ASTRONOMY 111: Introduction to the Solar System
Spring 2012 Syllabus

GLENDALE COMMUNITY COLLEGE

Contact Information:

Instructor: Sally Watt, M.S. Office: PS113 Phone: (623) 845-3386 E-mail: sara.watt@gcmail.maricopa.edu	Office Hours: **Mon, Wed, Fri** 11:00 AM – 12:00 PM **Tues and Thurs** 9:00 – 10:00 AM

Course Description: This course will provide you with an introduction to astronomy and science procedures even if you are not a science major. We will discuss the scientific method, history of astronomy, properties of light, the solar system and planets, the Sun, and nearby stars.

Prerequisites: Introductory Algebra (MAT 092) or a higher course. Introductory Algebra is similar to a one-year high school algebra course. There *will* be some algebra required.

Text: All materials must be purchased new! You **must** bring the lecture-tutorials workbook to class every day! The homework will be assigned through *Mastering Astronomy*.

1. *Lecture-tutorials for Introductory Astronomy, 2d ed., Prather, Slater, Adams, Brissenden, 2008* (ISBN: 0312392267)
2. *Mastering Astronomy Student Access Kit, Prichard, Benjamin Cummings, 2006* (ISBN: 9780805383089)
   (Note: this kit is linked to *The Cosmic Perspective 6th edition* by Bennett et al.)

Attendance:
It is your responsibility to be *in class on time!* You are responsible for the material presented in class. Other than GCC approved activities, there will be no excused absences. As there is no assigned text book for this class, most of the information will be presented in class. We will be covering a lot of material in each class so it is important that you are here every day. There will be attendance checks on random days. No make-ups for the attendance checks will be allowed.

Withdrawal Policy:
A student may withdraw from the course by submitting a withdrawal form to the Admissions Office. All withdrawals must be done before the last date for student initiated withdrawal, **April 20, 2012**. I will not withdraw students on the final roster! If you miss an exam and have not contacted me, I reserve the right to initiate your withdrawal from the class.

Disabilities:
If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please notify me and the Disability Services and Resources Office on the GCC main campus located in room TDS 100 (Phone: 623.845.3080).

Disciplinary Action:
Disciplinary actions may be imposed on student for misconduct or violation of law and/or college rules and policies. Students may be subject to the following: temporary exclusion, disciplinary probation, suspension or expulsion from class. The policies followed in disciplinary actions are outlined in the official Student Handbook. The relevant section can be viewed online at http://www.gc.maricopa.edu/catalog/student_rights.html. Every student is expected to know and comply with all current published policies, rules and regulations as printed in the college catalog, class schedule, and/or student handbook.

Lecture Schedule: The following is a rough outline of what we will cover each week. The schedule is subject to change. Changes will be announced in class but you will be responsible for the changes whether or not you are present.

Date	**Lecture**
Jan. 16 - 20	Introduction / Positions on the sky
Jan. 23 - 27	Motions / Phases of the Moon / Eclipses
Jan. 30 – Feb. 3	History of Astronomical Thought
Feb. 6 - 10	Light / Spectroscopy
Feb. 13 - 17	Telescopes
Feb. 20 - 24	Review and Exam
Feb. 27 – Mar. 2	Solar System Formation
Mar. 5 - 9	Earth
Mar. 12 - 16	SPRING BREAK
Mar. 19 - 23	Moon, Mercury
Mar. 26 - 30	Venus, Mars
Apr. 2 - 6	Review and Exam
Apr. 9 - 13	Jupiter Saturn
Apr. 16 - 20	Uranus, Neptune, Pluto
Apr. 23 - 27	Solar System Debris
Apr. 30 – May 4	Exoplanets, The Sun
See Final Exam Schedule	Review and Final Exam

By the end of this course you should be able to:

1. Apply the scientific method and other critical thinking models to astronomical phenomena for hypotheses development, experimental design, data acquisition and data analysis.
2. Explain the application of fundamental physical principles to various astronomical phenomena.
3. Outline the history of astronomical thought.
4. Describe in terms of energy, wavelength, and frequency the various portions of the electromagnetic spectrum.
5. Describe instruments used to detect radiation from the various portions of the electromagnetic spectrum.
6. Compare the physical properties of the Earth with its moon.
7. Give an overview of the components of the solar system.
8. Compare and contrast the physical properties of the major planets.
9. Describe the minor components of the solar system.
10. Explain possible models of solar system formation.
11. Describe the physical properties of the Sun.
12. Compare solar system dimensions with nearby stars dimensions.

