

# ASTRONOMY 113: Introduction to the Solar System Laboratory

## Spring 2012 Syllabus

Section 16713

M 1:00 PM – 3:30 PM

PS 170



### Contact Information:

Instructor: Sally Watt, M.S. Office: PS113 Phone: (623) 845-3386 E-mail: <a href="mailto:sara.watt@gcmail.maricopa.edu">sara.watt@gcmail.maricopa.edu</a>	Office Hours: <b>Mon, Wed, Fri</b> 11:00 AM – 12:00 PM <b>Tues and Thurs</b> 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.

### Prerequisites/ Co-requisites:

The only course co-requisite for this class is AST 111: Introduction to the Solar System.

### Laboratory Manual:

*Astronomy I Laboratory Manual, by Winters and Watt, September 2008.*

Note: you will receive the lab manual the second week of class.

**You must bring your *lab manual*, a *scientific calculator* and a *pencil* to lab every week!**

### Lab Schedule:

Date	Lab
Jan. 16	MLK HOLIDAY
Jan. 23	Night Time Sky
Jan. 30	Project Planning
Feb. 6	Kepler's Laws
Feb. 13	Spectroscopy
Feb. 20	PRESIDENT'S DAY
Feb. 27	Optics
Mar. 5	CCD Image Processing
Mar. 12	SPRING BREAK
Mar. 19	Lunar Topography
Mar. 26	Jupiter and its Moons
Apr. 2	Discovery of Neptune
Apr. 9	Discovery of an Asteroid
Apr. 16	Parallax, Distance and Near Misses
Apr. 23	The Rotation Rate of the Sun
Apr. 30	Project Presentations

### 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 campus located in room TDS 100 (Phone: 623.845.3080)

**Grades:**

Each lab will be worth 10 points for completing the lab in class. You must have the lab instructor's signature at the end of the class period to get credit for doing the lab. The following week will begin with a 10 point quiz on the previous lab within the first 5 minutes. If you are not here or are late or missed the previous lab, the quiz cannot be made up! Thus, each lab is worth a total of 20 points. The research project will be worth 100 points. The total points will be 370 points. The final grades will depend on your total points in the class. 90% of the points will result in an A for the course, 80% a B, 70% a C, etc.

**Safety Considerations:**

Arizona Statute ASRS15-151 specifies that every student, teacher, and visitor in public and private schools shall wear appropriate eye protective ware while participating in or when observing vocational, technical, industrial arts, art or laboratory science activities involving exposure to: molten metals or other molten materials, cutting, shaping and grinding of materials, heat treatment, tempering or kiln firing of any metal or other materials, welding fabrication processes, explosive materials, caustic solutions, radioactive materials.

**Attendance:**

It is your responsibility to be in class on time. If you aren't here in the first 15 minutes of class you have missed the instructions for the lab and cannot stay to complete it. Other than GCC approved activities, there will be no excused absences. I will not stay past the end of lab!

**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 day for student withdrawal, **Apr. 20, 2012**.

**Disciplinary Action:**

All labs must only be completed in class! Any labs that are completed or partially completed prior to coming to class will be confiscated and you will not be given any points for the work on the first violation. Any subsequent violation will be met with disciplinary action. I consider this cheating!

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](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.

**Course Objectives:**

At the end of this course, you will 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. Demonstrate ability to follow directions in completing laboratory exercises.
3. Demonstrate ability to properly and safely use laboratory tools, e.g. Calculators, computers, rulers, telescopes, photometers, maps, etc. for data acquisition, data analysis or simulation.
4. Demonstrate ability to work effectively in collaborative groups.
5. Present accurate and meaningful project reports analyzing experiments, both qualitatively and quantitatively.

**Project:**

You will be required to complete a science project of some sort demonstrating your understanding of the scientific method. Presentations will be **Apr. 30, 2012**. The presentation need only be 5 – 10 minutes long but must include all steps of the scientific method. We will spend the lab period **Jan. 30** to plan your projects. You **MUST** have your project approved by the next class meeting, **Feb. 6!**

**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 following page by **Jan. 30, 2012**.

---

**ASTRONOMY 113:  
INTRODUCTION TO THE SOLAR SYSTEM LABORATORY  
SYLLABUS ACKNOWLEDGEMENT**



SPRING 2012  
M

AST 113 SEC. 16713  
1:00 – 3:30 PM

SARA WATT  
PS 170

I acknowledge that I have received a course syllabus for the course described above. I have read it and understand the attendance, withdrawal, grading and other policies. I recognize that to successfully complete this course, it may require 2 to 3 hours out of class for each hour spent in class. I understand that I am 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.

Printed Name: \_\_\_\_\_

E-mail address or some way to contact you:

\_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

---