

**Syllabus for Astro 101 Lab Section 411**  
**6-7:50 pm Monday nights**  
**Chapman 235**

**Instructor:** Katie Eckert

**Office:** Phillips 101

**Office Hours:** TBA

**Email:** [keckert@physics.unc.edu](mailto:keckert@physics.unc.edu)

**Class Website:** <http://www.physics.unc.edu/~keckert/Astro101L.html>

You can find links to WebAssign, Skynet, Afterglow, and other important sites for our labs on my website.

**Goals for Course: These Labs are New!** The astronomy 101 labs have been completely redone since last year. The course is almost entirely computer based and does not require full lab reports as in years past. We are also no longer at the mercy of Chapel Hill weather to do our labs. The labs are now designed to follow closely along with the Astronomy 101 course, a major improvement over the old labs. We will be using state of the art telescopes located in Chile.

<http://skynet.unc.edu/>

(The link is also posted on my website)

The goals of these labs are to teach key concepts learned in Astro101/102 lectures.

- Our place in the Universe
  - Earth's place in the Solar System
  - The Solar System's place in the Milky Way
  - The Milky Way's place in the Universe
- Distance Indicators (ie., How big is the Universe?)
  - Parallax – measure things nearby to the Solar System
  - Standard Candles – measure objects outside our Galaxy
  - Hubble's Law – how this affects our measurements
- Correct common misconceptions

**Lab Reports:** Labs are due before the following lab period. We are now using WebAssign for the assignments, and labs will consist of the following:

- Answering questions asked in the lab
- Graphs and Images uploaded to WebAssign
- Discussion of results and errors

There will also be a short quiz at the beginning of each lab that will be based on the lab reading.

**WebAssign:** The link for registering is:

<http://www.webassign.net>

Once you are there select "I have a Class Key", and follow the instructions. Our class key is: unc 0353 4575. The cost is \$19.95. (The link to webassign is also posted at my website)

**Grading:** Each lab will count equally for your final lab grade. There are eight labs total plus your cumulative quiz grade will be the ninth.

Grading will be done on a curve, which means we will calculate the mean and standard deviation of the lab grades each week. The number of standard deviations your grade is away from the mean will determine your overall letter grade. Roughly:

<b>number of standard deviations from mean</b>	<b>Grade</b>
> 0.5	A
-0.5 to 0.5	B
-1.5 to -0.5	C
-2.5 to -1.5	D
< -2.5	F

**Policy on Late Labs:** Don't be late: 10 points will be taken off for each day after the assignment was due.

Jan 24 – Lab Orientation  
Feb 1 – Lab 1 Introduction to SKYNET (first part)  
Feb 8 -- Lab 1 Introduction to SKYNET(second part)  
Feb 15 -- Lab 2 Earth and Seasons (first part)  
Feb 22 -- Lab 2 Earth and Seasons (second part)  
Mar 1 -- Lab 3 The Galilean Revolution  
Mar 8 -- No Lab (spring break)  
Mar 15 -- Lab 4 Parallax  
Mar 22 – Lab 5 Standard Candles  
Mar 29 – Lab 6 Doppler Shifts and the Mass of the Milky Way  
Apr 5 – Lab 7 The Great Debate  
Apr 12 – Lab 8 Hubble Law  
Apr 19 – Lab 8 Due

**What to Bring to Class:**

Laptop Computer  
Copy of Lab  
Pen/Pencil