

ASTRONOMY 114
Syllabus (Fall 2009)
Section 14498
Mon 10:00am – 12:30pm
PS 170 (GCC Main)

Contact Information:

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| Instructor: Dr. Edward Rosenthal Office: PS111 (GCC Main) Phone: (623) 845-3894 (Main) E-mail: edward.rosenthal@gcmail.maricopa.edu | Office Hours: GCC Main: M 1:30-2:30pm T 4:30-5:30pm W 1:30-2:30pm R 3:30-5:30pm |
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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 Astronomy II (AST 112).

Laboratory Manual:

Astronomy II Laboratory Manual, by Winters and Watt, September 2008.

Note: the manual will be distributed in 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 |
|-------------|--|
| Aug. 24 | Planispheres |
| Aug. 31 | Night Time Sky |
| Sept. 7 | Spectroscopy |
| Sept. 14 | Project Planning |
| Sept. 21 | The Sun and the Solar Spectrum |
| Sept. 28 | CCD Image Processing |
| Oct. 5 | Apparent Magnitudes |
| Oct. 12 | Stellar Motions / Absolute Magnitudes |
| Oct. 19 | Binary Stars |
| Oct. 26 | Photoelectric Photometry of the Pleiades |
| Nov. 2 | Discovery of Nova 2012 |
| Nov. 11 | Cepheid Variable Stars |
| Nov. 16 | Hubble Redshift Distance Relation |
| Nov. 23 | Make Up Labs |
| Nov. 30 | Distances to Galaxies |
| Dec. 7 | Project Presentations |

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!

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 about 360 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.

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 students to withdraw, **November 30, 2009** (with my signature); **October 2, 2009** (without my signature).

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)

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. **You are responsible for understanding that information.**

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.

Research project:

You will be required to complete a research project of some sort demonstrating your understanding of the scientific method. Presentations will be **Dec 7**. The presentation need only be 5 – 10 minutes long but must include all steps of the scientific method. We will spend the lab period **Sep 14** to plan your projects. You **MUST** have your project approved by the next class meeting, **Sep 21**.

Syllabus Acknowledgement Sheet:

You are responsible for understanding the material presented in this syllabus. You will be notified 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 **Aug 31, 2009**.

**INTRODUCTION TO ASTRONOMY II LABORATORY (AST 114)
SYLLABUS ACKNOWLEDGEMENT**

FALL 2009
M

AST 114 SEC. 14498
10:00am – 12:30pm

Edward Rosenthal
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.

Printed Name: _____

E-mail address or some way to contact you:

Signature: _____

Date: _____
