Behaviors of Young Children Birth Age Eight (3) 2-3

EED200 Foundations of Early Childhood Education 3
EED222 Introduction to the Exceptional Young Child: Birth to Age Eight 3
EED225 Language and Literacy in the Context of Culture and Relationships 3

Restricted Electives

Credits: 2-7

Students must select 2-7 credits from the following courses to meet a minimum of 36 credits for the certificate. Cannot be shared with Required Courses Area.

CFS+++ Any CFS Child/Family Studies course(s)
ECH+++ Any ECH Early Childhood Education course(s)
EDU+++ Any EDU Education course(s)
EED+++ Any EED Early Education course(s)
FCS+++ Any FCS Family and Consumer Science course(s)
ITD+++ Any ITD Infant/Toddler Development course(s)

Program Competencies

1. Design developmentally, culturally, and linguistically appropriate learning experiences that promote each child`s growth and development in the following domains: Social-Emotional, Physical, Cognitive, and Language and Literacy. (CFS101AH, CFS/ECH176, CFS235, CFS/ECH284AA, CFS/ECH284AB, ECH128, ECH281, EED200, EED205, EED210, EED225, EED260, EED261, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
2. Implement developmentally, culturally, and linguistically appropriate learning experiences. (CFS101AH, CFS/ECH273, CFS/ECH284AA, CFS/ECH284AB, ECH128, ECH272, CFS/ECH275, ECH279, ECH281, EED210, EED260, EED261, EED278, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
3. Implement the components necessary for a safe, caring, inclusive, and healthy learning environment according to best practices and local, state, and national standards. (CFS123, CFS125, CFS/ECH271, CFS282, CFS/ECH284AA, CFS/ECH284AB, CFS/ECH269, ECH280, ECH282, EED212, EED215, EED222, EED255, EED260, EED261, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
4. Assess children`s learning and development through observation and documentation, using guidelines established by the profession. (CFS/ECH176, CFS235, CFS/ECH284AA, CFS/ECH284AB, ECH140, CFS/ECH269, ECH270, EED200, EED205, EED255, EED260, EED261, EED280, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
5. Establish reciprocal, culturally responsive relationships with families and communities. (CFS123, CFS125, CFS/ECH271, CFS282, ECH280, ECH282, EED212, EED215, EED225, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
6. Practice communication skills to advocate for children and their families. (CFS/ECH269, CFS/ECH287, EED200, EED222, EED225, EED255, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
7. Practice ethical and professional standards and behavior. (CFS/ECH284AA, CFS/ECH284AB, CFS/ECH269, CFS/ECH287, EED200, EED255, EED260, EED261, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
8. Advocate for an ethical, equitable, diverse, and effective early childhood education profession. (CFS/ECH269, CFS/ECH287, EED200, EED222, EED225, EED255, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
9. Engage in reflective practice and continuous learning through education and research. (CFS/ECH271, CFS/ECH273, CFS282, CFS/ECH284AA, CFS/ECH284AB, ECH140, CFS/ECH269, ECH270, ECH272, CFS/ECH275, ECH279, ECH282, CFS/ECH287, EED212, EED222, EED255, EED260, EED261, EED278, EED280, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)
10. Collaborate with peers to problem solve within early childhood education. (CFS/ECH273, CFS/ECH284AA, CFS/ECH284AB, CFS/ECH269, ECH272, CFS/ECH275, ECH279, CFS/ECH287, EED222, EED255, EED260, EED261, EED278, CFS+++, EDU+++, EED+++, ECH+++, FCS+++, ITD+++)

MCCCD Governing Board Approval Date: August 23, 2022

Emergency Management

Major: 5304
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 18
CIP Code: 43.0302
Primary/Initiating College: Glendale Community College
Program Availability: GC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-9161.00 Emergency Management Directors

Description: The Certification of Completion (CCL) in Emergency Management provides the student with knowledge and skills required to conduct a comprehensive emergency management program. The program prepares students to manage emergency operations, hazardous materials incidents, tactics, strategy, and safety of firefighting activities, and customer service in the public sector. The student will be prepared for positions such as Emergency Manager, Emergency Management Planner, Emergency Operations Coordinator, Environmental Compliance Planner, and Emergency Management Specialist, working in state, local, federal, and international governments, business and industry, military installations, and health care facilities.

Learning Outcomes

1. Define terrorism, and describe the role of first responders in emergency response plans, resource development, incident management systems, patient assessment, and communication with the media. (AJS/FSC139)
2. Analyze disaster recovery operations including planning considerations, special populations issues and recovery responsibilities. (AJS/FSC146)
3. Explain emergency planning concepts and implementation strategies for response and prevention. (AJS/FSC147)
4. Describe the components of an integrated emergency management system, including the role of the managers and key organizations and explain historical events that impacted on its development and processes for assessing threat. (AJS/FSC148)
5. Discuss hazard mitigation strategies, including coordinated community responses and resources. (AJS/FSC149)
6. Evaluate methods for managing emergency incidents including command, control, and coordination of response. (FSC224)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 10

AJS/FSC139 Emergency Response to Terrorism 3
AJS/FSC146 Disaster Recovery Operations 3
AJS/FSC147 Emergency Preparedness 3
AJS/FSC148 Fundamentals of Emergency Management 3
AJS/FSC149 Hazard Mitigation 3
FSC224 Incident Command Systems 3

MCCCD Governing Board Approval Date: February 25, 2020

Emergency Medical Technology

Major: 5643N
Catalog Year: 2024-2025
Effective Term: 2022 Summer
Award: CCL
Total Credits: 13
CIP Code: 51.0904
Primary/Initiating College: Phoenix College
Program Availability: CG, GC, MC, PC, PV, RS
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as
29-2041.00 Emergency Medical Technicians and Paramedics

Description: The Certificate of Completion (CCL) in Emergency Medical Technology curriculum provides the student with the necessary knowledge and skills in accordance with the National EMS Scope of Practice published by National Highway Traffic Safety Administration (NHTSA) and the Arizona Department of Health Services. Successful completion of the curriculum and upon licensure, the candidate can seek employment with ambulance service companies, first responder agencies, fire departments, and hospitals as an Emergency Medical Technician (EMT). Emphasis is on the fundamental principles and skills required to provide emergency medical care for the ill or injured. The primary focus of an EMT is to respond to, assess and triage emergent, urgent, and non-urgent requests for medical care, apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Learning Outcomes

1. Demonstrate the administration of CPR and Automated External Defibrillator (AED) on adults and children using methods that meet current BLS standards. (EMT101, EMT104, EMT104LL)
2. Demonstrate knowledge and understanding of medical, legal and ethical roles and scope of practice of an Emergency Medical Technician. (EMT101, EMT104, EMT104AB, EMT104LL)
3. Apply effective oral, written, and visual communication skills to manage an emergency response. (EMT101, EMT104, EMT104LL)
4. Apply current technology to specific tasks related to emergency medical services. (EMT101, EMT104, EMT104AB, EMT104LL)
5. Collaborate with various populations in public safety systems. (EMT101, EMT104, EMT104AB, EMT104LL)
6. Demonstrate critical thinking through written, oral, and visual formats in various environments to manage diverse situations specific to an emergency response. (EMT101, EMT104, EMT104AB, EMT104LL)
7. Demonstrate patient advocacy with respect to cultural and individual differences. (EMT101, EMT104, EMT104AB, EMT104LL)
8. Demonstrate awareness of procedures to ensure patient, public, personnel, and personal safety. (EMT101, EMT104, EMT104AB, EMT104LL)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.

++ indicates that any suffixed course may be selected.

EMT104 requires students to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. Depending on the college, this may be completed through EMT104AB or program director-approved rotation.

Admission Criteria

At Rio Salado College, this program is offered through an educational partnership. Employment by the partnership organization is required for admission.

Program Prerequisites

None

Required Courses

Credits: 13

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0) AND
Credit By Evaluation (0.5) 0.5

+ EMT104AB Applied Practical Studies for Emergency Medical Technology 0.5
+ EMT104LL Emergency Medical Technology Practicum 2
+ EMT104 Emergency Medical Technology 10

MCCCD Governing Board Approval Date: February 22, 2022

Emergency Medical Technology Comprehensive

Major: 5058
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 16-17
CIP Code: 51.0904
SOC Code: Upon completion of this certificate, students may pursue a career as
29-2041.00 Emergency Medical Technicians and Paramedics

Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, MC, PC, PV
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Emergency Medical Technology Comprehensive curriculum provides the student with the necessary knowledge and skills in accordance with the National EMS Scope of Practice published by National Highway Traffic Safety Administration (NHTSA) and the Arizona Department of Health Services. This certificate provides students with the expanded knowledge and skills for pre-hospital settings. Successful completion of the curriculum and upon licensure, the candidate can seek employment with ambulance service companies, first responder agencies, fire departments, and hospitals as an Emergency Medical Technician (EMT). Emphasis is on the fundamental principles and skills required to provide emergency medical care for the ill or injured. The primary focus of an EMT is to respond to, assess and triage emergent, urgent, and non-urgent requests for medical care, apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Learning Outcomes

1. Demonstrate the administration of CPR and Automated External Defibrillator (AED) on adults and children using methods that meet current BLS standards. (EMT101, EMT104, EMT104LL)
2. Demonstrate knowledge and understanding of medical, legal and ethical roles and scope of practice of an Emergency Medical Technician. (EMT101, EMT104, EMT104AB, EMT104LL, AJS/EMT/FSC258, HCC145, PME190, PME191, SWU258)
3. Apply effective oral, written, and visual communication skills to manage an emergency response. (EMT101, EMT104, EMT104LL, HCC145, AJS/EMT/FSC258, PME190, PME191, SWU258)
4. Apply current technology to specific tasks related to an emergency medical services. (EMT101, EMT104, EMT104AB, EMT104LL, AJS/EMT/FSC258, PME190, PME191, SWU258)
5. Collaborate with various populations in public safety systems. (EMT101, EMT104, EMT104AB, EMT104LL, AJS/EMT/FSC258, PME190, PME191, SWU258)
6. Demonstrate critical thinking through written, oral, and visual formats in various environments to manage diverse situations specific to an emergency response. (BIO156, EMT101, EMT104, EMT104AB, EMT104LL, AJS/EMT/FSC258, PME190, PME191, SWU258)
7. Demonstrate patient advocacy with respect to cultural and individual differences. (EMT101, EMT104, EMT104AB, EMT104LL, AJS/EMT/FSC258, PME190, PME191, SWU258)
8. Demonstrate awareness of procedures to ensure patient, public, personnel, and personal safety. (EMT101, EMT104, EMT104AB, EMT104LL, AJS/EMT/FSC258, PME190, PME191, SWU258)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

EMT104 requires students to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. Depending on the college, this may be completed through EMT104AB or program director-approved rotation.

Program Prerequisites

None

Required Courses

Credits: 13

Students who have current validation in Basic Life Support (BLS) are required to receive credit by evaluation.

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0) AND
Credit By Evaluation (0.5) 0.5

+ EMT104AB Applied Practical Studies for Emergency Medical Technology 0.5
+ EMT104 Emergency Medical Technology 10
+ EMT104LL Emergency Medical Technology Practicum 2

Restricted Electives

Credits: 3-4

AJS/EMT/FSC258 Victimology and Crisis Management in Public Safety 3
BIO156 Introductory Biology for Allied Health 4
HCC145 Medical Terminology for Health Care Professionals 3
PME190 Introduction to ECG Rhythm Analysis and Interpretation for EMS Professionals 3
PME191 Introduction to Pharmacology for EMS Professionals 3
SWU258 Victimology and Crisis Management 3

MCCCD Governing Board Approval Date: February 28, 2023

Enrolled Agent

Major: 5958
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 17-18
CIP Code: 52.0301
Primary/Initiating College: South Mountain Community College
Program Availability: GC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
13-2081.00 Tax Examiners and Collectors, and Revenue Agents
13-2082.00 Tax Preparers

Description: The Certificate of Completion (CCL) in Enrolled Agent program helps to prepare students for the Enrolled Agent Examination. The Internal Revenue Service (IRS) Enrolled Agent credential allows tax practitioners to represent taxpayers before the IRS when it comes to collections, audits, and appeals. Enrolled Agents` expertise in the continually changing field of taxation enables them to effectively represent taxpayers at all administrative levels within the IRS. Students who successfully complete this CCL may also seek employment as tax preparers.

Learning Outcomes

1. Apply accounting principles to report the financial position of an organization, prepare taxation reporting, and compliance. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC221, ACC222, ACC224, ACC230, ACC270AB, ACC270AC)
2. Prepare taxpayers case for examination. (ACC224)
3. Apply current technology to specific business tasks. (ACC115, ACC224, CIS105)
4. Evaluate the legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (ACC111, ACC121, ACC221, ACC224)
5. Apply principles and practices of accounting to analyze and interpret general purpose financial statements. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC221, ACC222, ACC230)
6. Apply basic rules of financial accounting to business transactions. (ACC105, ACC111, ACC112, ACC115, ACC121, ACC211, ACC221, ACC222, ACC230)
7. Apply appropriate procedures to prepare individual, partnership, and corporate taxes, including tax reporting for income, payroll, sales, and personal property. (ACC105, ACC121, ACC221, ACC222, ACC224, ACC270AB, ACC270AC)
8. Demonstrate an understanding of compliance in accounting, reporting and tax. (ACC105, ACC121, ACC221, ACC222, ACC224, ACC270AB, ACC270AC)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consultation with an Academic Advisor is recommended for course selection.
The Volunteer Income Tax Assistance (VITA) program internship is only available in the spring semester- Contact a program adviser for more information.

Program Prerequisites

None

Required Courses

Credits: 15

ACC111 Accounting Principles I (3) OR
ACC211 Financial Accounting (3) 3

ACC121 Individual Tax Preparation 3
+ ACC221 Tax Accounting 3
+ ACC224 Tax Practice Administration and Business Entity Analysis 3
CIS105 Survey of Computer Information Systems 3

Restricted Electives

Credits: 2-3

Students should select 2-3 credits from the list below:

ACC105 Payroll, Sales and Property Taxes 3
+ ACC112 Accounting Principles II 3
ACC115 Computerized Accounting 3
+ ACC222 Payroll Accounting 3
+ ACC230 Uses of Accounting Information I 3
+ ACC270AB Accounting Internship 2
+ ACC270AC Accounting Internship 3

MCCCD Governing Board Approval Date: November 26, 2019

Entrepreneurial Studies Level I

Major: 5819N
Catalog Year: 2024-2025
Effective Term: 2019 Fall
Award: CCL
Total Credits: 10-11
CIP Code: 52.0701
Primary/Initiating College: Estrella Mountain Community College
Program Availability: GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-1021 General and Operations Managers

Description: The Certificate of Completion (CCL) in Entrepreneurial Studies Level I program is designed to provide students with an introduction to the entrepreneurial process. Courses include a history of

entrepreneurship, current research into its impacts on society, types of business start-up opportunities, and creating a preliminary business plan, as well as securing a healthy financial future. A Certificate of Completion (CCL) in Entrepreneurial Studies Level II is also available

Learning Outcomes

1. Explain entrepreneurship. (EPS150, EPS162)
2. Create planning activities required for the successful launch of a new venture. (EPS162, EPS195)
3. Identify venture opportunities. (EPS160)
4. Evaluate feasibility of venture opportunities. (EPS150, EPS160, EPS162)
5. Explore and evaluate funding opportunities. (GBS132)
6. Create opportunities through innovation. (EPS160)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 10-11

EPS150 Introduction to Entrepreneurship 3
EPS160 New Venture Creation 2

EPS162 Introduction to Social Entrepreneurship (3) OR
EPS195 Business Start-Up and Planning (2) 2-3

GBS132 Personal and Family Financial Security 3

MCCCD Governing Board Approval Date: May 28, 2019

Entrepreneurial Studies Level II

Major: 5820
Catalog Year: 2024-2025
Effective Term: 2024 Summer
Award: CCL
Total Credits: 18-19
CIP Code: 52.0701
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-1021 General and Operations Managers

Primary/Initiating College: Estrella Mountain Community College
Program Availability: GC, GW, MC, PC, RS, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00

Description: The Certificate of Completion (CCL) in Entrepreneurial Studies Level II program is designed to prepare students to acquire additional skills, tools and knowledge necessary for successful venture opportunities. A Certificate of Completion (CCL) in Entrepreneurial Studies Level I is also available and fully embedded in this program.

Learning Outcomes

1. Explain entrepreneurship.(EPS150, EPS162)
2. Create planning activities required for the successful launch of a new venture.(EPS161, EPS162, EPS195, MGT253)
3. Identify venture opportunities.(EPS160, EPS180)
4. Evaluate feasibility of venture opportunities.(EPS150, EPS160, EPS162, EPS165)
5. Explore and evaluate funding opportunities.(GBS132, MGT253)
6. Create opportunities through innovation.(EPS160, EPS180)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18-19

EPS150 Introduction to Entrepreneurship 3
EPS160 New Venture Creation 2

EPS162 Introduction to Social Entrepreneurship (3) OR
EPS195 Business Start-Up and Planning (2) 2-3

GBS132 Personal and Family Financial Security 3

EPS161 New Venture Law and Finance (3) OR
EPS180 Technology Business Planning (3) 3

EPS165 New Venture Feasibility Analysis 2
MGT253 Owning and Operating a Small Business 3

MCCCD Governing Board Approval Date: May 28, 2019

Fast Track Practical Nursing

Major: 5114
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 22-27.5
CIP Code: 51.3901
Primary/Initiating College: Gateway Community College
Program Availability: GC, GW, MC
Field of Interest: Health Sciences
Instructional Council: Nursing Program
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
29-2061.00 Licensed Practical and Licensed Vocational Nurses

Description: The Certificate of Completion (CCL) in Fast Track Practical Nursing program provides students with the theory and skills required to practice as a practical nurse in acute care, extended care, and intermediate care settings. The program of study combines nursing theory lectures with planned patient care learning experiences in hospitals, nursing homes and health care agencies. Graduates are eligible to take the National Council

Licensure Examination (NCLEX-PN) to become a licensed practical nurse (LPN). Licensing requirements are the exclusive responsibility of the Arizona State Board of Nursing.

The Fast Track Practical Nursing Program is approved by the Arizona State Board of Nursing.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Program Competencies

1. Function effectively in the role of the beginning Practical Nurse under the direction of a Registered Nurse. (NUR150, NUR160PN, NUR180PN)
2. Demonstrate critical thinking skills and evidence based practice through utilization of the nursing process as a guideline in providing nursing care. (NUR150, NUR160PN, NUR180PN)
3. Assist with data collection and contribute to the established plan of care. (NUR150, NUR160PN, NUR180PN)
4. Implement an established plan of care using appropriate practical nursing knowledge. (NUR150, NUR160PN, NUR180PN)
5. Assist with the evaluation of nursing care based on established outcome criteria. (NUR150, NUR160PN, NUR180PN)
6. Apply therapeutic communication techniques in providing basic nursing care for clients throughout the lifespan. (NUR150, NUR160PN, NUR180PN)
7. Perform technical aspects of basic, safe nursing care. (NUR150, NUR160PN, NUR180PN)
8. Demonstrate identified caring behaviors. (NUR150, NUR160PN, NUR180PN)
9. Function in accordance with the ethical and legal standards of practical nursing practice. (NUR150, NUR160PN, NUR180PN)
10. Illustrate use of relevant technology for client care and documentation. (NUR150, NUR160PN, NUR180PN)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Waiver of Licensure/Certification Guarantee: Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-771-7800).

Health Declaration: It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours

at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients` lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application. All students must provide documentation of compliance with all health and safety requirements. Only students in compliance with the mandatory health and safety requirements are permitted to remain enrolled in nursing courses.

Health and Safety Requirements for the Fast Track Nursing Program:

1. Students must submit a Health and Safety Documentation Checklist verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.
4. Admission to a nursing program requires that students be in compliance with the Maricopa County Community College District Supplemental Background Check policy. Program applications will not be accepted without a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Upon conditional program admission, the student must comply with all requirements of the current MCCCD background check policy.

Admission Criteria:

1. Application and acceptance into Fast-Track Practical Nursing Program.
2. A passing score on a nursing program admission test is required to complete an application.
3. Documentation of Health and Safety Requirements.
4. Fingerprint Clearance Card.
5. High school diploma or GED is required. Applicants must signify that they meet this requirement by providing high school diploma/transcripts or GED completion OR by signing the nursing application page containing the `Declaration of High School Graduation or GED completion.` In some instances, high school diploma/transcripts or proof of GED completion may be required.

Program Prerequisites

Credits: 0-4.5

Current Certified Nurse Assistant (CNA) (0) OR
Licensed Nurse Assistant (LNA) (0) OR
+ NCE150 Advanced Placement: Nurse Assisting (2) OR
+ NUR158 Nurse Assisting (4.5) OR
Equivalent (0-4.5) OR
Waived by Nursing Program Director for Military Veterans demonstrating equivalent work experience (0) 0-4.5

Required Courses

Credits: 22-23

Students should meet with Nursing Program Director to make appropriate course selection for NUR150 or NUR180PN.

+ NUR160PN Practical Nursing Theory and Science I 11

+ NUR150 Practical Nurse Bridge Course (12) OR
+ NUR180PN Practical Nursing Theory and Science II (11) 11-12

MCCCD Governing Board Approval Date:

Financial Services

Major: 5907
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 16
CIP Code: 52.0803
Primary/Initiating College: Phoenix College
Program Availability: GC, GW, PC, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
41-3031.00 Securities, Commodities, and Financial Services Sales Agents

Description: The Certificate of Completion (CCL) in Financial Services builds the industry knowledge and skills for individuals to prepare for careers in Financial Services. This CCL will introduce students new to or interested in financial services to the fundamental concepts of capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of security industry jobs. This CCL also helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE). A Certificate of Completion (CCL) and Associate in Applied Science (AAS) in Banking and Finance are also available.

Learning Outcomes

1. Analyze risks, rewards, and tax benefits associated with various types of investments, alternative investments, and securities to meet client goals. (GBS120, GBS151, GBS261, GBS261LL, MGT126)
2. Demonstrate knowledge of market mechanics including participants, economic factors, and regulations as they apply to capital markets. (GBS151, GBS261, GBS261LL)
3. Identify trading mechanics and corporate actions. (GBS261, GBS261LL)
4. Explain the purpose, registration, distribution, and filing requirements of various types of offerings. (GBS261, GBS261LL)
5. Describe the regulations, rules, and prohibitive actions related to the securities industry. (GBS151, GBS261, GBS261LL)
6. Analyze the impact of monetary policy and regulation on business activity, stability in the securities market, and the economy. (GBS151, GBS261, GBS261LL)
7. Evaluate investments using a variety of sources and analysis factors. (GBS151, GBS261, GBS261LL)
8. Demonstrate professional behavior in accordance with industry standards. (GBS120, GBS151, GBS261, GBS261LL, MGT126, MKT267, MKT271)
9. Integrate ethical responsibility in decision making. (GBS120, GBS151, GBS261, GBS261LL, MKT267, MKT271)
10. Demonstrate service oriented communication skills. (GBS120, GBS261, GBS261LL, MGT126, MKT267, MKT271)
11. Use constructive feedback to improve performance. (GBS120, GBS261, GBS261LL, MGT126, MKT267, MKT271)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

This Certificate of Completion (CCL) is intended for current or prospective securities industry professionals who are interested in expanding their knowledge in the area of financial securities to enhance their employment opportunities.

Program Prerequisites

None

Required Courses

Credits: 16

GBS120 Workplace Communication Skills 3
GBS151 Introduction to Business 3
GBS261 Investments I 3
GBS261LL Securities Industry Essentials (SIE) Exam Prep 1

MGT126 Customer Service Skills and Strategies 3

MKT267 Principles of Sales (3) OR
MKT271 Principles of Marketing (3) 3
Recommend MKT267 if career goal in the field of finance is sales.

MCCCD Governing Board Approval Date: June 27, 2023

Financial Services: Pre-licensure

Major: 5931N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 4
CIP Code: 52.0803
Primary/Initiating College: Phoenix College
Program Availability: CG, GC, GW, PC, SC
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
41-3031.00 Securities, Commodities, and Financial Services Sales Agents

Description: The Certificate of Completion (CCL) in Financial Services: Pre-licensure is designed to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry.

Learning Outcomes

1. Evaluate professional behavior and ethical responsibilities in accordance with industry standards. (GBS261, GBS261LL)
2. Describe the regulations, rules, and prohibitive actions related to the securities industry. (GBS261, GBS261LL)
3. Identify trading mechanics and corporate actions. (GBS261, GBS261LL)
4. Explain the purpose, registration, distribution, and filing requirements of various types of offerings. (GBS261, GBS261LL)
5. Analyze risks, rewards, and tax benefits associated with various types of investments, alternative investments, and securities to meet client goals. (GBS261, GBS261LL)
6. Demonstrate readiness for the FINRA Securities Industry Essentials (SIE) Examination. (GBS261LL)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 4

GBS261 Investments I 3
GBS261LL Securities Industry Essentials (SIE) Exam Prep 1

MCCCD Governing Board Approval Date: June 27, 2023

Fingerprint Identification and Photography

Major: 5010N **Primary/Initiating College**: Phoenix College
Catalog Year: 2024-2025 **Program Availability**: CG, EM, GC, MC, PC, SC, SM
Effective Term: 2024 Fall **Field of Interest**: Behavioral Science and Human Services
Award: CCL **Instructional Council**: Administration of Justice Studies
Total Credits: 10 **GPA**: 2.00
CIP Code: 43.0406
SOC Code: Upon completion of this degree, students may pursue a career as:
33-1012.00 First-Line Supervisors of Police and Detectives
33-3021.02 Police Identification and Records Officers
33-3051.00 Police and Sheriff`s Patrol Officers
33-3051.01 Police Patrol Officers
33-3021.00 Detectives and Criminal Investigators
33-3021.06 Intelligence Analysts
19-4092.00 Forensic Science Technicians
13-1041.06 Coroners

Description: The Certificate of Completion (CCL) in Fingerprint Identification and Photography is designed to prepare students for entry level positions in the field of fingerprint classification and identification. It is one pathway to the Associate in Applied Science (AAS) in Forensic Science.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS213, AJS214, AJS290BN)
2. Solve problems through logical and sound reasoning. (AJS101, AJS213, AJS214, AJS290BN)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS213, AJS214, AJS290BN)
4. Communicate in the language common to the criminal justice system. (AJS101, AJS213, AJS214, AJS290BN)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS213, AJS214, AJS290BN)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations (AJS101, AJS213, AJS214, AJS290BN)
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS213, AJS214, AJS290BN)

8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS213, AJS214, AJS290BN)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS213, AJS214, AJS290BN)
10. Collect, identify, classify, and analyze physical evidence related to criminal investigations. (AJS101, AJS213, AJS214, AJS290BN)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 10

AJS101 Introduction to Criminal Justice 3
AJS213 Evidence Technology: Fingerprints 3
AJS214 Evidence Technology/Photography 3
AJS290BN Courtroom Testimony Seminar 1

MCCCD Governing Board Approval Date: February 27, 2024

Fingerprint Identification and Photography

Major: 5010N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 10
CIP Code: 43.0406
Primary/Initiating College: Phoenix College
Program Availability: CG, EM, GC, MC, PC, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
33-1012.00 First-Line Supervisors of Police and Detectives
33-3021.02 Police Identification and Records Officers
33-3051.00 Police and Sheriff`s Patrol Officers
33-3051.01 Police Patrol Officers
33-3021.00 Detectives and Criminal Investigators
33-3021.06 Intelligence Analysts
19-4092.00 Forensic Science Technicians
13-1041.06 Coroners

Description: The Certificate of Completion (CCL) in Fingerprint Identification and Photography is designed to prepare students for entry level positions in the field of fingerprint classification and identification. It is one pathway to the Associate in Applied Science (AAS) in Forensic Science.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS213, AJS214, AJS290BN)

2. Solve problems through logical and sound reasoning. (AJS101, AJS213, AJS214, AJS290BN)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS213, AJS214, AJS290BN)
4. Communicate in the language common to the criminal justice system. (AJS101, AJS213, AJS214, AJS290BN)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS213, AJS214, AJS290BN)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations (AJS101, AJS213, AJS214, AJS290BN)
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS213, AJS214, AJS290BN)
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS213, AJS214, AJS290BN)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS213, AJS214, AJS290BN)
10. Collect, identify, classify, and analyze physical evidence related to criminal investigations. (AJS101, AJS213, AJS214, AJS290BN)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Required Courses

Credits: 10

AJS101 Introduction to Criminal Justice 3
AJS213 Evidence Technology: Fingerprints 3
AJS214 Evidence Technology/Photography 3
AJS290BN Courtroom Testimony Seminar 1

MCCCD Governing Board Approval Date: February 27, 2024

Fire Service Management

Major: 5420
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 27
CIP Code: 43.0202
SOC Code: Upon completion of this degree, students may pursue a career as:
33-1021.00 First-Line Supervisors of Fire Fighting and Prevention Workers

Primary/Initiating College: Paradise Valley Community College
Program Availability: GC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Fire Service Management can be used by professional firefighters for promotional opportunities within the Fire Services. The program provides courses for experienced professional firefighters who desire to learn advanced fireground tactics and strategy, building construction, practical incident command, supervisory training of personnel, public administration, basic finance,

and human resource management. An Associate in Applied Science (AAS) in Fire Service Management is also available.

Learning Outcomes

1. Demonstrate management principles as they pertain to evaluation, supervision, discipline, delegation, and assignments. (FSC119, FSC167, FSC202, FSC204, FSC208, FSC214, FSC215)
2. Manage a variety of emergency incidents based on standard procedures. (FSC113, FSC167, FSC202, FSC204, FSC208, FSC215)
3. Evaluate human resource practices including recruitment and selection, evaluation, compensation, supervision, and discipline of fire service personnel. (FSC119, FSC167, FSC202, FSC204, FSC208, FSC214, FSC215)
4. Analyze the methods of providing for firefighter safety in a variety of incidents. (FSC113, FSC167, FSC202, FSC204, FSC208, FSC214)
5. Describe ways to improve customer satisfaction through diversity, equity and inclusion. (FSC167, FSC215)

Program Notes

Students must earn a grade of C or better in all courses within the program.

This program replaces: CCL/5514 Fire Service Professional is no longer offered after guided pathways.

Admission Criteria

Permission of the Program Director.

Program Prerequisites

None

Required Courses

Credits: 27

FSC113 Introduction to Fire Suppression 3
FSC119 Introduction Fire Service Ethics 3
FSC167 Fire Captain Academy 6
FSC202 Supervisory Training for Firefighters 3
+ FSC204 Firefighting Tactics and Strategy 3
+ FSC208 Firefighter Safety and Building Construction 3
+ FSC214 Human Resource Management in Fire Service 3
FSC215 Customer Service in the Public Sector 3

MCCCD Governing Board Approval Date: April 25, 2023

Firefighter Operations

Major: 5557
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 16.5-33
CIP Code: 43.0203
SOC Code: Upon completion of this certificate, students may pursue a career as:
33-2011.01 Municipal Firefighters

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Firefighter Operations provides the opportunity for individuals seeking careers in the fire service to acquire minimum standard firefighting skills and prepare for state and/or national certifications, including the Firefighter I and II Certification. An Associate in Applied Science (AAS) in Fire Science is also available.

Learning Outcomes

1. Describe the basic theories of fire behavior and methods of fire control in a variety of fire operations. (FSC102)
2. Demonstrate the appropriate and safe use of personal firefighting equipment. (FSC102)
3. Recognize the professional and organizational structures, processes, and policies that guide fire departments. (FSC102, FSC105, FSC174)
4. Demonstrate physical tasks, proper tool selection, and knowledge of operating procedures in accordance with the standards of the profession. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC130, FSC134, FSC174)
5. Identify the hazards to health and safety related to emergency operations. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC174)
6. Collaborate effectively with members of a team to achieve goals. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC130, FSC134, FSC174)
7. Demonstrate the critical thinking, mental, and emotional skills needed to perform firefighting tasks and services. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC130, FSC134, FSC174)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Formal application and admission to the program is required.

Program Prerequisites

None

Required Courses

Credits: 16.5-33

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5)
OR
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0) AND
Credit By Evaluation (0.5) 0.5

+ EMT104 Emergency Medical Technology (10) AND
+ EMT104AB Applied Practical Studies for Emergency Medical Technology (0.5) AND
+ EMT104LL Emergency Medical Technology Practicum (2)
OR
Arizona State EMT Certification (0) OR
Arizona State Paramedic Certification (0) OR
Permission of Program Director (0) 0-12.5

+ FSC102 Fire Department Operations 11

FSC105 Hazardous Materials/First Responder (3) OR
Permission of Program Director (0) 0-3

FSC130 Fitness for Firefighters/CPAT (1) OR
Verification of CPAT completion (0) 0-1

+ FSC134 Fitness and Conditioning for Firefighters 3
+ FSC174 Functions of Command 2

MCCCD Governing Board Approval Date: February 22, 2022

Foundations of Behavioral Sciences

Major: 5522
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 18
CIP Code: 30.1701
Primary/Initiating College: South Mountain Community College
Program Availability: GC, PC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Counseling
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
31-1133.00 Psychiatric Aides
21-1093.00 Social and Human Service Assistants
29-2053.00 Psychiatric Technicians

Upon completion of a graduate degree, students may pursue a career as:
21-1011.00 Substance Abuse and Behavioral Disorder Counselors
21-1092.00 Probation Officers and Correctional Treatment Specialists
21-1093.00 Social and Human Service Assistants
29-2053.00 Psychiatric Technicians
21-1023.00 Mental Health and Substance Abuse Social Workers
21-1014.00 Mental Health Counselors
21-1012.00 Educational, Guidance, School, and Vocational Counselors
21-1013.00 Marriage and Family Therapists
21-1019.00 Counselors, All Others
21-1022.00 Healthcare Social Workers
19-3039.00 Psychologists, All Other
19-3031.03 Counseling Psychologists
19-3032.00 Industrial-Organizational Psychologists
19-3031.00 Clinical, Counseling, and School Psychologists
29-1223.00 Psychiatrists
19-3039.01 Neuropsychologists and Clinical Neuropsychologists
25-1066.00 Psychology Teachers, Postsecondary
19-3034.00 School Psychologists
29-1071.00 Physician Assistant

Description: The Certificate of Completion (CCL) in Foundations of Behavioral Sciences is designed to provide students with a foundational study of human behavior and prepare them to assist, as part of a clinical team, in the care of individuals and families dealing with mental illness, comorbid medical conditions, and challenging behaviors. The program includes courses designed to provide students with the skills necessary to deliver essential behavioral health and social services. The core focus of the program is practical training and service learning experiences. This program prepares students for industry certification and is embedded in the CCL in

Advanced Behavioral Sciences, the Associate in Applied Science (AAS) in Behavioral Sciences, and the Bachelors of Science (BS) in Behavioral Sciences available at MCCCD.

Learning Outcomes

1. Determine the role, function, and responsibilities of various mental health professions. (BHS150, BHS160, BHS170, BHS180)
2. Examine the comprehensive bio-psycho-social needs of diverse client populations in behavioral health and social service settings. (BHS150, BHS165, BHS170, BHS180)
3. Identify methods to resolve current symptoms and prevent future effects of burnout, traumatic stress, and compassion fatigue. (BHS155, BHS160, BHS165)
4. Manage individual cases as part of a multidisciplinary team in a fashion that best serves the patient and simultaneously protects the practitioner. (BHS155, BHS160, BHS165, BHS170, BHS180)
5. Document treatment plans in collaboration with a multidisciplinary team. (BHS160, BHS170, BHS180)
6. Practice evidence-based behavioral health interventions using assessment and outcome measures. (BHS150, BHS160, BHS165, BHS170, BHS180)
7. Demonstrate ethical interpersonal and communication skills important in establishing and maintaining relationships. (BHS150, BHS155, BHS160, BHS165, BHS170)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

BHS150 Introduction to Behavioral Health and Social Services 3
BHS155 Professional Resiliency and Well-Being 3
BHS160 Ethical, Legal, and Professional Issues in Counseling Services 3
BHS165 Applied Therapeutic Communication Skills 3
BHS170 Case Management and Clinical Documentation 3
BHS180 Child, Family, and Adult Advocacy 3

MCCCD Governing Board Approval Date: February 27, 2024

Foundations of Early Childhood Education

Major: 5054
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 18-19
CIP Code: 13.1210
Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, MC, PC, PV, RS
Field of Interest: Education
Instructional Council: Early Childhood Education
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
25-2011.00 Preschool Teachers, Except Special Education
25-9042.00 Teaching Assistants, Preschool, Elementary, Middle, and Secondary School, Except Special Education
25-9043.00 Teaching Assistants, Special Education
25-9049.00 Teaching Assistants, All Other

Description: The Certificate of Completion (CCL) in Foundations of Early Childhood Education is designed to prepare students with foundational knowledge regarding the growth and development of the young child. Topics include cognitive and physical development of the young child, language acquisition, curriculum development, health and safety guidelines, business procedures, and family/community relationship building. This CCL is embedded (can be used to fulfill part of the requirements) in a second available CCL, Early Childhood Education. Both CCLs are embedded (can be used to fulfill requirements) in the Associate in Applied Science (AAS) in Early Childhood Education.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.

Program Prerequisites

None

Required Courses

Credits: 18-19

CFS101AH Art Activities for the Young Child (1) AND
ECH281 Movement/Music for the Young Child (1) OR
ECH128 Early Learning: Play and the Arts (3) OR
+ EED210 Creative and Cognitive Play (3) 2-3

CFS123 Health and Nutrition In Early Childhood Settings (1) AND
CFS125 Safety in Early Childhood Settings (1) AND
ECH280 Food Experiences with Young Children (1) OR
EED215 Early Learning: Health, Safety, Nutrition and Physical Fitness (3) 3

CFS/ECH176 Child Development (3) OR
CFS235 Developing Child: Theory into Practice, Prenatal to Age Eight (3) OR
EED205 The Developing Child: Prenatal to Age Eight (3) 3

CFS/ECH271 Arranging the Environment (1) AND
CFS282 Mainstreaming The Young Child with A Disability (1) AND
ECH282 Discipline/Guidance of Child Groups (1) OR
EED212 Guidance, Effective Interactions and the Environment (3) 3

+ CFS/ECH284AA Early Childhood Teaching Internship (1) OR
+ EED260 Early Childhood Infant/Toddler Internship (1) OR
+ EED261 Early Childhood Preschool Internship (1) 1

EED200 Foundations of Early Childhood Education 3
EED222 Introduction to the Exceptional Young Child: Birth to Age Eight 3

Program Competencies

1. Identify developmentally, culturally, and linguistically appropriate learning experiences that promote each child`s growth and development in the following domains: Social-Emotional, Physical, Cognitive, and

Language and Literacy. (CFS101AH, CFS/ECH176, CFS235, CFS/ECH284AA, ECH128, ECH281, EED200, EED205, EED210, EED260, EED261)
2. Describe the components necessary for a safe, caring, inclusive, and healthy learning environment according to best practices and local, state, and national standards. (CFS123, CFS125, CFS/ECH271, CFS282, CFS/ECH284AA, ECH280, ECH282, EED212, EED215, EED222, EED260, EED261)
3. Analyze children`s learning and development through observation and documentation, using standards and best practices. (CFS/ECH176, CFS235, CFS/ECH284AA, EED200, EED205, EED260, EED261)
4. Establish reciprocal, culturally responsive relationships with families and communities. (CFS123, CFS125, CFS/ECH271, ECH280, CFS282, ECH282, EED212, EED215)
5. Practice communication skills to advocate for children and their families. (EED200, EED222)
6. Practice ethical and professional standards and behavior. (CFS/ECH284AA, EED200, EED260, EED261)
7. Advocate for an ethical, equitable, diverse, and effective early childhood education profession. (EED200, EED222)
8. Engage in reflective practice and continuous learning through education and research. (CFS/ECH271, CFS282, CFS/ECH284AA, ECH282, EED212, EED222, EED260, EED261)
9. Collaborate with peers to problem-solve within early childhood education. (CFS/ECH284AA, EED222, EED260, EED261)

MCCCD Governing Board Approval Date: August 23, 2022

Fundamentals of Applied Molecular Bioscience-Level 1

Major: 5339N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 4
CIP Code: 41.0101
Primary/Initiating College: Glendale Community College
Program Availability: College-specific: GC
Field of Interest: Science, Technology, Engineering and Mathematics
Instructional Council: Biology
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
19-4021.00 Biological Technicians

Description: The Certificate of Completion (CCL) in Fundamentals of Applied Molecular Bioscience-Level 1 is designed to prepare students for entry-level positions in support of biological research, medical diagnostics and biomanufacturing. Includes training in the operation of laboratory equipment and high-end instrumentation, computational biology, designing experimental protocols, data collection and analysis.

Learning Outcomes

1. Accurately perform basic scientific calculations and measurements routinely used in biology and chemistry laboratories. (ABS173, ABS175, ABS295AA, BIO195AA, BIO295AA)
2. Follow written protocols and standard operating procedures to conduct controlled scientific investigations including accurately, maintaining a laboratory notebook, analyzing and interpreting data, and reporting results and conclusions effectively in written, graphical, and oral formats. (ABS173, ABS175, ABS295AA, BIO195AA, BIO295AA)
3. Conduct single and multivariable experiments with accurate documentation of methodology, results and appropriate statistical analyses. (ABS173, ABS175, ABS295AA, BIO195AA, BIO295AA)
4. Troubleshoot unanticipated investigative problems by consulting with others, critically analyzing methodology used, revising procedure as necessary and/or seeking alternative strategies to test the hypothesis. (ABS175, ABS295AA, BIO195AA, BIO295AA)
5. Demonstrate the skills needed to work effectively in a diverse team environment, including the ability to clearly communicate with peers from a variety of backgrounds and levels of experience, collaborate with

others and act as a productive contributor to effective group dynamics and the team's project. (ABS173, ABS175, ABS295AA, BIO195AA, BIO295AA)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in each course in the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

BIO156++ or BIO181++ recommended as a prerequisite or corequisite to Semester 1.

Program Prerequisites

None

Required Courses

Credits: 4

ABS173 Basic Instrumentation and Lab Math 1
ABS175 Design and Analysis of Multivariable Biological Experiments 1
+ BIO195AA Principles and Practice of Scientific Research 1

+ ABS295AA Independent Research in Applied Biology (1) OR
+ BIO295AA Independent Research in Biology (1) 1

MCCCD Governing Board Approval Date: April 22, 2025

General Business

Major: 5683
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 21
CIP Code: 52.0101
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-1021.00 General and Operations Managers
11-3012.00 Administrative Services Managers
11-9199.07 Security Managers
11-3071.02 Storage and Distribution Managers
11-3071.01 Transportation Managers
11-2022.00 Sales Managers
13-1199.00 Business Operations Specialists, All Other
13-1041.08 Customs Brokers
13-1199.04 Business Continuity Planners
13-1199.06 Online Merchants

Description: The Certificate of Completion (CCL) in General Business is designed to provide business training for various entry-level positions in business. The courses include an introduction to business concepts, accounting and computer principles, and legal issues related to business. An Associate in Applied Science (AAS) is also available.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 12

ACC111 Accounting Principles I 3
CIS105 Survey of Computer Information Systems 3
GBS151 Introduction to Business 3
GBS205 Legal, Ethical and Regulatory Issues in Business 3

Restricted Electives

Credits: 9

Students should select nine (9) credits from the following courses/subjects. Any 100/200 level courses in the following subjects can be used, except courses used to satisfy the Required Courses area.

ACC+++ Any ACC Accounting course(s)
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS133DA Internet/Web Development Level I 3
EPS+++ Any EPS Entrepreneurial Studies course(s) 1-3
GBS+++ Any GBS General Business course(s)
MGT+++ Any MGT Management course(s)
MKT+++ Any MKT Marketing course(s)
IBS+++ Any IBS International Business course(s)
REA+++ Any REA Real Estate course(s)
SBS+++ Any SBS Small Business Management course(s)
TQM+++ Any TQM Total Quality Management course(s)

Program Competencies

1. Demonstrate critical thinking through written and oral formats. (GBS151, GBS205, EPS+++, GBS+++)
2. Analyze the financial health of an organization using basic accounting principles. (ACC111, ACC+++)
3. Apply current technology to specific business tasks. (CIS105, CIS114DE, CIS117DM, CIS133DA, TQM+++)
4. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (ACC111, GBS151, GBS205, MGT+++, MKT+++)
5. Apply basic principles and techniques of management to recruit, select, hire, train, supervise, and evaluate employees. (GBS151, MGT+++)
6. Evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting (GBS151, MGT+++, TQM+++)
7. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, GBS205, IBS+++, MGT+++, MKT+++, SBS+++, REA+++, TQM+++)

MCCCD Governing Board Approval Date: June 25, 2019

Health and Wellness Coaching

Major: 5245N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 7
CIP Code: 51.0001
SOC Code: Upon completion of this certificate, students may pursue a career as:
21-1091.00 Health Education Specialists

Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Health Sciences
Instructional Council: Exercise Science, Health and Physical Education, Recreation and Wellness
GPA: 2.00

Description: The Certificate of Completion (CCL) in Health and Wellness Coaching is designed to prepare students for employment as a health and wellness coach. Health and wellness coaches facilitate client-driven goal-setting, self-discovery, active learning, and accountability using behavior change theories. The program is designed to equip students to apply communication and motivational strategies to improve overall health and well-being.

This certificate is designed to prepare students who have completed or are in pursuit of an associate degree for the National Board for Health and Wellness Coaching Certification Exam.

Learning Outcomes

1. Develop a client-centered communication style purposed on promoting health, wellness, and overall well-being. (HWC101, HWC290)
2. Demonstrate effective, evidence-based coaching strategies to positively impact behavior change and resolve ambivalence. (HWC101, HWC290)
3. Develop a working familiarity of current evidence-based recommendations in the areas of health promotion and wellness to support the client in implementing lasting personal lifestyle choices and behaviors. (HES100, HWC101, HWC290)
4. Apply the legal and ethical standards of health and wellness coaching. (HWC101, HWC290)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Must have an associate degree to take the National Board for Health and Wellness Coaching Certification Exam.

Admission Criteria

Enrollment in an associate degree or permission of Program Director.

