ASTRO 11 Syllabus

Section 1: Monday 7:35-9:30pm
Section 5: Tuesday 7:35-9:30pm

Instructor: Peter Brown
E-mail: pbrown@astro.psu.edu
Web: Head TA Page: www.astro.psu.edu/headta/
Office: 443 Davey Lab (back left corner)
Office Hours: Monday 1-2 pm, Tuesday 1-2 pm, Wednesday 2-3 pm

Required material for this course:

- Planisphere (star map)
- Scientific calculator - one that is capable of scientific notation and trigonometry
- An ACCESS computer account – in case I need to contact you outside of class
- Pencils, erasers, paper normal school stuff

Attendance:

The labs for this course depend on either in-class demonstrations or the use of laboratory equipment (sometimes both). Therefore, attendance is mandatory in order to receive credit for the lab. Make sure that you come to every class! Otherwise, you will not be able to do the labs correctly, and your grade will suffer. I expect you to come to class and contact me if you miss a class, preferably before the missed class. Tuesday, December 7 (same time and place) will be a make up lab for both sections. Other than that, I will only make arrangements for labs to be made up for legitimate, documented (in writing) reasons.

Grades:

- Semester Observing Project (a.k.a. Lab 1): 200 points
- Labs 2-13: 100 points each (the lowest score will be dropped, so there will be 11 labs counted)
  - Total: 200 + (11 * 100) = 1300 points
- Grades will be assigned on a percentage basis: 100-94=A, 93-90=A-, 87-89=B+, 83-86=B, 80-82=B-, 77-79=C+, 73-76=C, 70-72=C-, 67-69=D+, 63-66=D, 60-62=D-, and < 60 F.
- These point values may be reduced but will not be raised (i.e., a 94% guarantees you an A)

I do not intend for this class to be so easy that you do not try your best to learn. On the other hand, I do not want it to be so hard that you get frustrated and hate astronomy for the rest of your life. I will try to strike an appropriate balance in this course, so that you develop an appreciation for astronomy and an understanding of how we learn about our universe. I am open to feedback through the semester as to whether I am helping or hindering your interest in astronomy. Additional projects may be given for extra credit at my discretion, but they would most likely be more demanding and challenging than the normal labs.
**Lab Schedule:**

<table>
<thead>
<tr>
<th>Section 1: Monday 7:35 - 9:30</th>
<th>Section 5: Tuesday 7:35 - 9:30</th>
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<tbody>
<tr>
<td>September 7, 2004 104 Osmond Lab 1</td>
<td>September 7, 2004 104 Osmond Lab 1</td>
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<td>September 13, 2004 104 Osmond Lab 1</td>
<td>September 7, 2004 104 Osmond Lab 1</td>
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<td>September 20, 2004 104 Osmond Lab 3</td>
<td>September 14, 2004 104 Osmond Lab 3</td>
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<td>September 27, 2004 71 Willard Lab 2</td>
<td>September 21, 2004 71 Willard Lab 2</td>
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<td>October 4, 2004 104 Osmond Lab 4</td>
<td>September 28, 2004 104 Osmond Lab 4</td>
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<td>October 11, 2004 104 Osmond Lab 6</td>
<td>October 5, 2004 104 Osmond Lab 6</td>
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<td>October 18, 2004 71 Willard Lab 5</td>
<td>October 12, 2004 71 Willard Lab 5</td>
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<td>October 25, 2004 104 Osmond Lab 8</td>
<td>October 19, 2004 104 Osmond Lab 8</td>
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<td>November 1, 2004 104 Osmond Lab 7</td>
<td>October 26, 2004 104 Osmond Lab 7</td>
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<td>(1a due)</td>
<td>November 2, 2004 104 Osmond Lab 9</td>
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<td>November 8, 2004 104 Osmond Lab 9</td>
<td>November 9, 2004 104 Osmond Lab 9</td>
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<td>November 15, 2004 104 Osmond Lab 10</td>
<td>November 16, 2004 104 Osmond Lab 10</td>
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<td>November 22, 2004 104 Osmond Lab 10</td>
<td>November 23, 2004 104 Osmond Lab 11</td>
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<td>November 29, 2004 104 Osmond Lab 11</td>
<td>November 30, 2004 104 Osmond Lab 12</td>
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<td>December 6, 2004 104 Osmond Lab 13</td>
<td>December 7, 2004 104 Osmond Lab 13</td>
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<tr>
<td>(1b due)</td>
<td>Makeup Lab</td>
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Please note, we will not be meeting in our regular room when the labs require the use of a computer. We will also not be doing the labs in order because of the need to share the computer room. Please check the schedule ahead of time so that you come to the correct place having already read the correct lab. Please be on time so that we can start on time and go home on time.

