

# Welcome to Astro 3!

**Section:** \_\_\_\_\_

**TA:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Office Hours:** \_\_\_\_\_

## Executive Summary

- Hand in the pre-lab at the beginning of section.
- Bring the current week's lab to class.
- Work on the lab in groups of three, but everyone must complete his/her own lab write-up.
- Hand in the lab write-up at the end of section.
- Contact your TA (at least 24 hours ahead of time) if you need to complete a lab in a different section.
- Contact your TA if you miss a lab.
- Website: <http://www.astro.ucla.edu/undergrad/astro3/>

## Lab Overview

Astronomy 3 is a 5-credit course with a 2-hour weekly lab section. The ten weeks of the quarter include eight labs.

The labs focus on key concepts from the lecture: the behavior of light, color and spectra, gravity, orbits, motions of the night sky, properties of stars & galaxies and the expansion of the Universe. You will work the labs in groups of 3 students, and each group will be provided the necessary equipment or data for the lab. Do work together and discuss your results, but write down your own answers to each of the lab questions. Everyone must turn in his/her own lab write-up. The grader will be looking for conceptual understanding, so formulate your answers to demonstrate your understanding – show them that you “get it.”

Each lab begins with a list of the goals for the lab, in this form: “At the end of this lab, you should be able to...” This is a guide for you to check your learning. If you find you cannot meet these goals, check with your partners or your TA. If your lab write-up shows that you can meet the goals, you'll get a good grade on the lab and you'll be better prepared for the exams.

## Administrative Details

Always write your section and TA on your lab to make sure you get credit for your work. If you attend a section other than the one for which you are registered (see below), write the section for which you are registered on your lab. If you attend a different lab section, be sure to turn in your completed lab to the TA for that section (not your regular TA). Your TA will e-mail you with important information regarding labs, locations and exam reviews. Make sure your email account is set up to receive course emails by visiting <http://ccle.ucla.edu>.

## **Attendance**

All eight labs count towards your grade in the course. If you must miss a lab section, you should attend another lab section that same week –you cannot make up missed labs later in the course. You must e-mail both your TA and the TA of the section you wish to attend, at least 24 hours in advance, in order to insure that you receive credit for the lab. Be aware that if your lab section falls at the end of the week for a particular lab activity, there may be few or no options for makeup. Plan ahead if you know you will be absent from your lab section. If you miss a lab, contact your TA as soon as possible to arrange a make-up. If you do not contact your TA within one week of your absence, you will receive a zero for the missed lab. If you miss all opportunities to do the lab during the week it is given then see your TA as soon as possible and no later than 7 days after the missed lab to discuss alternative make-up options. Only one alternative make-up will be allowed. Other missed labs will earn you a zero score.

Be on time for section. The TA may provide guidance at the beginning of section, and missing this may make it difficult to complete the lab in the allotted time. You may not continue to work on the lab after the section is over.

Pay attention to the lab location. Lab 2 will meet in the Planetarium, and the lab location is subject to change during the quarter. If you are late because you go to the wrong room, your TA will not give you extra time (and your lab partners will be ahead of you).

## **Pre-Labs**

Each lab (after the first week) includes a pre-lab worksheet provides an introduction to the concepts covered in the upcoming lab. The pre-lab is graded as part of the lab and is due at the beginning of the lab period.

## **Lab Procedure**

Be sure to bring your copy of the lab to the class each week. This is your responsibility! All the equipment needed to perform the lab activities will be provided to your group by the TA. Use caution with the lab equipment, as some of it is breakable. Use particular care not to drop optical components such as mirrors and lenses or light sources such as flashlights and bulbs. Be sure to include units of measure where appropriate in your answers (for example, if you measure some quantity) or you will not receive full credit. Take time to explore the phenomena in the labs – make predictions and test your results. Ask yourself and your partners “how does this work?” and “how do you know?” and be skeptical of explanations unless you can test them and reproduce your results. Labs will be collected at the end of section – no exceptions!