Program Prerequisites

None

Required Courses

Credits: 7

HES100 Healthful Living 3
HWC101 Health and Wellness Coaching 3
HWC290 Health and Wellness Coaching Internship 1

MCCCD Governing Board Approval Date: March 19, 2024

Homeland Security

Major: 5322N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 15
CIP Code: 43.9999
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, PC, RS, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
33-1012.00 First-Line Supervisors of Police and Detectives
33-3021.00 Detectives and Criminal Investigators
33-3021.01 Police Detectives
33-3021.02 Police Identification and Records Officers
33-3021.03 Criminal Investigators and Special Agents
33-3051.04 Customs and Border Protection Officers
33-3021.06 Intelligence Analysts
33-3031.00 Fish and Game Wardens
33-3051.00 Police and Sheriff`s Patrol Officers
33-3051.01 Police Patrol Officers
33-3052.00 Transit and Railroad Police
33-9032.00 Security Guards
43-5031.00 Police, Fire and Ambulance Dispatchers

Description: The Certificate of Completion (CCL) in Homeland Security program is designed to provide students with the knowledge and skills needed to conduct a homeland security evaluation and to assess, investigate and respond to terrorism incidents. It also provides criminal justice practitioners with an opportunity for academic growth and the development of specialized skills in homeland security.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
2. Solve problems through logical and sound reasoning. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
4. Communicate in the language common to the criminal justice system. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
7. Utilize technology to collect, analyze and communicate data. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
8. Practice professional standards appropriate to the field of criminal justice. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS/FSC139, AJS/FSC147, AJS/FSC148, AJS/FSC149, AJS195)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

AJS/FSC139 Emergency Response to Terrorism 3
AJS/FSC147 Emergency Preparedness 3
AJS/FSC148 Fundamentals of Emergency Management 3
AJS/FSC149 Hazard Mitigation 3
AJS195 International and Domestic Terrorism 3

MCCCD Governing Board Approval Date: April 7, 2020

Human Resources Management

Major: 5580
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 24
CIP Code: 52.1001
SOC Code: Upon completion of this degree, students may pursue a career as:
11-3120.00 Human Resource Manager

Primary/Initiating College: Phoenix College
Program Availability: GC, GW, MC, PC, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00

Description: The Certificate of Completion (CCL) in Human Resources Management program is designed to provide skills necessary for careers in human resources management. The program is designed to provide students a series of courses with an emphasis in management and is designed to prepare students for an entry-level position in human resources. Graduates may be employed in employment (recruiting, interviewing, and hiring), benefits administration, compensation, and employee relations. A Certificate of Completion (CCL) in Human Resources: Compensation and Benefits is also available.

Learning Outcomes

1. Evaluate current and historical trends in human resource management and human resource needs to develop a human resource plan. (MGT229, MGT251, MGT276, MGT286)
2. Solve basic mathematical problems including payroll, simple income tax, retirement, financial statements, and insurance. (GBS131, MAT112)
3. Apply current technology to specific business tasks. (CIS105, BPC110)
4. Create and use effective oral, written, and visual business communication skills. (GBS120)
5. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS205, MGT251, MGT276, MGT286)
6. Evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting. (MGT229, MGT276)

7. Apply basic principles and techniques of management to recruit, select, hire, train, supervise, and evaluate employees. (MGT229, MGT251, MGT276, MGT286)
8. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (MGT229, MGT251, MGT276, MGT286)
9. Critically evaluate the alternatives faced in business decision making to select the most effective and efficient solution. (GBS120, GBS205, MGT229, MGT251, MGT276, MGT286)
10. Evaluate and develop compensation plans. (MGT251, MGT276, MGT286)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 24

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

GBS205 Legal, Ethical, and Regulatory Issues in Business 3

GBS131 Business Calculations (3) OR
+ MAT112 Mathematical Concepts and Applications (3) OR
Satisfactory completion of higher level Mathematics course 3

GBS120 Workplace Communication Skills 3
MGT229 Management and Leadership I 3
MGT251 Human Relations in Business 3
MGT276 Human Resources Management 3
+ MGT286 Human Resource Employment Management 3

MCCCD Governing Board Approval Date: December 12, 2023

Infant and Toddler Development

Major: 5277N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 9
CIP Code: 13.1210
Primary/Initiating College: Rio Salado College
Program Availability: GC, PV, RS
Field of Interest: Education
Instructional Council: Early Childhood Education
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
25-2011 Preschool Teachers, Except Special Education
25-9042 Teaching Assistants, Preschool, Elementary, Middle, and Secondary School, Except Special Education
25-9043 Teaching Assistants, Special Education
25-9049 Teaching Assistants, All Other

Description: The Certificate of Completion (CCL) in Infant and Toddler Development program prepares students with foundational knowledge on the development of infant and toddler aged children. Students will learn about child health, physical milestones, cognitive development as well as disabilities and developmental delays specific to this age group. Topics include communication and language acquisition, and adult/child relationship building. Also covered is social-emotional development, societal stresses, and supportive professional roles and responsibilities. An Associate in Applied Science (AAS) in Early Childhood Education is available.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 9

ITD200 The Physical Child: Birth to Age Three 3
ITD210 Early Attachments, Relationships, and Families: Birth to Age Three 3
ITD220 Cognition and Communication: Birth to Age Three 3

Learning Outcomes

1. Describe the physical development of infant and toddler aged children and corresponding nutritional and fitness needs. (ITD200)
2. Examine appropriate health and safety standards, practices, and documentation in infant and toddler settings. (ITD200)
3. Contrast the major research and theories within the field of child development. (ITD210)
4. Summarize the cognitive and psychosocial development of the infant and toddler aged children. (ITD210, ITD220)
5. Describe attachment and relationship development between adults and infant and toddler aged children and its impact on child development. (ITD210, ITD220)
6. Summarize language development and communication skills of infant and toddler aged children. (ITD220)
7. Apply early childhood education skills in the infant and toddler setting. (ITD200, ITD210, ITD220)

MCCCD Governing Board Approval Date: February 28, 2023

IT Fundamentals

Major: 5299N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 3
CIP Code: 11.0101
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1232.00 Computer User Support Specialists
49-9070 Maintenance and Repair Workers, General
29-2099 Health Technologists and Technicians, All Other

Description: The Certificate of Completion (CCL) in IT Fundamentals is designed to provide the fundamental IT skills necessary for employment as a technician in a variety of industries. This certificate helps prepare students for the CompTIA ITF+ certification exam.

Learning Outcomes

1. Describe the basic components of computer hardware. (CIS101)
2. Set up a computer workstation. (CIS101)
3. Manage files and folders across platforms. (CIS101)
4. Create quality documents using word processing programs. (CIS101)
5. Produce quality visuals using presentation programs. (CIS101)
6. Prepare quality spreadsheets using spreadsheet programs. (CIS101)
7. Compose quality communication using email platforms. (CIS101)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 3

CIS101 Technician IT Fundamentals 3

MCCCD Governing Board Approval Date: February 27, 2024

Law Enforcement

Major: 5987N
Catalog Year: 2024-2025
Effective Term: 2019 Fall
Award: CCL
Total Credits: 15
CIP Code: 43.0107
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as
33-1012.00 First-Line Supervisors of Police and Detectives
33-3052.00 Transit and Railroad Police
33-3021.01 Police Detectives
33-3021.02 Police Identification and Records Officers
33-3051.00 Police and Sheriff`s Patrol Officers
33-9032.00 Security Guards
33-3051.04 Customs and Border Protection Officers
33-3011.00 Bailiffs
33-3021.00 Detectives and Criminal Investigators
33-3021.06 Intelligence Analysts
33-3031.00 Fish and Game Wardens

33-3021.03 Criminal Investigators and Special Agents

Description: The Certificate of Completion (CCL) in Law Enforcement is designed for students who are interested in pursuing a course of study specifically focused on law enforcement. The certificate program specializes in training and education related to the duties of law enforcement. The program is designed for the student with no Arizona police academy experience and is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS123, AJS205, AJS230, AJS275)
2. Solve problems through logical and sound reasoning. (AJS101, AJS123, AJS205, AJS275)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS205, AJS230, AJS275)
4. Communicate in the language common to the criminal justice system. (AJS101, AJS205, AJS230, AJS275)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS123, AJS230)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS101, AJS123, AJS230)
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS230, AJS275)
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS123, AJS230, AJS275)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS230, AJS275)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

AJS101 Introduction to Criminal Justice 3
AJS123 Ethics and the Administration of Justice 3
AJS205 Effective Communication and Report Writing in Criminal Justice 3
AJS230 The Police Function 3
AJS275 Criminal Investigation I 3

MCCCD Governing Board Approval Date: December 11, 2018

Law Enforcement Investigation

Major: 5899N
Catalog Year: 2024-2025
Effective Term: 2022 Spring
Primary/Initiating College: Glendale Community College
Program Availability: GC, RS
Field of Interest: Behavioral Science and Human Services

Award: CCL
Instructional Council: Administration of Justice Studies
Total Credits: 6
GPA: 2.00
CIP Code: 43.0107
SOC Code: Upon completion of this certificate, students may pursue a career as:
25-1111.00 Criminal Justice and Law Enforcement Teachers, Postsecondary
33-3021.00 Detectives and Criminal Investigators
33-3051.00 Police and Sheriff`s Patrol Officers
33-9021.00 Private Detectives and Investigators

Description: The Certificate of Completion (CCL) in Law Enforcement Investigation is designed to prepare the law enforcement officer to become a specialist in the investigation of criminal activity and to successfully assist in prosecution. Courses address case management, legal aspects of interviewing, search and seizure, and courtroom presentations. Students will demonstrate skills related to these areas in a crime scene scenario.

Learning Outcomes

1. Describe the skills needed to manage investigative case assignments. (LET225, LET225AA, LET254, LET255)
2. Describe techniques for investigating specific categories of crime. (LET225, LET225AB, LET254)
3. Describe the legal requirements for conducting searches. (LET225, LET225AB, LET254)
4. Describe the legal requirements for conducting interviews, as well as the personal attributes of the officer necessary for a successful interview. (LET225, LET225AC, LET255)
5. Describe the requirements for a complete investigative report. (LET225, LET225AD, LET254)
6. Describe proper preparation for court testimony and proper behavior when testifying. (LET225, LET225AE, LET255)
7. Describe motions and legal proceedings involved in court presentations. (LET225, LET225AE, LET255)
8. Demonstrate the correct method of preserving and seizing computer evidence. (LET225, LET225AF, LET254)
9. Demonstrate skills required to investigate and report a crime scene, including proper decision making regarding legal aspects. (LET225, LET225AG, LET254, LET255)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Student must be Law Enforcement personnel or have permission of Program Director.

Program Prerequisites

None

Required Courses

Credits: 6

+ LET225 Criminal Investigations Certification (6)
OR
+ LET225AA Criminal Investigations Certification I (1) AND
+ LET225AB Criminal Investigations Certification II (1) AND
+ LET225AC Criminal Investigations Certification III (1) AND
+ LET225AD Criminal Investigations Certification IV (1) AND
+ LET225AE Criminal Investigations Certification V (0.5) AND
+ LET225AF Criminal Investigations Certification VI (0.5) AND
+ LET225AG Criminal Investigations Certification VII (1)

OR
+ LET254 Criminal Investigations Detective I (3) AND
+ LET255 Criminal Investigations Detective II (3) 6

MCCCD Governing Board Approval Date: June 22, 2021

Law Enforcement Training Academy

Major: 5991N
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 40
CIP Code: 43.0107
Primary/Initiating College: Rio Salado College
Program Availability: GC, RS
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
33-3021.00 Detectives and Criminal Investigators
33-3051.00 Police and Sheriff`s Patrol Officers
33-9021.00 Private Detectives and Investigators
33-3011.00 Bailiffs

Description: The Certificate of Completion (CCL) in Law Enforcement Training Academy is designed for students wishing to pursue a career as a law enforcement officer. The student will develop skills in eight functional areas: Introduction to Law Enforcement, Law and Legal Matters, Patrol Procedures, Traffic Control, Crime Scene Management, Community and Police Relations, Report Writing, and Police Proficiency Skills.

Learning Outcomes

1. Practice professional standards of policing. (AJS101, AJS113, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)
2. Apply the principles and processes of law and legal matters to policing. (AJS101, AJS109, AJS113, AJS151, AJS153, AJS154, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275, AJS290BN)
3. Apply principles of patrol procedures to maintain best practices of contemporary policing. (AJS101, AJS113, AJS151, AJS153, AJS154, AJS162, AJS201, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)
4. Demonstrate proficiency in conducting practical investigations in traffic collisions, traffic direction, and impaired driver cases. (AJS101, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275, AJS290BN)
5. Apply principles of law and best practices to criminal investigations and crime scene management. (AJS101, AJS109, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)
6. Collaborate with others to establish shared vision and effective relationships. (AJS101, AJS113, AJS162, AJS230, AJS270, AJS275, AJS290BN)
7. Engage in appropriate interactions. (AJS101, AJS151, AJS153, AJS154, AJS162, AJS230, AJS270, AJS275, AJS290BN)
8. Apply aspects of mental and physical conditioning for personal safety in law enforcement activities. (AJS101, AJS230, AJS290BN)
9. Synthesize relevant sources of information to prepare comprehensive police reports. (AJS101, AJS109, AJS113, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275, AJS290BN)
10. Demonstrate the police proficiency skills that meet the standards set forth by the Arizona Peace Officer Standards and Training Board. (AJS101, AJS151, AJS153, AJS154, AJS205, AJS210, AJS215, AJS230, AJS260, AJS275)
11. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS109, AJS113, AJS162, AJS201, AJS205, AJS210, AJS215, AJS230, AJS260, AJS270, AJS275, AJS290BN)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

AJS coursework for this program is taught by instructors who are certified police officers in the State of Arizona as required by the Arizona Peace Officer Standards and Training (AzPOST) Board standards. Any AJS coursework that has already been completed but was not taught by a certified police officer with a recognized academy, will not satisfy the requirements of the certificate. Additionally, this Certificate of Completion (CCL) can be awarded to peace officers who complete the AzPOST waiver (lateral transfers) or to out-of-state academies engaged in an Educational Partnership (ESP) or an Educational Service Agreement (ESA) through one of the offering colleges.

This Certificate of Completion (CCL) is offered as an educational partnership at Rio Salado College.
This Certificate of Completion is offered as a closed academy program at Chandler Gilbert Community College and Glendale Community College. Students at these colleges are advised to meet with the program director, chair and/or faculty advisor.

Admission Criteria

Must meet AzPOST minimum requirements for a law enforcement officer and meet any physical requirements by the Academy Director.

Program Prerequisites

None

Required Courses

Credits: 40

AJS101 Introduction to Criminal Justice 3
AJS109 Substantive Criminal Law 3
AJS113 Criminal Justice Crime Control Policies and Practices 3
AJS151 Firearms I 1
+ AJS153 Firearms II/Handguns 1
AJS154 Firearms III/Long Weapons 1
AJS162 Domestic Violence 3
AJS201 Rules of Evidence 3
AJS205 Effective Communication and Report Writing in Criminal Justice 3
AJS210 Constitutional Law 3
AJS215 Criminalistics: Physical Evidence 3
AJS230 The Police Function 3
AJS260 Procedural Criminal Law 3
AJS270 Community Relations 3
AJS275 Criminal Investigation I 3
AJS290BN Courtroom Testimony Seminar 1

MCCCD Governing Board Approval Date: December 8, 2020

Leadership in Public Safety Organizations

Major: 5211N **Primary/Initiating College**: Rio Salado College

Catalog Year: 2024-2025
Effective Term: 2022 Fall
Award: CCL
Total Credits: 6
CIP Code: 44.0401
Program Availability: CG, GC, PC, RS
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
33-1011.00 First-Line Supervisors of Correctional Officers
33-1012.00 First-Line Supervisors of Police and Detectives
33-3051.03 Sheriffs and Deputy Sheriffs
33-1021.00 First-Line Supervisors of Fire Fighting and Prevention Workers
33-1021.01 Municipal Fire Fighting and Prevention Supervisors
33-1021.02 Forest Fire Fighting and Prevention Supervisors

Description: The Certificate of Completion (CCL) in Leadership in Public Safety Organizations program builds the industry knowledge and skills for individuals to transition to leadership positions in the field of public safety. This CCL will introduce students to the fundamental concepts and skills of professionalism, organizational culture and management, characteristics of effective teams, conflict resolution, motivation, systems-thinking, problem-solving, and leadership as applicable to public safety organizations. Students with the requisite experience in the field who complete this CCL can pursue employment in a variety of front-line leadership positions within the fields of public safety including law enforcement, fire service, and public safety support operations such as communication operators and property and records management.

Learning Outcomes

1. Apply strategies for promoting health and wellness. (LET173)
2. Model professional identity, presence, and behavior appropriate to the field of public safety. (LET173, LET174, LET175)
3. Demonstrate effective management of the operations and resources of public safety organizations within varied situations and environments. (LET173, LET174, LET175)
4. Seek opportunities for continuing professional development and mentorship that advance the mission and vision of the organization. (LET173, LET174, LET175)
5. Create an environment that supports diversity of perspectives and engagement in constructive criticism. (LET173, LET174, LET175)
6. Use empathy to create and maintain productive workplace relationships and team environments. (LET173, LET174, LET175)
7. Engage in self-reflection to inform decision making. (LET173, LET174, LET175)
8. Apply effective oral and written communication strategies for diverse audiences and situations. (LET173, LET174, LET175)
9. Apply appropriate conflict resolution strategies for a variety of situations. (LET173, LET174, LET175)
10. Apply motivation theories and practices to improve individual, team, and organizational performance. (LET173, LET174, LET175)
11. Use a process to develop clear, concise, factual, and defensible documents. (LET173, LET175)
12. Demonstrate the qualities of ethical leadership. (LET174, LET175)
13. Explain organizational culture and its application to the field of public safety and related governmental agencies. (LET174, LET175)
14. Demonstrate initiative and resourcefulness in leading people, situations, and organizations. (LET174, LET175)
15. Demonstrate a systems-thinking approach to decision making in a complex organizational structure. (LET174, LET175)
16. Apply risk management strategies to mitigate liabilities. (LET174, LET175)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

This is a closed program for Public Safety professionals. Please see the Program Advisor for admission requirements.

Program Prerequisites

None

Required Courses

Credits: 6

LET173 Introduction to Leadership in Public Safety 2
+ LET174 Organizational Culture and Leadership 3
+ LET175 Public Safety Leadership Capstone 1

MCCCD Governing Board Approval Date: October 26, 2021

Legal Studies

Major: 5966N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 15
CIP Code: 43.0104
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
23-1012.00 Judicial Law Clerks
33-1012.00 First-Line Supervisors of Police and Detectives
33-3011.00 Bailiffs
33-3012.00 Correctional Officers and Jailers
33-3021.00 Detectives and Criminal Investigators
33-3021.01 Police Detectives
33-3021.02 Police Identification and Records Officers
33-3021.03 Criminal Investigators and Special Agents
33-3051.00 Police and Sheriff`s Patrol Officers
33-3051.01 Police Patrol Officers
33-9032.00 Security Guards
43-5031.00 Police, Fire and Ambulance Dispatchers

Description: The Certificate of Completion (CCL) in Legal Studies is designed for students who are interested in pursuing a course of study specifically focused on legal studies. It is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS109, AJS123, AJS201, AJS205, AJS210)
2. Solve problems through logical and sound reasoning. (AJS109, AJS201, AJS205, AJS210, AJS260)

3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS201, AJS205, AJS210)
4. Communicate in the language common to the criminal justice system. (AJS109, AJS201, AJS205, AJS210)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS123, AJS201, AJS210)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS109, AJS123, AJS201, AJS210, AJS260)
7. Utilize technology to collect, analyze and communicate data. (AJS201, AJS210)
8. Practice professional standards appropriate to the field of criminal justice. (AJS109, AJS123, AJS201, AJS210, AJS260)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS109, AJS123, AJS201, AJS210, AJS260)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

AJS109 Substantive Criminal Law 3
AJS201 Rules of Evidence 3

AJS123 Ethics and the Administration of Justice (3) OR
AJS205 Effective Communication and Report Writing in Criminal Justice (3) 3

AJS210 Constitutional Law 3
AJS260 Procedural Criminal Law 3

MCCCD Governing Board Approval Date: October 24, 2023

Linux Associate

Major: 5046N
Catalog Year: 2024-2025
Effective Term: 2025 Spring
Award: CCL
Total Credits: 6-9
CIP Code: 11.1001
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career in the following job fields:
15-1211.00 Computer Systems Analysts
15-1231.00 Computer Network Support Specialists

Upon completion of an associate degree, students may pursue a career in the following job fields:

15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators

Description: The Certificate of Completion (CCL) in Linux Associate program is designed to help prepare students for employment or to improve current professional skills. The program includes Linux operating system basics and management including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. This program helps prepare students for the Linux Professional Institute Certification (LPIC-1) and CompTIA Linux + certification exams. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Demonstrate the ability to install Linux. (CIS126DL)
2. Create, manage, and delete user accounts, groups and permissions. (CIS126DL, CIS238DL)
3. Apply troubleshooting techniques to prevent and address system issues. (CIS105, CIS126DL, CIS238DL)
4. Monitor system functions and security through the use of a variety of system tools and logs. (CIS105, CIS126DL, CIS238DL)
5. Install and maintain software packages. (CIS105, CIS126DL, CIS238DL)
6. Describe and navigate the Linux file system hierarchy. (CIS126DL)
7. Create partitions and file systems, and manipulate access to them. (CIS126DL, CIS238DL)
8. Demonstrate configuration and troubleshooting of Linux networking, including network protocols, client and server systems. (CIS126DL, CIS238DL)
9. Configure and troubleshoot Linux security, including permissions, access control lists (ACLs), and firewalls. (CIS126DL, CIS238DL)
10. Create and maintain shell scripts. (CIS126DL, CIS238DL)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces: CCL/5219 Linux Associate

Program Prerequisites

None

Required Courses

Credits: 6-9

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

CIS126DL Linux Operating System 3
+ CIS238DL Linux System Administration 3

MCCCD Governing Board Approval Date: November 26, 2019

Linux System Administration

Major: 5052N **Primary/Initiating College**: Estrella Mountain Community College
Catalog Year: 2024-2025 **Program Availability**: EM, GC, MC, PC, PV, SC, SM
Effective Term: 2025 Spring **Field of Interest**: Computer and Information Technology
Award: CCL **Instructional Council**: Computer Information Systems
Total Credits: 15-18 **GPA**: 2.00
CIP Code: 11.1001
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in Linux System Administration program is designed to help prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the workplace. The program includes a core of Linux classes including Linux operating system basics, system administration, network administration and network security. The courses in the program will help develop a student`s knowledge and skill level in preparation for employment or to improve current professional skills. Students who complete this program may seek employment in a variety of environments. The program helps prepare students for the Red Hat Certified System Administrator (RHCSA), Red Hat Certified Engineer (RHCE), and CompTIA Linux+ certification exams. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Automate system tasks utilizing Linux shell scripting. (CIS239DL, CIS275DL)
2. Demonstrate the ability to install Linux. (CIS126DL, CIS275DL)
3. Create, manage, and delete user accounts, groups and permissions. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
4. Apply troubleshooting techniques to prevent and address system issues. (CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS239DL, CIS275DL)
5. Monitor system functions and security through the use of a variety of system tools and logs. (CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
6. Install and maintain software packages. (CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS275DL)
7. Describe and navigate the Linux file system hierarchy. (CIS126DL, CIS126RH, CIS275DL)
8. Create partitions and file systems, and manipulate access to them. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
9. Demonstrate configuration and troubleshooting of Linux networking, including network protocols, client and server systems. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS275DL)
10. Configure and troubleshoot Linux security, including permissions, SELinux, access control lists (ACLs), digital certificates, and firewalls. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)

11. Configure automation services. (CIS240RH)
12. Create and maintain shell scripts. (CIS238RH, CIS240RH)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces: CCL/5225 Linux Networking Administration

Program Prerequisites

None

Required Courses

Credits: 15-18

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

Students should select from one of the following two specializations (Linux or Red Hat Enterprise Linux):

Specialization: Linux
CIS126DL Linux Operating System 3
+ CIS238DL Linux System Administration 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240DL Linux Network Administration 3
+ CIS275DL Linux Capstone 3

Specialization: Red Hat Enterprise Linux
CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240RH Red Hat System Administration III 3
+ CIS275DL Linux Capstone 3

MCCCD Governing Board Approval Date: December 10, 2019

Management

Major: 5729
Catalog Year: 2024-2025
Primary/Initiating College: Phoenix College
Program Availability: GC, MC, PC, PV, RS, SC, SM

Effective Term: 2020 Fall
Award: CCL
Total Credits: 18
CIP Code: 52.0201
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-1021.00 General and Operations Managers
11-2022.00 Sales Managers
11-3012.00 Administrative Services Managers
11-3050.00 Industrial Production Managers

Description: The Certificate of Completion (CCL) in Management is designed to provide skills for management careers. Students completing this program are better equipped to apply competencies needed for successful performance in management occupations such as manufacturing, wholesaling, retailing, and service industries. An Associate in Applied Science (AAS) in Management is also available.

Learning Outcomes

1. Use basic accounting principles to develop and maintain business financial records. (ACC111)
2. Solve basic mathematical problems including discounts, markups, interest, credit, payroll, simple income tax, depreciation, financial statement, and insurance. (ACC111)
3. Apply current technology to specific business tasks. (BPC110, CIS105)
4. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, MGT229, MGT251)
5. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS205)
6. Create and use effective oral, written, and visual business communication skills. (MGT229)
7. Evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting. (GBS151, MGT229, MGT251)
8. Apply basic principles and techniques of management to recruit, select, hire, train, supervise, and evaluate employees. (GBS151, MGT251)
9. Critically evaluate the alternatives faced in business decision making to select the most effective and efficient solution. (GBS151, MGT229, MGT251)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

ACC111 Accounting Principles I 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

GBS151 Introduction to Business 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
MGT229 Management and Leadership I 3

MGT251 Human Relations in Business 3

MCCCD Governing Board Approval Date: May 28, 2019

Marketing

Major: 5094
Catalog Year: 2024-2025
Effective Term: 2021 Spring
Award: CCL
Total Credits: 21
CIP Code: 52.1401
Primary/Initiating College: Phoenix College
Program Availability: GC, GW, MC, PC, PV, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
11-2011 Advertising and Promotions Managers
11-2022 Sales Managers
41-1011 First-Line Supervisors of Retail Sales Workers
41-3011 Advertising Sales Agents
41-4012 Sales Representatives, Wholesale and Manufacturing

Description: The Certificate of Completion (CCL) in Marketing program meets students` needs by providing skills necessary for marketing careers. The program is designed to develop competencies essential for success in Marketing. By completing this program, students will be better equipped for successful performance in a variety of marketing/management occupations including wholesaling, retailing, professional sales, and entrepreneurship. An Associate in Applied Science (AAS) in Marketing and Sales is available.

Learning Outcomes

1. Apply current technology to specific business tasks. (BPC110, CIS103, CIS105)
2. Apply effective oral, written, and visual business communication skills. (GBS120)
3. Demonstrate critical thinking through written and oral formats. (GBS120, GBS151)
4. Apply functions of modern business, including business principles, marketing, labor relations, and risk analysis to business situations. (GBS151)
5. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS151, MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)
6. Apply functions of modern business, including business principles, marketing, labor relations, and risk to business situations. (GBS151, MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)
7. Analyze marketing research to create marketing plans and forecasts. (GBS151, MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)
8. Create an ethically and socially responsible social media campaign. (MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)
9. Analyze business advertising scenarios in the context of target markets. (MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)
10. Evaluate customers, company, product and/or service, competitor and marketplace information in order to facilitate the selling process. (MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)
11. Apply techniques for negotiating, overcoming objections, and customer service activities. (MKT263, MKT267, MKT271, MKT101, MKT110, MKT268)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

GBS151 Introduction to Business 3
GBS120 Workplace Communication Skills 3
MKT263 Advertising Principles 3
MKT267 Principles of Sales 3
MKT271 Principles of Marketing 3

Restricted Electives

Credits: 3

Students should select from the following courses in consultation with Department Advisor.

CIS103 Introduction to Social Media 3
MKT101 Introduction to Public Relations 3
MKT110 Marketing and Social Networking 3
MKT268 Merchandising 3

MCCCD Governing Board Approval Date: June 25, 2019

Microsoft Office Professional

Major: 5132
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 16-22
CIP Code: 11.0601
Primary/Initiating College: Phoenix College
Program Availability: CG, EM, GC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
43-6014.00 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
43-9061.00 Office Clerks, General
43-9021.00 Data Entry Keyers

Description: The Certificate of Completion (CCL) in Microsoft Office Professional emphasizes training on word processing, spreadsheet, database, and presentation software for business purposes. This certificate provides students with the knowledge and skills requisite of various business settings. This certificate helps with initial preparation for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS). This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology and Certificate of Complete (CCL) in Microsoft Office Specialist.

Learning Outcomes

1. Discuss the role of computer information systems in developing business solutions. (CIS105)
2. Create simple macros using Visual Basic for Applications (VBA). (CIS105, CIS114DE)
3. Prepare business documents using Microsoft Word. (CIS105, CIS113DE)

4. Develop spreadsheets using Microsoft Excel. (CIS105, CIS114DE)
5. Create relational databases using Microsoft Access. (CIS105, CIS117DM)
6. Produce presentations using Microsoft PowerPoint. (CIS105, CIS118DB)
7. Manage files using the Windows Operating System. (BPC270, CIS105, CIS121AE, CIS122AE, MST150++)
8. Utilize Microsoft Project to manage business projects. (CIS124AA, CIS124BA, CIS224)
9. Integrate Microsoft applications to meet business needs. (BPC/OAS111AA, BPC270, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS118DB, CIS121AE, CIS122AE, CIS224, MST150++)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 16-22

BPC/OAS111AA Computer Keyboarding I (1) OR
Permission of Program Director (0) 0-1

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3

CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

MCCCD Governing Board Approval Date: December 10, 2019

Microsoft Office Specialist

Major: 5137
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 25-31
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

CIP Code: 11.0601
SOC Code: Upon completion of this certificate, students may pursue a career as:
43-6011.00 Executive Secretaries and Executive Administrative Assistants
43-6014.00 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
43-9061.00 Office Clerks, General
43-9021.00 Data Entry Keyers

Upon completion of the AAS degree, students may pursue a career as:
15-1232.00 Computer User Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts

Description: The Certificate of Completion (CCL) in Microsoft Office Specialist emphasizes advanced training on word processing, spreadsheet, and database software for business purposes. This certificate builds upon the knowledge and skills gained by the CCL in Microsoft Office Professional for use in various business settings. This certificate helps prepare students for the Microsoft Office Specialist (MOS) certification examinations. This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology.

Learning Outcomes

1. Discuss the role of computer information systems in developing business solutions. (CIS105)
2. Create macros using Visual Basic for Applications (VBA). (CIS105, CIS114DE, CIS213DE, CIS214DE, CIS217AM)
3. Prepare business documents in Microsoft Word using advanced word processing features. (CIS105, CIS113DE, CIS213DE)
4. Develop complex workbooks using Microsoft Excel. (CIS105, CIS114DE, CIS214DE)
5. Create advanced relational databases using Microsoft Access. (CIS105, CIS117DM, CIS217AM)
6. Produce presentations using Microsoft PowerPoint. (CIS105, CIS118DB)
7. Manage files using the Windows Operating System. (BPC270, CIS105, CIS121AE, CIS122AE, MST150++)
8. Utilize Microsoft Project to manage business projects. (CIS124AA, CIS124BA, CIS224)
9. Integrate Microsoft applications to meet multi-faceted business needs. (BPC/OAS111AA, BPC270, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS118DB, CIS121AE, CIS122AE, CIS213DE, CIS214DE, CIS217AM, CIS224, MST150++)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 25-31

The following courses are required and included in Microsoft Office Professional CCL

BPC/OAS111AA Computer Keyboarding I (1) OR
Permission of Program Director (0) 0-1

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3

CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

The following courses are required in Microsoft Office Specialist CCL

CIS213DE Advanced Microsoft Word: Word Processing 3
CIS214DE Advanced Excel Spreadsheet: Level II 3
CIS217AM Advanced Microsoft Access: Database Management 3

MCCCD Governing Board Approval Date: December 10, 2019

Music Industry Studies: Audio Production Technologies

Major: 5334
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 40
CIP Code: 10.0203
Primary/Initiating College: Phoenix College
Program Availability: GC, MC, PC, PV
Field of Interest: Visual and Performing Arts
Instructional Council: Music
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
27-4011.00 Audio and Video Equipment Technicians

Upon completion of an associate degree, students may pursue a career as:
27-4012.00 Broadcast Technicians

Upon completion of a bachelor`s degree, students may pursue a career as:
27-2012.05 Technical Directors/Managers

Description: The Certificate of Completion (CCL) in Music Industry Studies: Audio Production Technologies offers students hands-on study of audio engineering and related media fields. Students learn and apply the concepts and theories associated with music recording, live sound reinforcement, and sound design. The program is designed to give students foundational knowledge and experience essential in the field of audio production. An Associate in Applied Science (AAS) is also available.

Learning Outcomes

1. Demonstrate an understanding of the fundamentals of music and sound. (MTC101, MUC111, MUC191, MUC193, MUC195, MUC195AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC122)
2. Apply audio engineering and/or sound design techniques using current industry standard technologies. (MUC111, MUC191, MUC192, MUC193, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC281, MUC292, MUC295)
3. Demonstrate effective written, oral, visual, interpersonal and collaborative skills to build relationships and network with diverse clients, colleagues, and organizations. (MTC101, MUC109, MUC110, MUC145, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC296WA, MUC297AA, MUC298AA, MUC122, MUC222, MUC292, MUC295)
4. Employ basic computer literacy skills to general and audio-specific applications. (MUC111, MUC191, MUC192, MUC193, MUC281, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
5. Demonstrate the initiative and ability to adapt to new technologies. (MUC111, MUC191, MUC192, MUC193, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC297AA, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC281, MUC292, MUC295)
6. Demonstrate effective troubleshooting methods in a variety of contexts. (MUC111, MUC191, MUC192, MUC193, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC218, MUC296WA, MUC281, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
7. Demonstrate an understanding of professional ethics, relevant intellectual property laws, rights management, publishing, licensing, and contracts. (MUC109, MUC110, MUC145, MUC296WA, MUC297AA, MUC298AA)
8. Critically analyze media for their social, cultural, aesthetic, and historical significance. (MUC109, MUC110, MUC191, MUC192, MUC195, MUC195AA)
9. Using a fundamental understanding of scientific inquiry, solve problems within the discipline. (MUC111, MUC191, MUC192, MUC193, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC112, MUC122, MUC198, MUC218, MUC222, MUC289, MUC281, MUC292, MUC295)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 31

MTC101 Introduction to Music Theory 3
MUC109 Music Business: Content Creation and Copyright 3

MUC110 Music Business: Marketing and Monetization (3) OR
MUC145 Recording Studio Business Operations (3) 3

+ MUC111 Digital Audio Workstation I (DAW I) 3
MUC122 Sound Design I 3
MUC191 Electronic Music I 3

MUC195 Studio Music Recording I (3) OR
MUC195AA Studio Music Recording I (3) 3

+ MUC196 Studio Music Recording II (3) OR
+ MUC196AA Studio Music Recording II (3) 3

MUC197 Live Sound Reinforcement I 3

+ MUC218 Audio Mixing Techniques 3

+ MUC296WA Cooperative Education (1) OR
+ MUC297AA Audio Production Internship (1) OR
MUC298AA Special Projects (1) 1

Restricted Electives

Credits: 9

Students must select a total of nine (9) credits from the list below in consultation with an academic advisor.
NOTE: at least one (1) of the following courses must be completed: MUC281, MUC289, MUC292, or MUC295.
+ MUC112 Digital Audio Workstation II (DAW II) 3
+ MUC192 Electronic Music II 3
+ MUC193 Computer-Based Sound Synthesis 3
+ MUC198 Live Sound Reinforcement II 3
+ MUC222 Sound Design II 3
+ MUC281 Electronic Music III 3
+ MUC289 Live Sound Reinforcement III 3
+ MUC292 Sound Design III 3
+ MUC295 Studio Music Recording III 3

MCCCD Governing Board Approval Date: February 25, 2025

Non-Sworn Fire Service Professional

Major: 5486
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 18
CIP Code: 43.0203
SOC Code: Upon completion of this certificate, students may pursue a career as:
33-2011.01 Municipal Firefighters

Primary/Initiating College: Glendale Community College
Program Availability: GC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Non-Sworn Fire Service Professional program is designed for students who need basic preparation courses to pursue a non-sworn career as a fire service professional and/or more comprehensive information about life safety, fire hazards, and prevention. A unique feature of the program is that the instructors are professional fire service personnel including firefighters.

Learning Outcomes

1. Describe the chemical processes utilized in dealing with hazardous materials incidence. (FSC105)
2. Identify the chemical and physical properties of hazardous materials. (FSC105)
3. Analyze the problems concerning fire prevention techniques, procedures, regulations, code enforcement, and occupancy survey. (FSC106, FSC108, FSC208)

4. Explain the characteristics and behavior of fire and extinguishing agents. (FSC113)
5. Discuss fire suppression organization, basic fire fighting tactics, and public relations as affected by fire suppression. (FSC113)
6. Evaluate the methods of attacking, controlling, and extinguishing various types of fires. (FSC113)
7. Describe personal and practical skills needed to enhance customer service in the public sector. (FSC215)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

FSC105 Hazardous Materials Awareness and Operations 3
FSC106 Introduction to Fire Protection 3
FSC108 Fundamentals of Fire Prevention 3
FSC113 Introduction to Fire Suppression 3
+ FSC208 Firefighter Safety and Building Construction 3
FSC215 Customer Service in the Public Sector 3

MCCCD Governing Board Approval Date: February 25, 2020

Nurse Assisting

Major: 5963N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 2-4.5
CIP Code: 51.3902
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM, GC, GW, MC, PV, SC
Field of Interest: Health Sciences
Instructional Council: Nursing
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
31-1131.00 Nursing Assistants

Description: The Certificate of Completion (CCL) in Nurse Assisting prepares students for employment as a nurse assistant. The program combines classroom instruction with clinical laboratory practice and long-term care and/or acute care experiences. Students who complete the program are eligible to take a written and practical certification examination if desired to meet employment requirements to be a nurse assistant. Certification/licensing requirements are the exclusive responsibility of the Arizona State Board of Nursing.

The MCCCD Nurse Assisting program is approved by the Arizona State Board of Nursing.

Waiver of Licensure/Certification Guarantee: Admission or completion from the MCCCD Nurse Assisting program does not guarantee obtaining a license or certificate to practice as a nurse assistant. Licensure and certification requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college of school requirements for graduation.

Pursuant to A.R.S. §32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

All nurse assistant applicants for certification will be fingerprinted to permit the Department of Public Safety to obtain state and federal criminal history information. All applicants with a positive history are investigated. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-899-5150).

Health Declaration: It is essential that students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients` lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application.

Health and Safety Requirements for MCCCD Nurse Assisting Program:

1. Students must meet and maintain health and safety requirements throughout the program.
2. Admission to a Maricopa County Community College District health program requires that students be in compliance with the MCCCD Supplemental Background Check Policy. Evidence of a current Arizona Department of Public Safety Level One Fingerprint Clearance Card is required for program application.
3. Negative urine drug screen.

Grade Requirements: Student must obtain a C grade or better in all courses.

University Transfer Students: For students planning a university program: Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

THE NURSE ASSISTING PATHWAY

The nurse assisting pathway is designed to prepare students to complete the Nurse Assistant certification/licensure through the Arizona State Board of Nursing to practice in a health care agency as a nurse assistant. Completion of the Nurse Assistant program of study provides job ready skills as a nurse assistant.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Learning Outcomes

1. Safely perform nurse assisting skills to meet the needs of diverse populations. (NCE150, NUR158)
2. Perform therapeutic maintenance and preventative interventions to provide holistic nurse assistant care. (NCE150, NUR158)
3. Demonstrate effective communication skills while fostering mutual respect and shared decision making with patients, families and colleagues. (NCE150, NUR158)
4. Integrate technology to provide safe quality care and improve patient outcomes. (NCE150, NUR158)
5. Manage information confidentially, ethically, and effectively. (NCE150, NUR158)
6. Function effectively in the role and within the scope of the nurse assistant. (NCE150, NUR158)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Application and acceptance into the program, high school graduate or GED, and meet current health and safety course requirements.

Program Prerequisites

None

Required Courses

Credits: 2-4.5

+ NUR158 Nurse Assisting (4.5) OR
Advanced Placement course:
+ NCE150 Advanced Placement: Nurse Assisting (2) 2-4.5

MCCCD Governing Board Approval Date: December 10, 2024

Organizational Leadership

Major: 5731
Catalog Year: 2024-2025
Effective Term: 2020 Fall
Award: CCL
Total Credits: 18
CIP Code: 52.0213
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
11-1021.00 General and Operations Manager

Description: The Certificate of Completion (CCL) in Organizational Leadership is designed to prepare students with knowledge and skills needed in today`s changing workplace. The program provides leadership and communication skills and techniques for planning, organizing, leading and controlling business situations. This program also emphasizes procedures for effective resource allocation. The CCL in Organizational Leadership is fully embedded in an Associate in Applied Science (AAS) in Organizational Management.

Learning Outcomes

1. Create and use effective oral, written, and visual business communication skills. (GBS120)
2. Critically evaluate the alternatives faced in business decision making to select the most effective and efficient solution. (GBS110, GBS151, MGT101, MGT175, MGT229, MGT251, TQM240)
3. Recognize ethical, legal, and global dimensions in business practice and how business integrates social responsibility into operations/decision making. (BPC110, CIS105, GBS110, GBS151, MGT101, MGT175, MGT229, MGT251, TQM240)
4. Research, locate, and evaluate business information in order to support evidence-based decisions. (BPC110, CIS105, GBS110, GBS120, GBS151, GBS233, MGT101, MGT175, MGT229, MGT251, TQM240)
5. Use team collaboration to solve business problems. (BPC110, CIS105, GBS110, GBS151, MGT101, MGT229, MGT251)

6. Apply current technology to specific business tasks. (BPC110, CIS105)
7. Describe and evaluate organizational structures and the functions of planning, organizing, leading, and controlling in a business setting. (GBS151, MGT175, MGT101, MGT229, TQM240)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

GBS110 Human Relations in Business and Industry (3) OR
MGT251 Human Relations in Business (3) 3

GBS120 Workplace Communication Skills 3
GBS151 Introduction to Business 3

MGT175 Business Organization and Management (3) OR
TQM240 Project Management in Quality Organizations (3) 3

MGT101 Techniques of Supervision (3) OR
MGT229 Management and Leadership I (3) 3

MCCCD Governing Board Approval Date: April 23, 2019

Paramedicine

Major: 5990
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 44.5-45.5
CIP Code: 51.0904
SOC Code: Upon completion of this certificate, students may pursue a career as:
29-2041.00 Emergency Medical Technicians and Paramedics

Primary/Initiating College: Phoenix College
Program Availability: GC, MC, PC, PV
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Paramedicine is a nationally accredited program designed to prepare students to become Paramedics. This program is a formal education in such paramedicine topics as anatomy and physiology, pathophysiology, cardiology, pulmonary, pharmacology, pediatrics, geriatrics hematology, and toxicology. Paramedicine builds upon EMT education and includes paramedic scope of practice. Paramedicine is integrated with fire service, law enforcement, ground transport services, flight transport services, search and rescue, hospitals, clinical setting, community paramedicine, and EMS education. There is an Associate in Applied Science (AAS) in Paramedicine available.

Learning Outcomes

1. Maintain patient, public, personnel, and personal health, wellness and safety. (EMT101, PME201, PME202, PME203, PME204, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289)
2. Demonstrate personal behaviors consistent with professional standards. (EMT101, PME201, PME202, PME203, PME204, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289)
3. Communicate efficiently and effectively with members of diverse populations in a culturally responsive manner. (EMT101, PME201, PME202, PME203, PME205, PME206, PME240, PME250, PME245, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289)
4. Effectively function within a multi-disciplinary healthcare system, recognizing roles, responsibilities and scope of practice. (PME201, PME202, PME203, PME205, PME206, PME240, PME245, PME250, PME251, PME252, PME253, PME254, PME260, PME270, PME280, PME281, PME281AA, PME281AB, PME288, PME289)
5. Efficiently synthesize and evaluate multiple sources of information. (BIO160, EMT101, PME160, PME240, PME250, PME245, PME251, PME201, PME252, PME253, PME202, PME203, PME205, PME270, PME280, PME281, PME260, PME206, PME254, PME289, PME288)
6. Perform comprehensive patient assessment. (BIO160, EMT101, PME160, PME240, PME250, PME245, PME251, PME201, PME252, PME253, PME202, PME203, PME205, PME270, PME280, PME281, PME260, PME206, PME254, PME289, PME288)
7. Develop a working differential diagnosis using multiple sources of information. (BIO160, EMT101, PME160, PME240, PME250, PME245, PME251, PME201, PME252, PME253, PME202, PME203, PME205, PME270, PME280, PME281, PME260, PME206, PME254, PME289, PME288)
8. Make informed, autonomous decisions in both clinical and uncontrolled settings. (BIO160, PME160, PME240, PME250, PME245, PME251, PME201, PME252, PME253, PME202, PME203, PME205, PME270, PME280, PME281, PME260, PME206, PME254, PME289, PME288)
9. Guide and support the healthcare team, navigating interpersonal dynamics. (PME250, PME245, PME251, PME201, PME252, PME253, PME202, PME203, PME205, PME270, PME280, PME281, PME260, PME206, PME254, PME289, PME288)
10. Effectively manage patients. (EMT101, PME245, PME251, PME201, PME252, PME253, PME202, PME203, PME205, PME270, PME280, PME281, PME260, PME206, PME254, PME289, PME288)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Students must be current and in good standing with the Arizona Department of Health Services Bureau of Emergency Medical Services-Certified as an Emergency Medical Technician. EMT certification preparatory courses are available at Maricopa County Community Colleges. Contact an academic advisor for details.

Students must complete an application and selection process.

Program Prerequisites

None

Required Courses

Credits: 44.5-45.5

BIO160 Introduction to Human Anatomy and Physiology (4) OR
PME160 Emergency Medical Services Professionals: Anatomy and Physiology (3) 3-4

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers 0.5
+ PME201 Advanced Cardiac Life Support (ACLS) Initial Provider in Paramedicine 1
+ PME202 Pediatric Advanced Life Support (PALS) Initial Provider in Paramedicine 1
+ PME203 Pediatric Emergencies for Prehospital Professionals (PEPP) Initial Provider in Paramedicine 1
+ PME204 Neonatal Resuscitation Provider (NRP) in Paramedicine 0.5
+ PME205 Advanced Medical Life Support (AMLS) Initial Provider in Paramedicine 1
+ PME206 International Trauma Life Support (ITLS) Provider/Pre-Hospital Trauma Life Support (PHTLS) 1
+ PME240 Pharmacology in Paramedicine 3
+ PME245 Airway and Ventilatory Management in Paramedicine 3
+ PME250 Comprehensive Patient Assessment in Paramedicine 1
+ PME251 Medical Emergencies in Paramedicine I 4
+ PME252 Medical Emergencies in Paramedicine II 4
+ PME253 Medical Emergencies in Paramedicine III 4
+ PME254 Technical Operations in Paramedicine 2.5
+ PME260 Trauma Patient Management in Paramedicine 2
+ PME270 Immersive Total Patient Management Experience (ITPME) 2
+ PME280 Preparation for Paramedicine Practicum 1

+ PME281 Paramedicine Clinical Practicum: Comprehensive (2) OR
+ PME281AA Paramedicine Clinical Practicum: Phase I (1) AND
+ PME281AB Paramedicine Clinical Practicum: Phase II (1) 2

+ PME288 Paramedicine Comprehensive Field Internship Practicum 5
+ PME289 Preparation for Paramedic National Credentialing 2

MCCCD Governing Board Approval Date: April 22, 2025

Personal Training

Major: 5421
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL

Primary/Initiating College: Glendale Community College
Program Availability: CG, GC, MC, PV, SC, SM
Field of Interest: Health Sciences
Instructional Council: Exercise Science, Health and Physical Education, Recreation and Wellness

Total Credits: 18-18.5
GPA: 2.00
CIP Code: 31.0507
SOC Code: Upon completion of this certificate, students may pursue a career as:
39-9031.00 Exercise Trainers and Group Fitness Instructors

Description: The Certificate of Completion (CCL) in Personal Training is designed to prepare students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM), and the American Council on Exercise (ACE) personal trainer certifications. These certifications are generally required for employment in personal training positions and/or professional advancement within the fitness industry. The curriculum provides students with the foundational skills needed to design and implement fitness programs appropriate to clients' goals and aligned with current industry best

practices. A CCL in Personal Training: Advanced, an Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance, and an Associate in Arts (AA), Emphasis in Exercise Science are also available for students interested in continuing their studies in this field.