A version of this schedule can also be found at [http://www.astro.psu.edu/headta/Fall/labsched.html](http://www.astro.psu.edu/headta/Fall/labsched.html)

**Due Dates for Lab Reports:**

- The semester project (Lab 1) will be due in sections as indicated on the semester project instruction sheet. Do not procrastinate!!!!!
- After the first week we will be doing one lab in class per week as indicated on the schedule (next page). Regular Labs (ie 2-13) will be handed in before you leave the class. This will help you to complete your write up while what you learned is still fresh in your mind. It will also help me to return the labs to you quickly. If the lab took longer to complete or you need more time to ponder your astronomical discoveries, you may talk to me at the end of class. In that case, I will mark that you were there for the lab and you have until the beginning of the next class period to complete it and turn it in to me. Note, they are due by the beginning of the class, so if you come to class late, your lab will be late.
- Late labs (those turned in after the beginning of the next class period) will be docked 10 points (10% of an otherwise perfect lab). They must be turned in to personally, either before class, during office hours, or by appointment. Labs will no longer be accepted after two weeks from the date of the lab.
Writing up Lab Reports/Observations

- Read the labs ahead of time so that you can prepare yourself.
- If the math is giving you problems, try Lab 0 and ask for help.
- Please write neatly: a right answer that I cannot read is a wrong answer.
- Answer questions fully. Does the question have two or more parts?
- Label your graphs properly (title, axis, etc).
- Use correct units (if the answer is 5 light years, then merely a 5 will not suffice).
- Show me that you understand. (If you understand, ask for help before the end of the lab.)
- The lab notebook gives a very good description about how to record observations. Follow it carefully. Recording observation details like time and position are what made the difference between people being surprised and scared by eclipses to planning eclipse cruises years in advance (or at least going out and buying those funny looking glasses).
- You can work with others as needed, but your lab report should be written on your own. Do not copy from anyone else. All observations should be your own: draw what you see in the sky, not what you see on someone’s lab that they saw in the sky. Do not let others copy from your report. If I receive two identical answers or reports, I will not know who did the work and who did the copying. You may lose points or receive no credit for that answer/assignment. Or worse. For the official statement on Academic Integrity, please see http://www.astro.psu.edu/deptinfo/Astropolicy.html
- Do not fabricate observations. Do not draw a phase of the moon that you did not see. Sometimes it is obvious that you are lying. You may lose some or all points or be referred to the University for discipline for dishonest acts.

Lab 1: Semester Observing Project

This lab requires you to make observations of the moon, constellations, stars, clusters, and maybe a galaxy or so. It is important that you begin this project early and take advantage of clear skies whenever they come. I will be keeping track of clear nights so that if there aren’t many, I can substitute other projects (such as a constellation report) for some of the observations.

- 6 constellation drawings (use the half-circle format from the lab notebook) --10 points each
- 4 telescope observations (follow the sample sketch from the lab) --10 points each
- 8 moon observations (can be done in either format) --10 points each
- 1 paragraph telling me what you liked/didn’t like about this project --20 points (turn in with 1b)

Due Dates for Semester Observing Project

- Lab 1a (10 observations, including at least 4 of the moon) is due at the beginning of class on Nov. 1 (Section 1) or Nov. 2 (Section 5).
- Lab 1b (the remaining ten observations) is due at the beginning of class on Dec. 6 (Section 1) or the makeup lab on Dec. 7 (Section 5).
- These can be turned in as early as you are done, but please turn in as 1a and 1b, not single observations.