Stargazing Event:
Yes, this is an astronomy course. No, we will not be spending most classes outside at night since this course is during the day. However, I DO want you to take a look at the sky above you and what wonders it can hold. So, for *20 extra credit* points you may attend a stargazing event held by a suitable astronomy club. Check out the stargazing events held by Tony and Carole LaConte (www.stargazingforeveryone.com). See the website for times and locations. Kitt Peak Observatory in Tucson or Lowell Observatory in Flagstaff are viable options as well. *A planetarium program is NOT an acceptable event.* A one-page report on where you went, what you saw, and what you learned and some proof that you attended will be due by **Mon. Apr. 30, 2012.**

Late Policy: You will have all semester to do this! Absolutely no late papers will be accepted!

Homework:
Homework assignments will be assigned each week and can be done through the Mastering Astronomy Web site. You will have 1 week to complete each homework assignment. If you do not have a computer with internet access at home, the computers in the High Tech centers may be used. To log onto the website, you will need to create your own account. Follow the instructions found later in this syllabus.

Late Policy: Homework is due by midnight on the due date whether you are in class or not. Late homework will decrease the points awarded by 2% per hour for 50 hours after the due date. After that, no late homeworks will be accepted, but you can complete the homework for practice.

Grades:
There will be three exams (2 mid-terms and a final) worth 100 points each. Homework will vary depending on the amount of work required for each question. Random quizzes will show up roughly each week – be prepared!

3 Exams @ 100 points each	300
14 Homeworks	~120
Quizzes (approx.)	~50
Total (approx.)	~ 470

Exam grades may be curved, but the final grades will be assigned by total points with 90% = A, 80% = B etc. I will give you running estimates of your grades after each exam.

Syllabus Acknowledgement Sheet:
You are responsible for understanding the material presented in this syllabus. Students will be notified by the instructor of any changes in the course requirements or policies. In order to remain in the class, you must sign and date the syllabus acknowledgement sheet on the last page by **January 25, 2011.**

Dear Student:
In this course you will be using MasteringAstronomy™, an online tutorial and homework program that accompanies your textbook.

What You Need:

- ✓ **A valid email address**
- ✓ **A student access code** (Comes in the Student Access Kit that may have been packaged with your new textbook or is available separately in your school's bookstore. Otherwise, you can purchase access online at www.masteringastronomy.com.)
- ✓ If given the choice, link your account to ***Bennett/Donahue/Schneider/Voit, The Cosmic Perspective, 6e***
- ✓ **The ZIP code for your school: 85302**
- ✓ **A Course ID: WATTAST111SEC<YourSectionNumberHere>**

Register

- Go to www.masteringastronomy.com and click **New Students** under Register.
- To register using the Student Access Code inside the MasteringAstronomy Student Access Kit, select **Yes, I have an access code**. Click **Continue**.

  –OR– ***Purchase access online*****:** Select **No, I need to purchase access online now**. Select the text listed above and whether you want to include access to the eBook (optional), and click **Continue**. Follow the on-screen instructions to purchase access using a credit card. The purchase path includes registration, but the process may differ slightly from the steps printed here.
- **License Agreement and Privacy Policy:** Click **I Accept** to indicate that you have read and agree to the license agreement and privacy policy.
- Select the appropriate option under "Do you have a Pearson Education account?" and supply the requested information. Upon completion, the **Confirmation & Summary** page confirms your registration. This information will also be emailed to you for your records. You can either click **Log In Now** or return to www.masteringastronomy.com later.

Log In

- Go to www.masteringastronomy.com.
- Enter your Login Name and Password and click **Log In**.

Enroll in Your Instructor's Course and/or Access the Self-Study Area

Upon first login, you'll be prompted to do one or more of the following:

- Enter your instructor's MasteringAstronomy Course ID listed above.
- Select your text, if available, and **Go to Study Area** for access to self-study material.
- Enter a Student ID. Your instructor *may* request that you enter a special Student ID for this course. If so, be sure to enter this information EXACTLY as instructed.

Click **Save** and **OK**.

Congratulations! You have completed registration and have enrolled in your instructor's MasteringAstronomy course. To access your course from now on, simply go to www.masteringastronomy.com, enter your Login Name and Password, and click **Log In**. If your instructor has created assignments, you can access them by clicking on the **Assignments** button. Otherwise, click on **Study Area** to access self-study material.

Support

Access Customer Support at www.masteringastronomy.com/support, where you will find:

- System Requirements
- Answers to Frequently Asked Questions
- Additional contact information for Customer Support, including Live Chat