Learning Outcomes

1. Apply a foundational understanding of the relevant scientific concepts of physiology, biomechanics and psychology. (EXS101, EXS125, EXS146, EXS215, EXS217, FON100, FON241)
2. Locate and evaluate relevant scholarly literature. (EXS101, EXS146, EXS215, EXS217, FON100, FON241)
3. Conduct common, evidence-based assessments of health and human movement. (EMT101, EXS101, EXS125, EXS146, EXS215, EXS217, WED106)
4. Design basic, evidence-based physical activity programs for healthy and athletic populations. (EXS101, EXS125, EXS146, EXS215, EXS217 FON100, FON241, PED101ST, PED101RT)
5. Implement basic, evidence-based physical activity programs for healthy and athletic populations. (EXS101, EXS125, EXS146, EXS215, EXS217, FON100, FON241, PED101ST, PED101RT)
6. Apply a fundamental understanding of theories of motivation and behavior change to encourage exercise adoption and adherence. (EXS101, EXS215, EXS217)
7. Adapt instructional techniques to ensure client safety and goal attainment. (EXS146, EXS215, EXS217, PED101ST, PED101RT)
8. Apply industry standards of care to mitigate risk and ensure the safety of clients. (EMT101, EXS146, EXS215, EXS217, WED106)
9. Demonstrate communication behaviors appropriate to the field. (EMT101, EXS101, EXS146, EXS215, EXS217, WED106)
10. Demonstrate industry-accepted professional, ethical, and business standards. (EMT101, EXS101, EXS146, EXS215, EXS217, PED101ST, PED101RT, WED106)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 17-17.5

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR
WED106 Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR
Current CPR/AED certification (0) 0-0.5

EXS101 Introduction to Exercise Science 3
+ EXS125 Introduction to Exercise Physiology 3
+ EXS146 Introduction to Exercise Testing 1
+ EXS215 Resistance Training and Recovery Techniques 3
+ EXS217 Cardiorespiratory and Flexibility Training 3

FON100 Introductory Nutrition (3) OR
FON241 Principles of Human Nutrition (3) 3

PED101ST Strength Training (1) OR
PED101RT Resistance Training for Improved Sports Performance (1) 1

Restricted Electives

Credits: 1

Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.

EXS+++++ Any EXS Exercise Science course 1
FON+++++ Any FON Food and Nutrition course 1
HES+++++ Any HES Health Science course 1
PED+++++ Any PED Physical Education course 1
IFS110 Critical Research for College Success 1

MCCCD Governing Board Approval Date: November 22, 2022

Personal Training: Advanced

Major: 5445
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 30-30.5
CIP Code: 31.0507
SOC Code: Upon completion of this certificate, students may pursue a career as:
39-9031.00 Exercise Trainers and Group Fitness Instructors

Primary/Initiating College: Glendale Community College
Program Availability: CG, GC, MC, PV, SC, SM
Field of Interest: Health Sciences
Instructional Council: Exercise Science, Health & Physical Education, Recreation & Wellness
GPA: 2.00

Description: The Certificate of Completion (CCL) in Personal Training: Advanced is designed to prepare students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM), and the American Council on Exercise (ACE) personal trainer certifications. These certifications are generally required for employment in personal training positions and/or professional advancement within the fitness industry. The curriculum is designed to prepare students for employment in positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. The curriculum includes the foundational courses required for the CCL in Personal Training coupled with advanced hands-on courses that foster the development of critical thinking and leadership skills important for developing, implementing and leading exercise programs. An Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance and an Associate in Arts (AA), Emphasis in Exercise Science are also available for students interested in continuing their studies in this field.

Learning Outcomes

1. Apply a foundational understanding of the relevant scientific concepts of physiology, biomechanics and psychology. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, FON100, FON241)
2. Locate and evaluate relevant scholarly literature. (EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, FON100, FON241)
3. Conduct advanced, evidence-based assessments of health and human movement. (EMT101, EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, WED106)
4. Design evidence-based physical activity programs tailored to client goals and needs. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, FON100, FON241, PED101ST, PED101RT)
5. Implement evidence-based physical activity programs tailored to client goals and needs. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, FON100, FON241, PED101ST, PED101RT)

6. Apply theories of motivation and behavior change to develop and implement basic strategies for improving exercise adoption and adherence. (EXS101, EXS215, EXS217, EXS257, EXS270++)
7. Adapt instructional techniques to ensure client safety and goal attainment. (EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, PED101ST, PED101RT, PED101++)
8. Apply industry standards of care to mitigate risk and ensure the safety of clients. (EMT101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, WED106)
9. Demonstrate communication behaviors appropriate to the field. (EMT101, EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, WED106)
10. Demonstrate industry-accepted professional, ethical, and business standards. (EMT101, EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, PED101ST, PED101RT, PED101++, WED106)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 29-29.5

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR
WED106 Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR
Current CPR/AED certification (0) 0-0.5

EXS101 Introduction to Exercise Science 3
+ EXS125 Introduction to Exercise Physiology 3
+ EXS146 Introduction to Exercise Testing 1
+ EXS215 Resistance Training and Recovery Techniques 3
+ EXS217 Cardiorespiratory and Flexibility Training 3
+ EXS246 Advanced Exercise Testing 2
+ EXS255 Program Design: Muscular Fitness and Performance 3
+ EXS257 Program Design: Cardiorespiratory Fitness 3

Student must complete three (3) credits from the following EXS internship course options:
+ EXS270 Exercise Science Internship (3) OR
+ EXS270AA Exercise Science Internship (1) AND
+ EXS270AB Exercise Science Internship (2) 3

FON100 Introductory Nutrition (3) OR
FON241 Principles of Human Nutrition (3) 3

PED101RT Resistance Training for Improved Sports Performance (1) OR
PED101ST Strength Training (1) 1

PED101BC Boot Camp (1) OR
PED101BS Body Sculpting (1) OR
PED101CY Cycling - Indoor (1) OR
PED101GF Group Fitness/Aerobics (1) OR
PED101KB Kickboxing (1) OR
PED101LD Latin Dancing (1) OR

PED101PC Physical Conditioning (1) OR
PED101PS Pilates (1) OR
PED101SR Stretch and Relaxation (1) OR
PED101TC Tai Chi (1) OR
PED101TX Suspension Training (1) OR
PED101YG Gentle Yoga (1) OR
PED101YH Hatha Yoga (1) OR
PED101YO Yoga (1) OR
PED101YP Power Yoga (1) OR
PED101YR Restorative Yoga (1) OR
PED101ZU Zumba Fitness (1) 1

Restricted Electives

Credits: 1

Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.

EXS+++++ Any EXS Exercise Science course (1)
FON+++++ Any FON Food and Nutrition course (1)
HES+++++ Any HES Health Science course (1)
PED+++++ Any PED Physical Education course (1)
IFS110 Critical Research for College Success (1)

MCCCD Governing Board Approval Date: February 25, 2025

Practical Nursing

Major: 5957
Catalog Year: 2024-2025
Effective Term: 2021 Spring
Award: CCL
Total Credits: 35-45
CIP Code: 51.3901
Primary/Initiating College: Gateway Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, SC
Field of Interest: Health Sciences
Instructional Council: Nursing Program
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
29-2061.00 Licensed Practical and Licensed Vocational Nurses

Description: The Certificate of Completion (CCL) in Practical Nursing Program is available at seven of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. Practical Nursing Program graduates are eligible to apply for the national exam for the practical nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Certificate of Completion Practical Nursing Program is approved by the Arizona State Board of Nursing.

Program offerings: This program is offered at the following sites:
Chandler Gilbert Community College
Estrella Mountain Community College
GateWay Community College
Glendale Community College
Mesa Community College

Paradise Valley Community College
Phoenix College
Scottsdale Community College

Waiver of Licensure/Certification Guarantee: Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. For a Department of Public Safety Fingerprint Clearance Card application, contact MCCCD Healthcare/Nursing Advisor. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-771-7800).

Health Declaration: It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients` lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give careful consideration to the mental and physical demands of the program prior to making application. All must provide documentation of compliance with all health and safety requirements required to protect patient safety. Only students in compliance are permitted to enroll in nursing courses. Students will meet these requirements by providing the required documentation for the Health/Safety Requirements Documentation Checklist and the signed Health Declaration Form.

Health and Safety Requirements for the Nursing Program:
1. Students must submit a Health and Safety Documentation Checklist verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.
4. Admission to an Allied Health program requires that students be in compliance with the Maricopa County Community College District Supplemental Background Check policy. Program applications will not be accepted without a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Upon conditional program admission, the student must comply with all requirements of the current MCCCD background check policy.

University Transfer Students: Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at the Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

PRACTICAL NURSE EXIT OPTION
Following completion of the practical nurse level program of study, the student is eligible to apply for licensure as a practical nurse. Licensed Practical Nurses (LPN) may be employed in acute, long-term, and community-

based health care settings under the direction of a registered nurse. Practical Nurses function within their legal scope of practice and use professional standards of care in illness care and health promotion activities for clients and families across the life span.

The Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; (404-975-5000); email: info@acennursing.org.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Learning Outcomes

1. Define the most frequently used medical, diagnostic, clinical procedure, surgical, drug, laboratory, and pathological terms related to the human body. (BIO202)
2. Create an environment utilizing therapeutic communication and caring to achieve desired client outcomes. (NUR152, NUR172, NUR191)
3. Demonstrate effective communication skills both verbally, behaviorally, and in writing with health team members, clients and their families. (NUR152, NUR172, NUR191)
4. Provide culturally competent care to a diverse population. (NUR152, NUR172, NUR191)
5. Demonstrate legal and ethical behaviors in all nursing activities. (NUR152, NUR172, NUR191)
6. Apply the nursing process to provide safe client care. (NUR152, NUR172, NUR191)
7. Apply scientific principles and clinical reasoning to safely provide evidence-based clinically competent care within the current healthcare environment. (NUR152, NUR172, NUR191)
8. Demonstrate accountability for quality improvement in the health care system. (NUR152, NUR172, NUR191)
9. Integrate technology to assist in providing safe, effective client care. (NUR152, NUR172, NUR191)
10. Manage information confidentially and effectively to ensure positive client outcomes. (NUR152, NUR172, NUR191)
11. Provide nursing care individuals and families across the lifespan that addresses the needs of diverse clients by engaging them in their healthcare decisions. (NUR191)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Course Fee Information: Please see class schedule for information regarding course fees.

MaricopaNursing is aligned with Nurse of the Future Competencies: Patient-Centered Care, Professionalism, Leadership, Systems-Based Practice, Informatics and Technology, Communication, Teamwork and Collaboration, Safety, Quality Improvement, and Evidence-Based Practice. These competencies focus on key stakeholders of healthcare clients, colleagues and communities. Demonstration of the competencies will signify preparation for successful transition into nursing practice and further professional development.

Admission Criteria

High School diploma or GED is required for the Certificate of Completion in Practical Nursing. Applicants must signify that they meet this requirement by providing high school diploma/transcripts or GED completion OR by signing the nursing application page containing the `Declaration of High School Graduation or GED completion`. In some instances, high school diploma/transcripts or proof of GED completion may be required.

Formal application and admission to the program is required; all program prerequisites must be completed prior to submission.
A passing score on a nursing program admission test is required to complete an application.

The Nursing Program Chair reserves the right to deny acceptance of an admission application if the applicant was previously dismissed for issues relating to academic integrity, unsafe patient care, and/or two (2) or more failures from any nursing program.

All applicants holding or receiving a certificate as a Nursing Assistant and/or license as a Practical Nurse must remain in good standing with the Board of Nursing. Once enrolled, students receiving any disciplinary actions against their certificate or license must notify the Nursing Program Chair within five (5) school days. The Nursing Program Chair reserves the right to restrict the student`s participation in clinical experiences and involvement in patient care until the certificate and/or license is valid and unrestricted.

Program Prerequisites

Credits: 10-20

The credit-hour range is subject to change depending on the student`s educational experience.

+ BIO156 Introductory Biology for Allied Health (4) OR
+ BIO181 General Biology (Majors) I (4) OR
One year of high school biology 0-4

+ BIO201 Human Anatomy and Physiology I 4

+ CHM130 Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1) OR
+ CHM130AA Fundamental Chemistry with Lab (4) OR
One year of high school chemistry 0-4

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
Satisfactory completion of higher level mathematics course 3-5

Students that are admitted into the MaricopaNursing Program for Fall 2015 and Spring 2016, AND completed MAT120, MAT121, or MAT122 prior to Fall 2015 as an admission requirement, may complete the program without completing MAT140, MAT141, or MAT142 as a graduation requirement, by waiver of the program director.

Required Courses

Credits: 25

+ BIO202 Human Anatomy and Physiology II 4
+ NUR152 Nursing Theory and Science I 9
+ NUR172 Nursing Theory and Science II 9
+ NUR191 Practical Nursing Transition 3

MCCCD Governing Board Approval Date: November 20, 2018

Programming and Systems Analysis Level I

Major: 5048
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 24
CIP Code: 11.0501
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1211.00 Computer Systems Analyst.

Description: The Certificate of Completion (CCL) in Programming and Systems Analysis Level I provides an exploration of different computer language and technical skills. The CCL includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics. A Certificate of Completion (CCL) in Programming and Systems Analysis Level II, Certificate of Completion (CCL) in iOS App Development and an Associate in Applied Science (AAS) in Programming and Systems Analysis are also available.

Learning Outcomes

1. Analyze business requirements using critical thinking skills. (CIS105, CIS133DA, CIS150, CIS15AB, CIS166++, GBS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++)
2. Use computer systems and networks in a responsible and ethical manner. (CIS105, GBS151)
3. Design, develop and implement database solutions to effectively manage data. (CIS119DO, CIS276DA, CIS276DB)
4. Develop and implement well-structured computer programs that solve business problems. (CIS150, CIS15AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++)
5. Utilize the software development lifecycle for application development. (CIS150, CIS15AB, CIS166++, CIS156, CIS159, CIS162++, CIS163AA, CIS165++)
6. Test and debug computer programs. (CIS150, CIS15AB, CIS159, CIS162++, CIS163AA, CIS165++)
7. Leverage the functions and architecture of an operating system to achieve business objectives. (CIS105, CIS126DL, CIS126RH, MST150++)
8. Communicate professionally in formal and informal situations to diverse audiences. (CIS133DA, CIS166++)
9. Write effective documentation according to industry standards.(CIS133DA, CIS150, CIS15AB, CIS166++, CIS156, CIS159, CIS162++, CIS163AA, CIS165++)
10. Collaborate effectively with diverse teams. (GBS151)
11. Apply an understanding of characteristics and principles of business processes to software application development. (GBS151, CIS133DA, CIS150, CIS15AB, CIS166++, CIS156, CIS159, CIS162++, CIS163AA, CIS165++)
12. Design web-based applications using client-side and server-side scripting. (CIS133DA, CIS166++)
13. Develop a project scope while considering factors such as customer requirements, project costs, return on investment, and internal/external business objectives. (GBS151, CIS133DA, CIS150, CIS15AB, CIS166++, CIS156, CIS159, CIS162++, CIS163AA, CIS165++)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consultation with an Academic Advisor is recommended for course selection.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 24

CIS105 Survey of Computer Information Systems 3

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
+ MST150++ Any Microsoft Windows course (3) 3

CIS133DA Internet/Web Development Level I 3

+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) 3

+ CIS166++ Any Web Scripting course(s) 3
GBS151 Introduction to Business 3

Select a programming language from below that best aligns with academic and professional goals (1 course for a total of 3 credits) in one of the following areas:
+ CIS156 Python Programming: Level I (3) OR
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) OR
+ CIS165++ Any Mobile Application Development course (3) 3

MCCCD Governing Board Approval Date: April 27, 2021

Programming and Systems Analysis Level II

Major: 5962
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 36-38
CIP Code: 11.0501
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1211.00 Computer Systems Analyst.

Description: The Certificate of Completion (CCL) in Programming and Systems Analysis Level II provides an in-depth exploration of different computer language and technical skills. This CCL includes, but is not limited to the following: local area networks, team roles, and dynamics. A Certificate of Completion (CCL) in iOS Application Development and an Associate in Applied Science (AAS) in Programming and Systems Analysis are available.

Learning Outcomes

1. Analyze business requirements using critical thinking skills. (CIS105, CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225AB, CIS250, CIS251, CIS259, CIS262++, CIS263AA, CIS265, GBS151, GBS211)
2. Use computer systems and networks in a responsible and ethical manner. (CIS105, CIS190, CIS225AB, CIS250, CNT140AB, GBS151, MST140++)
3. Design, develop and implement database solutions to effectively manage data. (CIS119DO, CIS276++)
4. Develop and implement well-structured computer programs that solve business problems. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS251, CIS259, CIS262++, CIS263AA, CIS265)
5. Utilize the software development lifecycle for application development. (CIS150++, CIS151, CIS166++, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS225AB, CIS250, CIS251, CIS259, CIS262++, CIS263AA, CIS265)
6. Test and debug computer programs. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS251, CIS259, CIS262++, CIS263AA, CIS265)
7. Leverage the functions and architecture of an operating system to achieve business objectives. (CIS105, CIS126DL, CIS126RH, CIS165++, CIS265. MST150++,)
8. Communicate professionally in formal and informal situations to diverse audiences. (CIS133DA, CIS166++, CIS225AB, CIS250, GBS211)
9. Write effective documentation according to industry standards. (CIS133DA, CIS150++, CIS151, CIS166++, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS225AB, CIS250, CIS251, CIS259, CIS262++, CIS263AA, CIS265)
10. Collaborate effectively with diverse teams. (GBS151)
11. Apply an understanding of characteristics and principles of business processes to software application development. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS224, CIS225AB, CIS250, CIS251, CIS259, CIS262++, CIS263AA, CIS265, GBS151)
12. Design web-based applications using client-side and server-side scripting. (CIS133DA, CIS166++, CIS262++ CIS263AA)
13. Develop a project scope while considering factors such as customer requirements, project costs, return on investment, and internal/external business objectives. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS224, CIS225AB, CIS250, CIS251, CIS259, CIS262++, CIS263AA, CIS265, CIS267, GBS211)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Consultation with an Academic Advisor is recommended for course selection.

Program Prerequisites

None

Required Courses

Credits: 33-34

The following courses are required and included in CCL Programming and Systems Analysis Level I

CIS105 Survey of Computer Information Systems 3

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
+ MST150++ Any Microsoft Windows course (3) 3

CIS133DA Internet/Web Development Level I 3

+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) 3

+ CIS156 Python Programming: Level I (3) OR
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162++ Any C Programming: Level I course (3) OR
+ CIS163AA Java Programming: Level I (3) OR
+ CIS165++ Any Mobile Application Development course (3) 3

+ CIS166++ Any Web Scripting course(s) 3
GBS151 Introduction to Business 3

The following courses are required for CCL Programming and Systems Level II

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) OR
+ MST140 Microsoft Networking Essentials (3) 3-4

+ CIS225AB Object-Oriented Analysis and Design (3) OR
+ CIS250 Management of Information Systems (3) 3

Select a programming language from below that best aligns with academic and professional goals (1 course for a total of 3 credits) in one of the following areas:

+ CIS256 Python Programming: Level II (3) OR
+ CIS259 Visual Basic Programming II (3) OR
+ CIS262++ Any C Programming: Level II course (3) OR
+ CIS263AA Java Programming: Level II (3) OR
+ CIS265 Advanced iOS Application Development (3) 3

Restricted Electives

Credits: 3-4

Select one of the courses below that best aligns with academic and professional goals for a total of 3-4 credits. Students may not choose courses they have taken from the required courses area.

+ CIS151 Computer Game Development-Level I 3
+ CIS156 Python Programming: Level I 3
+ CIS159 Visual Basic Programming I 3
+ CIS162++ Any C Programming: Level I course 3
+ CIS163AA Java Programming: Level I 3
+ CIS165++ Any Mobile Application Development course 3
CIS224 Project Management Microsoft Project for Windows 3
+ CIS251 Computer Game Development-Level II 3
+ CIS256 Python Programming: Level II 3
+ CIS259 Visual Basic Programming II 3
+ CIS262++ Any C Programming: Level II course 3

+ CIS263AA Java Programming: Level II 3
+ CIS265 Advanced iOS Application Development 3
+ CIS267 Pega System Architect Essentials 4
GBS211 Legal, Ethical and Regulatory Issues of the Internet Studies 3

MCCCD Governing Board Approval Date: February 28, 2023

Real Estate: Prelicense

Major: 5139N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 6.5
CIP Code: 52.1501
Primary/Initiating College: Rio Salado College
Program Availability: GC, MC, RS, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
41-9022.00 Real Estate Sales Agent

Description: The Certificate of Completion (CCL) in Real Estate: Prelicense introduces students to the real estate profession. This program is designed to prepare students to meet the requirements to take the Arizona State Real Estate Salesperson`s Exam. Emphasis will be placed on license laws, real and personal property, financing, purchasing, selling, renting, legal descriptions, rights and interests in property, ownership, contracts, real estate terminology and economics, investing in real estate, foreclosure, land use, and evaluation.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Learning Outcomes

1. Demonstrate knowledge of national and Arizona specific real estate laws, principles, and practices. (REA179, REA180, REA201)
2. Apply effective communication skills in order to collaborate with a diverse population. (REA179, REA180, REA201)
3. Utilize research and critical thinking skills to manage real estate transactions. (REA179, REA180, REA201)
4. Demonstrate successful marketing techniques. (REA179, REA180, REA201)
5. Prepare and negotiate purchase contracts. (REA290AH)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 6.5

REA179 Real Estate Principles I (3) AND
+ REA180 Real Estate Principles II (3) OR
REA201 Real Estate Principles I and II (6) 6

REA290AH Real Estate Seminar: Contract Writing 0.5

MCCCD Governing Board Approval Date: April 27, 2021

Red Hat Linux Administrator

Major: 5049N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 6-9
CIP Code: 11.1001
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM, GC, GW, MC, PC, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career in the following job fields:
15-1211.00 Computer Systems Analysts
15-1231.00 Computer Network Support Specialists

Upon completion of an associate degree, students may pursue a career in the following job fields:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators

Description: The Certificate of Completion (CCL) in Red Hat Linux Administrator program is designed to help prepare students for employment or to improve current professional skills. The program includes Red Hat Enterprise Linux system basics and management including sophisticated manipulation of file structures, backup systems, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, and system resource control. This program helps prepare students for the Red Hat Certified System Administrator (RHCSA) certification exam. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Create, manage, and delete user accounts, groups and permissions. (CIS126RH, CIS238RH)
2. Apply troubleshooting techniques to prevent and address system issues. (CIS105, CIS126RH, CIS238RH)
3. Monitor system functions and security through the use of a variety of system tools and logs. (CIS105, CIS126RH, CIS238RH)
4. Install and maintain software packages. (CIS105, CIS126RH, CIS238RH)
5. Describe and navigate the Linux file system hierarchy. (CIS126RH)
6. Create partitions and file systems, and manipulate access to them. (CIS126RH, CIS238RH)
7. Demonstrate configuration and troubleshooting of Linux networking, including network protocols, client and server systems. (CIS126RH, CIS238RH)
8. Configure and troubleshoot Linux security, including permissions, SELinux, access control lists (ACLs), and firewalls. (CIS126RH, CIS238RH)
9. Create and maintain shell scripts. (CIS238RH)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 6-9

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3

MCCCD Governing Board Approval Date: November 26, 2019

Red Hat Linux Engineer

Major: 5050N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 9-12
CIP Code: 11.1001
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM, GC, GW, MC, PC, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1231.00 Computer Network Support Specialists
15-1299.08 Computer Systems Engineers/Architects

Upon completion of an associate degree, students may pursue a career as:
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators

Description: The Certificate of Completion (CCL) in Red Hat Linux Engineer program is designed to help prepare students for employment or to improve current professional skills. The program includes in depth Red Hat Enterprise Linux system networking including integrating Linux servers and workstations into a network environment with multi-platform network operating systems with a variety of open-standard and proprietary protocols. This program helps prepare students for the Red Hat Certified System Administrator (RHCSA) and Red Hat Certified Engineer (RHCE) certification exams. Students who complete this program may seek employment

in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Create, manage, and delete user accounts, groups and permissions. (CIS126RH, CIS238RH, CIS240RH)
2. Apply troubleshooting techniques to prevent and address system issues. (CIS105, CIS126RH, CIS238RH)
3. Monitor system functions and security through the use of a variety of system tools and logs. (CIS105, CIS126RH, CIS238RH, CIS240RH)
4. Install and maintain software packages. (CIS105, CIS126RH, CIS238RH)
5. Describe and navigate the Linux file system hierarchy. (CIS126RH)
6. Create partitions and file systems, and manipulate access to them. (CIS126RH, CIS238RH, CIS240RH)
7. Demonstrate configuration and troubleshooting of Linux networking, including network protocols, client and server systems. (CIS126RH, CIS238RH)
8. Configure and troubleshoot Linux security, including permissions, SELinux, access control lists (ACLs), digital certificates, and firewalls. (CIS126RH, CIS238RH, CIS240RH)
9. Configure automation services. (CIS240RH)
10. Create and maintain shell scripts. (CIS238RH, CIS240RH)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 9-12

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3
+ CIS240RH Red Hat System Administration III 3

MCCCD Governing Board Approval Date: December 10, 2019

Retail Management

Major: 5286 **Primary/Initiating College**: South Mountain Community College

Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 24
CIP Code: 52.0212
Program Availability: EM, GC, GW, PC, RS, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
41-1011.00 First Line Supervisor of Retail Sales
11-2021.00 Marketing Managers
11-2022.00 Sales Managers

Description: The Certificate of Completion (CCL) in Retail Management is designed to prepare individuals working in the retail industry, and related fields, for the industry training needs in supervision and management, marketing, financial management, and business planning. The curriculum encompasses several business essentials and also emphasizes the skill sets needed for effective management and communication in the work environment. An Associate in Applied Science (AAS) in Retail Management is also available.

Learning Outcomes

1. Demonstrate skills in leading, negotiating, and working in harmony with others in a business setting. (MGT101, MGT229, MGT251)
2. Apply fundamental concepts to perform basic computing skills and technology operations. (BPC110, CIS105)
3. Demonstrate communication principles and critical thinking through written and oral formats. (COM100)
4. Evaluate various leadership styles and management techniques and explain their use in contemporary business settings. (MGT101, MGT229, MGT251)
5. Apply marketing principles to the development of a marketing strategy. (MKT271)
6. Evaluate current trends in human resource management and human resource needs to develop a human resource plan. (MGT251, MGT276)
7. Interpret and analyze financial information and financial performance measures to make business decisions. (ACC111, ACC211)
8. Evaluate merchandising, financial planning, and strategy in the industry to make business decisions. (MGT180)
9. Create and present a strategic plan for a business, including financial strategy and financial performance measures. (MGT180)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 24

ACC111 Accounting Principles I (3) OR
ACC211 Financial Accounting (3) 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

COM100 Introduction to Human Communication 3

MGT101 Techniques of Supervision (3) OR
MGT229 Management and Leadership I (3) 3

MGT251 Human Relations in Business 3
MGT180 Retail Management 3
MGT276 Human Resources Management 3
MKT271 Principles of Marketing 3

MCCCD Governing Board Approval Date: June 22, 2021

Small Business Management Level I

Major: 5153N
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 10-12
CIP Code: 52.0703
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG, EM, GC, PC, RS
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
47-4011.01 Energy Auditors
13-1199.02 Security Management Specialists
13-1041.08 Customs Brokers
13-1199.04 Business Continuity Planners
13-1199.05 Sustainability Specialists
13-1199.06 Online Merchants

Description: The Certificate of Completion (CCL) in Small Business Management Level I program is designed to meet the needs of individuals who wish to own and/or manage a small business. Prepares students to acquire the skills, tools and knowledge necessary for successful start-up and operations of a business.

Learning Outcomes

1. Prepare a business plan and budget to develop a comprehensive action, operations, and strategic plans. (EPS195, MGT253, SBS200, SBS216)
2. Apply basic accounting, finance, and marketing principles in a small business environment. (MKT271, MGT253, SBS202, SBS203, SBS204, SBS220, SBS230)
3. Create and use effective oral, written, and visual business communication skills. (MKT271, MGT253, SBS200, SBS204, SBS213, SBS214, SBS220)
4. Describe effective staff planning, personnel cost control, and discipline methods. (EPS195, MGT253, SBS200, SBS213, SBS216)
5. Apply problem-solving processes to problems in small business daily operations. (EPS195, MGT253, SBS200, SBS213, SBS216)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 10-12

EPS195 Business Start-Up and Planning (2) OR
+ SBS216 Planning for a Small Business (2) OR
MGT253 Owning and Operating a Small Business (3) 2-3

SBS200 Small Business Operations 2

SBS202 Small Business Bookkeeping and Tax Preparation (1) AND
SBS203 Financing and Cash Management for a Small Business (1) OR
SBS230 Financial and Tax Management for Small Business (2) 2

SBS204 Small Business Marketing and Advertising (2) OR
SBS220 Internet Marketing for Small Business (2) OR
MKT271 Principles of Marketing (3) 2-3

SBS213 Hiring and Managing Employees 1
SBS214 Small Business Customer Relations 1

MCCCD Governing Board Approval Date: May 28, 2019

Small Business Management II

Major: 5978
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 16-18
CIP Code: 52.0703
Primary/Initiating College: Glendale Community College
Program Availability: GC, GW, PC, RS
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
47-4011.01 Energy Auditors
13-1199.02 Security Management Specialists
13-1041.08 Customs Brokers
13-1199.04 Business Continuity Planners
13-1199.05 Sustainability Specialists
13-1199.06 Online Merchants

Description: The Certificate of Completion (CCL) in Small Business Management Level II program is designed to focus on aspects critical to a specific individual`s small business. Prepares students to acquire additional skills, tools and knowledge necessary for successful start-up and operations of a business. A Certificate of Completion (CCL) in Small Business Management Level I is also available and fully embedded in this program.

Learning Outcomes

1. Prepare a business plan and budget to develop a comprehensive action, operations, and strategic plans. (MGT253, SBS200, EPS150, EPS195, SBS216, SBS217)
2. Apply basic accounting, finance, and marketing principles in a small business environment. (MKT271, MGT253, SBS202, SBS203, SBS204, SBS220, SBS221 SBS230)

3. Create and use effective oral, written, and visual business communication skills. (MKT271, SBS200, SBS204, SBS213, SBS214, SBS220, SBS221)
4. Describe effective staff planning, personnel cost control, and discipline methods. (EPS195, MGT253, SBS200, SBS213, SBS216)
5. Apply problem-solving processes to problems in small business daily operations. (EPS195, MGT253, EPS150, SBS200, SBS213, SBS216, SBS217)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 10-12

EPS195 Business Start-Up and Planning (2) OR
+ SBS216 Planning for a Small Business (2) OR
MGT253 Owning and Operating a Small Business (3) 2-3

SBS200 Small Business Operations 2

SBS202 Small Business Bookkeeping and Tax Preparation (1) AND
SBS203 Financing and Cash Management for a Small Business (1) OR
SBS230 Financial and Tax Management for Small Business (2) 2

SBS204 Small Business Marketing and Advertising (2) OR
SBS220 Internet Marketing for Small Business (2) OR
MKT271 Principles of Marketing (3) 2-3

SBS213 Hiring and Managing Employees 1
SBS214 Small Business Customer Relations 1

Restricted Electives

Credits: 6

Choose 6 credits from the restricted electives below. Courses cannot be shared with Required Courses.

EPS150 Introduction to Entrepreneurship 3
EPS195 Business Start-Up and Planning 2
MGT253 Owning and Operating a Small Business 3
MKT271 Principles of Marketing 3
SBS202 Small Business Bookkeeping and Tax Preparation 1
SBS203 Financing and Cash Management For a Small Business 1
SBS204 Small Business Marketing and Advertising 2
+ SBS216 Planning for a Small Business 2
SBS217 Starting/Managing a Home Business 1
SBS220 Internet Marketing for Small Business 2
SBS221 Social Media Marketing for Small Business 2
SBS230 Financial and Tax Management for Small Business 2

MCCCD Governing Board Approval Date: May 28, 2019

Social Media Marketing

Major: 5830
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 17-18
CIP Code: 52.1402
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, EM, GC, MC, PC, PV, SC, SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
13-1161.00 Market Research Analyst and Marketing Specialists

Description: The Certificate of Completion (CCL) in Social Media Marketing is designed to provide useful skills important in a variety of strategic marketing areas, e.g., social media, digital communications, integrated marketing, media relations, and brand management. An Associate in Applied Science (AAS) in Marketing and Sales is also available.

Learning Outcomes

1. Apply current technology to specific business tasks. (CIS103)
2. Apply effective oral, written, and visual business communication skills. (GBS120)
3. Analyze marketing research to create marketing plans and forecasts. (MKT101, MKT110, MKT271)
4. Create an ethically and socially responsible social media campaign. (MKT101, MKT110, MKT111, MKT271)
5. Differentiate social media marketing from other marketing approaches. (CIS103, MKT101, MKT110, MKT271)
6. Identify and segment populations and select appropriate, high priority social media networks. (CIS103, MKT110, MKT271)
7. Apply relevant social media marketing theories, models, and research to create a strategic social media marketing campaign. (MKT110, MKT111)
8. Document work responsibilities, research, service learning or educational experiences related to a social media marketing career field. (GBS120, MKT280AB, MKT298AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

CIS103 Introduction to Social Media 3
GBS120 Workplace Communication Skills 3
MKT110 Marketing and Social Networking 3
+ MKT111 Applied Marketing and Social Networking 3
MKT271 Principles of Marketing 3

Restricted Electives

Credits: 2-3

MKT101 Introduction to Public Relations 3
+ MKT280AB Marketing Internship 2
+ MKT298AB Special Projects 2

MCCCD Governing Board Approval Date: June 25, 2019

Tactical Emergency Casualty Care

Major: 5998N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 2.5
CIP Code: 51.0904
SOC Code: Upon completion of this certificate, students may pursue a career as
29-2041.00 Emergency Medical Technicians and Paramedics

Primary/Initiating College: Glendale Community College
Program Availability: GC, PC, PV
Field of Interest: Health Sciences
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00

Description: The Certificate of Completion (CCL) in Tactical Emergency Casualty Care is designed to provide the knowledge, skills and ability to synthesize standard of care and expanded scope of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence-based paramedicine in the tactical emergency setting. This certificate prepares students for a tactical emergency casualty care paramedic credential.

Learning Outcomes

1. Differentiate the levels of threat. (PME293)
2. Perform comprehensive trauma patient assessment according to levels of threat. (PME293)
3. Differentiate the phases of trauma patient management. (PME293)
4. Manage airway and ventilatory emergencies according to TECC guidelines. (PME293)
5. Manage circulatory emergencies according to TECC guidelines. (PME293)
6. Manage various trauma conditions according to scope of practice, levels of threat, and TECC guidelines. (PME293)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Current state Paramedic certification.

Program Prerequisites

None

Required Courses

Credits: 2.5

PME293 Tactical Emergency Casualty Care (TECC) 2.5

MCCCD Governing Board Approval Date: October 22, 2019

Technical Theatre: Audio Technician

Major: 5077N
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 11-12
CIP Code: 50.0502
SOC Code: Upon completion of this certificate, students may pursue a career as:
27-4014.00 Sound Engineering Technicians

Primary/Initiating College: Phoenix College
Program Availability: GC, PC, PV
Field of Interest: Visual and Performing Arts
Instructional Council: Theatre Arts
GPA: 2.00

Description: The Certificate of Completion (CCL) in Technical Theatre: Audio Technician is designed to prepare students to apply live sound reinforcement in theatre productions. Classes include instruction in live sound reinforcement, setting up equipment, and sound design for theatrical productions. A Certificate of Completion (CCL) in Technical Theatre and the Associate in Arts, Fine Arts (AAFA), Emphasis in Theatre are also available.

Program Competencies

1. Demonstrate an understanding of audio signal flow. (MUC197, MUC198, THP201AA, THP201AB, THP202, THO202AB)
2. Demonstrate proper use of dynamic and time-based audio effects. (MUC122, MUC197, MUC198, THP201AB, THP202, THO202AB)
3. Demonstrate the setup, placement, care, and use of mics, speakers, monitors, and mixing consoles according to industry standards. (MUC197, MUC198, THP201AB, THP202, THO202AB, THO251)
4. Apply knowledge of various mic types and placement on actors. (MUC197, MUC198, THP201AB, THP202, THO202AB)
5. Apply audio mixing skills in a theatre production. (MUC122, MUC197, MUC198, THP201AA, THP201AB, THP202, THO202AB)
6. Demonstrate proper programming and use of an audio cueing system for theatrical use. (MUC122, THP201AB, THP202, THO202AB)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 11-12

+ MUC122 Sound Design I 3
MUC197 Live Sound Reinforcement I 3
+ MUC198 Live Sound Reinforcement II 3

THP201AA Theatre Production I (1) OR
THP201AB Theatre Production II (2) OR
THP202 Theatre Production Projects (1) OR
THO202AB Theatre Production I Electrics (1) 1-2

THO251 Safety Practices in Theatre and Film Production 1

MCCCD Governing Board Approval Date: December 10, 2019

Technical Theatre: Costuming

Major: 5090N
Catalog Year: 2024-2025
Effective Term: 2023 Fall
Award: CCL
Total Credits: 8-9 **GPA**: 2.00
CIP Code: 50.0510
SOC Code: Upon completion of this certificate, students may pursue a career as:
39-3092.00 Costume Attendants

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC, PV
Field of Interest: Visual and Performing Arts
Instructional Council: Theatre Arts

Description: The Certificate of Completion (CCL) in Technical Theatre: Costuming is designed to provide students with skills in the acquisition, construction, alteration, and maintenance of costumes for theatrical performances. Courses include instruction in costume construction, theory and period styles. A Certificate of Completion (CCL) in Technical Theatre and the Associate in Arts, Fine Arts (AAFA), Emphasis in Theatre are also available.

Learning Outcomes

1. Demonstrate proficiency in hand sewing, basic pattern development and machine sewing. (THO202AC, THP201AA, THP201AB, THP206, TEC225)
2. Execute costume fittings. (THO202AC, THP201AA, THP201AB, THP206)
3. Take accurate measurements using industry standards. (THO202AC, THP201AA, THP201AB, THP206, TEC225)
4. Develop and maintain costume paperwork. (THO202AC, THP201AA, THP201AB, THP206, THO115)
5. Utilize costume shop tools for the production, maintenance, and alteration of costume garments to industry standards. (THO202AC, THP201AA, THP201AB, THP206, TEC225)
6. Recognize shop roles and responsibilities including safety protocols. (THO202AC, THP201AA, THP201AB, THP206, TEC113, TEC114, TEC115, THO115)
7. Differentiate between various fabric and textile types and their uses. (THP206, TEC114, TEC115, TEC225)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 5-6

THP201AA Theatre Production I (1) OR
THP201AB Theatre Production II (2) OR
THO202AC Theatre Production I Costume Shop (1) 1-2

THP206 Introduction to Costume Construction for Theatre 4

Restricted Electives

Credits: 3

Students should select courses for a total of 3 credits based on their career goal. Speak to a Program Director for additional information.

TEC113 Textiles: Dyeing 1
TEC114 Textiles: Block Printing/Silk Screening 1
TEC115 Textiles: Hand Painting 1
TEC225 Pattern Design I 3
THO115 Makeup for Stage and Screen 3

MCCCD Governing Board Approval Date: April 7, 2020

Technical Theatre: Stage Crew Technician

Major:5099N
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: CCL
Total Credits: 6-7
CIP Code: 50.0502
Primary/Initiating College: Phoenix College
Program Availability: EM, GC, PC, PV, SC
Field of Interest: Visual and Performing Arts
Instructional Council: Theatre Arts
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
27-4011.00 Audio and Video Equipment Technicians

Description: The Certificate of Completion (CCL) in Technical Theatre: Stage Crew Technician is designed to provide students with skills to work on theatrical productions as part of the stage crew. The courses include instruction in general theatre knowledge and safety and provide opportunities for hands-on theatrical production experience. A Certificate of Completion (CCL) in Technical Theatre and the Associate in Arts, Fine Arts (AAFA), Emphasis in Theatre are also available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Interpret stage directions to industry specifications. (THO202AA, THO202AB, THP201AA, THP201AB, THP213)
2. Recognize theatre roles and responsibilities including safety protocols. (THP201AA, THP201AB, THO202AA, THO202AB, THO251, THP213)
3. Demonstrate use of safety procedures for shop, rigging, lighting and handling of scenic elements. (THO202AA, THO202AB, THO251, THP201AA, THP201AB, THP213)
4. Recognize different forms of theatrical scenery. (THO202AA, THO202AB, THP201AA, THP201AB, THP213)

5. Operate basic lighting and audio equipment for stage use. (THO202AA, THO202AB, THO251, THP201AA, THP201AB, THP213)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 6-7

THP201AA Theatre Production I (1) OR
THP201AB Theatre Production II (2) OR
THO202AA Theatre Production I Scene Shop (1) OR
THO202AB Theatre Production I Electrics (1) 1-2

THP213 Introduction to Technical Theatre 4
THO251 Safety Practices in Theatre and Film Production 1

MCCCD Governing Board Approval Date: February 27, 2024

Victimology

Major: 5392N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: CCL
Total Credits: 15
CIP Code: 43.0107
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Behavioral Science and Human Services
Instructional Council: Administration of Justice Studies
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as
33-1012.00 First-Line Supervisors of Police and Detectives
33-3021.01 Police Detectives
33-3021.02 Police Identification and Records Officers
33-3051.01 Police Patrol Officers
33-3051.00 Police and Sheriff`s Patrol Officers
33-3011.00 Bailiffs
33-3021.00 Detectives and Criminal Investigators
33-3021.03 Criminal Investigators and Special Agents
21-1023.00 Mental Health and Substance Abuse Social Workers
21-1014.00 Mental Health Counselors
21-1011.00 Substance Abuse and Behavioral Disorder Counselors
43-5031.00 Police, Fire, and Ambulance Dispatchers

Description: The Certificate of Completion (CCL) in Victimology is designed for students who are interested in pursuing a course of study specifically focused on crisis intervention, community services, and victim rights. It is one pathway to the Associate in Applied Science (AAS) in Administration of Justice.

Learning Outcomes

1. Synthesize multiple sources of information to make timely assessments. (AJS101, AJS162, AJS255, AJS/EMT/FSC258)
2. Solve problems through logical and sound reasoning. (AJS101, AJS162, AJS225, AJS/EMT/FSC258)
3. Communicate orally, visually and in writing precisely, appropriately, and effectively to varied audiences. (AJS101, AJS162, AJS/EMT/FSC258)
4. Communicate in the language common to the criminal justice system. (AJS101, AJS162, AJS225, AJS255, AJS/EMT/FSC258)
5. Collaborate with diverse agencies, community representatives and individuals to achieve common goals. (AJS101, AJS162, AJS225, AJS/EMT/FSC258)
6. Apply the principles and processes of criminal and constitutional law, criminology theory, knowledge of the functions and components of the criminal justice system, and current issues to criminal justice operations. (AJS101, AJS162, AJS/EMT/FSC258)
7. Utilize technology to collect, analyze and communicate data. (AJS101, AJS162, AJS225, AJS/EMT/FSC258)
8. Practice professional standards appropriate to the field of criminal justice. (AJS101, AJS162, AJS/EMT/FSC258)
9. Subscribe to and practice ethical behavior appropriate to the field of criminal justice. (AJS101, AJS/EMT/FSC258)
10. Collect, identify, classify, and analyze physical evidence related to criminal investigations. (AJS101, AJS/EMT/FSC258)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 15

AJS101 Introduction to Criminal Justice 3
AJS162 Domestic Violence 3
AJS225 Criminology 3
AJS255 The Criminal Justice System Handling of the Mentally Ill 3
AJS/EMT/FSC258 Victimology and Crisis Management in Public Safety 3

MCCCD Governing Board Approval Date: October 24, 2023

Video Game Production: Audio and Sound

Major: 5130
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 30
CIP Code: 50.0411

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV
Field of Interest: Computer and Information Technology
Instructional Council: Video Game Production
GPA: 2.00

SOC Code: Upon completion of this degree, students may pursue a career as:
15-1255.01 Video Game Designers
27-1014.00 Multimedia Artists and Animators
27-4014.00 Sound Engineering Technicians

Description: The Certificate of Completion (CCL) in Video Game Production: Audio and Sound provides students with the introductory skills in audio and sound for video games. Coursework focuses on the music aspects of Video Game Production. An Associate in Applied Science (AAS) in Video Game Production is available. Certificates of Completion (CCL) are also available in Video Game Production: Game Art, Video Game Production: Coding and Scripting, and Video Game Production: Narrative.

