

# Astronomy 105L

## Principles of Astronomy Lab

Palomar College

Course Syllabus

Fall Semester 2011

70878 (W 1:00pm/NS-117)

### Professor Lane

**Office:** NS-110A

**Phone:** 744-1150 x 2951  
(voice mail is available 24 hours)

**email:** [mlane@palomar.edu](mailto:mlane@palomar.edu)

**Class Website:**

<http://daphne.palomar.edu/mlane>

*NOTE: This course does not use the  
Blackboard system*

**Office Hours:**

Mon 12:30p – 2:00p

Tues 5:30p – 6:30p

Wed 12:30p – 1:00p

(Additional consultation is available by appointment)

### Welcome to Astronomy Lab!

The purpose of this class is to introduce you to the methods astronomers use to understand our Universe. This class will walk you through the practical applications of many of the concepts that are covered in the Astronomy 100 lecture class.

### Course Prerequisites

The prerequisites for the Astronomy Laboratory class are listed in the Palomar College Catalog. Each student who wishes to enroll in the Astronomy 105L course must have successful completion (a grade of "C" or better) or concurrent enrollment in either the Astronomy 100 or Astronomy 120 class. There are no exceptions to this prerequisite.

### Laboratory Exercises

Each class meeting will cover a different laboratory exercise. Each exercise will range in difficulty and will cover a different topic from the astronomy lecture class. Prior to the exercise, your instructor will give an introductory presentation outlining the purpose of the exercise and what is hoped to be accomplished by the exercise. Exercises will be worth 20 points and must be completed in class prior to your departure. The exercises will be collected by your instructor at the end of each class meeting.

### Required Materials for Astronomy 105L

#### 1. Laboratory Manual

The laboratory manual required for this class is *Lane Astronomy 105L Principles of Astronomy Laboratory*. The laboratory manual is sold only through **Off Campus Books** bookstore. The laboratory manual must be brought to each and every class meeting.

#### 2. Supplementary Materials

**Scientific calculator:** Each student must purchase a scientific calculator. The calculator must support all of the functions of trigonometry. Graphing calculators are not required, but are acceptable

**Ruler:** Each student must purchase a metric ruler.

**Pencil:** Ink pens are not allowed to be used in class. Any work done in ink will be returned ungraded.

**Additional** Free graph paper is available for printing from the internet:

**Graph paper:** <http://incompetech.com/graphpaper/>  
(if needed)

***Each student must have their own laboratory manual and supplementary materials.  
No materials may be shared between students.***

## Mathematics Requirement

This course is designed to fulfill general education requirements for students who may have no special orientation toward math or science. However, mathematics is the scientist's most fundamental tool and will be used extensively in this course. It will be assumed that all students have a familiarity with high school algebra and simple geometrical and graphical relationships. Although the level of mathematics will not go beyond basic algebra, it will be used *extensively* each and every class meeting and is the primary tool used to arrive at the answers we seek. If you are uncomfortable with math or you feel that mathematics is difficult for you, please reconsider taking this course.

## Lab Credit

To receive laboratory credit, all work must be completed *in the lab*. Therefore, work that is done outside of the class & outside of the class period cannot be accepted for a grade. Do not work ahead. Do not work on assignments at home. Credit can only be assigned to the work that is completed in the classroom. Assignments cannot be completed at home. Work hard to complete the exercise in the allotted class period.

## Attendance Policy

Prompt, regular class attendance is essential for successful completion of this course. Attendance will be recorded each class meeting. Each student is expected to be in class for the entire scheduled time period of the class. **If you cannot stay or are unwilling to stay the entire scheduled time period, please do not take this class.** If you need to leave class early, please inform your instructor of your situation before the start of class. Each class meeting is worth a large percentage of the overall semester. Therefore the attendance policy is rather strict:

**Two (2) successive unauthorized absences = automatic drop from the course**

**Three (3) unauthorized absences total = automatic drop from the course**

***PLEASE NOTE:*** Please be aware that the last day to drop any class without notation on your transcript is September 21<sup>st</sup>. The last day to drop a class with a "W" (withdrawal) appearing on your transcript is October 15<sup>th</sup>. After October 15<sup>th</sup>, any student that appears on my grade roster must be given an evaluative grade.

