

# ASTRONOMY II LABORATORY SYLLABUS

AST 114

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Office Hours: M, W 11:00 - 12:00 F 7:00 - 7:50 TTh 9 - 10:00am

## COURSE DESCRIPTION

This course, Ast 114, provides a variety of astronomical observations and laboratory exercises to supplement the course: Introduction to Astronomy II (Ast 112).

## PREREQUISITES

The prerequisite/corequisite for this course is: Introduction to Astronomy II (Ast 112).

## ASTRONOMY LAB II SCHEDULE

Lab 1	Planisphere
Lab 2	Night Sky
Lab 3	CCD Imaging
Lab 4	Project Planning
Lab 5	Sun and Solar Spectrum
Lab 6	Apparent Magnitudes
Lab 7	Stellar Motions / Abs. Magnitudes
Lab 8	Photoelectric Photometry
Lab 9	Eclipsing Binaries
Lab 10	Cepheid Variables
Lab 11	Star Clusters
Lab 12	Discovery of Nova 2068
Lab 13	Nova Cygni 1975
Lab 14	Distance to Near-by Galaxies
Lab 15	<b>Project Presentations</b>

The lab schedule is tentative.

## OFFICE HOURS

My office hours are posted on the door at PS 108. If these don't work for you, please let me know and we can schedule an appointment.

## COURSE COMPETENCIES

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 the ability to follow directions in completing laboratory exercises.
3. Demonstrate ability to properly and safely use laboratory tools, e.g. calculator, computer, rulers, protractors, cameras, telescopes, photometers, magnifiers, maps, etc. for data acquisition, data analysis or simulation.
4. Demonstrate ability to work effectively in collaborative groups.
5. Write accurate and meaningful project reports analyzing experiments, both qualitatively and quantitatively.

### LABORATORY MANUAL

Astronomy II Laboratory Manual, Winters and Watts, 2006. (Yellow) It will be given out the second week of class.

### TAPING POLICY

Students are free to tape the laboratory sessions for their own use.

### DISCIPLINARY ACTIONS

Disciplinary actions may be imposed on students 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 the class. The policies followed in disciplinary actions are outlined in the official "Student Handbook" published by Glendale Community College.

### ATTENDANCE POLICY

Attendance will be taken each period. If a student has accumulated unofficial absences in excess of three (3) lab periods during the semester, the instructor **MAY** file a withdrawal form for that student.

There are no make-up laboratory assignments. However, the student may miss one assignment without penalty.

Only students enrolled in the class are allowed to attend class. For emergency child care during class time, all "Child Care Referral" at 602.244.2678 to find certified child care centers near the campus.

### TARDINESS

Students that come more than 15 minutes late to class will not be allowed to complete the laboratory assignment. Exceptions to this policy **MUST** be cleared with the instructor in **ADVANCE**.

## WITHDRAWAL POLICY

A student may withdraw from the course by submitting a withdrawal form to the Admissions Office. If a student wishes to be withdrawn from the course, it is the responsibility of the STUDENT to contact the instructor about the possibility of a withdrawal. There will be no withdrawals during the last 2 regular weeks of class.

## DISABILITY STATEMENT

If students have a disability which may require special accommodations, please notify the Disability Services and Resources office, located in SPS 31 (623.845.3080).

## FOOD AND DRINK IN THE CLASSROOM

School policy prohibits food and drink in the classroom. The only exception is WATER in closed containers, e.g. sports bottles or small bottled water containers.

## GRADING

### Laboratory Assignments - 180 points

Students will receive 15 points for every laboratory assignment that they successfully complete. There are 13 assignments scheduled, but the student needs to only complete 12 assignments for full credit of 180 points.

Note that project planning sessions and project presentations do NOT count as laboratory assignments.

### Quizzes - 60 points

At the beginning of each lab period, students will be given a 5 minute quiz on the previous lab assignment. Students that come late will not be allowed additional time for the quiz. If a student comes in after the 5 minute time period, they will not be able to take the quiz.

If you absent for an assignment, you will be required to make the quiz you missed on the next lab period. If you miss a quiz, there are no make up quizzes. Each quiz is worth 5 points for a total of 60 points.

### Observational Project - 60 points

Each student is expected to complete an observational lab project during the semester. The instructor will provide a variety of suggestions of different projects. The projects fall into 2 categories:

(1) sketches and (2) photographs. The instructor must approve each project.

You will be encouraged to work in groups of 2 or 3 people to complete this project. Each student in each group **must** (1) turn in a written report on their own AND (2) give an oral presentation on their project on the scheduled date. Both the written report and the oral presentation **MUST** be made in order to receive full credit for the observational project. Each member of the group must participate in **ALL** phases of the project: the observations, the oral presentation, and the written report.

Grading will be based on the following:

Overall Neatness 5 points

Written Report 10 points

Oral Presentation 10 points

Quality of the work 35 points

### CALCULATORS

We will be using calculators in the classroom. You can get a scientific calculator for under \$10 at Target. If not I will have some for loan in class.

### GRADING SCALE

The approximate guideline for grades is:

269 - 300 points = A

239 - 268 points = B

209 - 238 points = C

179 - 208 points = D

178 points and Below = F