Learning Outcomes

1. Analyze the electronic game industry, including history, markets, distribution, publishing channels, business models, team roles, and career landscape. (CRW176, MUC292, VGP298AB)
2. Analyze commonly used game components and mechanics. (CIS151, CRW176, MUC222, VGP298AB)
3. Manage game development project resources, budgets, goals, and tasks. (CIS105, CIS151, MUC292)
4. Evaluate software and hardware used for game design, development, and production. (AVC100, CIS105, CIS151, MUC111, MUC122, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
5. Apply audio design concepts in the creation of interactive applications. (MUC122, MUC192, MUC222, MUC292, VGP298AB)
6. Create planning materials such as compositions, audio files, audio recordings, and design documents. (MUC111, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
7. Create a variety of audio and music resources. (MUC111, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
8. Apply audio and music planning materials and media resources to a cohesive game experience. (CIS105, CIS151, MUC292, VGP298AB)
9. Demonstrate effective written, oral, visual, and interpersonal communication skills. (AVC100, CIS105, CIS151, CRW176, MUC111, MUC122, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
10. Collaborate in a culturally responsive manner in a team environment. (AVC100, CIS105, CIS151, CRW176, MUC111, MUC122, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
11. Engage in ethical personal and professional creative practices, in accordance with audio and music industry standards. (MUC111, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
12. Examine the implications of cultural values, individual beliefs, and biases as applied to sound design and music composition. (MUC111, MUC191, MUC192, MUC195, MUC222, MUC292, VGP298AB)
13. Create a portfolio of work. (MUC292, VGP298AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 30

AVC100 Introduction to Digital Arts 1
CIS105 Survey of Computer Information Systems 3
+ CIS151 Computer Game Development Level I 3
CRW176 Writing Narrative for Video Games 3

+ MUC111 Digital Audio Workstation I (DAW I) (3) OR
+ MUC192 Electronic Music II (3) 3

MUC122 Sound Design I 3
MUC191 Electronic Music I 3
MUC195 Studio Music Recording I 3
+ MUC222 Sound Design II 3
+ MUC292 Sound Design III 3
VGP298AB Special Projects 2

MCCCD Governing Board Approval Date: February 25, 2025

Video Game Production: Coding and Scripting

Major: 5129
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 33 **GPA**: 2.00
CIP Code: 50.0411
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1255.01 Video Game Designers
27-1014.00 Multimedia Artists and Animators
27-4014.00 Sound Engineering Technicians

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV
Field of Interest: Computer and Information Technology
Instructional Council: Video Game Production

Description: The Certificate of Completion (CCL) in Video Game Production: Coding and Scripting provides students with the introductory skills to code and write script for video games. Coursework focuses on the coding and scripting aspects of Video Game Production. An Associate in Applied Science (AAS) in Video Game Production is also available. Certificates of Completion (CCL) are also available in Video Game Production: Game Art, Video Game Production: Audio and Sound and Video Game Production: Narrative.

Learning Outcomes

1. Analyze the electronic game industry, including history, markets, distribution, publishing channels, business models, team roles, and career landscape. (CIS107, CIS151, VGP298AB)
2. Apply commonly used game components and gameplay mechanics. (CIS107, CIS120DC, CIS130DB, CIS150AB, CIS151, CIS156, CIS163AA, VGP298AB)
3. Manage gameplay project resources for creating games. (CIS105, CIS107, CIS120DC, CIS150AB, CIS151, VGP298AB)
4. Propose and manage software, hardware and development environments used for game development. (CIS105, CIS107, CIS120DC, CIS151, VGP298AB)
5. Utilize advanced scripting and programming techniques, structures and pattern design in the creation and manipulation of interactive applications. (CIS107, CIS120DC, CIS130DB, CIS150AB, CIS151, CIS156, CIS163AA, VGP298AB)
6. Synthesize game assets such as art and audio files, game narrative and planning materials to create playable prototypes and deliverables. (AVC100, CIS107, CIS120DC, CIS130DB, CIS151, MUC122, VGP298AB)

7. Demonstrate effective written, oral, visual, and interpersonal communication skills. (CIS107, CIS151, CRW176, VGP298AB)
8. Collaborate in a culturally responsive manner in a team environment. (AVC100, CIS107, CIS120DC, CIS130DB, CIS151, CRW176, MUC122, VGP298AB)
9. Engage in ethical personal and professional creative practices, in accordance with copyright laws, intellectual property, civic responsibility, and standards of the field. (AVC100, CIS105, CIS107, CIS120DC, CIS130DB, CIS151, CRW176, MUC122, VGP298AB)
10. Examine the implications of cultural values, individual beliefs, and biases as applied to game design, development, and production. (CIS107, VGP298AB)
11. Create a portfolio of work. (VGP298AB)

Program Notes

Students must earn a grade of C or better in each course in the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 33

AVC100 Introduction to Digital Arts 1
CIS105 Survey of Computer Information Systems 3
+ CIS107 The Electronic Game Industry 3
CIS120DC Introduction to Adobe Animate 3
CIS130DB 3D Studio Max: Animation 3
+ CIS150AB Object-Oriented Programming Fundamentals 3
+ CIS151 Computer Game Development Level I 3
+ CIS156 Python Programming: Level I 3
+ CIS163AA Java Programming: Level I 3
CRW176 Writing Narrative for Video Games 3
MUC122 Sound Design I 3
+ VGP298AB Special Projects 2

MCCCD Governing Board Approval Date: February 25, 2025

Video Game Production: Game Art

Major: 5123
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 39
CIP Code: 50.0411
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV
Field of Interest: Computer and Information Technology
Instructional Council: Video Game Production
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1255.01 Video Game Designers
27-1014.00 Multimedia Artists and Animators

27-4014.00 Sound Engineering Technicians

Description: The Certificate of Completion (CCL) in Video Game Production: Game Art provides students with the introductory skills to design Art for video games. Coursework focuses on the artistic aspect of Video Game Production. An Associate in Applied Science (AAS) in Video Game Production is available. Certificates of Completion (CCL) are also available in Video Game Production: Audio and Sound, Video Game Production: Coding and Scripting, and Video Game Production: Narrative.

Learning Outcomes

1. Analyze the electronic game industry, including history, markets, distribution, publishing channels, business models, team roles, and career landscape. (AVC200, AVC240, CIS230DB, VGP298AB)
2. Analyze commonly used narrative strategies, media resources, animation methods, and interactive components in video games. (AVC200, AVC240, AVC247, AVC287, CIS230DB)
3. Manage game development project resources, budgets, goals, and tasks. (AVC150, AVC200, AVC240, AVC247, AVC287, CIS230DB, VGP298AB)
4. Evaluate software and hardware used for game design, development, and production. (AVC/MMT184, AVC100, AVC150, AVC/MMT185, AVC200, AVC240, AVC/MMT285, AVC247, AVC287, CIS105, CIS130DA, CIS130DB, CIS151, CIS230DB, MUC122, VGP298AB)
5. Apply basic scripting and programming concepts in the creation of interactive components, animations, and game assets. (AVC/MMT185, AVC200, AVC240, AVC247, AVC/MMT285, AVC287, CIS130DA, CIS130DB, CIS151, CIS230DB, MUC122, VGP298AB)
6. Create planning materials such as sketches, character sheets, storyboards, prototypes, narrative scripts, audio, and design documents. (AVC/MMT184, AVC100, ART116, AVC150, AVC/MMT185, AVC200, AVC240, AVC247, AVC/MMT285, AVC287, CIS130DA, CIS130DB, CIS151, CIS230DB, CRW176, VGP298AB)
7. Create a variety of media resources such as images, models, sprites, and animations. (AVC/MMT184, AVC100, ART116, AVC150, AVC/MMT185, AVC200, AVC240, AVC247, AVC/MMT285, AVC287, CIS130DA, CIS130DB, CIS151, CIS230DB, CRW176, MUC122, VGP298AB)
8. Construct game experiences using planning materials and media resources. (AVC150, AVC200, AVC240, CIS105, CIS151, CIS230DB, VGP298AB)
9. Demonstrate effective written, oral, visual, and interpersonal communication skills. (AVC/MMT184, AVC100, AVC150, AVC/MMT185, AVC200, AVC240, AVC247, AVC/MMT285, AVC287, CIS105, CIS130DA, CIS130DB, CIS151, CIS230DB, CRW176, MUC122, VGP298AB)
10. Collaborate in a culturally responsive manner in a team environment. (AVC/MMT184, AVC100, AVC150, AVC/MMT185, AVC200, AVC240, AVC247, AVC/MMT285, AVC287, CIS105, CIS130DA, CIS130DB, CIS151, CIS230DB, CRW176, MUC122, VGP298AB)
11. Engage in ethical personal and professional creative practices, in accordance with copyright laws, intellectual property, civic responsibility, and standards of the field. (AVC/MMT184, AVC100, AVC150, AVC/MMT185, AVC200, AVC240, AVC247, AVC/MMT285, AVC287, CIS105, CIS130DA, CIS130DB, CIS151, CIS230DB, CRW176, MUC122, VGP298AB)
12. Examine the implications of cultural values, individual beliefs, and biases as applied to game design, development, and production. (AVC150, CRW176, VGP298AB)
13. Create a portfolio of selected game art, animations, and interactive projects. (VGP298AB)

Program Notes

Students must earn a grade of C or better in each course in the program.

+ indicates course has prerequisites and/or corequisites.

++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 39

ART116 Life Drawing I 3
AVC100 Introduction to Digital Arts 1
AVC150 Multimedia Storytelling 3
+ AVC200 Animation and Interactivity 3
+ AVC/MMT184 Digital Animation I 3

+ AVC/MMT185 3D Modeling for Animation I (3) OR
+ CIS130DA 3D Studio Max: Modeling (3) 3

+ AVC240 Cinematography and Directing for 2D/3D Animation (3) OR
+ CIS230DB 3D Studio Max: Lighting and Rendering (3) 3

AVC247 High Resolution Digital Model Making through 3D Laser Scanning and Photogrammetry (3) OR
+ AVC287 3D Character Animation (3) 3

+ AVC/MMT285 3D Modeling and Animation II (3) OR
+ CIS130DB 3D Studio Max: Animation (3) 3

CIS105 Survey of Computer Information Systems 3
+ CIS151 Computer Game Development -Level I 3
CRW176 Writing Narrative for Video Games 3
MUC122 Sound Design I 3
+ VGP298AB Special Projects 2

MCCCD Governing Board Approval Date: February 25, 2025

Video Game Production: Game Narrative

Major: 5125
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 27
CIP Code: 50.0411
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV
Field of Interest: Computer and Information Technology
Instructional Council: Video Game Production
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1255.01 Video Game Designers
27-1014.00 Multimedia Artists and Animators
27-4014.00 Sound Engineering Technicians

Description: The Certificate of Completion (CCL) in Video Game Production: Game Narrative provides students with the introductory skills to write narrative for video games. Coursework focuses on the narrative aspect of Video Game Production. An Associate in Applied Science (AAS) in Video Game Production is also available. Certificates of Completion (CCL) are available in Video Game Production: Game Art, Video Game Production: Audio and Sound and Video Game Production: Coding and Scripting.

Learning Outcomes

1. Analyze the electronic game industry, including history, markets, distribution, publishing channels, business models, team roles, and career landscape. (CIS151, CRW176, VGP298AB)
2. Analyze commonly used game components and mechanics, such as linear story theory, character development, and quest objects to develop stories. (CRW170, CRW176, CRW190, CRW270, VGP298AB)
3. Manage game development project goals and tasks. (CRW176, VGP298AB)
4. Create a variety of media resources such as images, narratives, 3D models, animations, and audio. (AVC100, CIS151, CRW176, MUC122, VGP298AB)
5. Construct game experiences using planning materials and media resources. (AVC100, CIS105, CIS151, CRW160, CRW170, CRW176, CRW190, CRW270, MUC122, VGP298AB)
6. Apply the peer review workshop process to explore, develop, and revise original writing. (CRW160, CRW170, CRW190, CRW270)
7. Demonstrate social responsibility and ethical behavior toward the creation of original works in a culturally diverse world. (CRW160, CRW170, CRW176, CRW190, CRW270, VGP298AB)
8. Examine the implications of cultural values, individual beliefs, and biases as applied to the production of game narratives. (CRW176, VGP298AB)
9. Explore the dynamic relationships among people, culture, and the physical world. (CRW160, CRW170, CRW176, CRW270, VGP298AB)
10. Evaluate the technical elements and theories of literature across multiple genres. (CRW160, CRW170, CRW176, CRW190, CRW270)
11. Interpret the effects of technical craft elements in published literary works. (CRW160, CRW170, CRW190, CRW270)
12. Create a portfolio of work. (VGP298AB)

Program Notes

Students must earn a grade of C or better in each course in the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 27

AVC100 Introduction to Digital Arts 1
CIS105 Survey of Computer Information Systems 3
+ CIS151 Computer Game Development Level I 3
MUC122 Sound Design I 3
CRW160 Introduction to Writing Poetry 3
CRW170 Introduction to Writing Fiction 3
CRW176 Writing Narrative for Video Games 3
CRW190 Introduction to Screenwriting 3
+ CRW270 Intermediate Fiction Writing 3
VGP298AB Special Projects 2

MCCCD Governing Board Approval Date: February 25, 2025

VMware Foundations

Major: 5035N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 4
CIP Code: 11.1001
Primary/Initiating College: Phoenix College
Program Availability: GC, GW, PC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1244.00 Network and Computer Systems Administrators

Upon completion of an associate degree, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1231.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in VMware Foundations program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software defined data centers. The program introduces vSphere and VMware ESXi server in the enterprise and covers many aspects of virtualization for VMware ESXi server administration. It is designed to help prepare students for the VMware Certified Technical Associate (VCTA) certification exam. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Apply virtualization concepts to hardware hierarchies. (CIS293)
2. Manage VMware environments including basic network functions. (CIS293)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CNT, and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the prerequisites to the courses within the Required Courses area as follows OR receive permission of the Program Director:

CIS105 Survey of Computer Information Systems 3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support (3) AND
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Windows Operation Course (3) 3-6

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (3) 3

Students with no industry experience have the option to complete the full CCL VMware Network Administrator (major code 5032), that includes the courses in Admission Criteria and required courses.

Program Prerequisites

None

Required Courses

Credits: 4

+ CIS293 VMware ESXI Server Enterprise 4

MCCCD Governing Board Approval Date: November 28, 2023

VMware Network Administrator

Major: 5032
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 24-28
CIP Code: 11.1001
Primary/Initiating College: Glendale Community College
Program Availability: GC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in VMware Network Administrator program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software-defined data centers. Courses will build the knowledge and skills for students to design, install, configure, troubleshoot, and manage virtual environments and help prepare students for the CompTIA A+, CompTIA Linux +, CompTIA Network +; VMware Certified Technical Associate (VCTA) and VMware Certified Professional (VCP) certification exams. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Demonstrate knowledge of concepts and theories of virtualization and cloud computing. (CIS126DL, CIS126RH)

2. Apply virtualization concepts to hardware hierarchies. (BPC170, CIS105, CIS293)
3. Manage VMware environments including basic network functions. (BPC270, CIS105, CIS126DL, CIS126RH, CIS190, CIS293, CNT140AB)
4. Troubleshoot virtual networks. (CIS190, CIS293, CIS294, CIS295, CNT140AB)
5. Build an enterprise level virtual network infrastructure using industry best practices. (CIS190, CIS293, CIS294, CIS295, CNT140AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, and CNT.

Program Prerequisites

None

Required Courses

Credits: 24-28

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4

+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

MCCCD Governing Board Approval Date: November 28, 2023

VMware Systems Administrator

Major: 5033N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: CCL
Total Credits: 12
CIP Code: 11.1001
Primary/Initiating College: Phoenix College
Program Availability: GC, PC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

SOC Code: Upon completion of this certificate, students may pursue a career in the following job fields:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career in the following job fields:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in VMware Systems Administrator program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software defined data centers. The program introduces vSphere and VMware ESXi server in the enterprise and covers many aspects of virtualization for VMware ESXi server administration. It includes advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure and is designed to prepare students for the VMware Certified Technical Associate (VCTA) and VMware Certified Professional (VCP) certification exams. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Apply virtualization concepts to hardware hierarchies. (CIS293)
2. Manage VMware environments including basic network functions. (CIS293, CIS294)
3. Troubleshoot virtual networks. (CIS293, CIS294)
4. Build an enterprise level virtual network infrastructure using industry best practices. (CIS293, CIS294, CIS295)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CNT and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the prerequisites to the courses within the Required Courses area as follows OR receive permission of the Program Director:

CIS105 Survey of Computer Information Systems 3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support (3) AND
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Windows Operation Course (3) 3-6

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (3) 3

Students also have the option to complete the full CCL in this program, VMware Network Administrator (major code 5032), that includes the prerequisites and required courses.

Program Prerequisites

None

Required Courses

Credits: 12

+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

MCCCD Governing Board Approval Date: November 28, 2023

Web App Development

Major: 5835N
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 9-12
CIP Code: 11.0202
Primary/Initiating College: Mesa Community College
Program Availability: CG, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1254.00 Web Developers

Upon completion of an associate degree, students may pursue a career as:
15-1132.00 Software Developers, Applications
15-1251.00 Computer Programmers
15-1253.00 Software Quality Assurance Analysts and Testers

Description: The Certificate of Completion (CCL) in Web App Development prepares students for employment in entry-level coding, programming, and software development positions with an emphasis on web apps. Courses in this certificate can apply toward the Associate in Applied Science (AAS) in Mobile App Development and Certificates of Completion (CCL) in Mobile App Development and Cross-Platform App Development.

Learning Outcomes

1. Design and develop a user interface that utilizes professional UI/UX principles. (CIS133DA, CIS166AA, CIS233DA)
2. Design and develop applications that meet the client`s needs utilizing the appropriate controls for the appropriate platform. (CIS105, CIS133DA, CIS166AA, CIS233DA)
3. Develop effective, efficient, tested code that meets specifications. (CIS105, CIS133DA, CIS166AA, CIS233DA)
4. Analyze problems using critical thinking skills and design program solutions. (CIS105, CIS133DA, CIS166AA, CIS233DA)
5. Research and evaluate professional resources to effectively apply them to a problem. (CIS133DA, CIS166AA)
6. Communicate in varied settings, both orally and in writing, in a culturally responsive manner to function well in a diverse and collaborative team environment. (CIS233DA)

7. Practice industry accepted professional and ethical behavior. (CIS133DA, CIS233DA)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students should consult with a Department Advisor in arranging their schedules.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 9-12

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director, Department or Division Chair (0) 0-3

+ CIS133DA Internet/Web Development Level I 3
+ CIS166AA Introduction to JavaScript 3
+ CIS233DA Internet/Web Development Level II 3

MCCCD Governing Board Approval Date: December 10, 2019

Web Design

Major: 5986
Catalog Year: 2024-2025
Last Admit Term: 2025 Summer
Award: CCL
Total Credits: 38-43
CIP Code: 11.0801
Primary/Initiating College: Glendale Community College
Program Availability: CG, EM, GC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1255.00 Web and Digital Interface Designers
27-1024.00 Graphic Designers

Description: The Certificate of Completion (CCL) in Web Design provides students with comprehensive and focused studies in web design, including advanced image manipulation, vector graphics, page layout, video editing and design principles. An Associate in Applied Science (AAS) in Web Design/Development and CCLs in Web Foundations and Web Development are also available.

Learning Outcomes

1. Design websites using knowledge of computer information systems, including security, computer concepts, web delivery system architecture, and file management. (AVC100, ART112, CIS105, CIS120DC, CIS133DA, CIS136, CIS138DA, CIS166AA, CIS220DF, CIS233DA, CIS235)

2. Develop public-facing websites based on research, planning, design principles and thorough testing. (ART112, AVC100, CIS105, CIS120DA, CIS120DC, CIS120DK, CIS133DA, CIS136, CIS138DA, CIS166AA, CIS220DF, CIS233DA, CIS235)
3. Create complex websites using current standards in Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and Javascript. (ART112, AVC100, CIS105, CIS120DA, CIS120DB, CIS120DC, CIS120DK, CIS133DA, CIS138DA, CIS166AA, CIS220DF, CIS233DA)
4. Employ best practices in user interface, user experience, accessibility and search engine optimization to build complex websites aligned with industry standards. (AVC183, ART112, AVC100, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS138DA, CIS220DF, CIS233DA)
5. Implement thoughtfully designed e-commerce solutions. (AVC183, ART112, AVC100, AVC181, CIS105, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS166AA, CIS220DF, CIS233DA, CIS235)
6. Construct a website using a content management system. (AVC183, ART112, AVC100, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS220DF, CIS233DA)
7. Apply project management skills to prioritize projects and meet deadlines. (CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS136, CIS166AA, CIS220DF, CIS235)
8. Adhere to industry accepted professional, legal, and ethical practices. (CIS105, CIS120DB, CIS120DC, CIS120DF, CIS133DA, CIS136, CIS220DF, CIS233DA, CIS235)
9. Communicate professionally in formal and informal situations to diverse audiences. (CIS105, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS166AA, CIS220DF, CIS233DA, CIS235)
10. Collaborate with others to address web design challenges. (CIS133DA, CIS233DA, CIS235)
11. Create digital media content using principles of design. (AVC183, ART112, AVC100, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS138DA, CIS220DF)
12. Select design elements and composition appropriate to the project. (AVC183, ART112, AVC181, AVC100, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS138DA, CIS220DF)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 36-37

The following courses are required for the CCL in Web Foundations:

CIS105 Survey of Computer Information Systems 3
CIS120DF Introduction to Adobe Photoshop 3
CIS133DA Internet/Web Development Level I 3
CIS136 Content Management Systems: WordPress 3
+ CIS166AA Introduction to Javascript 3
+ CIS233DA Internet/Web Development Level II 3
+ CIS235 e-Commerce 3

The following courses are required for the CCL in Web Design:
+ AVC183 Digital Graphic Arts I (3)
ORAVC100 Introduction to Digital Arts (1) AND
+ AVC181 Graphic Design I (3)
OR
ART112 Two-Dimensional Design (3) 3-4

CIS120DA Introduction to Adobe Premiere (3) OR
CIS120DK Introduction to Digital Video Editing (3) 3

CIS120DB Introduction to Adobe Illustrator 3

CIS120DC Introduction to Adobe Animate (3) OR
+ CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging (3) 3

CIS138DA Desktop Design and Publishing Using Adobe InDesign 3

Restricted Electives

Credits: 2-6

Select 2-6 credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business, and/or Multimedia.

MCCCD Governing Board Approval Date: February 28, 2023

Web Development

Major: 5988
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 39
CIP Code: 11.0801
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1254.00 Web Developers
15-1252.00 Software Developers

Description: The Certificate of Completion (CCL) in Web Development prepares students to create and administer interactive and professional websites. The program provides students with knowledge and skills in developing dynamic websites, client and server side programs, database structures, and object-oriented design. A Certificate of Completion (CCL) in Web Design and an Associate in Applied Science (AAS) in Web Design/Development are also available. Some of these programs are available at select colleges. Please check with your local college for program availability.

Learning Outcomes

1. Design websites using knowledge of computer information systems, including security, computer concepts, web delivery system architecture, and file management. (CIS105, CIS119DO, CIS126DL, CIS126RH, CIS133DA, CIS136, CIS150AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++)

2. Research, plan, design, develop, test, publish, and maintain websites. (CIS105, CIS119DO, CIS120DF, CIS126RH, CIS133DA, CIS136, CIS150AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++)
3. Create complex websites using current standards in Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and Javascript. (CIS105, CIS119DO, CIS133DA, CIS150AB, CIS166AA, CIS166AE, CIS233DA,)
4. Research and utilize best practices in user interface, user experience, accessibility and search engine optimization to build complex websites. (CIS119DO, CIS120DF, CIS133DA, CIS136, CIS166AE, CIS233DA)
5. Design and implement e-commerce solutions. (CIS105, CIS119DO, CIS120DF, CIS133DA, CIS136, CIS150AB, CIS166AA, CIS166AE, CIS233DA, CIS235)
6. Construct a website using a content management system. (CIS120DF, CIS133DA, CIS136, CIS166AA, CIS166AE, CIS233DA)
7. Apply project management skills to prioritize projects and meet deadlines. (CIS120DF, CIS136, CIS166AA, CIS235)
8. Adhere to industry accepted professional, legal, and ethical practices. (CIS105, CIS120DF, CIS133DA, CIS136, CIS233DA, CIS235)
9. Communicate professionally in formal and informal situations to diverse audiences. (CIS105, CIS120DF, CIS133DA, CIS136, CIS166AA, CIS233DA, CIS235)
10. Collaborate with others to address web design challenges. (CIS133DA, CIS233DA, CIS235)
11. Design websites using knowledge of programming. (CIS105, CIS133DA, CIS136, CIS150AB, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS256, CIS262AD, CIS263AA, CIS265++)
12. Manipulate digital media content. (CIS120DF)
13. 13. Develop and deploy secure database solutions that use web-based protocols. (CIS119DO, CIS276++)
14. 14. Implement security solutions to diminish or counter threats against web delivery systems. (CIS119DO, CIS126RH, CIS133DA, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166AA, CIS166AE, CIS233DA, CIS235, CIS262AD, CIS263AA, CIS265++, CIS276++)
15. 15. Use server-side scripting languages to create secure, dynamic web pages. (CIS133DA, CIS166AE, CIS233DA)

Program Notes

Students must earn a grade of C or better in each course in the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces:
CCL/5051 Web Developer
CCL/5060 Web Developer
CCL/5168 Web Development and Graphic Design
CCL/5346 Web Development

Program Prerequisites

None

Required Courses

Credits: 36

The following courses are required and included in the CCL in Web Foundations:
CIS105 Survey of Computer Information Systems 3
CIS120DF Introduction to Adobe Photoshop 3

CIS133DA Internet/Web Development Level I 3
CIS136 Content Management Systems: WordPress 3
+ CIS166AA Introduction to Javascript 3
+ CIS233DA Internet/Web Development Level II 3
+ CIS235 e-Commerce 3

The following courses are required for the CCL in Web Development:

+ CIS166AE Web Scripting with PHP: Hypertext Preprocessor (PHP) 3

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276++ Any Database Management Systems course (3) 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

Programming Language: Select two courses for a total of 6 credits
+ CIS150AB Object-Oriented Programming Fundamentals 3
+ CIS156 Python Programming: Level I 3
+ CIS159 Visual Basic Programming I 3
+ CIS162++ Any C Programming course 3
+ CIS163AA Java Programming: Level I 3
+ CIS165++ Any Mobile Application Development course 3
+ CIS256 Python Programming: Level II 3
+ CIS262AD C# Level II 3
+ CIS263AA Java Programming: Level II 3
+ CIS265++ Any Advanced Application Development course 3

Restricted Electives
Credits: 3

Students should select any course with a CIS prefix in consultation with their program advisor to further develop skills in the areas of Databases, Information Systems, Programming, and/or Operating Systems. 3

MCCCD Governing Board Approval Date: February 23, 2021

Web Foundations

Major: 5984
Catalog Year: 2024-2025
Effective Term: 2021 Fall
Award: CCL
Total Credits: 21
CIP Code: 11.0801
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, MC, PC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1254.00 Web Developers
15-1255.00 Web and Digital Interface Designers

Description: The Certificate of Completion (CCL) in Web Foundations introduces students to designing and developing web pages. This CCL prepares students for entry level web positions. Certificates of Completion (CCL)

in Web Design and Web Development are available. An Associate in Applied Science (AAS) degree in Web Design/Development is also available.

Learning Outcomes

1. Integrate knowledge of computer information systems, including security, computer concepts, web delivery system architecture, and file management in web design. (CIS105, CIS133DA, CIS136, CIS166AA, CIS233DA, CIS235)
2. Explain the web development life cycle including the planning, designing, developing, testing, publishing, and maintaining of websites. (CIS133DA, CIS136, CIS166AA, CIS233DA, CIS235)
3. Create basic websites using current standards in Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and Javascript. (CIS105, CIS133DA, CIS166AA, CIS233DA)
4. Utilize best practices in user interaction, user experience, accessibility and search engine optimization to build basic websites. (CIS133DA, CIS136, CIS166AA, CIS233DA)
5. Design and implement e-commerce solutions. (CIS105, CIS235)
6. Manipulate digital media content. (CIS120DF, CIS136)
7. Construct a website using a content management system. (CIS136)
8. Prioritize projects and meet deadlines. (CIS120DF, CIS136, CIS166AA, CIS235)
9. Demonstrate industry accepted professional, legal, and ethical practices. (CIS105, CIS120DF, CIS133DA, CIS136, CIS233DA, CIS235)
10. Communicate professionally in formal and informal situations. (CIS105, CIS120DF, CIS133DA, CIS136, CIS166AA, CIS233DA, CIS235)
11. Explain the need for collaboration in the web industry. (CIS133DA, CIS233DA)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 21

CIS105 Survey of Computer Information Systems 3
CIS120DF Adobe Photoshop Level I: Digital Imaging 3
CIS133DA Internet/Web Development Level I 3
CIS136 Content Management Systems: WordPress 3
+ CIS166AA Introduction to Javascript 3
+ CIS233DA Internet/Web Development Level II 3
+ CIS235 e-Commerce 3

MCCCD Governing Board Approval Date: December 10, 2019

Academic Certificates (AC)

Ceramics

Major: 6256N
Catalog Year: 2024-2025
Effective Term: 2024 Fall
Award: AC
Total Credits: 33
CIP Code: 50.0702
Primary/Initiating College: Glendale Community College
Program Availability: GC, MC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
27-1013.00 Fine Artists (Painters, Sculptors, Metalsmiths, Printmakers, Muralists, Photographers)
25-3021.00 Community Art Educators

Upon completion of a bachelor`s degree, students may pursue a career as:
25-4013.00 Museum Staffs

Upon completion of a graduate degree, students may pursue a career as:
25-1121.00 Art Professors

Description: The Academic Certificate (AC) in Ceramics is designed for students who wish to develop specialized skills in ceramics beyond the foundational level. The courses in this certificate offer an emphasis in creative problem-solving and portfolio development, as well as the advanced training required for art careers. With the certificate, students may pursue a career as a practicing artist or continue their education at specialized art schools. An Associate in Arts, Fine Arts (AAFA) is also available.

Learning Outcomes

1. Demonstrate foundational skills in the use of art process and media to enable effective visual communication and personal expression. (ART111, ART112, ART113, ART115, ART161, ART162, ART261, ART262)
2. Demonstrate specialized ceramic skills to enable effective visual communication and personal expression. (ART161, ART162, ART261, ART262, ART290AC)
3. Apply critical thinking skills, the creative process, and aesthetic/perceptual literacy to solve visual, technical and conceptual problems. (ARH102, ART111, ART112, ART113, ART115, ART161, ART162, ART261, ART262, ART290AC, ART290GC)
4. Communicate and collaborate effectively while recognizing diverse opinions and cultural and individual differences. (ARH102, ART111, ART112, ART113, ART115, ART161, ART162, ART261, ART262, ART290AC, ART290GC, ART290KC, ART290LC)
5. Identify the social, cultural, historical, and contemporary contexts that influence the production and interpretation of art. (ART111, ART112, ART113, ART115, ART161, ART162, ART261, ART262, ART290AC, ART290GC, ART290KC, ART290LC)
6. Use the critique process to present and develop fine art portfolios for transfer, career development, or personal use. (ARH102, ART111, ART112, ART113, ART115, ART255, ART161, ART162, ART290AC, ART290GC, ART290KC, ART290LC)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18

ARH102 Art from Renaissance to Modernism 3
ART111 Drawing I 3
ART112 Two-Dimensional Design 3
ART113 Color 3
ART115 Three-Dimensional Design 3
ART255 Art Marketing 3

Restricted Electives

Credits: 15

ART161 Ceramics I 3
+ ART162 Ceramics II 3
+ ART261 Ceramics III 3
+ ART262 Ceramics IV 3
+ ART290AC Studio Art 3
+ ART290GC Studio Art: Ceramics 3
+ ART290KC Studio Art: Glazing Techniques 3
+ ART290LC Studio Art: Clay Bodies 3

MCCCD Governing Board Approval Date: June 25, 2024

Chicana and Chicano Studies

Major: 6230N
Catalog Year: 2024-2025
Effective Term: 2022 Fall
Award: AC
Total Credits: 12-13
CIP Code: 05.0203
SOC Code: Upon completion of a master`s degree, students may pursue a career as
25-1062 Area, Ethnic, & Cultural Studies Teachers, Postsecondary

Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, PC
Field of Interest: Culture and Society
Instructional Council: Ethnic Studies
GPA: 2.00

Description: The Academic Certificate (AC) in Chicana and Chicano Studies explores the unique experiences of the Chicana and Chicano people living in the Southwest. The Certificate provides a study of Mexican-American life in the society of the United States, including Mexican background, social and cultural differences, and experiences of assimilation.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

Credits: 3-6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment 0-3

Required Courses

Credits: 3-4

+ CCS101 Chicana and Chicano Studies 3
HIS109 Mexican American History and Culture 3
SPH245 Hispanic Heritage in the Southwest 3
Credits: 9
Restricted Electives
ENH112 Chicano Literature 3
HIS145 History of Mexico 3
HUM213 Hispanic Film 3
SPA101 Elementary Spanish I 4
+SPA102 Elementary Spanish II 4
+SPA103 Elementary Spanish for Spanish Speakers I 4
+SPA104 Elementary Spanish for Spanish Speakers II 4
+SPA201 Intermediate Spanish I 4
+SPA202 Intermediate Spanish II 4
+SPA203 Spanish for Spanish-Speaking Students I 4
+SPA204 Spanish for Spanish-Speaking Students II 4

Program Competencies

1. Conduct an oral history of an elderly Chicana or Chicano and correlate it with the Chicana and Chicano experience. (CCS101)
2. Describe and analyze the causes and nature of United States expansion into the Borderlands of North America. (CCS101, HIS109, SPH245)
3. Describe and analyze development of the borderlands and the role of Chicanas and Chicanos in the process. (CCS101, HIS109)
4. Describe the status, and ramifications, of Chicana and Chicano/Mexican civil, employment, political, and social rights from the time of the arrival of the railroads to the present. (CCS101, HIS109)
5. Describe and analyze the nature and consequences of United States activities and policies toward Mexico since the Mexican War and their impact on Chicanas and Chicanos. (CCS101, HIS109)
6. Describe and analyze the nature and consequences of historical and contemporary Mexican government activities and policies within Mexico and their impact on Chicanas and Chicanos. (CCS101, HIS109)
7. Describe and analyze the consequences of the Mexican War and the Treaty of Guadalupe Hidalgo to the former Mexican citizens and their descendants. (CCS101, HIS109, SPH245)
8. Describe and analyze the Spanish and Indian origins of Mexican culture and people. (CCS101, HIS109, SPH245)
9. Describe and analyze the expansion and evolution of Hispanic societies and culture up to Mexican Independence. (CCS101, HIS109, SPH245)
10. Examine the development of the Chicana and Chicano Movement and explain its ideology through its visual art, music, theater, and literature. (CCS101, SPH245)
11. Analyze the development of the Chicana and Chicano Movement and correlate it with the Civil Rights Movement and the Vietnam War. (HIS109)
12. Examine the evolution and contemporary styles of Hispanic art, music, theater, and literature of the Borderlands. (SPH245)

MCCCD Governing Board Approval Date: February 22, 2022

Communication Competence in the Workplace

Major: 6219N
Catalog Year: 2024-2025
Effective Term: 2019 Spring
Award: AC
Total Credits: 30-33
CIP Code: 09.9999
SOC Code: 25-1122, 27-3041, 27-3043

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC
Field of Interest: Culture and Society
Instructional Council: Communication
GPA: 2.00

Description: The Academic Certificate (AC) in Communication Competence in the Workplace is an interdisciplinary program of study that provides intensive study of written and oral communication skills in different contexts including interpersonal communication, small group interaction, team-building, problem solving, public speaking and presentation skills, conflict resolution, assertiveness, and leadership. Students develop skills to enhance their professional, social, and personal interactions, and become more competitive and effective in the workforce.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for all courses within the Required Courses area.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 18-21

COM110 Interpersonal Communication 3
+ COM225 Public Speaking 3
COM230 Small Group Communication 3
+ COM282AC Service-Learning Experience in Communication 3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as Indicated by Assessment 0-3

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

+ ENG102 First-Year Composition (3) OR
+ ENG108 First Year Composition for ESL (3) 3

Restricted Electives

Credits: 9

If choosing BPC110 or CIS105 only one can be applied
BPC110 Computer Usage and Applications 3
CIS105 Survey of Computer Information Systems 3
+ COM207 Introduction to Communication Inquiry 3
+ COM222 Argumentation 3
+ COM/THP241 Oral Interpretation of Literature 3
COM250 Introduction to Organizational Communication 3

+ COM259 Communication in Business and Professions 3
COM263 Elements of Intercultural Communication 3
+ ENG111 Technical and Professional Writing 3
+ GBS233 Business Communication 3
IBS109 Cultural Dimension for International Trade 3
SWU295 Effective Helping in a Diverse World 3

General Electives

Credits: 3

Any approved General Education course in the Cultural Awareness (C) value (3) OR
COM+++++ Any COM communication course (3) except courses used to satisfy Required Courses or Restricted Electives areas. 3

Program Competencies

1. Compose expository essays in English. (ENG101, ENG107)
2. Demonstrate skill in research, note-taking, organization, and documentation in the preparation and writing of a research paper. (ENG102, ENG108)
3. Demonstrate skill in using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, and developing and maintaining personal and professional relationships. (COM110)
4. Present ideas in an organized, time-constrained format, and express one`s self objectively, subjectively, and creatively. (COM225)
5. Explain and apply principles and processes of small groups to problem-solving, decision-making, and information-sharing. (COM230)
6. Complete a service-learning field experience within a private or public agency, educational institution, or citizen volunteer group. (COM282AC)
7. Read and analyze varied and challenging reading materials, and analyze, synthesize, and evaluate these materials through written discourse. (CRE101)

MCCCD Governing Board Approval Date: October 16, 2018

Communication Skills for Non-Native English Speakers

Major: 6222N
Catalog Year: 2024-2025
Effective Term: 2018 Spring
Award: AC
Total Credits: 30
CIP Code: 09.9999
SOC Code: 25-1122, 27-3041, 27-3043

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC
Field of Interest: Culture and Society
Instructional Council: Communication
GPA: 2.00

Description: The Academic Certificate (AC) in Communication Skills for Non-Native English Speakers is an interdisciplinary program of study designed to extend traditional ESL coursework. It provides Non-Native English Speakers with oral and written communication skills including interpersonal communication, small group interaction, team-building, problem solving, public speaking and presentation skills, conflict resolution, assertiveness, and leadership. Students develop skills to enhance their professional, social, and personal interactions, and become more competitive and effective in the workforce.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better for all courses within the Required Courses area.

Program Prerequisites

None

Required Courses

Credits: 21

COM120 Articulation and Pronunciation for Effective Communication 3
+ COM221 Oral Fluency in American Speech 3
+ COM282AC Service-Learning Experience in Communication 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) 3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as Indicated by Assessment 3

+ ENG101 First Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

+ ENG102 First Year Composition (3) OR
+ ENG108 First Year Composition for ESL (3) 3

Restricted Electives

Credits: 9

If choosing BPC110 or CIS105 only one can be applied
BPC110 Computer Usage and Applications 3
CIS105 Survey of Computer Information Systems 3
+ COM230 Small Group Communication 3
+ COM259 Communication in Business and Professions 3
+ ENG111 Technical Writing 3
+ GBS233 Business Communication 3
IBS109 Cultural Dimension for International Trade 3
SWU295 Effective Helping in a Diverse World 3

Any approved General Education course in the cultural awareness [C] value (3) OR
COM+++ Any COM Communication course (3) 3

Program Competencies

1. Compose expository essays in English. (ENG101, ENG107)
2. Demonstrate skill in research, note-taking, organization, and documentation in the preparation and writing of a research paper. (ENG102, ENG108)
3. Demonstrate skill in using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, and developing and maintaining personal and professional relationships. (COM100, COM110)
4. Analyze American speech production problems due to accents produced by another language; correct misarticulated American speech sounds; demonstrate critical listening to sound production and American English speech patterns; use American idioms and expressions; and prepare and deliver group and individual speech presentations. (COM120)
5. Demonstrate oral fluency in spontaneous speaking contexts and presentational speaking skills in English. (COM221)

6. Complete a service-learning field experience within a private or public agency, educational institution, or citizen volunteer group. (COM282AC)
7. Read and analyze varied and challenging reading materials, and analyze, synthesize, and evaluate these materials through written discourse. (CRE101)

MCCCD Governing Board Approval Date: February 26, 2008

Creative Writing

Major: 6224N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AC
Total Credits: 24
CIP Code: 23.1302
SOC Code: 25-1123

Primary/Initiating College: Mesa Community College
Program Availability: EM, GC, MC, PC, PV, RS
Field of Interest: Culture and Society
Instructional Council: Creative Writing
GPA: 2.00

Upon completion of this certificate, students may pursue a career as:
27-3043.05 Poets, Lyricists and Creative Writers
43-9081.00 Proofreaders and Copy Markers

Upon completion of a certificate, students may pursue a career as:
27-3041.00 Editors
27-3043.04 Copy Writers
27-3091.00 Interpreters and Translators

Description: The Academic Certificate (AC) in Creative Writing program is designed to provide students and professional writers with access to a community of writers and creative writing activities, instruction and guidance from established authors, and ongoing support in improving their writing skills and marketing their work. As students take courses in the program, they will build a portfolio of original work that may be submitted for publication. The program offers classes, workshops, and other activities such as readings and contests, which are accessible to writers of all levels regardless of academic or professional standing. The program aims to serve a diverse community who may be underrepresented in traditional creative writing programs. Completion of the certificate does not lead to a particular degree program, but may aid students in their pursuit of a career in the writing professions and in their continued enjoyment of writing for personal growth.

Learning Outcomes

1. Analyze the aesthetic values and literary styles of diverse eras and cultures.(CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW273, CRW274, CRW281, CRW290, CRW291, ENG210, THO118)
2. Evaluate the technical elements and theories of literature across multiple genres.(CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW201, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW272, CRW273, CRW274, CRW281, CRW290, CRW291)
3. Interpret the effects of technical craft elements in published literary works. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW201, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW272, CRW273, CRW274, CRW281, CRW290, CRW291)
4. Explore the dynamic relationships among people, culture, and the physical world. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW273, CRW274, CRW281, CRW290, CRW291)
5. Demonstrate social responsibility and ethical behavior toward the creation of original works in a culturally diverse world. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW201,

CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW273, CRW274, CRW281, CRW290, CRW291)

6. Engage the creative process through problem-solving, experimentation, and inspiration to produce original works across multiple genres. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW201, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW272, CRW273, CRW274, CRW281, CRW290, CRW291)
7. Apply the peer review workshop process to explore, develop, and revise original writing. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW272, CRW273, CRW274, CRW281, CRW290, CRW291)
8. Develop one-on-one relationships with creative writing mentors. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW201, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW273, CRW274, CRW281, CRW290, CRW291)
9. Create a portfolio of publication ready work. (CRW120, CRW150, CRW160, CRW170, CRW172, CRW180, CRW190, CRW200, CRW201, CRW202, CRW204, CRW220, CRW251, CRW260, CRW261, CRW270, CRW271, CRW272, CRW273, CRW274, CRW281, CRW290, CRW291)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Students who wish to enroll in the Creative Writing program must complete a formal application; contact Program Director.

Program Prerequisites

None

Required Courses

Credits: 21

ENG210 Creative Writing (3) may be substituted for CRW150 with permission of Program Director.
CRW150 Introduction to Creative Writing 3

CRW200 must be repeated for a total of two (2) credits.
+ CRW200 Readings for Writers (1) 2

+ CRW201 Portfolio 1

Students must complete six (6) credits from Series I and nine (9) credits from Series II in consultation with a Program Director.

Series I
Credits: 6
Students must complete two (2) of the following courses for a total of six (6) credits.
CRW120 Introduction to Writing Children`s Literature 3
CRW160 Introduction to Writing Poetry 3
CRW170 Introduction to Writing Fiction 3
CRW172 Introduction to Comic Book Writing 3
CRW180 Introduction to Writing Nonfiction 3

CRW190 Introduction to Screenwriting 3
THO118 Playwriting 3

Series II
Credits: 9
Students must complete three (3) of the following courses for a total of nine (9) credits.
+ CRW202 The Writer as Witness 3
+ CRW204 Journaling 3
+ CRW220 Intermediate Writing Children`s Literature 3
CRW251 Topics in Creative Writing 3
+ CRW260 Intermediate Poetry Writing 3
+ CRW261 Topics in Writing: Poetry 3
+ CRW270 Intermediate Fiction Writing 3
+ CRW271 Topics in Writing: Fiction 3
+ CRW272 Planning and Structuring the Novel 3
+ CRW273 Writing the Novel 3
+ CRW274 Revising the Novel 3
+ CRW281 Topics in Writing: Non-Fiction 3
+ CRW290 Intermediate Screenwriting 3
+ CRW291 Topics in Writing: Plays 3

Restricted Electives
Credits: 3

+ CRW+++++ Any CRW Creative Writing prefixed course not listed under Required Courses area. 1-3
ENG235 Magazine Article Writing 3
+ ENH+++++ Any ENH English Humanities prefixed course 3
HUM/THF210 Contemporary Cinema 3
THE260 Film Analysis 3

MCCCD Governing Board Approval Date: May 28, 2019

Language Studies

Major: 6237N
Catalog Year: 2025-2026
Effective Term: 2025 Fall
Award: AC
Total Credits: 12-18
CIP Code: 16.0199
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Field of Interest: Culture and Society
Instructional Council: Languages
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
25-1124.00 Foreign Language and Literature Teachers, Postsecondary
27-3091.00 Interpreters and Translators

Description: The Academic Certificate (AC) in Language Studies is designed to provide students with a foundation in the study of culture, language, and linguistic structures. The certificate provides students with the essential language skills and vocabulary to communicate in a language other than English.

Learning Outcomes
1. Examine the nature, diversity and variation of language. (SLC201)
2. Describe linguistic concepts and the process of language acquisition. (SLC201)

3. Demonstrate proficiency at the intermediate mid level in accordance with the ACTFL (American Council for the Teaching of Foreign Languages) benchmarks and performance indicators appropriate to the selected language. (ARB+++, ASL+++, CHI+++, FRE+++, GER+++, GRK+++, ITA+++, IPP+++, JPN+++, LAT+++, NAV+++, PIM+++, POR+++, RUS+++, SPA+++, TRS+++)
4. Apply knowledge of cultural norms, values, beliefs, and regional variations to settings where the target language is used. (AFR/ASB/CCS202, AHU+++, ARB+++, ASL+++, CHI+++, COM163, COM263, FRE+++, GER+++, GRK+++, ITA+++, ITH+++, JPH245, JPN+++, LAT+++, NAV+++, PIM+++, POR+++, PSY132, RUS+++, SPA+++, SPH+++, SOC241)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students may qualify to enter higher level language courses via departmental placement. Students wishing to earn credit for courses in which they placed out of should take the CLEP examination or apply credits earned through Advanced Placement (AP) or International Baccalaureate (IB) exams.

Program Prerequisites

Credits: 0-5

201-level proficiency in a language other than English as indicated by assessment or coursework.

Required Courses

Credits: 6-8

SLC201 Introduction to Linguistics 3
AND
Students must choose 3-5 credits in 202 or higher-level coursework in the language used to satisfy the program prerequisites.