Only students who are officially registered may participate in this class. If you are given a permission code to add this class, you must officially add the class prior to the next class meeting. If you have difficulty using the College's computerized enrollment system to add, please notify the instructor immediately. The deadline for adding any class or using a permission code to add is September 5<sup>th</sup>. Under no circumstance will students be allowed to add this class after the add deadline.

## Late Arrivals

Late arrivals are not acceptable. Not only are late arrivals disruptive, but students who arrive late will miss important announcements and essential information meant to help them through the lab exercise. If you are going to be more than 15 minutes late to class, do not attend the class.

## Students with Special Needs

If you have a disability that requires special accommodation, please speak with the instructor and provide documentation within the first two weeks of class. Reasonable accommodation will be made.

## Quizzes

There will be 4 or 5 quizzes during the session (depending on time). Each quiz will include only the material that was covered since the previous quiz. Each quiz will be worth 40 points. The quizzes are closed book and no notes are allowed. There are no make-ups for the quizzes. Each student will have their lowest quiz score dropped at the end of the semester.

## Dropping the Class

Dropping or withdrawing (with a "W") from this course is your responsibility. If you decide to drop or withdraw from this course for any reason, you must follow the procedure outlined in the Palomar College Class Schedule. Palomar College policy states that any student whose name appears on the final class roster MUST be given an evaluative grade at the conclusion of the session. Any petition for a late withdrawal must be handled through the Admissions and Records Office.

## Cheating and Plagiarism

Cheating and plagiarism will NOT be tolerated. I encourage students to work together and in groups to accomplish the goals of each exercise. However I expect that each student will complete the steps of each exercise in order to fully understand the concepts. If evidence clearly indicates that your work is not entirely your own, the work in question will not be accepted for a grade, and you will receive no credit for it. A second offense is grounds for automatic failure and a reporting to the College Administration for disciplinary action.

## Personal Responsibility

I believe that each student determines his or her own path in my class. I hold each and every student personally accountable for the requirements of being a student in this class. Students are not "given grades", rather – students earn the grade that they receive based upon their performance in class. The outcome of your final grade depends upon *YOU*. Your grade will be determined by your demonstration of what you have learned in this class, not by your attendance. I encourage you to work hard to achieve the grade that you desire, and to utilize me as the instructor to help you facilitate your learning – *this is your responsibility*. I expect each student to make the effort to be aware of deadlines and to abide by them – *this is your responsibility*. I expect each student to contact me immediately if there is an issue related to what is required of you in this class – *this is your responsibility*.

## Course Student Learning Outcomes (SLOs)

SLOs are a college-mandated obligation to measure student success. They have no impact on your grade in the course. Successful students should be able to meet the following Student Learning Outcomes:

1. Use Newton's Version of Kepler's Third Law to determine the mass of a body being orbited.
2. Determine the Age of the Universe. Using a Hubble Diagram, students will demonstrate the proper skills to interpret a data set and create a graph to find the Hubble constant. Then using the appropriate methodology they will use the Hubble constant to determine the age of the Universe.

*Students must also be able to describe and explain many, many other terms, concepts, and processes in order to successfully complete this class.*

## Grades

Grades for all exercises and quizzes will be posted on the class website. It is your responsibility to protect yourself from errors by closely monitoring your returned work and comparing it to your grades that are posted on the website. Mistakes are sometimes made by me! Please feel free to notify me of any errors that you encounter. Save all returned work until you have received your final grade!

### FINAL COURSE GRADE

Your final course grade will be determined approximately as follows:

55%	Exercises (20 points each)
45%	Quizzes (40 points each)

---

100% Total

#### ***COURSE GRADES:***

A's	90 – 100%
B's	80 – 89%
C's	70 – 79%
D's	60 – 69%
F's	0 – 59%