CHAMINADE UNIVERSITY
PHY-140L: INTRODUCTION TO ASTRONOMY LAB
COURSE SYLLABUS – FALL 2010

Instructor: Matthew Cochran
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Office: Henry Hall 7
Office Phone: 739-8361
Office Hours: Monday through Thursday 12:00 to 1:00 or by appointment
Course Time: Monday from 2:00 to 4:50
Course Room: Henry Hall L10
Prerequisites: Concurrent enrollment in PHY-140 is assumed.
Required Text: None. Handouts will be provided.
Other Materials: Scientific Calculator

COURSE DESCRIPTION:

This course consists of a series of labs/activities chosen to compliment the material covered in lecture. Emphasis is placed on moving away from memorized responses and towards a deep understand of fundamental physics concepts and astronomical principles.

COURSE OBJECTIVES:

Upon successful completion of the course, students will be able to:

- Use fundamental physics concepts and astronomical principles to describe the apparent motions of the Sun, Moon, and stars.
- Use fundamental physics concepts and astronomical principles to describe, classify, and compare celestial objects (*i.e.,* size, brightness, temperature, composition, etc.)
- Identify the North Stars and other objects in the night sky.

EVALUATIONS AND GRADING SCALE:

Labs Activities (12) 40%
Homework (12) 40%
Quizzes (12) 20%
Night Sky Activities(4 or more). . . . . EC

90% – 100% . . . . . A
80% – 90% . . . . . B
70% – 80% C
60% – 70% . . . . . D
0% – 60% . . . . . F

Incomplete grades (I) will be given in accordance with college regulations as outlined in the college catalog. Withdrawals (W) from the class are the responsibility of the student and deadlines are set by the college.

LAB ACTIVITIES AND HOMEWORK:
During labs, students will work together on worksheets that consist of carefully sequenced tasks and questions. Students are expected to construct answers for themselves through discussions with their classmates and with the instructor. The homework will consist of four to six multiple choice questions. The lab activities and homework are due at the beginning of the next lab.

QUIZZES:
A ten-minute quiz consisting of two or three multiple choice questions will be given at the beginning of every lab. Student will be allowed to use all old lab reports and homework assignments. Quizzes can not be made-up, so arrive on time. .

ATTENDANCE:
Each students is expected to attend every lab. Makeup labs will only be given under extenuating circumstances beyond the student's control. If a student knows in advance of an absence, inform the instructor as soon as possible.

NIGHT SKY ACTIVITIES:
Students will have the opportunity to earn extra credit by observing celestial objects at night. These activities will, by necessity, take place outside of class.

SAFETY:
No food or drinks are allowed in lab. In addition, student must wear closed-toed shoes at all times. Slippers are not allowed.

TENTATIVE SCHEDULE:

Week	Date	Lab
1	Aug 23	Lab 1: Position
2	Aug 30	Lab 2: Motion
3	Sep 06	Labor Day – No Lab
4	Sep 13	Lab 3: Seasonal Stars
5	Sep 20	Lab 4: The Ecliptic
6	Sep 27	Lab 5: Atomic Fingerprints
7	Oct 04	Lab 6: The Parsec
8	Oct 11	Discoverer's Day – No Lab
9	Oct 18	Lab 7: The Cause of Moon Phases
10	Oct 25	Lab 8: Predicting Moon Phases
11	Nov 01	Lab 9: Apparent and Absolute Magnitudes of Stars
12	Nov 08	Lab 10: HR Diagrams
13	Nov 15	Lab 11: Milky Way Scales
14	Nov 22	Lab 12: Galaxy Classification
15	Nov 29	Presentations