Restricted Electives

Credits: 6-10

Students must choose two (2) courses from the list below. Prerequisites may not be used to satisfy the Restricted Electives:

AFR/ASB/CCS202 Ethnic Relations in the United States (3) OR
SOC241 Race and Ethnic Relations (3) 3

+ COM163 Intercultural Communication in Everyday Life 3
COM263 Elements of Intercultural Communication 3
JPH245 Traditional and Modern Japanese Culture 3
PSY132 Psychology and Culture 3
AHU+++ Any AHU Arabic Humanities course(s)
ARB+++ Any ARB Arabic course(s)
ASL+++ Any ASL American Sign Language course(s)
CHI+++ Any CHI Chinese course(s)
FLA+++ Any FLA Foreign Language Acquisition course(s)
FRE+++ Any FRE French course(s)

GER+++ Any GER German course(s)
GRK+++ Any GRK Greek course(s)
IPP+++ Any IPP Interpreter Preparation Program course(s)
ITA+++ Any ITA Italian course(s)
ITH+++ Any ITA Italian Humanities course(s)
JPN+++ Any JPN Japanese course(s)
LAT+++ Any LAT Latin course(s)
NAV+++ Any NAV Navajo course(s)
NVH+++ Any NVH Navajo Humanities course(s)
PIM+++ Any PIM Pima course(s)
POR+++ Any POR Portuguese course(s)
RUS+++ Any RUS Russian course(s)
SLC+++ Any SLC Studies in Language and Culture course(s)
SPA+++ Any SPA Spanish course(s)
SPH+++ Any SPH Spanish Humanities course(s)
TRS+++ Any TRS Translation and Interpretation course(s)

MCCCD Governing Board Approval Date: October 29, 2024

Oral Communication Fluency for Non-Native English Speakers

Major: 6223N
Catalog Year: 2024-2025
Effective Term: 2008 Summer
Award: AC
Total Credits: 15
CIP Code: 09.9999
SOC Code: 25-1122, 27-3041, 27-3043

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC
Field of Interest: Culture and Society
Instructional Council: Communication
GPA: 2.00

Description: The Academic Certificate (AC) in Oral Communication Fluency for Non-Native English Speakers is a concentrated program of study in communication and oral fluency designed to extend traditional ESL coursework. It provides Non-Native English Speakers with intense practice in pronunciation and fluency of American speech as well as experience in all communication contexts including interpersonal communication, small group interaction, problem solving, and public speaking. Students develop skills to enhance their professional, academic, and social interactions to become more competitive and effective in the academic environment and in the workplace.

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better for all courses within the Required Courses area.

Program Prerequisites

None

Required Courses

Credits: 12

COM110 Interpersonal Communication 3
COM120 Articulation and Pronunciation for Effective Communication 3
+ COM221 Oral Fluency in American Speech 3
+ COM282AC Service-Learning Experience in Communication 3

Restricted Electives

Credits: 3

Any approved General Education course in the cultural awareness [C] value

Program Competencies

1. Demonstrate skill in using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, and developing and maintaining personal and professional relationships. (COM110)
2. Analyze American speech production problems due to accents produced by another language; correct misarticulated American speech sounds; demonstrate critical listening to sound production and American English speech patterns; use American idioms and expressions; and prepare and deliver group and individual speech presentations. (COM120)
3. Demonstrate oral fluency in spontaneous speaking contexts and presentational speaking skills in English. (COM221)
4. Complete a service-learning field experience within a private or public agency, educational institution, or citizen volunteer group. (COM282AC)

MCCCD Governing Board Approval Date: February 26, 2008

Sustainability

Major: 6240N
Catalog Year: 2024-2025
Effective Term: 2025 Summer
Award: AC
Total Credits: 15-18
CIP Code: 03.0104
Primary/Initiating College: Chandler-Gilbert Community College
Program Availability: CG, GC, PV, RS, SC, SM
Field of Interest: Science, Technology, Engineering and Mathematics
Instructional Council: Sustainability
GPA: 2.00
SOC Code: Upon completion of a bachelor`s degree, students may pursue a career as:
11-1011.03 Chief Sustainability Officers
11-9199.02 Compliance Managers
19-2041.00 Environmental Scientists and Specialists, Including Health
13-1199.05 Sustainability Specialists

Description: The Academic Certificate (AC) in Sustainability is interdisciplinary and builds a strong academic expertise within a student`s desired focus area of Sustainability. The focus areas are established within and among the foundational pillars of Sustainability (social - environmental - economic).

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites

None

Required Courses

Credits: 9-12

SSH111 Sustainable Cities 3
SUS110 Sustainable World 3
Credits: 6
Restricted Electives
Students must select three focus area classes
ASM104 Bones, Stones, and Human Evolution 4
BIO105 Environmental Biology 4

CHM107 Chemistry and Society (3) and
+ CHM107LL Chemistry and Society Laboratory (1) 4

COM263 Elements of Intercultural Communication 3
FON135 Sustainable Cooking 3
ECN212 Microeconomic Principles 3
EPS150 Introduction to Entrepreneurship 3
ENV101 Introduction to Environmental Science 4

GLG110 Geological Disasters and the Environment (3) and
GLG111 Geological Disasters and the Environment Lab (1) 4

GPH113 Introduction to Physical Geography 4
PHI216 Environmental Ethics 3
PSY132 Psychology and Culture 3
SBU200 Society and Business 3
SUS100 Introduction to Sustainability 3
SCT100 Introduction to Sustainable Built Environments 3

Learning Outcomes

1. Explore the sustainable interaction between human and natural systems. (SUS110)
2. Analyze the concept of sustainable development within local, regional, and global contexts. (SSH111)

MCCCD Governing Board Approval Date: February 23, 2021

Faculty and Administration

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Mónica Castañeda, Ed.D., Vice President, Student Affairs
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Lou Sanchez, Ed.D., Dean of Enrollment Services
Douglas Deiss, Ph.D., Interim Dean of Instruction, Academic Affairs
Genesis Toole, Ph.D., Dean of Student Life
Carly Zufelt, MFA, Dean of Instruction, Arts, Science and General Education

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Shufford, Kevin, Ph.D., Communication and World Languages
Shumaker, Nicky W, Automotive
Sindel, Kelly, M.A., Communication and World Languages
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Wheeler III, Dean, Ph.D., Social Sciences
Wierenga, Dale, M.Arch., Technology and Consumer Science
Williams, Melissa, D.N.P., Nursing
Witzke, Jackie, Ph.D., English, Reading, ESL, Journalism, and Creative Writing
Woodcock, Jennifer, MBS, MSN, CCRN, Nursing
Woods, Sherry Malaine, Education
Worthy, Lisa, Ph.D., Psychology
Yamak, Didem, Ph.D., Technology and Consumer Science
Yee, Sharon, Ph.D., Social Sciences
York, Justin, Ph.D., Biology
Zhosan, Dmytro, Ph.D., Social Sciences

GCC Faculty Emeritus

Adank, Willard A. (1968-1992) Physics/Mathematics Faculty, Department Chair
Antilla, Freddie L. (1983-2004) English Faculty
Arnoldt, Carmela B. (1992-2013) English Faculty, Department Chair
Austin, Mariam J. (1965-1986) Physical Education Faculty, Department Chair
Barstack, Renee (1981-2017) English Faculty
Baxter, Leroy E. (1966-1988) Music/Humanities Faculty, Department Chair
Beene, D. Leon (1976-1999) History Faculty
Beene, Holly McKinzie (1975-2009) Communication Faculty
Bietto, Frank (1966-1987) Political Science/History Faculty
Bilse, Don (28 years of service) CAD Faculty, Dean of Students
Bloss, Dale (1963-1988) Physical Education Faculty, Athletic Director and Department Chair
Boerner, Janice K. (1963-1993) English Faculty, Department Chair
Bowker, Robert (1986-2017) Biology Faculty
Boyle, James H. (25 years of service) Business and Information Technology Faculty
Braasch, Vernon C. (1963-1985) Physical Education Faculty, Department Chair
Brandt-Williams, Ann (1984-2009) Psychology Faculty, Department Chair
Brazie, Thomas (1967-2000) English Faculty
Brooker, Rodney (1987-2014) Business and Information Technology, Accounting Faculty
Callahan, Ruth (1992-2014) English/Reading/Journalism Faculty
Camp, Jane (1986-2009) English Faculty
Campion, Maurice M. (1964-1988) Spanish Faculty
Cary, Richard (1979-2001) Business Faculty
Catalano, Renault (1967-1995) Technology Faculty, Department Chair
Cavin, William C. (1966-1986) Biology Faculty, Department Chair
Celestian, Stanley (1976-2006) Physical Sciences/Astronomy Faculty
Charvonia, Ronald (1961-1988) Business Faculty
Chord, Paul (1966-1988) English Faculty
Christian, Robert (1990-2006) Communication Faculty

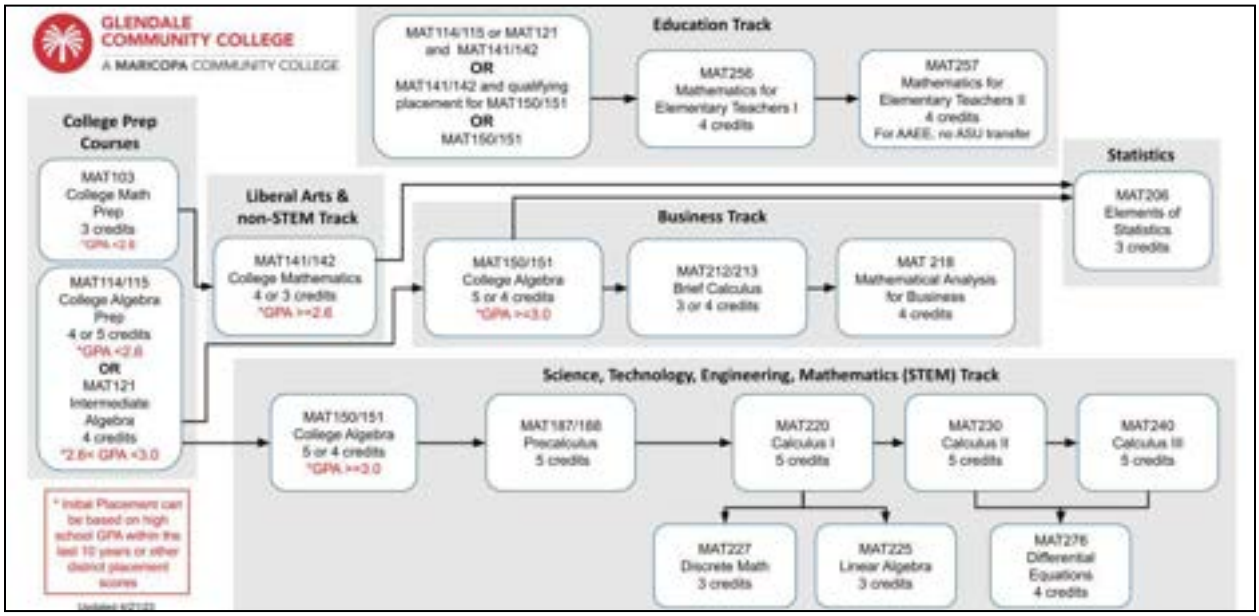
Clayton, Dorothy (1966-1989) Physical Education Faculty
Cooper, Elizabeth H. (1976-2005) Biology Faculty
Csontos, Louis (21 years of service) Chemistry Faculty, Department Chair
Cullinan, Andrea (1973-2004) Nursing Faculty
Cullinan, Michael (1990-2009) Math/Computer Science Faculty
Daugherty, James R. (1988-2015) Biology Faculty
DeMarco, Lenna (1989-2009) Dance Faculty
DePippo, Paul D. (1976-2004) Social Sciences Faculty, Department Chair
DeSoto, Marla (1992-2014) English/Reading/Journalism Faculty
Dias, Diana (1998-2006) Business and Information Technology Faculty
Dotterer, William (1966-2001) Business Faculty
Dudley, Anne (1990-2015) Mathematics Faculty
Dutton, Mary Ann (1960-1986) Choral Music Faculty
Dwyer, Diana (1982-2009) Library Faculty, Department Chair
Eastin, Gene N. (1963-1989) French/English Faculty, Department Chair
Ellis, Albert T. (1964-1988) Biology Faculty, Department Chair
Esquer, Mario H. (1977-2009) Technology and Consumer Science Faculty
Fischer, Mildred (1969-1998) English Faculty
Fitzgerald, Frank (1966-1989) Art Faculty, Department Chair
Foley, Thomas A. (1995-2017) Mathematics Faculty
Forney, Merrill (23 years of service) Physical Sciences Faculty
Fuenning, Richard M. (23 years of service) Physical Education Faculty
Galletti, Marie (1975-1998) English/ESL Faculty
Gardner, Moffat (1965-1985) Social Sciences Faculty
Gareshé, Gay (1987-2014) Social Sciences Faculty
Gibbons, George R. (1968-1988) Electronics/Drafting Faculty, Department Chair
Goff, Lyenatte (1963-2004) Mathematics Faculty
Goto, Darlene M. (1969-2007) Art Faculty
Griego, Manny (1976-2005) Engineering Faculty, Department Chair
Griggs, John (1971-2004) Foreign Languages/Communication Faculty, Department Chair
Gurule, Juan (1989-2009) Counseling Faculty
Guyman, Vernon (1968-2000) Mathematics Faculty
Haas, Patrick (1984-2005) English Faculty
Hamilton, Mirta (1979-2009) Art Faculty
Hansen, Vance W. (1965-1991) English Faculty
Hardin, Carnella (1979-2010) Business and Information Technology Faculty
Harris, C. Eugene (21 years of service) Music Faculty
Hartley, Jack A. (1963-1986) English Faculty
Hawks, Margaret (1967-2000) English Faculty, Department Chair
Herlihy, Harriet (1960-1989) English Faculty, Department Chair
Higgins, Don (1967-2001) Social Sciences Faculty, Department Chair
Hillis, Richard (21 years of service) Art Faculty
Hoff, Edward B. (1963-1989) Mathematics Faculty, Department Chair
Hoffs, Marilyn J. (1972-1996) Speech Communication/ Theatre Faculty, Department Chair
Holtfrerich, Michael (1988-2017) Mathematics Faculty, Department Chair
Howey, Charlotte (1989-2005) English/ESL/Spanish Faculty
Hubbard, N. LaRue (23 years of service) Business Faculty
Hubbard, Robert T. (1966-2006) Philosophy Faculty, Department Chair
Jacobs, Elizabeth "BJ" (1990-2014) Psychology Faculty
James, Gerald H. (1967-1993) Mathematics Faculty
Jenkins, Carol (1992-2017) Sociology Faculty
Johanson, Leonard C. (1965-1988) Art Faculty
Johnson, Frederica (1988-2009) Reading Faculty

Johnston, Eileen (2001-2014) Social Sciences Faculty, Department Chair
Jones, M. Louise (1981-2010) Counseling Faculty
Karpinski, Susan (2004-2019) Psychology Faculty
Kersting, Joseph M. (1991-2017) Fitness and Wellness Faculty
Kidney, Charlotte (over 22 years of service) Physical Education Faculty, Department Chair
King, Dick (1973-1998) Automotive Faculty, Department Chair
King, Owena A. (1966-1989) Business Faculty
Klann, Walter (1966-1998) Mathematics Faculty
Knopp, Nelda (1966-1998) Physical Education Faculty
Knowles, Henry (1965-1989) Speech Communication Faculty
Kong, Moonie (1966-1987) Physical Education Faculty
Kurtz, Donald A. (1965-1987) Business Faculty
Lange, Merle L. (1966-1989) Counseling Faculty, Department Chair, Financial Aid Director
Langlois, Lyle R. (1968-1989) Business Faculty
Lawrence, Barbara J. (1967-1988) Reading/English Faculty, Department Chair
Leskovsky, Mary (1986-2006) English Faculty, Honors Coordinator.
Lorenzini, August (1967-1985) Speech Communication/Film Faculty, Department Chair
Loss, Bonnie (1990-2021) Art and Humanities Faculty
Ludders, Virginia (1989-2009) Theatre/Communication Faculty
Martin, Ethel A. (1963-1989) Business Faculty
Matthews, Jack K. (22 years of service) Drafting Faculty, Department Chair
Matz, Harry (1965-1989) Reading Faculty, Department Chair, Honors Coordinator.
May, Mauricette (1998-2009) French Faculty
McCarthy, Rita (1988-2015) English/Reading/Journalism Faculty
McCoy, Leslie E. (1967-1989) Electronics Faculty, Department Chair
McKinley, Michael (1991-2012) Biology Faculty
McWilliams, Mary Lou (1968-1988) Counseling Faculty
Meeker, Joseph A. (1985-2009) CAD/Drafting Faculty
Meixner, Sylvia S. (1969-1992) Social Sciences/Sociology Faculty, Department Chair
Mikus, Andrew (1963-1989) History Faculty, Department Chair
Miller, David (2021) English, Reading, ESL, Journalism, and Creative Writing Faculty, Developmental Education Coordinator, Department Chair
Milliner, Charles (1969-2004) Business Faculty, Department Chair
Moloso, Phillip (1966-2002) Librarian/Business/Mathematics Faculty, Department Chair
Montanus, Mark (1965-1985) Business Faculty
Murray, Marilee (1974-2000) Chemistry Faculty, Department Chair
Murry, Suzanne (1982-2011) Business Faculty
Nelson, Bonnie (1968-1999) Philosophy Faculty, Curriculum Design Facilitator
Overson, Peter (1964-1989) Theatre Faculty
Peters, Allan M. (1965-1986) Physics Faculty, Department Chair
Pilch, Richard R. (1967-1996) Physical Education Faculty
Pisciotta, Pete (1967-1996) Mathematics/Physical Education Faculty, Athletic Director
Pitman, Fred (1969-1997) Physics Faculty
Pommerville, Jeffrey (1989-2018) Biology Faculty
Price, David (1966-1988) Chemistry Faculty
Rassi, Martha (1984-2005) Business Faculty
Reavis, Robert, H. (1999-2021) Biology Faculty
Reeder, Duane (35 years of service) Psychology Faculty
Rees, Richard (1965-2006) Psychology Faculty
Roberson, Doyle L. (1965-1989) Mathematics Faculty
Samuels, Carl (1967-2004) Psychology Faculty
Schafer, G.K. "Duke" (1975-2007) Public Safety Sciences Faculty
Schiedat, Marilyn (1976-2008) English Faculty

Schmidt, David (1991-2022) Performing Arts, Music Industry Studies
Schwalm, Karen T. (1988-2008) English Faculty
Siefer, Nancy (1987-2007) English Faculty
Shipley, Alvin D. (1966-2001) Mathematics Faculty, Department Chair
Smart, John (21 years of service) Social Science/Economics Faculty
Smelser, Philip (1963-2009) Philosophy Faculty, Department Chair
Smith, James A. (1965-1989) Physical Education Faculty
Smith, Linda (1986-2007) Social Sciences Faculty
Smith, Louis L. (1963-1985) Reading Faculty, Department Chair
Staheli, W. Kent (1966-1997) Physical Education Faculty, Department Chair
Staten, Jean (1975-1996) Librarian, Dean of Instruction.
Sylvester, Tim (1991-2017) Business and IT Faculty
Thompson, J.R. (Bob) (1968-2000) Geology Faculty, Department Chair
Triplett, Patricia (1983-2009) Nursing Faculty
Thrasher, John (1970-1997) Music Faculty, Director of Bands.
Ulm, Donald R. (1979-2009) Business and Information Technology Faculty
Van Marche, Deborah (1997-2017) Psychology Faculty, Department Chair
VanMeter, Charles (1968-1989) Agriculture Faculty, Department Chair
Vawter Jr., Charles (1965-2020) Business and Information Technology/Accounting Faculty
Walcott, Lyle (1965-2007) Philosophy Faculty
Weiss, Kenneth G. (1963-1986) Physical Education Faculty
West, Charles L. (1966-1994) Chemistry Faculty, Department Chair
Westenburg, Irwin S. "Wes" (1984) Psychology Faculty
Wilhoit, Sherrill (1975-1999) Business Faculty
Williams, Johnette (1970-2002) Library Faculty, Department Chair
Williams, Stephen (1981-2013) Biology Faculty, Department Chair
Wingersky, Joy (1981-2008) English Faculty
Winters, John B. (1968-2004) Physical Science Faculty

Appendices

Appendix A – Math Course Sequence Pathways Flowchart



Appendix B – MCCCD Academic Calendar 2025-2026

MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT
2025-2026 ACADEMIC CALENDAR
Dates are subject to change* / The most up to date calendar information can be found at
https://district.maricopa.edu/regulations/admin-regs/section-2/academic-calendars

Colleges may modify start dates in order to meet special needs. Dates listed below which are directly related to instruction refer to the traditional academic year model. Some courses may be offered over time-periods for which these dates are not applicable.
Links to ASU, GCU, NAU, and U of A calendars are incorporated on the last page for reference only and are subject to change without notice.

SUMMER SEMESTER – 2025		**Note: Subject to the 2025-2026 Catalog**
Mon	May 12	Final Grades Due for Spring 2025 Semester
Mon	May 19	Tuition Due for Summer 2025 Semester
Mon	**May 26**	**Memorial Day (Colleges Closed)**
Tue	May 27	Summer Semester Begins
Thu	**Jun 19**	**Juneteenth National Independence Day (Colleges Closed)**
Mon-Sat	Jun 30-Jul 5	Summer Break for Clock Hour Programs Only
Thu	**Jul 3**	**Observance of Independence Day (Colleges Closed)**
Thu	Jul 31	Summer Semester Ends
Mon	Aug 4	Final Grades Due for Summer 2025 Semester
FALL SEMESTER – 2025		
Wed	Aug 13	Tuition Due for Fall 2025 Semester
Fri	Aug 15	First Day of Faculty Accountability
Sat	Aug 23	Fall Semester Begins
Mon	**Sep 1**	**Labor Day (Colleges Closed)**
Mon	Sep 22	Find A Class Opens for Spring 2026 Semester
Mon	Oct 6	Spring 2026 Priority Registration Begins for Currently Enrolled Students
Sat+	Oct 11	Last Day for Withdrawal without Instructor's Signature
Mon++	Oct 13	Student Withdrawal with Instructor's Signature Begins
Mon	Oct 13	Spring 2026 Open Registration Begins
*		Application for December 2025 Graduation
Tue	**Nov 11**	**Veterans Day (Colleges Closed)**
Thu-Sun	**Nov 27-30**	**Thanksgiving Holiday (Colleges Closed)**
Sun	Dec 14	Last Day of Regular Classes
Mon-Fri**	Dec 15-19	Final Exam Week
Fri	Dec 19	Fall Semester Ends / Last day of Faculty Accountability
Sat	Dec 20	Mid-Year Recess Begins for Students
Mon	Dec 22	Final Grades Due for Fall 2025 Semester
Thu-Thu	**Dec 25-Jan 1**	**Mid-Year Recess (Colleges Closed)**
SPRING SEMESTER - 2026		
Fri	Jan 2	Employees Return to Campus
Mon	Jan 5	Clock Hour Student Classes Begin
Wed	Jan 7	Tuition Due for Spring 2026 Semester
Mon	Jan 12	First Day of Faculty Accountability
Sat	Jan 17	Spring Semester Begins
Mon	**Jan 19**	**Martin Luther King Jr. Day (Colleges Closed)**
Mon	**Feb 16**	**Presidents' Day (Colleges Closed)**
Tue	Feb 17	Summer/Fall 2026 Semesters - Find A Class Opens
Mon	Mar 2	Summer/Fall 2026 Semesters - Priority Registration Begins for Currently Enrolled Students
*		Application for 2026 May Graduation
Sat+	Mar 7	Last Day for Withdrawal without Instructor's Signature
Mon++	Mar 9	Student Withdrawal w/ Instructor's Signature Begins
Mon-Sun	**Mar 16-22**	**Spring Break for Students, Faculty, & Employees (Campus closed)**
Mon	Mar 23	2026 Summer/Fall Semesters - Registration Opens
Sun	May 10	Last Day of Regular Classes
Mon-Fri**	May 11-15	Final Exam Week

* For specific information concerning the last day to apply for graduation, individual class start dates, and final exams, consult the college of enrollment.
** Any classes meeting on Friday, Saturday or Sunday will have final examinations during their regular class time.
\+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (see *Administrative Regulation 2.3.6* in Catalog Common Pages).
++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (see *Administrative Regulation 2.3.6* in Catalog Common Pages).

1 6/11/2025

Fri	May 15	Commencement
Fri	May 15	Spring Semester Ends / Last day of Faculty Accountability
Mon	May 18	Final Grades Due for Spring 2026 Semester

SUMMER SEMESTER 2026		**Note: Subject to the 2026-2027 Catalog**
Mon	May 18	Tuition Due for Summer 2026 Semester
Mon	**May 25**	**Memorial Day (Colleges Closed)**
Tue	May 26	Summer Semester Begins
Thu	**Jun 18**	**Observance of Juneteenth National Independence Day (Colleges Closed)**
Mon-Sat	Jun 29-Jul 4	Summer Break for Clock Hour Programs Only
Thu	**Jul 2**	**Observance of Independence Day (Colleges Closed)**
Thu	Jul 30	Summer Session Ends
Mon	Aug 3	Final Grades Due for Summer 2026 Semester

SUMMER/FALL SEMESTER – 2025 **Note: Subject to 2025 – 2026 Catalog**

	S	M	T	W	TH	F	S	
M	11	12	13	14	15	16	17	
A	18	19	20	21	22	23	24	May 19 – Tuition Due for Summer 2025 Semester
Y	25	**26**	27	28	29	30	31	**May 26 – Memorial Day (Colleges Closed)**
	1	2	3	4	5	6	7	May 27 – Summer Semester Begins
J	8	9	10	11	12	13	14	
U	15	16	17	18	**19**	20	21	**Jun 19 – Juneteenth National Independence Day (Colleges Closed)**
N	22	23	24	25	26	27	28	Jun 30-Jul 5 - Summer Break for Clock Hour Programs
	29	30	1	2	**3**	4	5	**Jul 3 – Observance of Independence Day (Colleges Closed)**
J	6	7	8	9	10	11	12	
U	13	14	15	16	17	18	19	Jul 31 – Summer Session Ends
L	20	21	22	23	24	25	26	Aug 4 – Final Grades Due for Summer 2025 Semester
	27	28	29	30	31	1	2	Aug 13 – Tuition Due for Fall 2025 Semester
A	3	4	5	6	7	8	9	
U	10	11	12	13	14	15	16	Aug 15 – One (1) Day of Faculty Accountability
G	17	18	19	20	21	22	23	Aug 18-22 – Five (5) Days of Faculty Accountability
	24	25	26	27	28	29	30	Aug 23 – Fall Semester Begins
S	31	**1**	2	3	4	5	6	**Sept 1 - Labor Day (Colleges Closed)**
E	7	8	9	10	11	12	13	
P	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	
O	28	**29**	30	1	2	3	4	
C	5	6	7	8	9	10	11	Oct 6 – 45th Day
T	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30	31	1	
N	2	3	4	5	6	7	8	
O	9	10	**11**	12	13	14	15	**Nov 11 – Veterans Day (Colleges Closed)**
V	16	17	18	19	20	21	22	
	23	24	25	26	**27**	**28**	**29**	**Nov 27-30 – Thanksgiving Holiday (Colleges Closed)**
D	**30**	1	2	3	4	5	6	
E	7	8	9	10	11	12	13	Dec 14 – Last Day of Regular Classes
C	14	15	16	17	18	19	20	Dec 15-19 – Final Exam Week **
	21	22	23	24	**25**	**26**	**27**	Dec 19 – Fall Semester Ends / Last day of Faculty Accountability
	28	**29**	**30**	**31**				Dec 20 – Mid-Year Recess Begins Students
								Dec 22 – Final Grades Due for Fall 2025 Semester
								Dec 25 - Jan 1 Mid-Year Recess (Colleges Closed)

* For specific information concerning the last day to apply for graduation, individual class start dates, and final exams, consult the college of enrollment.
** Any classes meeting on Friday, Saturday or Sunday will have final examinations during their regular class time.
+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (see *Administrative Regulation 2.3.6* in Catalog Common Pages).
++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (see *Administrative Regulation 2.3.6* in Catalog Common Pages).

SPRING SEMESTER – 2026 **Note: Subject to 2025 – 2026 Catalog**

	S	M	T	W	TH	F	S	
J					**1**	2	3	**Jan 1 –New Year's Day (Colleges Closed)**
A	4	5	6	7	8	9	10	Jan 2 – Employees Return to Campus
N	11	12	13	14	15	16	17	Jan 5 – Clock Hour Student Classes Begin
	18	**19**	20	21	22	23	24	Jan 7 – Tuition Due for Spring 2026 Semester
F	25	26	27	28	29	30	31	Jan 12 – First Day of Faculty Accountability
E	1	2	3	4	5	6	7	Jan 17 – Spring Semester Begins
B	8	9	10	11	12	13	14	**Jan 19 – Martin Luther King Jr. Day (Colleges Closed)**
	15	**16**	17	18	19	20	21	**Feb 16 – Presidents' Day (Colleges Closed)**
	22	23	24	25	26	27	28	Mar 2 – 45th Day
M	1	2	3	4	5	6	7	
A	8	9	10	11	12	13	14	
R	15	**16**	**17**	**18**	**19**	**20**	**21**	**Mar 16-22 – Spring Break for Students, Faculty, & Staff (Colleges Closed)**
)	**22**	23	24	25	26	27	28	
A	29	30	31	1	2	3	4	
P	5	6	7	8	9	10	11	
R	12	13	14	15	16	17	18	May 10 – Last Day of Regular Classes
	19	20	21	22	23	24	25	May 11-15 – Final Exam Week **
M	26	27	28	29	30	1	2	May 15 – Commencement
A	3	4	5	6	7	8	9	May 15 – Spring Semester Ends / Last day of Faculty Accountability
Y	10	11	12	13	14	15	16	May 18 – Final Grades due for Spring 2026 Semester

SUMMER SEMESTER – 2026 **Note: Subject to 2026 – 2027 Catalog**

	S	M	T	W	TH	F	S	
M	10	11	12	13	14	15	16	
A	17	18	19	20	21	22	23	May 18 – Tuition Due for Summer 2026 Semester
Y	24	**25**	26	27	28	29	30	**May 25 –Memorial Day (Colleges Closed)**
	31	1	2	3	4	5	6	May 26 – 2026 Summer Session - Classes Begin
J	7	8	9	10	11	12	13	
U	14	15	16	17	**18**	19	20	**Jun 18 – Observance of Juneteenth National Independence Day**
N	21	22	23	24	25	26	27	**(Colleges Closed)**
	28	29	30	1	**2**	3	4	Jun 29 –Jul 4 - Summer Break for Clock Hour Programs
J	5	6	7	8	9	10	11	**Jul 2 – Observance of Independence Day (Colleges Closed)**
U	12	13	14	15	16	17	18	
L	19	20	21	22	23	24	25	Jul 30 – Summer Semester Ends
	26	27	28	29	30	31	1	Aug 3 – Final Grades Due for Summer 2026 Semester
A	2	3	4	5	6	7	8	Aug 12 – Tuition Due for Fall 2026 Semester
U	9	10	11	12	13	14	15	Aug 14 – One (1) Day Faculty Accountability
G	16	17	18	19	20	21	22	Aug 17-21 – Five (5) Days of Faculty Accountability
	23	24	25	26	27	28	29	Aug 22 – Fall Semester Begins
	30	31						

Instructional Days

	Fall	Spring	
M	15	13	
T	15	15	
W	16	15	
TH	15	15	
F	15	15	
	76	**73**	**= 149 Total**

Proposed Class Start Dates	MCCCD	ASU
Fall 2025	Sat, Aug 23	Thu, Aug 21
Spring 2026	Sat, Jan 17	Mon, Jan 12

Calendar for less than 12-month employees

9-month employees:	Aug 18, 2025 – May 15, 2026
9.5-month employees:	Aug 4, 2025 – May 15, 2026
10-month employees:	Jul 28, 2025 – May 22, 2026

* For specific information concerning the last day to apply for graduation, individual class start dates, and final exams, consult the college of enrollment.
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+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (*see Administrative Regulation 2.3.6 in Catalog Common Pages*).
++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (*see Administrative Regulation 2.3.6 in Catalog Common Pages*).

2025-2026

	S	M	T	W	TH	F	S		Instructional	Accountability	Contract
						1	2				
A	3	4	5	6	7	8	9		0	0	0
U	10	11	12	13	14	15	16		0	1	1
G	17	18	19	20	21	22	23		5	5	5
	24	25	26	27	28	29	30		5	5	5
S	31	**1**	2	3	4	5	6		4	4	5
E	7	8	9	10	11	12	13		5	5	5
P	14	15	16	17	18	19	20		5	5	5
	21	22	23	24	25	26	27		5	5	5
	28	29	30	1	2	3	4		5	5	5
O	5	6	7	8	9	10	11		5	5	5
C	12	13	14	15	16	17	18		5	5	5
T	19	20	21	22	23	24	25		5	5	5
	26	27	28	29	30	31	1		5	5	5
N	2	3	4	5	6	7	8		5	5	5
O	9	10	**11**	12	13	14	15		4	4	5
V	16	17	18	19	20	21	22		5	5	5
	23	24	25	26	**27**	**28**	**29**		3	3	5
D	**30**	1	2	3	4	5	6		5	5	5
E	7	8	9	10	11	12	13		5	5	5
C	14	15	16	17	18	19	20		0	5	5
	21	22	23	24	**25**	**26**	**27**		0	0	5
	28	**29**	**30**	**31**	**1**	2	3		0	0	5
J	4	5	6	7	8	9	10		0	0	5
A	11	12	13	14	15	16	17		0	5	5
N	18	**19**	20	21	22	23	24		4	4	5
	25	26	27	28	29	30	31		5	5	5
F	1	2	3	4	5	6	7		5	5	5
E	8	9	10	11	12	13	14		5	5	5
B	15	**16**	17	18	19	20	21		4	4	5
	22	23	24	25	26	27	28		5	5	5
M	1	2	3	4	5	6	7		5	5	5
A	8	9	10	11	12	13	14		5	5	5
R	15	**16**	**17**	**18**	**19**	**20**	**21**		0	0	5
	22	23	24	25	26	27	28		5	5	5
A	29	30	31	1	2	3	4		5	5	5
P	5	6	7	8	9	10	11		5	5	5
R	12	13	14	15	16	17	18		5	5	5
	19	20	21	22	23	24	25		5	5	5
M	26	27	28	29	30	1	2		5	5	5
A	3	4	5	6	7	8	9		5	5	5
Y	10	11	12	13	14	15	16		0	5	5
								TOTAL	**154**	**170**	**196**

Faculty Days Calendar

Contract Year – 2025-2026
Contract Days – 196 (39 weeks)
Accountability Days – 170
Instructional Days – 154

Arizona State University (ASU)
Northern Arizona University (NAU)
Grand Canyon University (GCU)
University of Arizona (UA)

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+ Through the 7th week of 16-week classes, students may initiate an official withdrawal from course(s) without instructor signature (*see Administrative Regulation 2.3.6 in Catalog Common Pages*).
++ After the 7th week of 16-week classes, student must initiate an official withdrawal request from instructor and obtain their signature (*see Administrative Regulation 2.3.6 in Catalog Common Pages*).

Appendix C – Maricopa Community Colleges Field of Interest Matrix: 2023-2024

Maricopa Community Colleges
Field of Interest Matrix 2025-2026

DESCRIPTION

The Maricopa County Community College Field of Interest Matrix identifies all programs currently available for offering within the ten (10) community colleges and skill centers of the district. The programs are grouped under Field of Interest as requested by the colleges. For specific information regarding individual programs, contact the college(s) listed as participating institutions.

Applied Technology

AREAS/PROGRAM	INSTITUTION
Air Conditioning/Refrigeration/Facilities	GW
Aircraft Maintenance Technology	CG
Aircraft Maintenance Technology-Airframe	CG
Aircraft Maintenance Technology-Powerplant	CG
Airway Science Technology, Flight Emphasis	CG
Applied Electrical Technologies	RS
Architectural and Civil CAD Technology	GC
Architectural AutoCAD	SC
Architectural Technology	SC
Automated Industrial Technology	EM, MC
Automated Industrial Technology I	EM, MC
Automated Industrial Technology II	EM, MC
Automotive Automatic Transmission and Transaxle	GC, GW, MC
Automotive Brake Systems	GC, GW, MC
Automotive Chassis	GC, GW, MC
Automotive Drive Train	GC, GW, MC
Automotive Electrical, Heating, Ventilation and Air Conditioning Systems	GC, GW, MC
Automotive Electronic/Electrical Systems	GC, GW, MC
Automotive Engine and Operations Management	GC, GW, MC
Automotive Engine Management and Repair	GC, GW, MC
Automotive Engine Repair	GC, GW, MC
Automotive Heating, Ventilation and Air Conditioning Systems	GC, GW, MC
Automotive Maintenance and Light Repair	GC, GW, MC

AREAS/PROGRAM	INSTITUTION
Automotive Manual Drive Train and Axles	GC, GW, MC
Automotive Service	GC, GW, MC
Automotive Steering and Suspension	GC, GW, MC
Basic Automotive Maintenance	RS
Basic Automotive Repair	GW
Building Inspection	MC
Cable and Wire Harness Assembly	MC
CAD Application	GC
CAD Fundamentals	GC
Caterpillar Technician Training	MC
Certified Flight Instructor Instrument Airplane Rating	CG
CNC Machine Operator	GW, MC
CNC Machining I	GW, MC
CNC Machining I (Day)	GW
CNC Machining II	GW, MC
Collision Repair Technician (Day)	GW
Computer Aided Drafting	MC
Construction Building Codes	MC
Construction Management	MC
Construction Safety OSHA 30	MC
Construction Technology	MC, SM
Construction Trades - Mechanical Trades: Plumbing	GW
Construction Trades - Mechanical Trades: Sheet Metal	GW
Construction Trades: Carpentry	GW, MC, SM
Construction Trades: Carpentry, Commercial and Residential	MC, SM
Construction Trades: Carpentry, Commercial and Residential (Day)	GW
Construction Trades: Construction Management	MC
Construction Trades: Electrical	MC, SM
Construction Trades: Electrical, Commercial and Residential	MC, SM
Construction Trades: Electricity	GW
Construction Trades: Heat and Frost Insulation	GW
Construction Trades: Ironworking	GW
Construction Trades: Masonry	MC, SM
Construction Trades: Millwrighting	GW
Construction Trades: Painting and Drywalling	GW
Construction Trades: Plumbing	MC, SM
Construction Trades: Plumbing, Commercial and Residential	GW, MC, SM

AREAS/PROGRAM	INSTITUTION
Construction Trades: Pre-Apprenticeship	GW
Construction Trades: Solar Energy	MC
Data Center Operations	EM, MC
Datacenter Administration	EM, GC
Drafting and Design Technology	MC
Educational Construction Trades Partnership: Carpentry	RS
Educational Construction Trades Partnership: Carpentry, Commercial and Residential	RS
Educational Construction Trades Partnership: Electrical	RS
Educational Construction Trades Partnership: Electrical, Commercial and Residential	RS
Educational Construction Trades Partnership: H.V.A.C.r Residential Service	RS
Educational Construction Trades Partnership: Plumbing	RS
Educational Construction Trades Partnership: Plumbing, Commercial and Residential	RS
Electrical Technology	GW
Electrical Technology - Commercial Wiring	GW
Electrical Technology - Industrial Wiring	GW
Electrical Technology: Residential Wiring	GW
Energy and Industrial Technology	EM
Environmental Science and Water Resources Technologies	GW
Environmental Science Technology	GW
Gifted Education	MC
H.V.A.C.r Residential Service	GW, MC
HVAC Commercial Installation and Service Technician	GW
HVAC Residential Installation and Service Technician (Day)	GW
Industrial Control Systems	EM, MC
Industrial Design Technology	GW
Industrial Design Technology: Design Specialist	GW
Industrial Electrical Systems	EM, MC
Industrial Fluid Systems	EM, MC
Industrial Mechanical Systems	EM, MC
Industrial Sewing	PC
Industrial Technology for Semiconductor	CG, EM, MC
International Residential Code	MC
Introduction to Semiconductor Manufacturing	RS
J-STD Soldering Certification	MC
Lineman Technology Level I	RS

AREAS/PROGRAM	INSTITUTION
Lineman Technology Level II	RS
Lineman Technology Level III	RS
Lineman Technology Level IV	RS
Manufacturing Production Technology	MC
Mechanical Drafting	MC
Nuclear Power Technology	EM
Precision Optics Level I	RS
Precision Optics Level II	RS
Quality Assurance	GW
Robotics Technology	EM, MC
Semiconductor Manufacturing	RS
Water and Wastewater Treatment	GW
Welding	MC
Welding: Fundamentals	MC
Welding: Fundamentals (Day)	GW
Welding: Gas Metal / Flux Cored Arc Welding (GMAW)/(FCAW)	MC
Welding: Gas Tungsten Arc Welding (GTAW) Ferrous	MC
Welding: Gas Tungsten Arc Welding (GTAW) Ferrous and Non-Ferrous (Day)	GW

Behavioral Science and Human Services

AREAS/PROGRAM	INSTITUTION
Addictions and Substance Use Disorders	RS
Addictions and Substance Use Disorders Level I	RS
Addictions and Substance Use Disorders Level II	RS
Administration of Justice	CG, EM, GC, MC, PC, PV, RS, SC, SM
Administration of Justice Studies	CG, EM, GC, MC, PC, PV, RS, SC, SM
Advanced Behavioral Sciences	GC, SM
Advanced Corrections and Detention	RS
Advanced Juvenile Corrections	RS
Associate in Arts, Emphasis in Counseling and Applied Psychological Science	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Criminal Justice	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Family Life Education	EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Law and Policy	CG, EM, GC, MC, PC, PV, RS, SC, SM

AREAS/PROGRAM	INSTITUTION
Associate in Arts, Emphasis in Political Science	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Psychology	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Social Work	EM, GC, MC, PC, PV, RS, SC, SM
Basic Corrections	RS
Basic Detention	RS
Behavioral Sciences	GC, SM
Child and Family Organizations Management and Administration	GC, RS
Community Emergency Response Team (CERT): Level I	PC
Corrections	CG, EM, GC, MC, PC, PV, RS, SC, SM
Corrections and Detention	RS
Crime Scene Investigation	CG, EM, GC, MC, PC, SC, SM
Developmental Disabilities Specialist	GC
Driver Operator	GC, PC, PV
Emergency Communications	RS
Emergency Communications and Deployment	PC
Emergency Management	GC, PC, PV
Fingerprint Identification and Photography	CG, EM, GC, MC, PC, SC, SM
Fire Science	GC, MC, PC, PV
Fire Service Management	GC, PC, PV
Firearms	RS
Firefighter Operations	GC, MC, PC, PV
Forensic Science	CG, EM, GC, MC, PC, PV, RS, SC, SM
Foundations of Behavioral Sciences	GC, PC, RS, SM
Hazardous Materials Response	PC
Homeland Security	CG, GC, PC, RS, SM
Juvenile Corrections	RS
Law Enforcement	CG, EM, GC, MC, PC, PV, RS, SC, SM
Law Enforcement Field Training	RS
Law Enforcement Investigation	GC, RS
Law Enforcement Training	CG, GC, RS
Law Enforcement Training Academy	GC, RS
Leadership in Public Safety Organizations	CG, GC, PC, RS
Legal Studies	CG, EM, GC, MC, PC, PV, RS, SC, SM

AREAS/PROGRAM	INSTITUTION
Non-Sworn Fire Service Professional	GC, PC, PV
Paralegal	PV, RS
Paralegal Studies	PC
Professional Addictions Counseling	RS
Public Safety Administration	PC, RS
Public Safety Leadership	RS
Public Safety Technology	RS
Search Warrant Preparation	RS
Substance Use Prevention and Interventions	RS
Terrorism Liaison Training: Level I	PC
Terrorism Liaison Training: Level II	PC
Victimology	CG, GC, MC, PC, PV, RS, SC, SM
Workforce Development and Community Re-Entry	RS
Workforce Development: Foundations in Addictions and Substance Use Disorders	RS

Business, Entrepreneurialism, and Management

AREAS/PROGRAM	INSTITUTION
Accounting	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Administrative Professional	EM, GC, PC, PV, SM
Advocate Driven Healthcare: Customer Service	RS
Aesthetician (24 Hours Per Week)	GW
Aesthetician (High School)	GW
Airline Operations	RS
Airline Operations: Reservations and Ticketing Services	RS
Associate in Business, General Requirements (ABUS-GR)	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Business, Special Requirements (ABUS-SR)	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Automobile Insurance: Customer Service	RS
Baking and Pastry Arts	SC
Bank Account Management: Customer Service	RS
Banking and Finance	GW, PC
Beauty and Wellness	GW, MC
Broadband Telecommunications	RS
Broadband Telecommunications: Field Operations	RS

AREAS/PROGRAM	INSTITUTION
Business Administration Fastrack	GC, PC, SC
Business Technology: Customer Service	RS
Cannabis Business Administration and Management	SC
Cannabis Business Advanced Entrepreneurship	SC
Cannabis Business Fundamentals	SC
Certified Bookkeeping	GC, PC, PV, RS, SC
Commercial Baking and Pastry	EM, SC
Commercial Real Estate	GC, SC, SM
Cosmetologist (32 Hours Per Week)	GW
Cosmetologist (High School)	GW
Cosmetology Instructor	GW
Credit Counseling: Customer Service	RS
Culinary Arts	EM, SC
Culinary Arts I	EM
Culinary Arts II	EM
Culinary: Foundations	SC
Culinary: Professional	SC
Debt Resolution: Customer Service	RS
Debt Resolution: Sales	RS
Enrolled Agent	GC, PC, PV, RS, SC, SM
Entrepreneurial Studies Level I	GC, GW, MC, PC, PV, RS, SC, SM
Entrepreneurial Studies Level II	GC, GW, MC, PC, RS, SM
Esports Business Operations	GC, PC, PV, RS, SM
Esports Event Production	PV
Fashion Merchandising	MC, PC
Financial Industry	GW
Financial Services	GC, GW, PC, SC, SM
Financial Services Retirement Accounts: Customer Service	RS
Financial Services: Pre-licensure	CG, GC, GW, PC, SC
General Business	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Hair Stylist (32 Hours Per Week)	GW
Hospitality: Food and Beverage Management	SC
Hospitality: Golf Management	SC
Hospitality: Hotel Management	SC
Hospitality: Meeting and Event Management	SC
Hospitality: Restaurant Management	SC
Hospitality: Spa and Wellness Center Management	SC

AREAS/PROGRAM	INSTITUTION
Hospitality: Tourism Development and Management	SC
Human Resources Management	GC, GW, MC, PC, RS, SC, SM
Human Resources: Compensation and Benefits	GW, PC, SM
Insurance: Customer Service	RS
Loan Consolidation: Customer Service	RS
Management	GC, MC, PC, PV, RS, SC, SM
Marketing	GC, GW, MC, PC, PV, SC, SM
Marketing and Sales	GC, GW, MC, PC, PV, SC
Massage Therapy (24 Hours Per Week)	GW
Nail Technician	GW
Organizational Leadership	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Organizational Management	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Pharmacy Prescription Benefits: Customer Service	RS
Prescription Prior Authorization: Customer Service	RS
Project Management	MC
Property Insurance: Customer Service	RS
Public Administration	RS
Quality Customer Service	RS
Real Estate Broker: Prelicense	SC
Real Estate: Prelicense	GC, MC, RS, SC, SM
Retail Management	EM, GC, GW, PC, RS, SM
Risk Management and Insurance	RS, PV
Small Business Management II	GC, GW, PC, RS
Small Business Management Level I	CG, EM, GC, GW, PC, RS
Small Business Start-Up	PV
Social Media Marketing	CG, EM, GC, MC, PC, PV, SC, SM
Utilities: Customer Service	RS
Water Utility Operations: Account Services and Delivery Management	RS
Web Hosting: Customer Service	RS

Computer and Information Technology

AREAS/PROGRAM	INSTITUTION
Adobe Foundations: Animation and Graphics Production	CG, GC, MC, PV, SM
Adobe Foundations: Audio and Video Production	SM

AREAS/PROGRAM	INSTITUTION
Amazon Web Services Cloud Associate	CG, GC, GW, MC, PC, PV, RS, SC, SM
Amazon Web Services Cloud Practitioner	CG, GC, GW, MC, PC, PV, RS, SC, SM
Amazon Web Services Cloud Specialist	CG, GC, PC, PV, SC, SM
Android App Development	GW, PC, RS, SM
AppleCare Hardware Repair Exam Prep	MC
Associate in Science, Emphasis in Computer Science	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Cisco Certified Network Professional: Enterprise	GC, GW, MC, PV, SC, SM
Cisco Certified Network Professional: Enterprise Advanced Routing and Services	GC, MC, PV, SC, SM
Cisco Certified Network Professional: Enterprise Core	GC, MC, PV, SC, SM
Cisco Network Administration and Security	CG, EM, GC, GW, MC, PV, SC, SM
Cisco Network Administration: CCNA	CG, EM, GC, GW, MC, PC, PV, SC, SM
Cisco Network Administration: CCNP	GC, MC, PC, SC, SM
Computer Information Systems	GW
Computer System Configuration and Support	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Computer System Configuration and Support, Linux	CG, EM, GC, GW, MC, PC, PV, SC, SM
Computer System Configuration and Support, Network	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Computer System Configuration and Support, Security	CG, EM, GC, GW, PC, PV, RS, SC, SM
Critical Infrastructure	EM, GC
Cross Functional Design and Web Essentials	SC
Cross-Platform App Development	GW, PC, RS, SM
Cyber Defense	EM
Cyber Engineering	CG, EM, GC, MC, PC, PV, RS, SC, SM
Cyber Operations	CG, GC, GW, MC, PV, SC, SM
Cybersecurity	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Cybersecurity Fundamentals	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Cybersecurity Management and Information Security	GC
Data Analytics	CG, EM, GW, MC, PV, RS, SC
Data Analytics and Programming	MC

AREAS/PROGRAM	INSTITUTION
Database Development	EM, SC
Desktop Support	CG, EM, GC, GW, PC, PV, RS, SC, SM
Emerging Technology: Digital and Wireless Technologies	PC
Emerging Technology: Wireless Optimization	PC
Foundations of Mobile App Development	PC, RS, SM
Information Technology	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
iOS App Development	GW, PC, PV, RS, SM
IT Fundamentals	GC, MC
IT Security Associate	EM
Jamf Training Foundation	MC
Linux Associate	CG, EM, GC, GW, PC, PV, SC, SM
Linux System Administration	EM, GC, PC, PV, SC, SM
Microsoft Desktop Associate	EM, GC, GW, MC, PC, PV, SM
Microsoft Office Professional	CG, EM, GC, PC, PV, RS, SC, SM
Microsoft Office Specialist	CG, GC, PV, RS, SC, SM
Microsoft System Administration	PC
Mobile App Development	PC, PV, RS, SM
Native Mobile App Development	PC, PV, RS, SM
Network and Cyber Fundamentals	GW
Network and Systems Administration	CG, EM, GC, GW, MC, PC, PV, SC, SM
Programming	RS, SM
Programming and Systems Analysis	CG, EM, GC, MC, PC, PV, RS, SC
Programming and Systems Analysis Level I	CG, EM, GC, MC, PC, PV, RS, SC
Programming and Systems Analysis Level II	CG, EM, GC, MC, PC, PV, RS, SC
Python Applications	CG, MC, SM
Red Hat Linux Administrator	EM, GC, GW, MC, PC, SC, SM
Red Hat Linux Engineer	EM, GC, GW, MC, PC, SC, SM
Video Game Production	GC, MC, PV
Video Game Production: Audio and Sound	GC, MC, PV
Video Game Production: Coding and Scripting	GC, MC, PV
Video Game Production: Game Art	GC, MC, PV
Video Game Production: Game Narrative	GC, MC, PV
VMware Foundations	GC, GW, PC
VMware Network Administrator	GC
VMware Systems Administrator	GC, PC

AREAS/PROGRAM	INSTITUTION
Web App Development	CG, GC, GW, MC, PC, PV, RS, SM, SC
Web Design	CG, EM, GC, PV, RS, SC, SM
Web Design/Development	CG, EM, GC, MC, PC, PV, RS, SC, SM
Web Development	CG, EM, GC, GW, MC, PC, PV, SC, SM
Web Foundations	CG, EM, GC, MC, PC, PV, RS, SC, SM
Windows App Development	PC, RS, SM

Culture and Society

AREAS/PROGRAM	INSTITUTION
African-American Studies	MC
American Indian Studies	PC, SC
Applied Bilingual Spanish Language Skills	CG, GW, SM
Applied English Language Skills	MC, PV, SM
Applied Storytelling	EM, SM
Associate in Arts, Emphasis in American Indian Studies	CG, EM, GC, MC, PC, PV, SC, SM
Associate in Arts, Emphasis in Anthropology	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Communication	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Economics	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in English (Creative Writing)	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in English (Literature)	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in History	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Humanities	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Information Studies and eSociety	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Japanese	EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Journalism and New Media Studies	EM, MC, GC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Philosophy	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM

AREAS/PROGRAM	INSTITUTION
Associate in Arts, Emphasis in Religious Studies	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Sociology	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Spanish	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Women and Gender Studies	CG, EM, GC, MC, PC, PV, RS, SC, SM
Chicana and Chicano Studies	CG, GC, PC
Communication Competence in the Workplace	GC, MC
Communication Skills for Non-Native English Speakers	GC, MC
Creative Writing	EM, GC, MC, PC, PV, RS
Deaf Interpreter Preparation	PC
Deaf Studies	PC
Foundations of Storytelling	EM, SM
International Studies	PC
Interpreter Preparation	PC
Journalism and New Media Studies	MC
Language and Literary Culture of the USA	RS
Language Studies	CG, GC, MC, RS
Oral Communication Fluency for Non-Native English Speakers	GC, MC
Public Relations	MC
Southwest Studies	PC
Spanish Language and Culture	CG, GW, MC, RS
Sustainability and Ecological Literacy	EM, RS, SM
Sustaining and Advancing Indigenous Nations	SC
Traditional and Fact-Based Storytelling	EM, SM
Women and Gender Studies	CG

Education

AREAS/PROGRAM	INSTITUTION
Associate in Arts, Elementary Education (AAEE)	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Early Childhood Education	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Educational Studies Early Childhood	CG, EM, GC, MC, PC, PV, RS, SC, SM

AREAS/PROGRAM	INSTITUTION
Associate in Arts, Emphasis in Secondary Education	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Secondary Education	CG, EM, GC, MC, PC, PV, RS, SC, SM
Early Childhood Education	CG, GC, MC, PC, PV, RS
Early Childhood Education - Dual Language	MC
Early Childhood Education Management and Administration	PV, RS
Elementary Education and Special Education	GC, PV, RS
Foundations of Early Childhood Education	CG, GC, MC, PC, PV, RS
Infant and Toddler Development	GC, PV, RS
Instructional Assistance	MC, SM

Health Sciences

AREAS/PROGRAM	INSTITUTION
Accelerated Pharmacy Technology	SC
Applied Behavioral Health	MC
Associate in Arts, Emphasis in Community Health	CG, EM, GC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Exercise Science	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Nutritional Science	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Speech and Hearing Science	EM, GC, PC, PV, RS, SC, SM
Basic Phlebotomy	PC
Biomedical Equipment Technology	MC
Clinical Data Coordination	PV
Clinical Medical Assisting	PC
Clinical Neurodiagnostic Technology	GW
Clinical Phlebotomy	GW, PC
Clinical Research Coordination	PV
Community Health Paramedicine	GC
Community Health Work	PV, SC
Computed Tomography	GW
Critical Care Paramedicine	GC, PC, PV
Dental Assisting	PC
Dental Hygiene	MC, PC, RS
Diagnostic Medical Sonography	GW
Electrocardiogram (ECG) Technician	GW

AREAS/PROGRAM	INSTITUTION
Electroneurodiagnostic (END) Technology	GW
Emergency Medical Technology	CG, GC, MC, PC, PV, RS
Emergency Medical Technology (EMT)	GW
Emergency Medical Technology (EMT) (High School)	GW
Emergency Medical Technology Comprehensive	CG, GC, MC, PC, PV
Exercise Science: Health, Fitness, and Sports Performance	CG, GC, MC, PV, SC, SM
Fast Track Practical Nursing	GC, GW, MC
Foundations of Recreation Management	SC
Foundations of Recreation Youth Services	SC
Foundations of Sports Medicine	RS
Health and Wellness Coaching	GC
Health Information Technology	PC
Health Information: Long Term Care Settings	PC
Health Science Education	GW
Health Services Management	GW
Healthcare Regulatory Compliance	GW
Histologic Technology	PC
Hospital Central Service Technology	GW
Laboratory Assisting	PC
Magnetic Resonance Imaging	GW
Massage Therapy	PC
Medical Administrative Assisting	PC
Medical Assisting	GW, PC
Medical Billing and Coding: Physician Based	GW
Medical Billing and Coding: Physician-Based	PC
Medical Coding: Hospital-Based	PC
Medical Laboratory Science	PC
Nuclear Medicine Technology	GW
Nuclear Medicine Technology and Computed Tomography	GW
Nurse Assisting	EM, GC, GW, MC, PV, SC
Nursing	CG, EM, GC, GW, MC, PC, PV, SC
Nursing (RN to BSN)	GW
Nursing Refresher	GW, MC
Nutrition and Dietetic Technology	PV
Nutrition for Personal Trainers and Coaches	SC
Occupational Therapy Assistant	GW
Operating Room Nursing	GW

AREAS/PROGRAM	INSTITUTION
Paramedicine	GC, MC, PC, PV
Personal Training	CG, GC, MC, PV, SC, SM
Personal Training: Advanced	CG, GC, MC, PV, SC, SM
Pharmacy Technician	GW
Physical Therapist Assisting	GW
Practical Nursing	CG, EM, GC, GW, MC, PC, PV, SC
Preschool Education	CG, GC, RS
Radiologic Technology	GW
Recreation Management	SC
Respiratory Care	GW
Sleep Medicine (Polysomnographic) Technology	GW
Spanish Interpreting for Healthcare Professionals	GW
Speech Language Pathology Assistant	EM
Surgical Technology	GW
Sustainable Food Systems	RS
Sustainable Food Systems: Food Entrepreneur	RS
Sustainable Food Systems: Food Service	RS
Tactical Emergency Casualty Care	GC, PC, PV
Workforce Development: Professional Cooking and Sustainable Practices	RS
Yoga Instruction Level II	SC
Yoga Instruction: Level I	SC
Yoga Instruction: Supplement	SC

Science, Technology, Engineering and Mathematics

AREAS/PROGRAM	INSTITUTION
Artificial Intelligence and Machine Learning	CG, EM
Associate in Arts, Emphasis in Geography	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Mathematics	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Arts, Emphasis in Sustainability and Environmental Studies	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Astronomy	CG, EM, GC, MC, PC, PV, SC, SM
Associate in Science, Emphasis in Biochemistry	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Biological Sciences	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM

AREAS/PROGRAM	INSTITUTION
Associate in Science, Emphasis in Chemistry	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Engineering	CG, EM, GC, GW, MC, PC, PV, SC, SM
Associate in Science, Emphasis in Geography - Meteorology	CG, EM, GC, MC, PC, PV, SC, SM
Associate in Science, Emphasis in Geology	CG, EM, GC, MC, PC, PV, RS, SC, SM
Associate in Science, Emphasis in Physics	CG, EM, GC, GW, MC, PC, PV, RS, SC, SM
Biotechnology and Molecular Biosciences	GC
Cannabis Cultivation	MC
Electronics Engineering Technology	MC
Electronics Technology	MC
Engineering Technology	CG, EM, GC, PV, SM
Environmental and Natural Resource Stewardship	PC
Equine Massage Therapy	SC
Equine Science	SC
Fundamentals of Applied Molecular Bioscience-Level 1	GC
Fundamentals of Horticulture	MC
Landscape Technology	MC
Mortuary Science	CG
Sustainability	CG, GC, PV, RS, SC, SM
Sustainable Horticulture	MC
Veterinary Assisting	MC
Veterinary Technology	MC

Visual and Performing Arts

AREAS/PROGRAM	INSTITUTION
Alteration Specialist	PC
Animation	GC, MC, PC
Animation and Time-Based Media	GC, MC, PC
Apparel Construction	PC
Associate in Arts, Fine Arts	CG, EM, GC, GW, MC, PC, PV, SC, SM
Associate in Arts, Fine Arts, Emphasis in Art	CG, EM, GC, GW, MC, PC, PV, SC, SM
Associate in Arts, Fine Arts, Emphasis in Dance	CG, GC, MC, PC, PV, SC, SM
Associate in Arts, Fine Arts, Emphasis in Music	CG, EM, GC, MC, PC, PV, SC, SM
Associate in Arts, Fine Arts, Emphasis in Musical Theatre	CG, EM, GC, MC, PC, PV, SC, SM

AREAS/PROGRAM	INSTITUTION
Associate in Arts, Fine Arts, Emphasis in Theatre	CG, EM, GC, MC, PC, PV, SC, SM
Beginning Piano Pedagogy	MC
Ceramics	GC, MC
Commercial and Freelance Photography	GC, PC
Commercial Interior Design	SC
Costume Design and Production, Level I	PC
Costume Design and Production, Level II	PC
Dance Performance and Technology	SC
Digital Arts: Digital Photography	CG, MC
Digital Media Arts	GC, PC
Disc Jockey Techniques	MC
Disc Jockey Techniques I	MC
Disc Jockey Techniques II	MC
Documentary Film Production	GC
Drawing and Painting	MC
Editing	SC
Fashion Design	MC, PC
Fashion Design: Entrepreneur	PC
Fashion Design: Level I	PC
Fashion Design: Level II	PC
Fashion Illustration	PC
Film and Media Production	GC
Foundations of Visual Communication	SC
Graphic Design	MC, PC
Illustration	CG, MC, PC
Illustration and Sequential Art	CG, MC, PC
Interior Design	PC, SC
Interior Design Kitchen and Bath	PC, SC
Interior Design Technology	PC, SC
Interior Design Upholstery and Soft Goods Production	PC
Interior Merchandising and Home Staging	PC, SC
Intermediate Piano Pedagogy	MC
Motion Picture Production	SC
Motion Picture, Television, and New Media Production	SC
Music Industry Studies: Audio Production Technologies	GC, MC, PC, PV
Music Industry Studies: Music Business	MC, PC, PV, SM
Music Industry Studies: Music Business I	MC, PC, PV, SM

AREAS/PROGRAM	INSTITUTION
Music Industry Studies: Music Business II	MC, PC, PV, SM
Pattern Design, Level I	PC
Pattern Design, Level II	PC
Photography	CG, GC, MC, PC
Residential Interior Design	PC, SC
Screenwriting	SC
Sequential Art	CG, PC
Stage Combat	PV
Technical Theatre	MC, PC, SC
Technical Theatre: Audio Technician	GC, PC, PV
Technical Theatre: Costuming	GC, MC, PC, PV
Technical Theatre: Hair and Makeup	MC
Technical Theatre: Lighting	PC, PV
Technical Theatre: Properties	EM, PC, PV, SC
Technical Theatre: Puppetry	PC, PV
Technical Theatre: Set/Scenic Construction	EM, PC
Technical Theatre: Stage Crew Technician	EM, GC, PC, PV, SC
Time-Based Media	PC
Visual Communication	SC
Visual Communication: Creative Branding	SC
Visual Communication: Design	SC

Appendix D – Fast Track Certificates

Applied Technology

- Automotive Automatic Transmission and Transaxle
- Automotive Brake Systems
- Automotive Electrical, Heating, Ventilation, and Air Conditioning Systems
- Automotive Electronic/Electrical Systems
- Automotive Engine Performance
- Automotive Engine Repair
- Automotive Heating, Ventilation, and Air Conditioning Systems

Behavioral Sciences & Human Services

- Administration of Justice
- Corrections
- Driver Operator
- Fingerprint Identification and Photography
- Homeland Security
- Law Enforcement
- Legal Studies
- Victimology

Business, Entrepreneurialism, & Management

- Entrepreneurial Studies Level I
- Real Estate: Prelicense
- Security Industry Essentials: Pre-licensure
- Small Business Management Level I

Computer & Information Technology

- Amazon Web Services Cloud Practitioner
- Cisco Certified Network Professional: Enterprise Advanced Routing and Services
- Cisco Certified Network Professional: Enterprise Core
- Cisco Network Administration: CCNA
- Computer System Configuration and Support
- Computer System Configuration and Support, Linux
- Computer System Configuration and Support, Network
- iOS App Development
- Linux Associate
- Microsoft Desktop Associate
- Red Hat Linux Administrator
- Red Hat Linux Engineer
- VMware Foundations
- VMware Systems Administrator
- Web App Development

Health Sciences

Emergency Medical Technology

- Emergency Medical Technology (EMT)
- Nurse Assisting

Visual & Performing Arts

- Technical Theatre: Stage Crew Technician

Appendix E – Awards with Spring 2025 Final Term

Linux System Administration

Major: 5052N
Catalog Year: 2024-2025
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 15-18
CIP Code: 11.1001
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM GC MC PC PV SC SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in Linux System Administration program is designed to help prepare students for a variety of industry-recognized Linux certification exams as well as provide practical hands-on skills for the workplace. The program includes a core of Linux classes including Linux operating system basics, system administration, network administration and network security. The courses in the program will help develop a student`s knowledge and skill level in preparation for employment or to improve current professional skills. Students who complete this program may seek employment in a variety of environments. The program helps prepare students for the Red Hat Certified System Administrator (RHCSA), Red Hat Certified Engineer (RHCE), and CompTIA Linux+ certification exams. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Automate system tasks utilizing Linux shell scripting. (CIS239DL, CIS275DL)
2. Demonstrate the ability to install Linux. (CIS126DL, CIS275DL)
3. Create, manage, and delete user accounts, groups and permissions. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
4. Apply troubleshooting techniques to prevent and address system issues. (CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS239DL, CIS275DL)
5. Monitor system functions and security through the use of a variety of system tools and logs. (CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
6. Install and maintain software packages. (CIS105, CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS275DL)
7. Describe and navigate the Linux file system hierarchy. (CIS126DL, CIS126RH, CIS275DL)
8. Create partitions and file systems, and manipulate access to them. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
9. Demonstrate configuration and troubleshooting of Linux networking, including network protocols, client and server systems. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS275DL)
10. Configure and troubleshoot Linux security, including permissions, SELinux, access control lists (ACLs), digital certificates, and firewalls. (CIS126DL, CIS126RH, CIS238DL, CIS238RH, CIS240DL, CIS240RH, CIS275DL)
11. Configure automation services. (CIS240RH)
12. Create and maintain shell scripts. (CIS238RH, CIS240RH)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.
Students must earn a grade of C or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces: **CCL/5225 Linux Networking Administration**

Program Prerequisites: None

Required Courses

Credits: 15-18

CIS105 Survey of Computer Information Systems (3) OR
Permission of program director (0) 0-3

Students should select from one of the following two specializations (Linux or Red Hat Enterprise Linux):

Specialization: Linux
CIS126DL Linux Operating System 3
+ CIS238DL Linux System Administration 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240DL Linux Network Administration 3
+ CIS275DL Linux Capstone 3

Specialization: Red Hat Enterprise Linux
CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240RH Red Hat System Administration III 3
+ CIS275DL Linux Capstone 3

MCCCD Governing Board Approval Date: December 10, 2019

Microsoft Desktop Associate

Major: 5030N
Catalog Year: 2024-2025
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 3
CIP Code: 11.1001
Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM, GC, GW, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career in the following job fields:
15-1151 Computer User Support Specialists

Upon completion of an associate`s degree, students may pursue a career in the following job fields:
15-1121 Computer Systems Analysts
15-1122 Information Security Analysts

15-1142 Network and Computer Systems Administrators
15-1152 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in Microsoft Desktop Associate program is designed to provide students with background knowledge and skills required for learning the specific tasks and industry recognized standards associated with how to effectively install and configure Windows operating systems. The course includes basic features of the Windows operating system, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. It is designed to prepare students for the Microsoft 365 Certified: Modern Desktop Administrator Associate certification exam. Students who complete this program may seek employment in a variety of environments. Students can also pursue additional Certificates of Completion (CCL) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification exams. An Associate in Applied Science (AAS) in Network and Systems Administration is also available at select colleges. Please check with your local college for program availability.

Learning Outcomes

10. Install, configure, and manage a Microsoft operating system. (MST150WT)
11. Configure and manage resource security with permissions based access control including file system permissions. (MST150WT)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.
Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students are encouraged, but not required, to complete CIS105, or CIS190, or CNT140AB prior to beginning this CCL. Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Required Courses

Credits: 3

MST150WT Installing and Configuring Microsoft Windows 10 3

MCCCD Governing Board Approval Date: November 26, 2019

Microsoft Office Professional

Major: 5132
Effective Term: 2024 Fall
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 16-22
CIP Code: 11.0601
Primary/Initiating College: Phoenix College
Program Availability: CG EM GC PC PV RS SC SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
43-6014.00 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
43-9061.00 Office Clerks, General
43-9021.00 Data Entry Keyers

Description: The Certificate of Completion (CCL) in Microsoft Office Professional emphasizes training on word processing, spreadsheet, database, and presentation software for business purposes. This certificate provides students with the knowledge and skills requisite of various business settings. This certificate helps with initial preparation for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS). This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology and Certificate of Complete (CCL) in Microsoft Office Specialist.

Learning Outcomes

1. Discuss the role of computer information systems in developing business solutions. (CIS105)
2. Create simple macros using Visual Basic for Applications (VBA). (CIS105, CIS114DE)
3. Prepare business documents using Microsoft Word. (CIS105, CIS113DE)
4. Develop spreadsheets using Microsoft Excel. (CIS105, CIS114DE)
5. Create relational databases using Microsoft Access. (CIS105, CIS117DM)
6. Produce presentations using Microsoft PowerPoint. (CIS105, CIS118DB)
7. Manage files using the Windows Operating System. (BPC270, CIS105, CIS121AE, CIS122AE, MST150++)
8. Utilize Microsoft Project to manage business projects. (CIS124AA, CIS124BA, CIS224)
9. Integrate Microsoft applications to meet business needs. (BPC/OAS111AA, BPC270, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS118DB, CIS121AE, CIS122AE, CIS224, MST150++)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

This program replaces:
CCL/5146 Computer Applications: Microsoft Office Specialist/Basic
CCL/5147 Computer Applications: Microsoft Office Specialist/Advanced
CCL/5212 Business Office Computer Applications
CCL/5213 Computer Usage and Applications
CCL/5214 Computer Applications Technology
CCL/5217 Computer Applications
CCL/5644 Business Applications Specialist

Program Prerequisites: None

Required Courses

Credits: 16-22

BPC/OAS111AA Computer Keyboarding I (1) OR
Permission of Program Director (0) 0-1

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3

CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

MCCCD Governing Board Approval Date: December 10, 2019

Microsoft Office Specialist

Major: 5137
Effective Term: 2024 Fall
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 25-31
CIP Code: 11.0601
Primary/Initiating College: Glendale Community College
Program Availability: CG GC PV RS SC SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
43-6011.00 Executive Secretaries and Executive Administrative Assistants
43-6014.00 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
43-9061.00 Office Clerks, General
43-9021.00 Data Entry Keyers

Upon completion of the AAS degree, students may pursue a career as:
15-1232.00 Computer User Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts

Description: The Certificate of Completion (CCL) in Microsoft Office Specialist emphasizes advanced training on word processing, spreadsheet, and database software for business purposes. This certificate builds upon the knowledge and skills gained by the CCL in Microsoft Office Professional for use in various business settings. This certificate helps prepare students for the Microsoft Office Specialist (MOS) certification examinations. This certificate embeds into the Associate in Applied Science (AAS) degree in Information Technology.

Learning Outcomes

1. Discuss the role of computer information systems in developing business solutions. (CIS105)
2. Create macros using Visual Basic for Applications (VBA). (CIS105, CIS114DE, CIS213DE, CIS214DE, CIS217AM)
3. Prepare business documents in Microsoft Word using advanced word processing features. (CIS105, CIS113DE, CIS213DE)
4. Develop complex workbooks using Microsoft Excel. (CIS105, CIS114DE, CIS214DE)
5. Create advanced relational databases using Microsoft Access. (CIS105, CIS117DM, CIS217AM)
6. Produce presentations using Microsoft PowerPoint. (CIS105, CIS118DB)
7. Manage files using the Windows Operating System. (BPC270, CIS105, CIS121AE, CIS122AE, MST150++)
8. Utilize Microsoft Project to manage business projects. (CIS124AA, CIS124BA, CIS224)
9. Integrate Microsoft applications to meet multi-faceted business needs. (BPC/OAS111AA, BPC270, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS118DB, CIS121AE, CIS122AE, CIS213DE, CIS214DE, CIS217AM, CIS224, MST150++)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites: None

Required Courses

Credits: 25-31

The following courses are required and included in Microsoft Office Professional CCL

BPC/OAS111AA Computer Keyboarding I (1) OR
Permission of Program Director (0) 0-1

CIS105 Survey of Computer Information Systems (3) OR
Permission of Program Director (0) 0-3

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3
CIS117DM Microsoft Access: Database Management 3
CIS118DB Desktop Presentation: Powerpoint 3

+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
CIS121AE Windows Operating System: Level I (1) AND
CIS122AE Windows Operating System: Level II (1) OR
MST150++ Microsoft Windows (3) 2-3

CIS124AA Project Management Software: Level I (1) AND
CIS124BA Project Management Software: Level II (1) OR
CIS224 Project Management Microsoft Project for Windows (3) 2-3

The following courses are required in Microsoft Office Specialist CCL

CIS213DE Advanced Microsoft Word: Word Processing 3
CIS214DE Advanced Excel Spreadsheet: Level II 3
CIS217AM Advanced Microsoft Access: Database Management 3

MCCCD Governing Board Approval Date: December 10, 2019

Small Business Management Level I

Major: 5153N
Catalog Year: 2023-2025
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 10-12
CIP Code: 52.0703
Primary/Initiating College: Estrella Mountain Community College
Program Availability: CG EM GC GW MC PC RS
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:

47-4011.01 Energy Auditors
13-1199.02 Security Management Specialists
13-1041.08 Customs Brokers
13-1199.04 Business Continuity Planners
13-1199.05 Sustainability Specialists
13-1199.06 Online Merchants

Description: The Certificate of Completion (CCL) in Small Business Management Level I program is designed to meet the needs of individuals who wish to own and/or manage a small business. Prepares students to acquire the skills, tools and knowledge necessary for successful start-up and operations of a business.

Learning Outcomes

1. Prepare a business plan and budget to develop a comprehensive action, operations, and strategic plans. (EPS195, MGT253, SBS200, SBS216)
2. Apply basic accounting, finance, and marketing principles in a small business environment. (MKT271, MGT253, SBS202, SBS203, SBS204, SBS220, SBS230)
3. Create and use effective oral, written, and visual business communication skills. (MKT271, MGT253, SBS200, SBS204, SBS213, SBS214, SBS220)
4. Describe effective staff planning, personnel cost control, and discipline methods. (EPS195, MGT253, SBS200, SBS213, SBS216)
5. Apply problem-solving processes to problems in small business daily operations. (EPS195, MGT253, SBS200, SBS213, SBS216)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.
Students must earn a grade of C or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Required Courses

Credits: 10-12

EPS195 Business Start-Up and Planning (2) OR
+ SBS216 Planning for a Small Business (2) OR
MGT253 Owning and Operating a Small Business (3) 2-3

SBS200 Small Business Operations 2

SBS202 Small Business Bookkeeping and Tax Preparation (1) AND
SBS203 Financing and Cash Management for a Small Business (1) OR
SBS230 Financial and Tax Management for Small Business (2) 2

SBS204 Small Business Marketing and Advertising (2) OR
SBS220 Internet Marketing for Small Business (2) OR
MKT271 Principles of Marketing (3) 2-3

SBS213 Hiring and Managing Employees 1
SBS214 Small Business Customer Relations 1

MCCCD Governing Board Approval Date: May 28, 2019

Small Business Management Level II

Major: 5978
Catalog Year: 2024-2025
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 16-18
CIP Code: 52.0703
Primary/Initiating College: Glendale Community College
Program Availability: GC GW MC PC RS
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
47-4011.01 Energy Auditors
13-1199.02 Security Management Specialists
13-1041.08 Customs Brokers
13-1199.04 Business Continuity Planners
13-1199.05 Sustainability Specialists
13-1199.06 Online Merchants

Description: The Certificate of Completion (CCL) in Small Business Management Level II program is designed to focus on aspects critical to a specific individual`s small business. Prepares students to acquire additional skills, tools and knowledge necessary for successful start-up and operations of a business. A Certificate of Completion (CCL) in Small Business Management Level I is also available and fully embedded in this program.

Learning Outcomes

1. Prepare a business plan and budget to develop a comprehensive action, operations, and strategic plans. (MGT253, SBS200, EPS150, EPS195, SBS216, SBS217)
2. Apply basic accounting, finance, and marketing principles in a small business environment. (MKT271, MGT253, SBS202, SBS203, SBS204, SBS220, SBS221 SBS230)
3. Create and use effective oral, written, and visual business communication skills. (MKT271, SBS200, SBS204, SBS213, SBS214, SBS220, SBS221)
4. Describe effective staff planning, personnel cost control, and discipline methods. (EPS195, MGT253, SBS200, SBS213, SBS216)
5. Apply problem-solving processes to problems in small business daily operations. (EPS195, MGT253, EPS150, SBS200, SBS213, SBS216, SBS217)

Program Notes

Students must earn a grade of C or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Required Courses

Credits: 10-12

EPS195 Business Start-Up and Planning (2) OR
+ SBS216 Planning for a Small Business (2) OR
MGT253 Owning and Operating a Small Business (3) 2-3

SBS200 Small Business Operations 2

SBS202 Small Business Bookkeeping and Tax Preparation (1) AND
SBS203 Financing and Cash Management for a Small Business (1) OR
SBS230 Financial and Tax Management for Small Business (2) 2

SBS204 Small Business Marketing and Advertising (2) OR
SBS220 Internet Marketing for Small Business (2) OR
MKT271 Principles of Marketing (3) 2-3

SBS213 Hiring and Managing Employees 1
SBS214 Small Business Customer Relations 1

Restricted Electives

Credits: 6

Choose 6 credits from the restricted electives below. Courses cannot be shared with Required Courses.

EPS150 Introduction to Entrepreneurship 3
EPS195 Business Start-Up and Planning 2
MGT253 Owning and Operating a Small Business 3
MKT271 Principles of Marketing 3
SBS202 Small Business Bookkeeping and Tax Preparation 1
SBS203 Financing and Cash Management For a Small Business 1
SBS204 Small Business Marketing and Advertising 2
+ SBS216 Planning for a Small Business 2
SBS217 Starting/Managing a Home Business 1
SBS220 Internet Marketing for Small Business 2
SBS221 Social Media Marketing for Small Business 2
SBS230 Financial and Tax Management for Small Business 2

MCCCD Governing Board Approval Date: May 28, 2019

VMware Foundations

Major: 5035N
Effective Term: 2024 Fall
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 4
CIP Code: 11.1001
Primary/Initiating College: Mesa Community College
Program Availability: GC, GW, MC, PC, SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1244.00 Network and Computer Systems Administrators

Upon completion of an associate degree, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1231.00 Computer Network Support Specialists

Description: The Certificate of Completion (CCL) in VMware Foundations program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software defined data centers. The program introduces vSphere and VMware ESXi server in the enterprise and covers many aspects of virtualization for VMware ESXi server administration. It is designed to help prepare students for the VMware Certified Technical Associate (VCTA) certification exam. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Apply virtualization concepts to hardware hierarchies. (CIS293)
2. Manage VMware environments including basic network functions. (CIS293)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students who pursue this Certificate of Completion (CCL) should have a basic level of computer literacy including navigating the internet and computer systems or take CIS105 as indicated in the required courses. Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CNT, and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the prerequisites to the courses within the Required Courses area as follows OR receive permission of the Program Director:
CIS105 Survey of Computer Information Systems 3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support (3) AND
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Windows Operation Course (3) 3-6

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (3) 3

Students with no industry experience have the option to complete the full CCL VMware Network Administrator (major code 5032), that includes the courses in Admission Criteria and required courses.

Program Prerequisites: None

Required Courses

Credits: 4

+ CIS293 VMware ESXI Server Enterprise 4

MCCCD Governing Board Approval Date: November 28, 2023

VMware Systems Administrator

Major: 5033N
Effective Term: 2024 Fall
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 12

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC, SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

CIP Code: 11.1001
SOC Code: Upon completion of this certificate, students may pursue a career in the following job fields:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists

Upon completion of a bachelor`s degree, students may pursue a career in the following job fields:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Certificate of Completion (CCL) in VMware Systems Administrator program is designed to help students prepare for VMware industry certifications and work in a variety of information technology environments including software defined data centers. The program introduces vSphere and VMware ESXi server in the enterprise and covers many aspects of virtualization for VMware ESXi server administration. It includes advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure and is designed to prepare students for the VMware Certified Technical Associate (VCTA) and VMware Certified Professional (VCP) certification exams. Students can also pursue additional Certificates of Completion (CCLs) in a variety of specializations within the information technology field to deepen their knowledge and skills and to help prepare them for multiple industry certification examinations. An Associate in Applied Science (AAS) in Network and Systems Administration is also available.

Learning Outcomes

1. Apply virtualization concepts to hardware hierarchies. (CIS293)
2. Manage VMware environments including basic network functions. (CIS293, CIS294)
3. Troubleshoot virtual networks. (CIS293, CIS294)
4. Build an enterprise level virtual network infrastructure using industry best practices. (CIS293, CIS294, CIS295)

Program Notes

This program is not eligible for Title IV Federal Financial Aid.

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Students with the requisite skills may have the CIS105 requirement waived by permission of the Program Director. Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CNT and MST.

Admission Criteria

This Certificate of Completion (CCL) is intended for industry professionals with the requisite experience. To pursue this CCL, students must complete the prerequisites to the courses within the Required Courses area as follows OR receive permission of the Program Director:
CIS105 Survey of Computer Information Systems 3

+ BPC170 A+ Exam Prep: Computer Hardware Configuration and Support (3) AND
+ BPC270 A+ Exam Prep: Operating System Configuration and Support (3) OR
MST150++ Any Windows Operation Course (3) 3-6

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (3) 3

Students also have the option to complete the full CCL in this program, VMware Network Administrator (major code 5032), that includes the prerequisites and required courses.

Program Prerequisites: None

Required Courses

Credits: 12

+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

MCCCD Governing Board Approval Date: November 28, 2023

Web Design

Major: 5986
Catalog Year: 2023-2025
Last Admit Term: 2025 Spring
Award: CCL
Total Credits: 38-43
CIP Code: 11.0801
Primary/Initiating College: Glendale Community College
Program Availability: CG, EM, GC, MC, PV, RS, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this certificate, students may pursue a career as:
15-1255.00 Web and Digital Interface Designers
27-1024.00 Graphic Designers

Description: The Certificate of Completion (CCL) in Web Design provides students with comprehensive and focused studies in web design, including advanced image manipulation, vector graphics, page layout, video editing and design principles. An Associate in Applied Science (AAS) in Web Design/Development and CCLs in Web Foundations and Web Development are also available.

Learning Outcomes

1. Design websites using knowledge of computer information systems, including security, computer concepts, web delivery system architecture, and file management. (AVC100, ART112, CIS105, CIS120DC, CIS133DA, CIS136, CIS138DA, CIS166AA, CIS220DF, CIS233DA, CIS235)
2. Develop public-facing websites based on research, planning, design principles and thorough testing. (ART112, AVC100, CIS105, CIS120DA, CIS120DC, CIS120DK, CIS133DA, CIS136, CIS138DA, CIS166AA, CIS220DF, CIS233DA, CIS235)
3. Create complex websites using current standards in Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and Javascript. (ART112, AVC100, CIS105, CIS120DA, CIS120DB, CIS120DC, CIS120DK, CIS133DA, CIS138DA, CIS166AA, CIS220DF, CIS233DA)
4. Employ best practices in user interface, user experience, accessibility and search engine optimization to build complex websites aligned with industry standards. (AVC183, ART112, AVC100, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS138DA, CIS220DF, CIS233DA)
5. Implement thoughtfully designed e-commerce solutions. (AVC183, ART112, AVC100, AVC181, CIS105, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS166AA, CIS220DF, CIS233DA, CIS235)
6. Construct a website using a content management system. (AVC183, ART112, AVC100, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS220DF, CIS233DA)

7. Apply project management skills to prioritize projects and meet deadlines. (CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS136, CIS166AA, CIS220DF, CIS235)
8. Adhere to industry accepted professional, legal, and ethical practices. (CIS105, CIS120DB, CIS120DC, CIS120DF, CIS133DA, CIS136, CIS220DF, CIS233DA, CIS235)
9. Communicate professionally in formal and informal situations to diverse audiences. (CIS105, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS133DA, CIS136, CIS166AA, CIS220DF, CIS233DA, CIS235)
10. Collaborate with others to address web design challenges. (CIS133DA, CIS233DA, CIS235)
11. Create digital media content using principles of design. (AVC183, ART112, AVC100, AVC181, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS138DA, CIS220DF)
12. Select design elements and composition appropriate to the project. (AVC183, ART112, AVC181, AVC100, CIS120DA, CIS120DB, CIS120DC, CIS120DF, CIS120DK, CIS138DA, CIS220DF)

Program Notes

Students must earn a grade of C or better in all courses within the program.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Required Courses

Credits: 36-37

The following courses are required for the CCL in Web Foundations:

CIS105 Survey of Computer Information Systems 3
CIS120DF Introduction to Adobe Photoshop 3
CIS133DA Internet/Web Development Level I 3
CIS136 Content Management Systems: WordPress 3
+ CIS166AA Introduction to Javascript 3
+ CIS233DA Internet/Web Development Level II 3
+ CIS235 e-Commerce 3

The following courses are required for the CCL in Web Design:
+ AVC183 Digital Graphic Arts I (3)
OR
AVC100 Introduction to Digital Arts (1) AND
+ AVC181 Graphic Design I (3)
OR
ART112 Two-Dimensional Design (3) 3-4

CIS120DA Introduction to Adobe Premiere (3) OR
CIS120DK Introduction to Digital Video Editing (3) 3

CIS120DB Introduction to Adobe Illustrator 3

CIS120DC Introduction to Adobe Animate (3) OR
+ CIS220DF Adobe Photoshop Level II: Advanced Digital Imaging (3) 3

CIS138DA Desktop Design and Publishing Using Adobe InDesign 3

Restricted Electives

Credits: 2-6

Select two to six (2-6) credits in consultation with your program advisor to further develop skills in the areas of Adobe, Art, Social Media, Marketing, Business, and/or Multimedia.

MCCCD Governing Board Approval Date: February 28, 2023

Appendix F – Awards with Summer 2025 Final Term

Administrative Professional

Major: 3680
Effective Term: 2024 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 62-70
CIP Code: 52.0401
SOC Code: Upon completion of this degree, students may pursue a career as:

Primary/Initiating College: Estrella Mountain Community College
Program Availability: EM GC GW PC PV SM
Field of Interest: Business, Entrepreneurialism and Management
Instructional Council: Business/Management
GPA: 2.00

43-6011 Executive Secretaries and Executive Administrative Assistants
43-6014 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive

Description: The Associate in Applied Science (AAS) in the Administrative Professional degree is designed to provide training for various office positions. The curriculum incorporates people and technological skills essential for job success. Includes instruction in business communications, office procedures, public relations, accounting, records management, and report preparation. A Certificate of Completion (CCL) in Administrative Professional is also available.

Learning Outcomes

1. Apply effective oral, written, and visual business communication skills. (GBS120, FYC, [COM])
2. Apply current technology to specific business tasks. (BPC110, CIS105, CIS113DE, CIS114DE, BPC101AA, BPC/OAS111AA, CIS133AA, CIS121AI, CIS121AE, CIS122AE, MKT110, CIS103, CIS214DE, CIS133DA, CIS117DM, ACC115)
3. Create advanced business documents, reports, spreadsheets, and presentations. (ACC115, BPC101AA, BPC110, CIS105, CIS113DE, CIS114DE, CIS117DM, CIS214DE)
4. Demonstrate critical thinking through written and oral formats. (CIS214DE, GBS120, GBS151, GBS205, MGT251, FYC, [SG/SQ], (CRE))
5. Apply functions of modern business, including business principles and marketing to business situations. (GBS151, MKT271, MKT110)
6. Use the Internet as a communication tool and information resource. (BPC101AA, BPC110, CIS103, CIS105, CIS133AA, CIS133DA, GBS120, GBS205, MKT110)
7. Analyze legal, ethical and social implications of business decisions and their impact on various individuals, groups and societies. (GBS151, GBS205, MKT110, SBU200)
8. Apply mathematics to common business calculations. (ACC+++, ACC115, BPC110, CIS105, CIS114DE, CIS214DE, GBS131, [MA])
9. Apply effective interpersonal and customer service skills in the workplace. (GBS120, MGT126, MGT251)
10. Apply professional behavior and ethics. (CIS105, GBS151, GBS205, MGT126, MGT251 SBU200, [HU])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 25-27

ACC115 Computerized Accounting 3

BPC110 Computer Usage and Applications (3) OR
CIS105 Survey of Computer Information Systems (3) 3

CIS113DE Microsoft Word: Word Processing 3
CIS114DE Excel Spreadsheet 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

GBS120 Workplace Communication Skills 3
GBS131 Business Calculations 3
GBS151 Introduction to Business 3

Select three (3) of the following courses:
BPC101AA Introduction to Computers I 1
BPC/OAS111AA Computer Keyboarding I 1
CIS121AE Windows Operating System: Level I 1
CIS121AI Mac Operating System 1
+ CIS122AE Windows Operating System: Level II 1
CIS133AA Internet/Web Development Level I-A 1

Restricted Electives

Credits: 15

Students should select fifteen (15) credits from the following courses, except courses used to satisfy the Required Courses area, in consultation with a program advisor:

ACC+++ Any ACC Accounting prefixed course (except ACC115) 3
MGT251 Human Relations in Business 3
MGT126 Customer Service Skills and Strategies 3
CIS133DA Internet/Web Development: Level I 3
+ CIS214DE Advanced Excel Spreadsheet: Level II 3
CIS103 Introduction to Social Media 3
MKT110 Marketing and Social Networking 3
CIS117DM Microsoft Access: Database Management 3
GBS205 Legal, Ethical, and Regulatory Issues in Business 3
MKT271 Principles of Marketing 3

General Education Requirements

General Education Requirement
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3)

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3)

Critical Reading
Credits: 0-3

Any approved general education course from the Critical Reading area OR
Equivalent as indicated by assessment.

Mathematics
Credits: 3-6

Any approved general education course from the Mathematics area OR
Equivalent as indicated by assessment.

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3

SBU200 Society and Business 3

Natural Sciences
Credits: 4

Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: June 28, 2022

Animation and Time-Based Media

Major: 3199
Effective Term: 2024 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 69-77
CIP Code: 10.0304
SOC Code: Upon completion of this degree, students may pursue a career as:
27-1014.00 Multimedia Artists and Animators

Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PC
Field of Interest: Visual and Performing Arts
Instructional Council: Art
GPA: 2.00

Upon completion of a bachelor`s degree, students may pursue a career as:
27-1011.00 Art Directors

Description: The Associate in Applied Science (AAS) in Animation and Time-Based Media is designed for the student who wishes to develop marketable skills in the area of digital animation and time-based media development. The program provides the student with an understanding of the equipment, operations, and knowledge of the terminology related to still image, video, and animation production. It allows for the exploration of personal interest in this area, prepares students for employment, and upgrades skills of those already employed in this field. Employment opportunities are included in video and multimedia fields, such as digital animator, media production, marketing, publishing, motion graphics, photography, storyboard artist, freelance artist designer, web and interactivity design, and multimedia artist/designer. A Certificate of Completion (CCL) in Animation and in Time-Based Media are also available.

Learning Outcomes

1. Create still, interactive, animation, and time-based images to project specifications demonstrating professional competence in research, planning, production, and presentation. (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC280AC, AVC297AC, ART111, ART116, ART131, AVC138, AVC140, AVC142, AVC143, AVC150, AVC170, AVC174, AVC/MMT185, AVC200, AVC202, AVC240, AVC/MMT285, AVC/THO246, AVC270, AVC273AC, AVC279, AVC284, AVC287, CIS133DA, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, MUC191, MUC192, MUC122, MUC195, MUC222, (COM), (CRE), [FYC], [MA], [SB], [SG], [SQ])
2. Apply critical thinking skills, the creative process, and historical and visual literacy to solve visual, technical, and conceptual problems. (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC280AC, AVC297AC, ART111, ART116, ART131, AVC138, AVC140, AVC142, AVC143, ART/COM/STO145, AVC150, AVC170, AVC174, AVC178, AVC/MMT185, AVC/MMT190, AVC192, AVC200, AVC240, AVC/THO246, AVC270, AVC279, AVC284, AVC/MMT285, AVC287, CIS133DA, CRW150, CRW172, CRW176, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, HUM/THF205, JRN213, MUC191, MUC192, MUC122, MUC195, MUC222, ARH101, ARH102, ARH115, (CRE), [FYC], [SB], [SG], [SQ])
3. Critique narratives and complex still, interactive, time-based, and animation media to evaluate their effectiveness for diverse audiences. (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC248, ART255, AVC280AC, AVC297AC, ART111, ART116, ART131, AVC138, AVC140, AVC142, AVC143, ART/COM/STO145, AVC150, AVC170, AVC174, AVC/MMT185, AVC200, AVC240, AVC/THO246, AVC270, AVC284, AVC/MMT285, AVC287, FMP215, FMT121, HUM/THF205, JRN213, ARH101, ARH102, ARH115, (CRE), [FYC])
4. Research and apply industry standard tools to develop effective complex time-based media or animations and workflows. (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC280AC, AVC297AC, ART131, AVC138, AVC140, AVC142, AVC143, ART/COM/STO145, AVC150, AVC170, AVC/MMT185, AVC200, AVC202, AVC240, AVC/THO246, AVC270, AVC273AC, AVC279, AVC284, AVC/MMT285, AVC287, CIS133DA, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, JRN213, MUC191, MUC192, MUC122, MUC195, MUC222, (CRE), [FYC], [MA], [SB], [SG], [SQ])
5. Demonstrate professional and collaborative practices in diverse settings (e.g., communication, time management, organization, and legal and ethical considerations). (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC248, ART255, AVC280AC, AVC297AC, ART111, ART116, AVC138, AVC140, AVC142, AVC143, ART/COM/STO145, AVC150, AVC170, AVC/MMT185, AVC200, AVC240, AVC/THO246, AVC270, AVC273AC, AVC284, AVC/MMT285, AVC287, CIS133DA, CRW150, CRW172, CRW176, FMP114, FMP/FMT151, FMP204, FMT121, HUM/THF205, JRN213, ARH101, ARH102, ARH115, (CRE), (COM), [FYC], [SB], [SG], [SQ])
6. Communicate narrative through animation, still, and time-based media while recognizing diverse opinions and cultural and individual differences. (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC280AC, AVC297AC, ART111, ART116, ART131, AVC138, AVC140, AVC142, AVC143, ART/COM/STO145, AVC150, AVC170, AVC/MMT185, AVC192, AVC200, AVC240, AVC/THO246, AVC270, AVC273AC, AVC279, AVC284, AVC/MMT285, AVC287, CIS133DA, CRW150, CRW172, CRW176, FMP108, FMP114, FMP/FMT151, FMP204, FMP215, FMT121, HUM/THF205, JRN213, MUC191, MUC192, MUC122, MUC195, MUC222, ARH101, ARH102, ARH115, (CRE), (COM), [FYC], [SB])
7. Create a collection of works (e.g. capstone, internships, and/or portfolio) that reflect professional competency. (AVC169, AVC177, AVC/MMT184, AVC100, AVC178, AVC248, ART255, AVC280AC, AVC297AC,

ART111, ART116, ART131, AVC138, AVC140, AVC142, AVC143, ART/COM/STO145, AVC150, AVC170, AVC/MMT185, AVC200, AVC240, AVC/THO246, AVC270, AVC273AC, AVC284, AVC/MMT285, AVC287, CRW150, CRW172, CRW176, FMT121, JRN213, [FYC], [MA], [SG], [SQ])

8. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 17-19

+ AVC169 2D Media Design (3) OR
+ AVC178 Digital Arts Studies (3) 3

+ AVC177 Digital Photographic Imaging I 3
+ AVC/MMT184 Digital Animation I 3
AVC100 Introduction to Digital Arts 1

AVC248 Design Self Promotion (3) OR
ART255 Art Marketing (3) 3

+ AVC280AC Digital Media Arts and Design Capstone (3) OR
+ AVC297AC Commercial Art Internship (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 30

Specialization 1: Digital Animation
Credits: 30
ART111 Drawing I 3
ART116 Life Drawing I 3

AVC150 Multimedia Storytelling (3) OR
CRW150 Introduction to Creative Writing (3) OR
CRW172 Introduction to Comic Book Writing (3) OR
CRW176 Writing Narrative for Video Games (3) OR
FMT121 Story Theory for Film, Television and Media (3) 3

AVC170 3D Computer Design (3) OR
AVC/THO246 Digital Fabrication (3) 3

+ AVC/MMT185 3D Modeling and Animation I 3
+ AVC200 Animation and Interactivity 3
+ AVC240 Cinematography and Directing for 2D/3D Animation 3
+ AVC284 Digital Animation II 3
+ AVC/MMT285 3D Modeling and Animation II 3

+ AVC287 3D Character Animation 3

Specialization 2: Time-Based Media
Credits: 30
ART111 Drawing I (3) OR
ART116 Life Drawing I (3) 3

AVC142 Introduction to Digital Photography 3

AVC150 Multimedia Storytelling (3) OR
FMT121 Story Theory for Film, Television and Media (3) OR
JRN213 Writing for Online (3) 3

+ AVC202 Media Productions I (3) OR
FMP108 Video Production (3) 3

+ AVC279 Media Productions II (3) OR
+ FMP215 Digital Video Effects (3) 3

MUC122 Sound Design I (3) OR
MUC191 Electronic Music I (3) 3

Complete twelve (12) credits from courses not already selected in the Required Courses area. Students may choose from one emphasis or from among multiple emphasis areas according to their occupational needs.

Photography Emphasis
ART131 Photography I 3
+ AVC138 Commercial Photography I 3
+ AVC140 Portrait Photography 3
+ AVC143 Intermediate Digital Photography 3
+ AVC270 Digital Photographic Imaging II 3

Audio Emphasis
+ FMP114 Audio Production 3
MUC122 Sound Design I 3
MUC191 Electronic Music I 3
+ MUC192 Electronic Music II 3
MUC195 Studio Music Recording I 3
+ MUC222 Sound Design II 3

Media Production Emphasis
ART/COM/STO145 Digital Storybook 1
+ AVC/MMT190 Art of Web Site Design 3
+ AVC192 Advanced Web Presentation Design 3
AVC/THO246 Digital Fabrication 3
CIS133DA Internet/Web Development Level I 3
+ FMP/FMT151 TV and New Media Production 3
+ FMP204 Advanced Video Production 3
+ FMP215 Digital Video Effects 3

Motion Graphics Emphasis
ART116 Life Drawing I 3
+ AVC174 Electronic Color Principles 1

+ AVC/MMT185 3D Modeling and Animation I 3
+ AVC200 Animation and Interactivity 3
+ AVC240 Cinematography and Directing for 2D/3D Animation 3
+ AVC273AC Special Topics: Multimedia Arts 3
+ AVC287 3D Character Animation 3
+ FMP215 Digital Video Effects 3

General Education Requirements

General Education Requirement
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment. (0) 0-3

Mathematics
Credits: 3-6

Any approved general education course from the Mathematics area. 3-6

Recommended for students planning to transfer to a four-year university:
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

ARH101 Art from Prehistory Through Middle Ages (3) OR
ARH102 Art from Renaissance to Modernism (3) OR
ARH115 History of Photography (3) OR
HUM/THF205 Introduction to Cinema (3) 3

Social-Behavioral Sciences
Credits: 3

Any approved general education course from the Social-Behavioral Sciences area.

Natural Sciences
Credits: 4

Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: February 27, 2024

Audio Production Technologies

Major: 3024
Effective Term: 2023 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 62-71
CIP Code: 10.0203
Primary/Initiating College: Mesa Community College
Program Availability: GC MC PC PV
Field of Interest: Visual and Performing Arts
Instructional Council: Music
GPA: 2.00
SOC Code: Upon completion of an associate degree, students may pursue a career as:
27-4011.00 Audio and Video Equipment Technicians
27-4012.00 Broadcast Technicians

Upon completion of a bachelor`s degree, students may pursue a career as:
27-2012.05 Technical Directors/Managers

Description: The Associate in Applied Science (AAS) in Audio Production Technologies offers students hands-on study of audio engineering and related media fields. Students learn and apply the concepts and theories associated with music recording, live sound reinforcement, and sound design. The program is designed to give students foundational knowledge and experience essential in the field of audio production. An embedded Certificate of Completion (CCL) in Audio Production Technologies is also available.

Learning Outcomes

1. Utilize appropriate campus resources, tools, and opportunities to support building connections and achieving individual educational goals. (FYE101, FYE103)
2. Demonstrate an understanding of the fundamentals of music and sound. (MTC101, MUC191, MUC193, MUC111, MUC194, MUC195, MUC195AA, MUC197, MUC296WA, MUC297AA, MUC298AA, MUC122)
3. Apply audio engineering and/or sound design techniques using current industry standard technologies. (MUC191, MUC192, MUC281, MUC111, MUC194, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
4. Demonstrate effective written, oral, visual, interpersonal and collaborative skills to build relationships and network with diverse clients, colleagues, and organizations. (MTC101, MUC193, MUC109, MUC110, MUC145,

MUC195, MUC195AA, MUC196, MUC196AA,MUC197, MUC296WA, MUC297AA, MUC298AA, MUC122, MUC222, MUC292, MUC295, (COM), [FYC], [SB])

5. Employ basic computer literacy skills to general and audio-specific applications. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC194, MUC195, MUC195AA, MUC196, MUC196AA,MUC197, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
6. Demonstrate the initiative and ability to adapt to new technologies. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC194, MUC195, MUC195AA, MUC196, MUC196AA,MUC197, MUC297AA, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295)
7. Demonstrate effective troubleshooting methods in a variety of contexts. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC194, MUC195, MUC195AA, MUC196, MUC196AA,MUC197, MUC296WA, MUC297AA, MUC298AA, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295, [MA], [SG], [SQ])
8. Demonstrate an understanding of professional ethics, relevant intellectual property laws, rights management, publishing, licensing, and contracts. (MUC109, MUC110, MUC145, MUC296WA, MUC297AA, MUC298AA, (CRE), [SB])
9. Critically analyze media for their social, cultural, aesthetic, and historical significance. (MUC191, MUC192, MUC195, MUC195AA, MUC109, MUC110, (CRE), [HU])
10. Using a fundamental understanding of scientific inquiry, solve problems within the discipline. (MUC191, MUC192, MUC193, MUC281, MUC111, MUC194, MUC195, MUC195AA, MUC196, MUC196AA, MUC197, MUC112, MUC122, MUC198, MUC222, MUC289, MUC292, MUC295, [MA], [SG], [SQ])

Program Notes

Students must earn a grade of C or better for all courses required within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected

Program Prerequisites: None

Required Courses

Credits: 31-34

In addition to the required course work, students must consult with a program advisor to select nine credits within the Restricted Electives area.

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

MTC101 Introduction to Music Theory 3
MUC109 Music Business: Content Creation and Copyright 3

MUC110 Music Business: Marketing and Monetization (3) OR
MUC145 Recording Studio Business Operations (2) 2-3

+ MUC111 Digital Audio Workstation I (DAW I) 3
MUC191 Electronic Music I 3
+ MUC192 Electronic Music II 3
+ MUC194 Audio Mixing Techniques 3

MUC195 Studio Music Recording I (3) OR
MUC195AA Studio Music Recording I (3) 3

+ MUC196 Studio Music Recording II (3) OR
+ MUC196AA Studio Music Recording II (3) 3

MUC197 Live Sound Reinforcement I 3

+ MUC297AA Audio Production Internship (1) OR
+ MUC296WA Cooperative Education (1) OR
+ MUC298AA Special Projects (1) 1

Restricted Electives

Credits: 9

Students must select a total of nine (9) credits from the list below in consultation with an academic advisor. NOTE: at least one (1) of the following courses must be completed: MUC281, MUC289, MUC292, or MUC295.

+ MUC112 Digital Audio Workstation II (DAW II) 3
MUC122 Sound Design I 3
+ MUC193 Computer-Based Sound Synthesis 3
+ MUC198 Live Sound Reinforcement II 3
+ MUC222 Sound Design II 3
+ MUC281 Electronic Music III 3
+ MUC289 Live Sound Reinforcement III 3
+ MUC292 Sound Design III 3
+ MUC295 Studio Music Recording III 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM110 is recommended.

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR

Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6

Any approved general education course from the Mathematics area.

Students who intend to transfer must take:
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

Any approved general education courses from the Humanities, Arts and Design area.

MHL140 or MHL145 or MHL153 are recommended.

Social-Behavioral Sciences
Credits: 3

Any approved general education course from the Social-Behavioral Sciences area.

PSY101 is recommended.

Natural Sciences
Credits: 4

Any approved general education course from the Natural Sciences area.

MCCCD Governing Board Approval Date: June 28, 2022

Biotechnology and Molecular Biosciences

Major: 3034
Effective Term: 2024 Summer
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 63-72
CIP Code: 41.0101
Primary/Initiating College: Glendale Community College
Program Availability: GC
Field of Interest: Science, Technology, Engineering and Mathematics
Instructional Council: Biology
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
19-4021.00 Biological Technicians

Description: The Associate in Applied Science (AAS) in Biotechnology and Molecular Biosciences program is designed to give entry-level laboratory technicians skills for application in academic, industrial and commercial research institutions. The exposure to an academic environment that simulates the contemporary biotechnological

workplace, inclusive of analytical, critical thinking and problem-solving skills, provides the opportunity to form a strong technical foundation typically sought by employers. The successful completion of the program may also provide the educational background for those wishing to pursue a career in the pharmaceutical industry, clinical laboratory medicine, forensics or environmental testing laboratories and/or a foundation for a student wishing to continue their education at a university.

Program Competencies

1. Experience the natural world in an observant, thoughtful, and inquisitive manner, posing questions about unexplained phenomena and formulating multiple hypothetical explanations for each in an open-minded and creative fashion. (ABS175, ABS283, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM151, CHM151AA, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL)
2. Accurately perform scientific calculations and measurements typically used in biotechnology laboratory. (ABS173, ABS175, ABS283, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM150AA, CHM151, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, [MA])
3. Use appropriate databases to locate primary scientific literature, carefully examine its text and figures, critically evaluate and discuss the experimental design, data analysis and source. (ABS175, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, (CRE), [FYC])
4. Utilize written protocols and techniques, including the safe and correct operation of contemporary laboratory equipment to reliably conduct controlled scientific investigations as appropriate for a research, clinical and/or manufacturing environment, including accurately and thoroughly documenting results, analyzing and interpreting data, and reporting results and conclusions effectively in written, graphical, and oral formats. (ABS173, ABS175, ABS283, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM150AA, CHM151, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, (COM), (CRE), [FYC], [MA])
5. Design controlled single and multivariable experiments in a socially conscious and ethically responsible manner, including accurately and thoroughly documenting methodology. (ABS173, ABS175, ABS283, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM150AA, CHM151, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, PHI105, PHI213, PHI216, [SB])
6. Use relevant software and digital databases to conduct scientific analyses, computer modeling, and information gathering. (ABS283, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, [FYC], [MA])
7. Explain biological and chemical principles and their application to biotechnological techniques. (ABS283, BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM151, CHM151AA, CHM151LL, CHM152, CHM152AA, CHM152LL, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL)
8. Persistently troubleshoot unanticipated investigative problems by consulting with others, critically analyzing methodology used, revising procedure as necessary and/or seeking alternative strategies to test the hypothesis. (BIO195AA, BIO208, BIO209, BIO210, BIO211AA, BIO211AB, BIO211AE, BIO215AB, BIO295AA, BIO295AB)
9. Demonstrate the skills needed to work effectively in a diverse team environment, including the ability to clearly communicate with peers from a variety of backgrounds and levels of experience, collaborate with others and act as a productive contributor to effective group dynamics and the team`s work. (BIO181, BIO181XT, BIO195AA, BIO205, BIO208, BIO209, BIO210, BIO215AB, BIO295AA, BIO295AB, CHM150, CHM151, CHM151LL, CHM151AA, CHM235, CHM235AA, CHM235LL, CHM236, CHM236AA, CHM236LL, (COM), [SB])
10. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (BIO211AA, BIO211AB, BIO211AE, BIO215AB, FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 45-48

ABS173 Basic Instrumentation and Lab Math 1
ABS175 Research Methods in Biology 1

+ BIO181 General Biology (Majors) I (4) OR
+ BIO181XT General Biology (Majors) I (4) 4

+ BIO195AA Principles and Practice of Scientific Research 1
+ BIO205 Microbiology 4
+ BIO208 Nucleic Acid Methods 3
+ BIO209 Biomolecular Separation 3
+ BIO210 Advanced Lab Instrumentation 3

BIO211AA Biotechnology Seminar: Biomedical Applications (1) OR
+ BIO211AB Biotechnology Seminar: Laboratory Protocol (1) OR
BIO211AE Biotechnology Seminar: Business and Regulatory Issues (1) 1

Complete four (4) credits from the following course options. Courses may be repeated for credit. BIO295AA must be taken for at least two (2) credits.
+ BIO215AB Biotechnology Internship 2
+ BIO295AA Independent Research in Biology 1
+ BIO295AB Independent Research in Biology 2

+ ABS283 Bioinformatics and Scientific Computing 3

+ CHM150 General Chemistry I (4) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM151 General Chemistry I (3) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM150AA General Chemistry I (5)
OR
+ CHM151AA General Chemistry I (4) 4-5

+ CHM152 General Chemistry II (3) AND
+ CHM152LL General Chemistry II Laboratory (1)
OR
+ CHM152AA General Chemistry II (4) 4

+ CHM235 General Organic Chemistry I (3) AND
+ CHM235LL General Organic Chemistry I Laboratory (1)
OR
+ CHM235AA General Organic Chemistry I with Lab (4) 4

+ CHM236 General Organic Chemistry IIA (3) AND
+ CHM236LL General Organic Chemistry IIA Laboratory (1)
OR
+ CHM236AA General Organic Chemistry IIA with Lab (4) 4

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

General Education Requirements

General Education Requirement
Credits: 18-24

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM230 recommended.

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment. 0-3

Mathematics
Credits: 3-6

+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) OR
Satisfactory completion of higher level Mathematics course 3-6

General Education Distribution
Credits: 6

Humanities, Arts and Design
Credits: 3

PHI105 Introduction to Ethics (3) OR
PHI213 Medical and Bio-Ethics (3) OR
PHI216 Environmental Ethics (3) 3

Social-Behavioral Sciences
Credits: 3

Any approved general education course from the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 0

Met by BIO181 OR BIO181XT in Required Courses area.

MCCCD Governing Board Approval Date: February 28, 2023

Engineering Technology

Major: 3187
Effective Term: 2024 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 61-71
CIP Code: 15.0000
Primary/Initiating College: District Office
Program Availability: CG EM GC PV SM
Field of Interest: Science, Technology, Engineering and Mathematics
Instructional Council: Engineering
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
17-3021.00 Aerospace Engineering and Operations Technicians
17-3022.00 Civil Engineering Technicians
17-3026.00 Industrial Engineering Technicians
17-3027.00 Mechanical Engineering Technicians
17-3027.01 Automotive Engineering Technicians
17-3024.00 Electro-Mechanical Technicians
17-3024.01 Robotics Technicians

Description: The Associate in Applied Science (AAS) in Engineering Technology program prepares students as entry-level engineering technicians. They will apply basic engineering principles and technical skills to support engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions, including preparation in the areas of research, production, and operations. This degree will prepare highly skilled and needed workers for area manufacturers and the tech industry.

Learning Outcomes

1. Use computer programming, computer tools, and computer modeling as applied to engineering analysis and design. (ECE102, ECE103, ECE216, ECE216AA, ECE216LL, CIS105, CIS150, CIS150AB, CIS156, CIS159, CIS162AB, CIS162AC, CIS162AD, CIS163AA, CSC100, CSC100AA, CSC100AB, CSC110, CSC110AA, CSC110AB)
2. Analyze engineering designs as a member of an engineering project team. (ECE102, ECE103, ECE104, ECE216, ECE216AA, ECE216LL, ECE294++, ECE298++, PHY111, PHY111AA, PHY115, PHY121, (COM))
3. Apply principles of engineering, science, and mathematics to solve engineering problems. (ECE102, ECE103, ECE104, ECE105, ECE216, ECE216AA, ECE216LL, CHM130, CHM130LL, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY111AA, PHY115, PHY121, PHY112, PHY116, PHY131, ECE294++, ECE298++, [MA])

4. Apply visual and spatial reasoning to create and interpret engineering diagrams. (ECE102, ECE103, ECE216, ECE216AA, ECE216LL, CAD100, CAD101, CAD145, DFT110, DFT126, CON241)
5. Safely and correctly use tools and equipment for industrial and lab applications. (ECE102, ECE103, CHM130, CHM130LL, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY111AA, PHY115, PHY121, PHY112, PHY116, PHY131)
6. Conduct appropriate experimentation and testing. (CHM130, CHM130LL, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY111AA, PHY115, PHY121, PHY112, PHY116, PHY131)
7. Employ appropriate engineering principles to collect and interpret data. (ECE102, ECE103, ECE104, ECE105, ECE294++, ECE298++, MAT206, CHM130, CHM130LL, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY111AA, PHY115, PHY121, PHY112, PHY116, PHY131)
8. Write technical reports consistent with engineering analysis and engineering design. (ECE102, ECE103, CHM130, CHM130LL, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY111AA, PHY115, PHY121, PHY112, PHY116, PHY131, [FYC])
9. Demonstrate effective collaboration and participation on a diverse and inclusive team to establish goals, plan tasks, and meet objectives. (ECE102, ECE103, ECE104, ECE294++, ECE298++, CHM130, CHM130LL, CHM150, CHM150AA, CHM150AA, CHM151, CHM151LL, CHM151AA, PHY111, PHY111AA, PHY115, PHY121, PHY112, PHY116, PHY131, (COM), [HU], [SB])
10. Use effective written, visual, and oral strategies to communicate to a range of audiences. (ECE102, ECE103, ECE104, ECE294++, ECE298++, (COM), (CRE), [FYC])
11. Recognize ethical and professional responsibilities in engineering situations and the implications for society at large. (ECE102, ECE103, ECE104, ECE296++, [FYC], [HU], [SB])
12. Demonstrate creativity, curiosity, and adaptability in a variety of contexts. (ECE102, ECE103, ECE104, ECE294++, ECE298++, (CRE), [FYC])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 27-36

+ CHM130 Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1)
OR
+ CHM130AA Fundamental Chemistry with Lab (4)
OR
+ CHM150 General Chemistry I (4) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM150AA General Chemistry I (5)
OR
+ CHM151 General Chemistry I (3) AND
+ CHM151LL General Chemistry I Laboratory (1)
OR
+ CHM151AA General Chemistry I (4) 4-5

CIS105 Survey of Computer Information Systems 3

+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) OR

+ CIS156 Python Programming: Level I (3) OR
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162AB C++: Level I (3) OR
+ CIS162AC Visual C++: Level I (3) OR
+ CIS162AD C#: Level I (3) OR
+ CIS163AA Java Programming: Level I (3) OR
+ CSC100 Introduction to Computer Science (C++) (3) OR
+ CSC100AA Introduction to Computer Science (C++) (3) OR
+ CSC100AB Introduction to Computer Science (C++) (4) OR
+ CSC110 Introduction to Computer Science (Java) (3) OR
+ CSC110AA Introduction to Computer Science (Java) (3) OR
+ CSC110AB Introduction to Computer Science (Java) (4) 3-4

+ ECE102 Engineering Analysis Tools and Techniques 2
+ ECE103 Engineering Problem Solving and Design 2

ECE216 Computer-Aided Engineering (2) AND
+ ECE216LL Computer Aided Engineering Laboratory (1) OR
+ ECE216AA Computer Aided Engineering (3) 3

+ ECE104 EPICS Gold I (2) OR
+ ECE294++ Special Topics in Engineering (1-4) OR
+ ECE296++ Cooperative Education (1-3) OR
+ ECE298++ Special Projects (1-3) 1-4

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

+ PHY111 General Physics I (4) OR
+ PHY111AA General Physics I (5) OR
+ PHY115 University Physics I (5) OR
+ PHY121 University Physics I: Mechanics (4) 4-5

+ PHY112 General Physics II (4) OR
+ PHY116 University Physics II (5) OR
+ PHY131 University Physics II: Electricity and Magnetism (4) 4-5

Restricted Electives

Credits: 12-15

In consultation with an Academic, Faculty, or Program Advisor, complete 12-15 credits of coursework from any of the areas below that best align with academic and professional goals. Students may select courses from multiple areas.

General Application

Select one of the following programming courses not already taken in required courses:
+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) OR
+ CIS156 Python Programming: Level I (3) OR
+ CIS159 Visual Basic Programming I (3) OR
+ CIS162AB C++: Level I (3) OR
+ CIS162AC Visual C++: Level I (3) OR
+ CIS162AD C#: Level I (3) OR

+ CIS163AA Java Programming: Level I (3) OR
+ CSC100 Introduction to Computer Science (C++) (3) OR
+ CSC100AA Introduction to Computer Science (C++) (3) OR
+ CSC100AB Introduction to Computer Science (C++) (4) OR
+ CSC110 Introduction to Computer Science (Java) (3) OR
+ CSC110AA Introduction to Computer Science (Java) (3) OR
+ CSC110AB Introduction to Computer Science (Java) (4) 3-4

Select one of the following courses not already taken in required courses:
+ ECE104 EPICS Gold I (2) OR
+ ECE294++ Special Topics in Engineering (1-4) OR
+ ECE296++ Cooperative Education (1-3) OR
+ ECE298++ Special Projects (1-3) 1-4

+ ECE105 MATLAB Programming 1

ECE106 Survey of Nanotechnology (1) OR
MNT110 Nanotechnology: What It Is and Why It Matters (3) 1-3

AIT100 Industrial Safety (1) OR
CON271 Construction Safety (3) OR
GTC/MIT/OSH106 Industrial Safety (2) 1-3

+ MAT206 Elements of Statistics 3

Biomedical Engineering Technician
BIO160 Introduction to Human Anatomy and Physiology (4) OR
+ BIO201 Human Anatomy and Physiology I (4) 4

ABS175 Research Methods in Biology 1
BIO211AA Biotechnology Seminar: Biomedical Applications 1
ECE111 Bioengineering Systems 3

Civil Engineering Technician
+ CET211 Strength of Materials (3) OR
CON223 Strength of Materials (3) 3

+ CON241 Surveying 3

ECE216 Computer-Aided Engineering (2) AND
+ ECE216LL Computer Aided Engineering Laboratory (1) OR
+ ECE216AA Computer Aided Engineering (3) 3

GLG101 Introduction to Geology I - Physical Lecture (3) AND
GLG103 Introduction to Geology I - Physical Lab (1) OR
GLG101IN Introduction to Geology I - Physical (4) 4

Drafting for Engineering Technician
CAD100 Fundamentals of 2D AutoCAD 3
+ CAD101 Elements of CAD Graphics (AutoCAD) 3
+ CAD145 Design Principles for Industry 3
DFT110 Introduction to Drafting 3
DFT126 Building Trades Blueprint Reading 3

ECE216 Computer-Aided Engineering (2) AND
+ ECE216LL Computer Aided Engineering Laboratory (1) OR
+ ECE216AA Computer Aided Engineering (3) 3

General Education Requirements

General Education Requirements
Credits: 19-23

General Education Core
Credits: 13-17

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3
COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Recommend COM225 or COM230

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 4-5

+ MAT187 Precalculus (5) OR
+ MAT220 Calculus with Analytic Geometry I (5) OR
+ MAT221 Calculus with Analytic Geometry I (4) 4-5

General Education Distribution
Credits: 6

Humanities, Arts and Design
Credits: 3

Any approved general education course in the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3

Any approved general education course in the Social-Behavioral Sciences area.

Recommend ECN211 or ECN212

Natural Sciences
Credits: 0

Met by CHM or PHY in Required Courses.

MCCCD Governing Board Approval Date: June 28, 2022

Exercise Science: Health, Fitness, and Sports Performance

Major: 3059
Effective Term: 2023 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 62-74.5
CIP Code: 31.0507
Primary/Initiating College: Glendale Community College
Program Availability: CG, GC, MC, PV, SC, SM
Field of Interest: Health Sciences
Instructional Council: Exercise Science, Health & Physical Education, Recreation & Wellness
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
39-9031.00 Exercise Trainers and Group Fitness Instructors

Description: The Associate in Applied Science (AAS) in Exercise Science: Health, Fitness, and Sports Performance prepares students for the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), National Academy of Sports Medicine (NASM) and the American Council on Exercise (ACE) personal trainer certifications. The curriculum is designed to prepare students for employment in positions such as personal training within health and fitness clubs, wellness centers, and public and private recreation facilities. The curriculum includes the foundational courses required for the Certificate of Completion (CCL) in Personal Training coupled with advanced hands-on courses required for the CCL in Personal Training: Advanced that foster the development of critical thinking, leadership, and communication skills important for developing, implementing and leading exercise programs. This curriculum also provides a good foundation for transfer to a four-year bachelor program. Students who complete this AAS also qualify for the CCL in Personal Training and Personal Training: Advanced. An Associate in Arts (AA), Emphasis in Exercise Science is also available for students interested in continuing their studies in this field.

Learning Outcomes

1. Apply a fundamental understanding of the relevant scientific concepts of human anatomy and physiology, biomechanics and psychology. (BIO160, BIO181++, BIO201++, EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, EXS275++, FON100, FON241, PSY101)
2. Locate and evaluate relevant scholarly literature. (EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS290, FON100, FON241, HES100, [FYC], (COM), (CRE))
3. Conduct advanced evidence-based assessments of health and human movement. (EMT101, EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, WED106, [MA])
4. Design evidence-based physical activity programs tailored to client goals and needs. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, EXS275++, FON100, FON241, HES100, PED101ST, PED101RT) [MA])
5. Implement evidence-based physical activity programs tailored to client goals and needs. (EXS101, EXS125, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, EXS275++, FON100, FON241, PED101ST, PED101RT)
6. Apply theories of motivation and behavior change to develop and implement basic strategies for improving exercise adoption and adherence. (EXS101, EXS215, EXS217, EXS257, EXS270++, EXS275++, HES100, PSY101)

7. Adapt instructional techniques to ensure client safety and goal attainment. (EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, EXS275++, HES210, PED101ST, PED101RT PED101++)
8. Apply industry standards of care to mitigate risk and ensure the safety of clients. (EMT101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, WED106, HES210)
9. Communicate through a variety of written and spoken modalities within diverse contexts. (EMT101, EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, EXS275++, HES100, WED106, HES210, [FYC], (COM), (CRE), [HU])
10. Demonstrate industry-accepted professional, ethical, and business standards. (EMT101, EXS101, EXS146, EXS215, EXS217, EXS246, EXS255, EXS257, EXS270++, EXS275++, WED106, PED101ST, PED101RT, PED101++, [FYC], (COM), (CRE), [HU])

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 46-52.5
+ BIO181++ General Biology (Majors) I (4) OR
One (1) year of high school biology (0) 0-4

BIO160 Introduction to Human Anatomy and Physiology (4) OR
+ BIO201++ Human Anatomy and Physiology I (4) 4

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5) OR
WED106 Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) (0.5) OR
Current CPR/AED certification (0) 0-0.5

EXS101 Introduction to Exercise Science 3
+ EXS125 Introduction to Exercise Physiology 3
+ EXS146 Introduction to Exercise Testing 1
+ EXS215 Resistance Training and Recovery Techniques 3
+ EXS217 Cardiorespiratory and Flexibility Training 3
+ EXS246 Advanced Exercise Testing 2
+ EXS255 Program Design: Muscular Fitness and Performance 3
+ EXS257 Program Design: Cardiorespiratory Fitness 3

Student must complete three (3) credits from the following EXS internship course options:
+ EXS270 Exercise Science Internship (3) OR
+ EXS270AA Exercise Science Internship (1) AND
+ EXS270AB Exercise Science Internship (2)
OR
+ EXS275 Sport Science Internship (3) OR
+ EXS275AA Sport Science Internship (1) AND
+ EXS275AB Sport Science Internship (2)
OR
+ EXS270AA Exercise Science Internship (1) AND
+ EXS275AB Sport Science Internship (2)
OR
+ EXS270AB Exercise Science Internship (2) AND
+ EXS275AA Sport Science Internship (1) 3

+ EXS290 Introduction to Evidence Based Practice 3

FON100 Introductory Nutrition (3) OR
FON241 Principles of Human Nutrition (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

HES100 Healthful Living 3
HES210 Cultural Aspects of Health and Illness 3

PED101ST Strength Training (1) OR
PED101RT Resistance Training for Improved Sports Performance (1) 1

PED101BC Boot Camp (1) OR
PED101BS Body Sculpting (1) OR
PED101CY Cycling - Indoor (1) OR
PED101GF Group Fitness/Aerobics (1) OR
PED101KB Kickboxing (1) OR
PED101LD Latin Dancing (1) OR
PED101PC Physical Conditioning (1) OR
PED101PS Pilates (1) OR
PED101SR Stretch and Relaxation (1) OR
PED101TC Tai Chi (1) OR
PED101TX Suspension Training (1) OR
PED101YG Gentle Yoga (1) OR
PED101YH Hatha Yoga (1) OR
PED101YO Yoga (1) OR
PED101YP Power Yoga (1) OR
PED101YR Restorative Yoga (1) OR
PED101ZU Zumba Fitness (1) 1

PSY101 Introduction to Psychology 3

Restricted Electives

Credits: 1

Complete one (1) credit from one of the following course options not already selected in the Required Courses area. Choose a course that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor as needed.

EXS+++++ Any EXS Exercise Science course 1
FON+++++ Any FON Food and Nutrition course 1
HES+++++ Any HES Health Science course 1
PED+++++ Any PED Physical Education course 1
IFS110 Critical Research for College Success 1

General Education Requirements

General Education Requirements
Credits: 15-21

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3

+ CRE101++ College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6)
OR
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) OR
Higher level course in the Mathematical Applications [MA] area (3-6) 3-6

General Education Distribution
Credits: 3

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 0

Met by HES100 in Required Courses.

Natural Sciences
Credits: 0

Met by BIO160 or BIO201++ in Required Courses.

MCCCD Governing Board Approval Date: November 22, 2022

Fire Science

Major: 3205
Effective Term: 2022 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 61.5-92
CIP Code: 43.0203
Primary/Initiating College: Mesa Community College
Program Availability: GC MC PC PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
33-2011.01 Municipal Firefighters

Description: The Associate in Applied Science (AAS) in Fire Science provides the opportunity for individuals seeking careers in the fire service to acquire standard firefighting skills and prepare for state and/or national certifications, including the Firefighter I and II Certification. Students will gain broad knowledge and skills necessary to work effectively in the fire service as firefighters. A Certificate of Completion (CCL) in Firefighter Operations is also available.

Learning Outcomes

1. Apply the basic theories of fire behavior and methods of fire control and prevention in a variety of fire operations. (FSC102, FSC108, FSC110, FSC113, FSC118, FSC208, (CRE), [MA])
2. Demonstrate the appropriate and safe use of personal firefighting equipment and fire apparatus. (FSC101, FSC102, FSC110, FSC113, FSC117, FSC118, FSC134, FSC234, (CRE), (COM), [MA])
3. Demonstrate the knowledge of the professional and organizational structures, processes, and policies that guide fire departments. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC105, FSC108, FSC110, FSC113, FSC117, FSC118, FSC119, FSC208, FSC215, (CRE), (COM), [MA], [SB], [SG], [SQ])
4. Demonstrate physical tasks, proper tool selection, and knowledge of operating procedures in accordance with the standards of the profession. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC108, FSC110, FSC118, FSC130, FSC134, FSC174, FSC208, FSC234, (CRE), [MA])
5. Mitigate hazards to health and safety by assessing, planning and responding to emergency situations. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC110, FSC113, FSC174, FSC208, (CRE), (COM), [MA], [SG], [SQ])
6. Demonstrate the critical thinking, mental, and emotional skills needed to perform firefighting tasks and services. (EMT101, EMT104, EMT104AB, EMT104LL, FSC102, FSC105, FSC110, FSC117, FSC118, FSC130, FSC134, FSC174, FSC215, FSC234, (CRE), (COM), [FYC], [MA], [SB], [SG], [SQ])
7. Practice industry accepted professional and ethical behavior related to fire service. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC108, FSC110, FSC118, FSC119, FSC215, (CRE), (COM), [FYC], [SB], [HU])
8. Collaborate effectively with members of a team to achieve goals. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC110, FSC119, FSC174, FSC215, (CRE), (COM), [FYC], [HU], [SB], [SG], [SQ])
9. Communicate efficiently and effectively with members of diverse populations in a culturally responsive manner. (EMT101, EMT104, EMT104AB, EMT104LL, FSC101, FSC102, FSC108, FSC110, FSC119, FSC215, (CRE), (COM), [FYC], [HU], [SB])
10. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.

Consult with your faculty mentor or academic advisor to determine educational requirements, including possible university transfer options, for your chosen career field.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Admission to program is required. See Program Director for details.

Program Prerequisites: None

Required Courses

Credits: 38.5-61

EMT101 Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers (0.5)
OR
Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer (0) AND
Credit By Evaluation (0.5) 0.5

+ EMT104 Emergency Medical Technology (10) AND
+ EMT104AB Applied Practical Studies for Emergency Medical Technology (0.5) AND
+ EMT104LL Emergency Medical Technology Practicum (2)
OR
Arizona State EMT Certification (0) OR
Arizona State Paramedic Certification (0) OR
Permission of Program Director (0) 0-12.5

FSC101 Introduction to Fire Service Selection and Entry (4) OR
Current employment as a firefighter as determined by the Program Director (0) 0-4

+ FSC102 Fire Department Operations 11

FSC105 Hazardous Materials/First Responder (3) OR
Permission of Program Director (0) 0-3

FSC108 Fundamentals of Fire Prevention (3) OR
FSC110 Wildland Firefighter (3) 3
(FSC110 is recommended)

FSC113 Introduction to Fire Suppression 3
FSC117 Fire Apparatus 3
FSC118 Fire Hydraulics 3
FSC119 Introduction Fire Service Ethics 3

FSC130 Fitness for Firefighters/CPAT (1) OR
Verification of CPAT completion (0) 0-1

FSC134 Fitness and Conditioning for Firefighters (3) OR
+ FSC234 Fitness and Wellness for Firefighter Candidates (3) 3
(FSC234 is recommended for students who have already completed the Fire Academy equivalent of FSC102)

+ FSC174 Functions of Command 2
+ FSC208 Firefighter Safety and Building Construction 3
FSC215 Customer Service in the Public Sector 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 1-3

FSC+++++ Any Fire Science Technology course.

Recommend the following:
FSC202 Supervisory Training for Firefighters 3
+ FSC204 Firefighting Tactics and Strategy 3
+ FSC282AC Service-Learning Experience in Fire Science 3
+ FSC296WC Cooperative Education 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM100 is recommended.

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level mathematics course in the Mathematical Applications [MA] area (3-6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

Any approved general education course from the Humanities, Fine Arts and Design [HU] area.

Social-Behavioral Sciences
Credits: 3

Any approved general education course from the Social and Behavioral Sciences [SB] area.

Natural Sciences
Credits: 4

Any approved general education course from the Natural Sciences [SG/SQ] area.

MCCCD Governing Board Approval Date: June 28, 2022

Fire Service Management

Major: 3207
Effective Term: 2024 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 67-72
CIP Code: 43.0202
Primary/Initiating College: Paradise Valley Community College
Program Availability: GC, PC, PV
Field of Interest: Behavioral Science and Human Services
Instructional Council: Emergency Medical Technology/Fire Science Technology
GPA: 2.0
SOC Code: Upon completion of this degree, students may pursue a career as:
33-1021.00 First-Line Supervisors of Fire Fighting and Prevention Workers

Description: The Associate in Applied Science (AAS) in Fire Service Management can be used by professional firefighters for promotional opportunities within the Fire Services. The program provides courses for experienced professional firefighters who desire to learn advanced fireground tactics and strategy, building construction, practical incident command, supervisory training of personnel, public administration, basic finance, and human resource management. Students can select from a variety of fire science electives to meet their professional goals. The Certificate of Completion (CCL) in Fire Service Management is also available.

Learning Outcomes

1. Demonstrate management principles as they pertain to evaluation, supervision, discipline, delegation, and assignments. (FSC119, FSC167, FSC202, FSC214, FSC215, FSC220, FSC231, FSC+++++, (CRE), (COM), [HU], [SB])
2. Manage a variety of emergency incidents based on standard procedures.(FSC113,FSC119, FSC167, FSC204, FSC220, FSC231, FSC+++++, (CRE), (COM), [MA], [SG], [SQ])

3. Evaluate human resource practices including recruitment and selection, evaluation, compensation, supervision, and discipline of fire service personnel. (FSC119, FSC167, FSC214, FSC215, FSC220, FSC+++++, (CRE), (COM), [HU], [SB])
4. Analyze the methods of providing for firefighter safety in a variety of incidents. (FSC113, FSC119, FSC167, FSC208, FSC220, FSC231, FSC+++++, (CRE), (COM), [MA], [SG], [SQ])
5. Demonstrate the critical thinking, mental, and emotional skills needed to manage emergency incidents. (FSC119, FSC167, FSC202, FSC204, FSC208, FSC215, FSC220, FSC+++++, (CRE), (COM), [FYC], [MA], [SB], [SG], [SQ])
6. Practice industry accepted professional and ethical behavior related to fire service. (FSC119, FSC167, FSC202, FSC214, FSC215, FSC220, FSC+++++, (CRE), (COM), [FYC], [SB], [HU])
7. Collaborate effectively with members of a team to achieve goals. (FSC119, FSC167, FSC202, FSC208, FSC215, FSC220, FSC231, FSC+++++, (CRE), (COM), [FYC], [HU], [SB], [SG], [SQ])
8. Communicate efficiently and effectively with members of diverse populations in a culturally responsive manner. (FSC215, FSC119, FSC167, FSC220, FSC+++++, (CRE), (COM), [FYC], [HU], [SB])
9. Apply relevant knowledge, skills, and habits of mind to seek career opportunities in the field. (FYE101, FYE103)

Program Notes

Students must earn a grade of C or better in all courses within the program.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria

Permission of the Program Director.

Program Prerequisites: None

Required Courses

Credits: 36-38

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

FSC113 Introduction to Fire Suppression 3
FSC119 Introduction Fire Service Ethics 3
+ FSC167 Fire Captain Academy 6
FSC202 Supervisory Training for Firefighters 3
+ FSC204 Firefighting Tactics and Strategy 3
+ FSC208 Firefighter Safety and Building Construction 3
+ FSC214 Human Resource Management in Fire Service 3
FSC215 Customer Service in the Public Sector 3
FSC220 Fire Officer 5
FSC231 Battalion Chief Academy 3

Restricted Electives

Credits: 3-9

Students should select 3-9 credit hours from the following courses in consultation with a Program Director.

FSC+++++ Any Fire Science Technology course(s)

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3)
AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM100 is recommended.

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking 3 OR
Equivalent as indicated by assessment. 0-3

Mathematics
Credits: 3-6

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level mathematics course in the Mathematics area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

Any approved general education course from the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social and Behavioral Sciences area.

SOC101 is recommended.

Natural Sciences
Credits: 4

Any approved general education course from the Natural Sciences area.

BIO100, OR BIO160, OR (CHM130 AND CHM130LL) is recommended.

MCCCD Governing Board Approval Date: June 27, 2023

Information Security

Major: 3039
Effective Term: 2023 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 63-74
CIP Code: 11.1003
SOC Code: 11-3021, 15-1122, 15-1141, 15-1142, 15-1143, 15-1152

Primary/Initiating College: Glendale Community College
Program Availability: GC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00

Description: The Associate in Applied Science (AAS) in Information Security degree is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs function. Emphasis is placed on developing the theoretical and practical skills needed to maintain security on mission-critical data and systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security disciplines which include both vendor-neutral and vendor-specific information technology (IT) security training. The Information Security program prepares students for internationally recognized IT certifications and high demands in business, industry and government.

Program Notes:
Students must earn a grade of C or better in all courses within the program.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 29-31

Certificate of Completion in Information Security Technology (5347) 28

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Restricted Electives

Credits: 12-16

Students should select at least four (4) courses from the list below. A minimum of six (6) credits must be ITS prefixed course.

+ CIS1++++ Any CIS programming Level I course 3
+ CIS271DL Linux Security 3
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4
+ CNT205 Cisco Certified Network Associate Security 4

ITS+++++ Any ITS Information Technology Security course except courses used to satisfy Required Courses area 6-16

General Education Requirements

General Education Requirements
Credits: 22-27

General Education Core
Credits: 12-17

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

Any approved general education course in the Oral Communications area 3

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment 0-3

Mathematics
Credits: 3-5

+ MAT150 College Algebra/Functions (5) OR
higher level mathematics course 3-5

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area

Social-Behavioral Sciences
Credits: 3

Any approved general education course from the Social-Behavioral Sciences area.

Natural Sciences
Credits: 4

Any approved general education course from the Natural Sciences area

Program Competencies

1. Install, configure, administer, use, and maintain a UNIX/Linux operating system. (CIS126++, CIS238++)
2. Define common network terminology and protocols to include local area network (LAN) and wide-area network (WAN) topologies, the Open System Interconnection reference (OSI) model and communication cabling standards. (CNT140AB)
3. Use appropriate equations to solve basic Internet Protocol (IP) addressing and subnetting problems associated with designing a network. (CNT140AB)
4. Apply basic security techniques such as password protection and access control lists (ACLs). (MST150++)
5. Explain a broad, cross-section of information security concepts including authentication methods, access control, cryptography, public key infrastructure (PKI), network attack and defense methods, operating systems and network device hardening, securing remote access and wireless technologies including viruses and worms. (CIS105, ITS110)
6. Define workstations, servers, network storage devices, routers, switches, gateways, guards, Virtual Private Networks (VPNs), firewalls, Internet Protocol Security (IPSec), Intrusion Detection Systems (IDSs), mobile devices, peripheral devices and security peripherals. (BPC170, CIS105, ITS110)
7. Identify the ethical and legal aspects of information security including government regulatory requirements impacting network and information security professionals. (ITS120)
8. Design, implement, monitor and improve security in-depth for operating systems including Microsoft Windows, Linux, Cisco IOS and Mac OS X. (ITS130)
9. Examine the techniques for defending LAN and WAN networks including firewalls, IDSs and VPNs. (ITS110)
10. Perform day-to-day administration tasks in a Microsoft Windows-based network. (MST150++)
11. Perform day-to-day administration tasks in a UNIX/Linux-based network. (CIS126++, CIS238++)

MCCCD Governing Board Approval Date: June 28, 2022

Information Security Technology

Major: 5347
Catalog Year: 2025-2026
Last Admit Term: 2025 Summer
Award: CCL
Total Credits: 28
CIP Code: 11.1003
Primary/Initiating College: Glendale Community College
Program Availability: College-Specific: GC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1212.00 Information Security Analysts

Description: The Certificate of Completion (CCL) in Information Security Technology program is designed to provide students with the knowledge and tools to understand how networks, operating systems and programs

function, as well as, how to protect them. Emphasis is placed on developing the knowledge and skills to maintain security on mission-critical data and computer systems. The program is designed to meet the training needs of employees in both public and private sectors. The program covers a variety of information security disciplines that include both vendor-neutral and vendor-specific security training. The Information Security Technology program is designed to help prepare students for internationally recognized industry certifications.

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

Program Prerequisites

None

Required Courses

Credits: 28

BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
CIS105 Survey of Computer Information Systems 3
CIS126RH Red Hat System Administration I 3
+ CIS238RH Red Hat System Administration II 3
CNT140AB Introduction to Networks 4
+ ITS110 Information Security Fundamentals 3
ITS120 Legal, Ethical and Regulatory Issues 3
+ ITS240 Ethical Hacking and Network Defense 3
+ MST150++ Any Microsoft Windows Operating System course 3

Program Competencies

12. Demonstrate how to install, configure, administer, use, and maintain a Red Hat operating system. (CIS126RH, CIS238RH)
13. Define common network terminology and protocols to include local area network (LAN) and wide-area network (WAN) topologies, the Open System Interconnection reference (OSI) model and communication cabling standards. (CNT140AB)
14. Use appropriate equations to solve basic Internet Protocol (IP) addressing and subnetting problems associated with designing a network. (CNT140AB)
15. Apply basic security techniques such as password protection and access control lists (ACLs). (MST150++)
16. Explain a broad, cross-section of information security concepts including authentication methods, access control, cryptography, public key infrastructure (PKI), network attack and defense methods, operating systems and network device hardening, securing remote access and wireless technologies including viruses and worms. (CIS105, ITS110)
17. Define workstations, servers, network storage devices, routers, switches, gateways, guards, Virtual Private Networks (VPNs), firewalls, Internet Protocol Security (IPSec), Intrusion Detection Systems (IDSs), mobile devices, peripheral devices and security peripherals. (BPC170, CIS105, ITS110)
18. Identify the ethical and legal aspects of information security including government regulatory requirements impacting network and information security professionals. (ITS120)
19. Implement in-depth security systems, for multiple operating systems, from initial design to sustained monitoring and continuous improvement. (ITS240)
20. Examine the techniques for defending LAN and WAN networks including firewalls, IDSs and VPNs. (ITS110)
21. Perform day-to-day administration tasks in a Microsoft Windows-based network. (MST150++)
22. Perform day-to-day administration tasks in a UNIX/Linux-based network. (CIS126RH, CIS238RH)

MCCCD Governing Board Approval Date: April 23, 2024

Network and Systems Administration

Major: 3189
Effective Term: 2024 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 61-74
CIP Code: 11.1001
Primary/Initiating College: Mesa Community College
Program Availability: CG, EM, GC, GW, MC, PC, PV, SC, SM
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.0
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1211.00 Computer Systems Analysts
15-1212.00 Information Security Analysts
15-1244.00 Network and Computer Systems Administrators
15-1231.00 Computer Network Support Specialists
15-1232.00 Computer User Support Specialists
43-9011.00 Computer Operators
49-2011.00 Computer, Automated Teller, and Office Machine Repairers

Upon completion of a bachelor`s degree, students may pursue a career as:
11-3021.00 Computer and Information Systems Managers
15-1241.00 Computer Network Architects

Description: The Associate in Applied Science (AAS) in Network and Systems Administration program provides students with a solid, hands-on skill set of computer, networking, and internetworking systems technology principles and desktop support. Students gain an understanding of the interaction between microcomputer software and hardware, network and internetworking operating systems software and hardware, local area network administration and management, the use of troubleshooting techniques, troubleshooting hardware and software tools, as well as interpersonal/customer service skills. Students have the opportunity to specialize in specific information technology areas based on their interests and professional goals and leading to industry recognized certifications through an embedded Certificate of Completion (CCL) including, but not limited to, Desktop (Desktop Support, Computer System Configuration and Support, Computer System Configuration and Support, Network, Computer System Configuration and Support, Security, Computer System Configuration and Support, Linux), Cisco (Cisco Network CCNA, Cisco Network CCNP, Cisco Network CCNA Security), Linux (Red Hat Linux Engineer, Linux Associate, Red Hat Linux Administrator, Linux System Administration), Microsoft (Microsoft System Administration, Microsoft Desktop Associate), and VMware (VMware Network Administrator, VMware Foundations, VMware System Administrator). Graduates may pursue employment in a variety of information technology environments and/or transfer to a university.

Learning Outcomes

1. Update hardware and software as needed to maintain fully functional systems. (BPC170, BPC270, BPC274, CIS126DL, CIS126RH, CIS238DL, CIS238RH, BPC171, CIS290++, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)
2. Apply knowledge of operating systems to manage system hardware, security protocols, and software technologies. (BPC270, BPC274, CIS102DA, CIS121AB, CIS121AH, CIS126DL, CIS126RH, CIS293, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CNT202, CNT205, ITS110, CIS290++, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)
3. Design, maintain, and revise systems to meet desired specifications. (BPC170, BPC270, BPC274, CIS121AB, CIS121AH, CIS126DL, CIS126RH, CIS293, CIS294, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CNT140AB, CNT150AB, CNT160AB, CNT202, CNT205,

CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, BPC171, CIS290++, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)

4. Manage administrative access and user security policies within systems. (BPC270, BPC274, CIS121AH, CIS126DL, CIS126RH, CIS190, CIS293, CIS294, CIS2295, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CNT150AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, MST160, MST260, CLD110, CLD120, BPC171, CIS290++, CIS296++, CIS298++)
5. Organize and prioritize workload to ensure successful completion of projects. (CIS102DA, CIS124AA, CIS124BA, CIS224, CIS250, CIS266, CIS275DL, CIS290++, BPC171, CIS296++, CIS298++, [FYC])
6. Integrate social and ethical responsibility in decision-making and actions. (CIS102DA, CIS105, CIS111, CIS250, CIS270, CIS272DB, CNT202, CNT205, ITS110, BPC171, CIS290++, CIS296++, CIS298++, ITS120, CRE101, [HU], [SB])
7. Continuously adapt to an ever-changing technical environment. (BPC170, BPC270, BPC274, CIS102DA, CIS105, CIS111, CIS121AH, CIS124AA, CIS124BA, CIS126DL, CIS126RH, CIS156, CIS190, CIS293, CIS294, CIS295, CIS224, CIS238DL, CIS238RH, CIS239DL, CIS240, CIS240DL, CIS240RH, CIS250, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CIS290++, CNT150AB, CNT160AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, ITS120, BPC171, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120)
8. Demonstrate professional behaviors and abide by norms and conventions appropriate to the field. (CIS102DA, CIS105, CIS111, CIS250, CIS270, CIS272DB, CIS290++, CNT202, CNT205, CNT171, ITS110, BPC171, CIS296++, CIS298++, ITS120, CRE101, [HU], [SB])
9. Apply critical thinking skills and problem-solving to configure and troubleshoot systems to ensure proper operation. (BPC170, BPC270, BPC274, CIS102DA, CIS105, CIS121AH, CIS126DL, CIS126RH, CIS156, CIS190, CIS293, CIS294, CIS295, CIS238DL, CIS238RH, CIS239DL, CIS240, CIS240DL, CIS240RH, CIS266, CIS270, CIS271DL, CIS271RH, CIS272DB, CIS275DL, CIS290++, CNT150AB, CNT160AB, CNT202, CNT205, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, ITS110, MST160, CLD110, BPC171, CIS296++, CIS298++, CRE101, [MA], [SG], [SQ])
10. Utilize effective written and oral communication with multiple stakeholders in formal and informal settings. (CIS102DA, CIS124AA, CIS124BA, CIS224, CIS250, CIS290++, CIS296++, CIS298++, CRE101, (COM), [FYC])
11. Demonstrate the ability to work with others individually and as a team. (CIS102DA, CIS124AA, CIS124BA, CIS224, CIS250, CIS290++, BPC171, CIS296++, CIS298++, CRE101, (COM), [SB])
12. Create and maintain proper documentation of design, implementation, validation, workflow processes, troubleshooting, and revisions of systems. (BPC274, CIS102DA, CIS121AH, CIS124AA, CIS124BA, CIS156, CIS224, CIS239DL, CIS240, CIS250, CIS266, CIS275DL, CIS290++, CNT140AB, CNT150AB, CNT160AB, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, BPC171, CIS296++, CIS298++, MST160, MST260, CLD110, CLD120, CRE101, [FYC], [MA], [SG], [SQ])
13. Maintain, update, and monitor networks and computer systems using automation and scripting. (BPC274, CIS121AB, CIS121AH, CIS156, CIS238DL, CIS238RH, CIS239DL, CIS240DL, CIS240RH, CNT240, CNT240AA, CNT240AB, CNT250, CNT250AA, CNT250AB, CIS271DL, CIS271RH, CIS290++, CIS296++, CIS298++, CIS266, CIS275DL, MST160, MST260, CLD110, CLD120)

Program Notes

Students must earn a grade of C or better in all courses within the program.
+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: BPC, CIS, CLD, CNT, ITS, and MST.

Students may receive credit for courses within the program based on current industry certifications.

This program replaces:
AAS/3013 Linux Networking Administration

AAS/3095 Information Technology: Cisco Networking
AAS/3096 Information Technology: Network Server
AAS/3208 Networking System Administration
AAS/3312 Computer and Networking Technology
AAS/3778 Microsoft Networking Technology
AAS/3794 Network Administration
AAS/3816 Networking Technology: Cisco

Program Prerequisites: None

Required Courses

Credits: 31-46

BPC170 A+ Exam Prep: Computer Hardware Configuration and Support 3
+ BPC270 A+ Exam Prep: Operating System Configuration and Support 3
CIS102DA Customer User Support 3
CIS105 Survey of Computer Information Systems 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) 3-4
(CNT140AB is required for students on the Cisco specialization)

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Students must also select from one of the following specializations based on their career goals.

Specialization 1: Cisco System Administration (CCNA) and Security
Credits: 12
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
+ CNT205 Cisco Certified Network Associate Security (4) 4

Specialization 2: Cisco System Administration (CCNP)
Credits: 24
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4

+ CNT240 Cisco Certified Network Professional: Enterprise Core (8) OR
+ CNT240AA Cisco Certified Network Professional: Enterprise Core I (4) AND
+ CNT240AB Cisco Certified Network Professional: Enterprise Core II (4) 8

+ CNT250 Cisco Certified Network Professional: Enterprise Advanced Routing and Services (8) OR
+ CNT250AA Cisco Certified Network Professional: Enterprise Advanced Routing and Services I (4) AND
+ CNT250AB Cisco Certified Network Professional: Enterprise Advanced Routing and Services II (4) 8

Specialization 3: Linux System Administration
Credits: 15
+ CIS238DL Linux System Administration 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240DL Linux Network Administration 3
+ CIS271DL Linux Security 3
+ CIS275DL Linux Capstone 3

Specialization 4: Red Hat Enterprise Linux Administration
Credits: 15
+ CIS238RH Red Hat System Administration II 3
+ CIS239DL Linux Shell Scripting 3
+ CIS240RH Red Hat System Administration III 3
+ CIS271RH Red Hat System Administration IV 3
+ CIS275DL Linux Capstone 3

Specialization 5: Cloud System Administration
Credits: 15-16
+ BPC274 Advanced Server Computer Maintenance: Server+ Prep 3
CIS121AH Microsoft PowerShell/Command Line Operations 3
+ CIS239DL Linux Shell Scripting 3

+ MST160 Azure Administrator (4) OR
+ CLD110 Amazon Web Services Cloud Foundations (3) 3-4

+ MST260 Microsoft Azure Cloud Development and Operations (3) OR
+ CLD120 Amazon Web Services Cloud Architect Associate (3) 3

Specialization 6: VMware Network Administrator
Credits: 12
+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

Restricted Electives

Credits: 0-8

Students must select enough Restricted Elective credits to meet the minimum total program credits. Students may not select the same courses used to satisfy Required Courses or specializations within the Required Courses. Consult with an Academic, Program, or Faculty Advisor to pick courses that align with your career goals.

Cisco Electives
CNT140AB Introduction to Networks 4
+ CNT150AB Switching, Routing, and Wireless Essentials 4
+ CNT160AB Enterprise Networking, Security, and Automation 4
+ CNT171 CCNA Exam Prep 1

+ CNT202 Cisco Secure Firewall Appliance Configuration (4) OR
+ CNT205 Cisco Certified Network Associate Security (4) 4

+ CNT206 Cisco Certified Network Associate Wireless 4

Linux Electives
+ CIS238DL Linux System Administration (3) OR
+ CIS238RH Red Hat System Administration II (3) 3

+ CIS239DL Linux Shell Scripting 3

+ CIS240DL Linux Network Administration (3) OR
+ CIS240RH Red Hat System Administration III (3) 3

+ CIS275DL Linux Capstone 3

Microsoft Electives
MST+++++ Any MST Microsoft Technology course
CIS121AB Microsoft Command Line Operations 1
CIS121AH Microsoft PowerShell/Command Line Operations 3

Security Electives
+ CIS270 Essentials of Network and Information Security 3
+ ITS110 Information Security Fundamentals 3

VMware Electives
+ CIS293 VMware ESXI Server Enterprise 4
+ CIS294 VMware vSphere Operate, Scale and Secure 4
+ CIS295 VMware NSX: Install, Configure, Manage 4

Other Information Technology Electives
+ BPC171 Recycling Used Computer Technology 1-3
CIS111 Ethics in Information Technology 3
CIS124AA Project Management Software: Level I 1
+ CIS124BA Project Management Software: Level II 1
+ CIS156 Python Programming: Level I 3
+ CIS190 Introduction to Networking 3
CIS224 Project Management Microsoft Project for Windows 3
+ CIS240 Local Area Network Planning and Design 3
+ CIS250 Management of Information Systems 3
+ CIS266 Network Integration Capstone 4
+ CIS290++ Computer Information Systems Internship 1-3
+ CIS296++ Cooperative Education 2-3
+ CIS298++ Special Projects 1-3
ITS120 Legal, Ethical, and Regulatory Issues 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3)

AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) OR
+ ENG111 Technical and Professional Writing (3) 6
(ENG111 does not count as an ENG Transfer option)

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

COM225 is recommended for students transferring to Northern Arizona University.

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment 0-3

Mathematics
Credits: 3-6

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) OR
Equivalent or higher level mathematics course in the Mathematical Applications area. 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3
Any approved general education course from the Humanities, Arts and Design area. 3

Social-Behavioral Sciences
Credits: 3
Any approved general education course from the Social-Behavioral Sciences area. 3

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences area. 4

MCCCD Governing Board Approval Date: November 28, 2023

Nursing

Major: 3812 **Primary/Initiating College**: Gateway Community College

Effective Term: 2023 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 62-75
CIP Code: 51.3801
Program Availability: CG, EM, GC, GW, MC, PC, PV, SC
Field of Interest: Health Sciences
Instructional Council: Nursing Program
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
29-1141.00 Registered Nurses

Description: The Associate in Applied Science (AAS) in Nursing Program is available at eight of the Maricopa Community Colleges. Clinical experiences are provided in a variety of healthcare settings. Nursing Program graduates are eligible to apply for the national exam for the registered nurse license. Licensing requirements are the exclusive responsibility of the State Board of Nursing.

The Associate in Applied Science (AAS) Nursing Program is approved by the Arizona State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326; (404-975-5000); email: info@acennursing.org.

Program offerings:
This program is offered at the following sites:
Chandler-Gilbert Community College
Estrella Mountain Community College
GateWay Community College
Glendale Community College
Mesa Community College
Paradise Valley Community College
Phoenix College
Scottsdale Community College

Waiver of Licensure/Certification Guarantee:
Admission or graduation from the Nursing Program does not guarantee obtaining a license to practice nursing. Licensure requirements and the subsequent procedures are the exclusive right and responsibility of the Arizona State Board of Nursing. Students must satisfy the requirements of the Nurse Practice Act: Statutes, Rules and Regulations, independently of any college or school requirements for graduation.

Pursuant to A.R.S. 32-1606(B)(17), an applicant for professional or practical nurse license by examination is not eligible for licensure if the applicant has any felony convictions and has not received an absolute discharge from the sentences for all felony convictions. The absolute discharge must be received five or more years before submitting this application. If you cannot prove that the absolute discharge date is five or more years, the Board cannot process your application.

Level One Fingerprint Clearance is required for admission into the program. Applicants must present a Level One Fingerprint Clearance Card to be copied by the advisor or designee. For a Department of Public Safety Fingerprint Clearance Card application, contact MCCCD Healthcare/Nursing Advisor. If there is any question about eligibility for licensure or certification, contact the nursing education consultant at the Arizona State Board of Nursing (602-771-7800).

Health Declaration:
It is essential that nursing students be able to perform a number of physical activities in the clinical portion of the program. At a minimum, students will be required to lift patients, stand for several hours at a time and perform bending activities. Students who have a chronic illness or condition must be maintained on current treatment and be able to implement direct patient care. The clinical nursing experience also places students under considerable mental and emotional stress as they undertake responsibilities and duties impacting patients` lives. Students must be able to demonstrate rational and appropriate behavior under stressful conditions. Individuals should give

careful consideration to the mental and physical demands of the program prior to making application. All must provide documentation of compliance with all health and safety requirements required to protect patient safety. Only students in compliance are permitted to enroll in nursing courses. Students will meet these requirements by providing the required documentation for the Health/Safety Requirements Documentation Checklist and the signed Health Declaration Form.

Health and Safety Requirements for the MaricopaNursing Program:
1. Students must submit a Health and Safety Documentation Checklist verifying completion of all requirements and maintain current status throughout the program.
2. Students must submit the Health Declaration Form signed by a licensed health care provider.
3. Students must test negative on a timed urine drug screen.
4. Admission to an Allied Health program requires that students be in compliance with the Maricopa County Community College District Supplemental Background Check policy. Program applications will not be accepted without a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Upon conditional program admission, the student must comply with all requirements of the current MCCCD background check policy.

University Transfer Students:
Students who are planning to earn the Bachelor of Science in Nursing may obtain their prerequisite courses at the Maricopa Community Colleges. For information on courses that meet requirements for admission into a baccalaureate program, please contact a program advisor.

REGISTERED NURSE PATHWAY
Associate in Applied Science Degree in Nursing Program
The Associate in Applied Science (AAS) degree in Nursing graduate is eligible to apply for licensure as a Registered Nurse (RN). The RN is educated as a generalist who delivers health care to clients and family groups and has competencies related to the art and science of nursing. The RN may be employed in a variety of acute, long term, and community-based healthcare settings. The AAS degree in Nursing provides the graduate with an educational foundation for articulation into the university setting.

This program is designed to meet education requirements for licensure or certification in the State of Arizona. Granting licensure and certification is the sole responsibility of the state board or approval agency. This program is only offered and available to students located in the State of Arizona. The Maricopa County Community College District and colleges define student location within Administrative Regulation 2.2.3(7).

Program Notes:
Students must earn a grade of C or better in all courses within the program.

Students must complete the following general education and introductory courses with a 2.0 GPA to be added to the queue of those waiting for an available cohort space to begin the core curriculum. BIO156 or BIO181, BIO201, CHM130 and CHM130LL, CHM130AA, ENG101 or ENG107, MAT140 or MAT141 or MAT142.

Course Fee Information:
Please see class schedule for information regarding course fees.

MaricopaNursing is aligned with Nurse of the Future Competencies: Person-Centered Care, Professionalism, Leadership, Systems-Based Practice, Informatics and Technology, Communication, Teamwork and Collaboration, Safety, Quality Improvement, and Evidence-Based Practice. These competencies focus on key stakeholders of healthcare clients, colleagues and communities. Demonstration of the competencies will signify preparation for successful transition into nursing practice and further professional development.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Admission Criteria: High school diploma or GED is required for the Associate in Applied Science degree in Nursing. Applicants must signify that they meet this requirement by providing high school diploma/transcripts or GED completion OR by signing the nursing application page containing the 'Declaration of High School Graduation or GED Completion.' In some instances, high school diploma/transcripts or proof of GED completion may be required.

Formal application and admission to the program is required. There are limited spaces available in the Nursing program. Only students who have completed all of the general education and introductory courses noted above may have their name added to the queue of those waiting for an available space in a cohort. A passing score on a nursing program admission test is required to complete an application.

Successful completion of a nurse assistant course (course must include an in-person clinical component) **or** certification or licensure as a Nurse Assistant is required to complete an application. The Nurse Assistant course does not have to be completed at a Maricopa college and certification or licensure is **not** required to apply. There is currently no time limit on when the Nurse Assistant course was taken.

Applicants for Advanced Placement must receive a passing score on a practical nursing content exam for placement into Block 3. The final placement decision rests with the Nursing Program Chair at the college to which the student is accepted. Advanced placement applications are maintained for two years from the date of application. After two years, the applicant is required to review, update, and resubmit the application.

The Nursing Program Chair reserves the right to deny acceptance of an admission application if the applicant was previously dismissed for issues relating to academic integrity, unsafe patient care, and/or two (2) or more failures from any nursing program.

All applicants holding or receiving a certificate or license as a Nursing Assistant and/or license as a Practical Nurse must remain in good standing with the Regulatory Board. Once enrolled, students receiving any disciplinary actions against their certificate or license must notify the Nursing Program Chair within five (5) school days. The Nursing Program Chair reserves the right to restrict the student`s participation in clinical experiences and involvement in patient care until the certificate and/or license is valid and unrestricted.

Program Prerequisites: None

Required Courses

Credits: 40-48

+ BIO156 Introductory Biology for Allied Health (4) OR
+ BIO181 General Biology (Majors) I (4) OR
One year of high school biology (0) 0-4

+ BIO201 Human Anatomy and Physiology I 4

+ CHM130 Fundamental Chemistry (3) AND
+ CHM130LL Fundamental Chemistry Laboratory (1) OR
+ CHM130AA Fundamental Chemistry with Lab (4) OR
Satisfactory completion of higher level college-level chemistry course and corresponding lab OR
One year of high school chemistry (0) 0-4

+ NUR152 Nursing Theory and Science I 9
+ NUR172 Nursing Theory and Science II 9
+ NUR252 Nursing Theory and Science III 9
+ NUR283 Nursing Theory and Science IV 9

General Education Requirements

General Education Requirements
Credits: 22-27

General Education Core
Credits: 9-14

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) 3

+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 3

Oral Communication
Credits: 0

Waived

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment

Mathematics
Credits: 3-5

+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
Satisfactory completion of higher level math course 3-5

General Education Distribution
Credits: 13

Humanities, Arts and Design
Credits: 2

Any approved general education course in the Humanities, Arts and Design area.

Social-Behavioral Sciences
Credits: 3

PSY101 Introduction to Psychology 3

Natural Sciences
Credits: 8

+ BIO202 Human Anatomy and Physiology II (4) AND
+ BIO205 Microbiology (4) 8

Program Competencies

1. Provide advocacy and individualized care for diverse populations. (NUR152, NUR172, NUR252, NUR283)
2. Demonstrate accountability for legal and ethical behaviors that reflect standards of professional nursing practice. (NUR152, NUR172, NUR252, NUR283)
3. Coordinate nursing care for multiple patients in collaboration with health team members for the acquisition/achievement of shared outcomes. (NUR152, NUR172, NUR252, NUR283)
4. Discuss healthcare micro and macro systems and their impact on patient care. (NUR152, NUR172, NUR252, NUR283)
5. Integrate technology to provide safe quality care and improve patient outcomes, managing information confidentially and effectively. (NUR152, NUR172, NUR252, NUR283)
6. Demonstrate effective communication skills while fostering mutual respect and shared decision making with patients, families and colleagues. (NUR152, NUR172, NUR252, NUR283)
7. Function effectively within interdisciplinary teams fostering open communication, shared decision-making and team development. (NUR152, NUR172, NUR252, NUR283)
8. Provide safe, quality care while minimizing risk of harm to patients and providers. (BIO156, BIO181, BIO201, CHM130, CHM130LL, CHM130AA, NUR152, NUR172, NUR252, NUR283)
9. Demonstrate accountability for quality improvement of personal performance, patient care and health care systems. (NUR152, NUR172, NUR252, NUR283)
10. Utilize evidence-based practice to meet individualized needs across the health care continuum. (NUR152, NUR172, NUR252, NUR283)

MCCCD Governing Board Approval Date: December 13, 2022

Programming and Systems Analysis

Major: 3844
Effective Term: 2023 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 62-71
CIP Code: 11.0501
Primary/Initiating College: Mesa Community College
Program Availability: CG EM GC MC PC PV RS SC
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this program, students may pursue a career as:
15-1211.00 Computer Systems Analyst

Description: The Associate in Applied Science (AAS) in Programming and Systems Analysis program provides an in-depth exploration of different computer language and technical skills. The AAS includes, but is not limited to the following: operating systems, local area networks, business communication, team roles, and dynamics. Certificate of Completions (CCLs) in Programming and Systems Analysis Level I and Level II and iOS App Development are also available.

Learning Outcomes

1. Analyze business requirements using critical thinking skills. (CIS105, CIS133DA, CIS150++, CIS151, CIS159, CIS156, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225++, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, GBS211, GBS151, CRE101, ECN211, ECN212, SBU200, CRE101, [FYC], [MA], [SG], [SQ])
2. Use computer systems and networks in a responsible and ethical manner. (CIS105, CIS190, CIS225++, CIS250, CNT140AB, GBS151, MST140++)
3. Design, develop and implement database solutions to effectively manage data. (CIS119DO, CIS276++)
4. Develop and implement well-structured computer programs that solve business problems. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS251, CIS259, CIS256, CIS262++, CIS263AA, CIS265, [MA])

5. Utilize the software development lifecycle for application development. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225++, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, [MA])
6. Test and debug computer programs. (CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS251, CIS259, CIS256, CIS262++, CIS263AA, CIS265, [MA])
7. Leverage the functions and architecture of an operating system to achieve business objectives. (CIS105, CIS126DL, CIS126RH, CIS165++, CIS265, MST150++)
8. Communicate professionally in formal and informal situations to diverse audiences. (CIS133DA, CIS166++, CIS225++, CIS250, CIS256, GBS211, CRE101, (COM), [FYC], [HU])
9. Write effective documentation according to industry standards. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS225++, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, CRE101, [FYC], [SG], [SQ])
10. Collaborate effectively with diverse teams. (GBS151, SBU200, CRE101, (COM), [HU])
11. Apply an understanding of characteristics and principles of business processes to software application development. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS166++, CIS224, CIS225++, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, GBS151, CRE101, [MA])
12. Design web-based applications using client-side and server-side scripting. (CIS133DA, CIS166++, CIS262++, CIS263AA)
13. Develop a project scope while considering factors such as customer requirements, project costs, return on investment, and internal/external business objectives. (CIS133DA, CIS150++, CIS151, CIS156, CIS159, CIS162++, CIS163AA, CIS165++, CIS224, CIS225++, CIS250, CIS251, CIS256, CIS259, CIS262++, CIS263AA, CIS265, GBS151, GBS211, [MA])

Program Notes

Students must earn a grade of C or better in all courses within the program.

Consultation with an Academic Advisor is recommended for course selection.
Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 34-37

CIS105 Survey of Computer Information Systems 3
GBS151 Introduction to Business 3

CIS126DL Linux Operating System (3) OR
CIS126RH Red Hat System Administration I (3) OR
+ MST150++ Any Microsoft Windows course (3) 3

CIS133DA Internet/Web Development Level I 3

Students interested in pursuing an iOS Certificate of Completion (CCL) are recommended to take CIS150AB
+ CIS150 Programming Fundamentals (3) OR
+ CIS150AB Object-Oriented Programming Fundamentals (3) 3

+ CIS166++ Any Web Scripting course(s) 3

+ CIS190 Introduction to Networking (3) OR
CNT140AB Introduction to Networks (4) OR
+ MST140 Microsoft Networking Essentials (3) 3-4

+ CIS225 Business Systems Analysis and Design (3) OR
+ CIS225AB Object-Oriented Analysis and Design (3) OR
+ CIS250 Management of Information Systems (3) 3

+ CIS119DO Introduction to Oracle: SQL (3) OR
+ CIS276DA MySQL Database (3) OR
+ CIS276DB SQL Server Database (3) 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

Select a programming language from below that best aligns with academic and professional goals (2 courses for a total of 6 credits) in one of the following areas:

+ CIS156 Python Programming: Level I (3) AND
+ CIS256 Python Programming: Level II (3) OR

+ CIS159 Visual Basic Programming I (3) AND
+ CIS259 Visual Basic Programming II (3) OR

+ CIS162++ Any C Programming: Level I course (3) AND
+ CIS262++ Any C Programming: Level II course (3) OR

+ CIS163AA Java Programming: Level I (3) AND
+ CIS263AA Java Programming: Level II (3) OR

+ CIS165++ Any Mobile Application Development course (3) AND
+ CIS265 Advanced iOS Application Development (3) 6

Restricted Electives

Credits: 6

Students may not use courses from the Required Courses Area.
CIS224 Project Management Microsoft Project for Windows 3
+ CIS151 Computer Game Development-Level I 3
+ CIS156 Python Programming: Level I 3
+ CIS159 Visual Basic Programming I 3
+ CIS162++ Any C Programming: Level I course 3
+ CIS163AA Java Programming: Level I 3
+ CIS165++ Any Mobile Application Development course 3
+ CIS251 Computer Game Development-Level II 3
+ CIS256 Python Programming: Level II 3
+ CIS259 Visual Basic Programming II 3
+ CIS262++ Any C Programming: Level II course 3
+ CIS263AA Java Programming: Level II 3
+ CIS265 Advanced iOS Application Development 3
GBS211 Legal, Ethical and Regulatory Issues of the Internet Studies 3

General Education Requirements

General Education Requirements
Credits: 22-28

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6

+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

Any approved general education course in the Oral Communication area.

Critical Reading
Credits: 0-3
+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent by assessment 0-3

Mathematics
Credits: 3-6

+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) 3-6

General Education Distribution
Credits: 10

Humanities, Arts and Design
Credits: 3

Any approved general education courses in the Humanities, Arts and Design [HU] area. 3

Social-Behavioral Sciences
Credits: 3

ECN211 Macroeconomic Principles (3) OR
ECN212 Microeconomic Principles (3) OR
SBU200 Society and Business (3) 3

Natural Sciences
Credits: 4

Any approved general education course in the Natural Sciences (Quantitative) [SQ] area or the Natural Sciences (General) [SG] area. 4

MCCCD Governing Board Approval Date: June 28, 2022

Video Game Production

Major: 3890
Effective Term: 2024 Fall
Last Admit Term: 2025 Summer
Award: AAS
Total Credits: 62-79
CIP Code: 50.0411
Primary/Initiating College: Mesa Community College
Program Availability: GC, MC, PV
Field of Interest: Computer and Information Technology
Instructional Council: Computer Information Systems
GPA: 2.00
SOC Code: Upon completion of this degree, students may pursue a career as:
15-1255.01 Video Game Designers
27-1014.00 Multimedia Artists and Animators
27-4014.00 Sound Engineering Technicians

Description: The Associate in Applied Science (AAS) in Video Game Production provides students with the essential skill sets needed to plan, design, and produce video games. The program features interdisciplinary coursework and related studies to build a strong foundation bridging the art and science of video game production. The Associate in Applied Science in Video Game Production`s curriculum brings together business concepts, game technology, game narrative, music, sound design, and animation to prepare students for entry-level careers as a Level Designer, Environment Artist, Production Artist, Character Modeler, Character Animator, Game Designer, Game Developer, Mobile Game Developer, Commercial Artist, Game Writer, Composer and/or Sound Designer. Embedded Certificates of Completion (CCL) are available in Video Game Production: Game Art, Video Game Production: Audio and Sound and Video Game Production: Narrative and Video Game Production: Scripting and Coding.

Learning Outcomes

1. Analyze the electronic game industry, including history, markets, distribution, publishing channels, business models, team roles, and career landscape. (CIS107, GST202, CRW176, AVC200, AVC240, AVC298AB, CIS230DB, CIS298AB, CRW298AB, MUC298AB)
2. Analyze commonly used game components and mechanics. (CIS107, CIS130DA, CIS151, CIS251, GST202, CRW176, AVC200, AVC240, AVC287, CIS120DC, CIS130DB, CIS150AB, CIS156, CIS163AA, CIS230DB, CIS298AB, CRW190, MUC222, MUC298AB)
3. Manage game development project resources, budgets, goals, and tasks. (CIS105, CIS107, CIS151, CIS251, CRW176, AVC150, AVC200, AVC240, AVC287, AVC298AB, CIS120DC, CIS230DB, CIS298AB, [MA])
4. Evaluate software and hardware used for game design, development, and production. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS151, CIS251, GST202, MUC122, AVC/MMT184, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, MUC111, MUC191, MUC194, MUC195, MUC222, MUC298AB)
5. Apply advanced scripting and programming concepts in the creation and manipulation of interactive applications. (AVC/MMT185, CIS107, CIS130DA, CIS151, CIS251, MUC122, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS150AB, CIS156, CIS163AA, CIS230DB, CIS298AB, MUC222, MUC298AB, [MA])
6. Create planning materials such as sketches, character sheets, storyboards, prototypes, narrative scripts, audio, and design documents. (AVC177, AVC100, AVC/MMT185, CIS107, CIS120DF, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, ART116, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC192, MUC194, MUC195, MUC222, MUC298AB)

7. Create a variety of media resources such as images, narratives, 3D models, animations, and audio. (AVC177, AVC100, AVC/MMT185, CIS107, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, ART116, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC192, MUC194, MUC195, MUC222, MUC298AB, [MA], [SG], [SQ])
8. Construct a cohesive game experience using planning materials and media resources. (CIS107, CIS130DA, CIS151, CIS251, AVC150, AVC200, AVC240, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, MUC298AB)
9. Demonstrate effective written, oral, visual, and interpersonal communication skills. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC194, MUC195, MUC222, MUC298AB, (COM), (CRE), [FYC], [SB], [SG], [SQ])
10. Collaborate in a culturally responsive manner in a team environment. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS130DA, CIS151, CIS251, CRW176, AVC150, GST202, MUC122, AVC/MMT184, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC194, MUC195, MUC222, MUC298AB, (COM), (CRE), [FYC], [SB], [SG], [SQ])
11. Engage in ethical personal and professional creative practices, in accordance with copyright laws, intellectual property, civic responsibility, and standards of the field. (AVC177, AVC100, AVC/MMT185, CIS105, CIS107, CIS130DA, CIS151, CIS251, CRW176, GST202, MUC122, AVC/MMT184, AVC150, AVC200, AVC240, AVC/MMT285, AVC287, AVC298AB, CIS120DC, CIS130DB, CIS230DB, CIS298AB, CRW160, CRW170, CRW190, CRW270, MUC111, MUC191, MUC192, MUC194, MUC195, MUC196, MUC222, MUC298AB, (COM), [FYC], [SB], [SG], [SQ], [MA])
12. Examine the implications of cultural values, individual beliefs, and biases as applied to game design, development, and production. (CIS107, CRW176, GST202, AVC150, AVC298AB, CIS298AB, MUC298AB, (COM), [SB])
13. Create a portfolio of work. (AVC298AB, CIS298AB, CRW298AB, MUC298AB)

Program Notes

Students must earn a grade of C or better in all courses within the program.

Students interested in transferring should meet with an Academic, Faculty, or Program Director.

GST201 Game Studies is recommended for students who intend to transfer to Arizona State University.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

+ indicates course has prerequisites and/or corequisites.
++ indicates that any suffixed course may be selected.

Program Prerequisites: None

Required Courses

Credits: 29-31

In addition to the required course work, students must consult with a program advisor to select one of the specializations within the Restricted Electives area.

AVC100 Introduction to Digital Arts 1

+ AVC177 Digital Photographic Imaging I (3) OR

CIS120DF Introduction to Adobe Photoshop (3) 3

AVC/MMT185 3D Modeling for Animation I (3) OR
CIS130DA 3D Studio Max: Modeling (3) 3

Note: AVC/MMT185 is recommended for students interested in the Game Art Emphasis and CIS130DA is recommended for students interested in the Coding and Scripting Emphasis

CIS105 Survey of Computer Information Systems 3
+ CIS107 The Electronic Game Industry 3
+ CIS151 Computer Game Development -Level I 3
+ CIS251 Computer Game Development -Level II 3
CRW176 Writing Narrative for Video Games 3

FYE101 Introduction to College, Career and Personal Success (1) OR
FYE103 Exploration of College, Career and Personal Success (3) 1-3

+ GST202 Games, Culture and Aesthetics 3
MUC122 Sound Design I 3

Restricted Electives

Credits: 14-23

Students must select 1 of the following 4 specializations.

Specialization I Game Art
Credits: 23
ART116 Life Drawing I 3
AVC150 Multimedia Storytelling 3
+ AVC/MMT184 Digital Animation I 3
+ AVC200 Animation and Interactivity 3

+ AVC240 Cinematography and Directing for 2D/3D Animation (3) OR
+ CIS230DB 3D Studio Max: Lighting and Rendering (3) 3

+ AVC/MMT285 3D Modeling and Animation II (3) OR
+ CIS130DB 3D Studio Max: Animation (3) 3

+ AVC287 3D Character Animation 3
+ AVC298AB Special Projects 2

Specialization II Game Narrative
Credits: 17
AVC150 Multimedia Storytelling 3
CRW160 Introduction to Writing Poetry 3
CRW170 Introduction to Writing Fiction 3
CRW190 Introduction to Screenwriting 3
+ CRW270 Intermediate Fiction Writing 3
+ CRW298AB Special Projects 2

Specialization III Coding and Scripting Emphasis
Credits: 14

CIS120DC Introduction to Adobe Animate 3
+ CIS150AB Object-Oriented Programming Fundamentals 3
+ CIS156 Python Programming: Level I 3
+ CIS163AA Java Programming: Level I 3
+ CIS298AB Special Projects 2

Specialization IV Audio and Music
Credits: 17-18
MUC191 Electronic Music I (3) OR
MUC194 Audio Mixing Techniques (3) 3

+ MUC111 Digital Audio Workstation I (DAW I) 3

+ MUC192 Electronic Music II (3) OR
+ MUC196 Studio Music Recording II (3) 3

MUC195 Studio Music Recording I 3
+ MUC222 Sound Design II 3

+ MUC292 Sound Design III (3) OR
+ MUC298AB Special Projects (2) 2-3

General Education Requirements

General Education Requirements
Credits: 19-25

General Education Core
Credits: 12-18

First-Year Composition
Credits: 6
+ ENG101 First-Year Composition (3) OR
+ ENG107 First-Year Composition for ESL (3) AND
+ ENG102 First-Year Composition (3) OR
+ ENG108 First-Year Composition for ESL (3) 6

Oral Communication
Credits: 3

COM100 Introduction to Human Communication (3) OR
COM110 Interpersonal Communication (3) OR
+ COM225 Public Speaking (3) OR
COM230 Small Group Communication (3) 3

Critical Reading
Credits: 0-3

+ CRE101 College Critical Reading and Critical Thinking (3) OR
Equivalent as indicated by assessment (0) 0-3

Mathematics
Credits: 3-6

Recommended for students who do not intend to transfer.
+ MAT120 Intermediate Algebra (5) OR
+ MAT121 Intermediate Algebra (4) OR
+ MAT122 Intermediate Algebra (3) OR
MAT126 Intermediate Algebra with Review (6) OR
satisfactory completion of a higher level mathematics course 3-6

Recommended for students who intend to transfer to Arizona State University in the Game Arts, Narrative for Games, or Audio and Music emphases.
+ MAT140 College Mathematics (5) OR
+ MAT141 College Mathematics (4) OR
+ MAT142 College Mathematics (3) OR
MAT145 College Mathematics with Review (5) OR
MAT146 College Mathematics with Review (6) 3-6

Recommended for students who intend to transfer to Arizona State University in the Scripting and Coding emphasis.
+ MAT150 College Algebra/Functions (5) OR
+ MAT151 College Algebra/Functions (4) OR
+ MAT152 College Algebra/Functions (3) OR
+ MAT155 College Algebra/Functions with Review (5) OR
+ MAT156 College Algebra/Functions with Review (6) 3-6

General Education Distribution
Credits: 7

Humanities, Arts and Design
Credits: 0
Met by GST202 in Required Courses

Social-Behavioral Sciences
Credits: 3
Any approved Social and Behavioral Sciences.

Natural Sciences
Credits: 4
Any approved general education course from the Natural Sciences Area.

MCCCD Governing Board Approval Date: February 27, 2024

Appendix G – Glossary of College Terminology

A

Academic Catalog: an annual publication of graduation policies, programs, and courses.

Advisor: a resource person able to help students plan a course of study and select appropriate courses. Also called Academic Advisor or Department Advisor or Program Advisor.

Arizona General Education Curriculum Certificate (AGEC): a general education certificate that fulfills lower-division general education requirements for students planning to transfer to any Arizona public community college or university. There are three types of AGECs in MCCCD: AGEC-A, AGEC-B, and AGEC-S. Generally, the MCCCD AGEC transfers as a block without loss of credit.

Associate Degree: a degree awarded for the completion of a minimum of 60 credits selected to meet specific requirements. The Associate in Arts (AA), Associate in Arts, Fine Arts (AAFA), Associate in Arts in Elementary Education (AAEE), Associate in Business (ABus) and Associate in Science (AS) emphasizes courses for transfer to four-year schools, the Associate in General Studies (AGS) allows more flexibility in course selection, and the Associate in Applied Science (AAS) emphasizes a particular occupational field.

Audit: taking a class for no credit. Please see the Tuition and Fee chart in the common pages' addendum for the additional charges for auditing.

Award: refers to the type of degree or certificate conferred upon completion, e.g. Associate in Applied Science (AAS), Associate in Arts (AA), Associate in Business (ABUS), Associate in General Studies (AGS), Associate in Science (AS), Arizona General Education Curriculum (AGEC), Academic Certificate (AC), Certificate of Competency (CCT), and Certificate of Completion (CCL).

Award Subplan (Specialization or Transfer Plan): organization of course options within an award based on a student's career or transfer goals. In the curricular bank these options are designated as specialization for occupational pathways and transfer plans for Emphases (e.g. AS, Chemistry). In the Student Information System (SIS) all organization of course options within awards are designated as subplans.

B

Bachelor Degree: a degree awarded for the completion of approximately 120 credits selected to meet specific requirements. The Bachelor in Arts (BA) or the Bachelor in Science (BS) generally are awarded by a four-year school.

C

Counselor: a faculty member available to help students and community members with personal, career, or school related concerns.

Course: a unit of teaching that develops students' knowledge and skills in a particular area of study. Courses in MCCCD include standard, discipline specific courses, as well as special topics, internships, experimental, service learning, etc. to provide an individualized learning experience. Courses can be offered in MCCCD as clock hour, credit hour, or non-credit.

Course Competencies: statements that describe skills and/or knowledge that students are expected to gain as a result of successfully completing the course. Includes a reference to the Course Outline (by Roman Numerals) that identifies a relationship between course concepts and a competency.

Course Equivalency Guide (CEG): the CEG indicates how Arizona State University, Northern Arizona University and the University of Arizona accept transfer coursework from the Arizona public institutions.

Credit Hour: an amount of work represented in course competencies and verified by evidence of student achievement. MCCCD follows the Federal Guidelines for the definition of credit hours.

Critical Course: a course that faculty have determined is predictive of future success in a pathway. Critical courses vary by pathway and are marked in the Pathway Planner to allow for the identification of opportunities for integrated student support and to inform improvements to a pathway map.

Cumulative Grade Point Average (GPA): a measure of student academic proficiency which is calculated by multiplying each course credit hour by the points awarded for the grade earned. The sum then is divided by the total number of credit hours completed with A, B, C, D, F, or Y grades. Please see the grade key in the common pages' addendum for point information.

E

Elective: a course a student selects in order to complete a program of study, sometimes with restrictions.

Emphasis: represents a set of specified coursework designed to articulate with particular baccalaureate programs and make the transfer path clear for students. An emphasis is not a separate award.

F

Federal Work Study: a form of financial aid based on need which provides the student with on campus paid employment while in school.

Fields of Interest: an organization of degrees and certificates that share similar areas of study, allowing students to find an educational pathway and participate in student experiences that align with their intended academic and career goals.

G

Gateway Course: the first discipline-specific course on a pathway that provides an introduction to the discipline.

General Elective: any credit course used to satisfy the minimum credit requirement for a particular degree pathway that does not fulfill any other degree requirements.

Grade Point Average (GPA): minimum required grade point average in Maricopa is determined by degree policies and approved in the curricular process. Degree and certificate GPA requirements may be informed by transfer institution admission requirements.

Grant: student financial aid based on need.

L

Lower Division Course: freshman and sophomore courses (100-level and 200-level) usually completed in the first two years of college.

M

Milestone: a measurable curricular or co-curricular achievement connected to a pathway that includes intermediate outcomes, such as completing a course sequence or an embedded award, participating in a work-based experience, or transferring to a baccalaureate program.

P

Pathway: a comprehensive plan to student end goals (e.g., degree, certificate, trade and technical program, and/or transfer option). It includes career opportunities, learning outcomes, a course sequence, milestones, and critical and gateway courses.

Pathway Planner: an online academic tool located in the Student Center that houses a pre-populated semester-by-semester course sequence (also known as a pathway) based upon the student's declared academic program/plan.

Prerequisite: specified condition, requirement, or course which must be completed before enrolling in a class.

R

Recommended Course: a suggested course selection provided by disciplinary faculty to meet a degree requirement where a specific course or single course is not otherwise prescribed.

Required Course: a course within the pathway that must be completed to achieve the certificate or degree awarded.

Restricted Elective: a course selected from a specified group of courses that support the achievement of the identified learning outcomes and satisfy MCCCD degree or certificate requirements.

S

Schedule Adjustment: the period during which a student can drop classes without penalty. This period varies with the length of class.

Scholarship: student financial aid based on academic achievement, need, or a combination of factors.

Semester: traditionally half an academic year (about 16 weeks). Fall semester begins in August and Spring semester begins in January.

Student Handbook: an annual online publication of college policies, procedures, and student rights and responsibilities. It contains the Maricopa Community College District (MCCD) Administrative Regulations and Appendix items (also referred to as the Catalog Common Pages) specifically relevant to students.

Shared Unique Number (SUN): The SUN System is a college course numbering system designed to help Arizona students plan their education and ensure successful transfer of course credits.

Syllabus: a course outline and information on classroom policies, tests, dates and materials to be used in a class. The instructor usually gives it to students at the first class meeting.

T

Total Credits: the number of credits required to complete the award.

Transcript: an official record of the classes a student has enrolled in and grades earned.

Transfer Credit: credit earned at another college applied to a Glendale Community College program or credit earned at Glendale Community College to be applied to another college or university.

U

Upper Division Course: junior and senior courses (300-level and 400-level) usually completed in the last two years of college.

Convenient Locations

GCC main
6000 W. Olive Ave., Glendale, AZ 85302
623.845.3333 | www.gccaz.edu

GCC North
5727 W. Happy Valley Rd., Phoenix, AZ 85310
623.845.4000 | www.gccaz.edu/gccnorth

GLENDALE COMMUNITY COLLEGE

A **MARICOPA** COMMUNITY COLLEGE

MARICOPA
COMMUNITY COLLEGES

The Maricopa Community College District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities. For Title IX/504 concerns, call the following number to reach the appointed coordinator: (480) 731-8499. For additional information, as well as a listing of all coordinators within the Maricopa College system, visit: www.maricopa.edu/non-discrimination