AST 1022L: Astronomy Laboratory  
Spring 2013  
Section 0441: Thursday 10:40am - 12:35pm // Section 0442: Thursday 12:50pm - 2:45pm  
Instructor: Mr. Alan Garner  
Office: 317 Bryant Space Science Center  
E-mail address: alangarner@astro.ufl.edu (best way to contact me)  
Phone number (office): (352) 294-1855  
Office hours: Monday 2:00pm-3:00pm, Friday 2:00pm-3:00pm or by appointment  

Teaching Lab Director: Dr. Francisco Reyes  
12 Bryant Space Science Center  
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(352) 294-1885

Course Website:
http://www.astro.ufl.edu/~alangarner/S13/ast1022L

Course Objectives and Goals:
AST-1022L Astronomy Laboratory counts for one (1) credit of Physical Science (P) towards the General Education requirement. It introduces students to the scientific method as applied to the field of astronomy. The students are introduced to the process of making astronomical observations, quantitatively analyzing those observations, extracting information about astronomical bodies such as the Sun, Moon, planets, stars, nebulae, and galaxies, and understanding the basic physical processes that take place in these bodies. The students will also be introduced to the process of writing a report on an experiment, communicating the details, results and conclusions to a reader not necessarily familiar with the experiment.

Academic Honesty:
Academic honesty is taken very seriously in this class. During experiments you will work in groups and it is fine to share and discuss the results of the experiment. However any analysis of the experiment and particularly anything you write in your lab reports should be completely your own work or properly cited material you found on your own. Copying material found on-line from Wikipedia or another source is just one example of what would constitute academic dishonesty. Any instances of academic dishonesty will be reported to the SCCR (Student Conduct and Conflict Resolution). No exceptions.

The SCCR's website can be found at:
http://www.dso.ufl.edu/scr/

Office Hours:
I am available for office hours, as noted at the beginning of the syllabus. Please, feel free to stop by at these times. If for some reason I have stepped out of my office momentarily I will leave a note on the door giving my location. You can come to my office hours for any reason, whether it is to discuss how you are doing in the class, or you would like help with an assignment, or you would like to review an assignment with me for corrections/pointers/advice before you turn it in. If these office hours aren't good for you, please do not hesitate to e-mail me about setting up an appointment. I am always happy to meet with students!
Course Meeting Times and Locations:
AST 1022L Astronomy Laboratory consists of 13 daytime labs and 3 mandatory night labs. Daytime labs will be conducted during the scheduled class period (detailed above) in Bryant room 7. The night labs with take place at the Campus Teaching Observatory (CTO); the dates and times for the night labs will be announced within the first couple weeks of classes. You might want to find it in the daytime before the first lab to be sure, since absence due to not being able to find CTO will not be excused. A map to the CTO can be found at [http://www.astro.ufl.edu/information/cto.html](http://www.astro.ufl.edu/information/cto.html). If you need assistance finding your way, the observatory phone number is (352) 392-1016. Night labs depend on the weather. If a night lab needs to be canceled I will send an email message before 7pm on the night of the lab. If you do not get a message, you should come to the CTO at the scheduled time for the lab unless there is severe weather such as an active thunderstorm or tornado watch or warning.

Items Required for Lab:
Students will need to bring the following items to all labs (except night labs):
- Lab Manual: [Hands on Astronomy Laboratory Manual](http://www.astro.ufl.edu/information/cto.html) ($18.40) is available at Target Copy Center in Butler Plaza (3422 SW Archer Rd) and at 1412 W. University Avenue.
- Writing utensils and paper
- Scientific calculator

For night labs, you can just take the lab sheet for that night lab out of your Lab Manual and bring it, a pencil, and something hard to write on (such as a binder or notebook). In addition, it may be useful to bring a flashlight (preferably with a red filter) and insect repellant (nobody likes mosquito bites!) to the night labs at the CTO.

Class work:
Quizzes: There will be 13 daytime lab experiments performed in this course. For each lab you will be expected to have read the manual for the day's experiment to prepare before you come to class. There may be a short quiz at the beginning of each class (except for the first day). Questions on the quizzes will be taken directly out of the lab notebook objective, introduction and procedure text, so please read through the labs carefully before class. You will have about 3 minutes at the beginning of class to complete the quiz. If you are late to class, you will not be given extra time to work on the quiz. No quizzes will be handed out once the last quiz is collected, or the time is up. There are 3-4 questions per quiz. The quiz questions are multiple choice and are very easy if you scanned the lab sheets before class (really!). In this way the quizzes serve to boost your grade if you come to class, or penalize you if you are late or did not come prepared. The quizzes can really hurt you if you are late to class or did not read the lab manual – so be careful!

Labs and Worksheets: After the introduction and possible quiz, you will perform the lab experiment and record your data. In most cases you will work with a partner or in a small group. You can share data, but everyone must participate in the experiment in some way. And after the experiment is complete you must work alone. You will work in groups to collect data but you must answer the questions and analyze the data independently. Before you leave, you may need to have your data sheet initialed by me (I will explain each class). For labs that include a worksheet, you will have one week to complete the experiment worksheet, and it will be due at the beginning of the next class.

Formal Lab Reports: I will assign a formal lab report for some labs we perform in class. All reports must be typed. I will explain the formal lab report guidelines when we have our first report. Similar to worksheets, lab reports will be due at the beginning of the following class and must include your name as well the names of any collaborators, your section number and meeting day. You must also include your original, initialed data sheet attached to the back. Lastly you may be required (upon request) to e-mail me an electronic copy of your report (the .doc or .odt file, for example). For most in-class labs, a full lab report will not be required.
Night Labs: There will be three night labs held during the semester outside of the regular class time. Attendance to these labs is required and the worksheets that accompany the lab account for 15% of your grade. Formal lab reports will never be required for the night labs. The dates for the night labs will be determined at a later point, and are dependent on weather conditions. The night labs are very easy and if you attend, look through the telecopes and fill out your worksheet you will do fine.

Additional Homework: For the first week there will be one optional homework assignment the first week of class to read Appendix A of the lab manual and complete the 10 problems within. The homework reviews basic concepts in science and math. You will be expected to know the material in the appendix even if you don't complete the homework. If any of it is unclear, do not hesitate to e-mail me and I'll be happy to review it/teach it to you!

Attendance and Late Work (the most important one):

The most important thing to take away from this section is to contact me immediately if there is a problem. If you let me know quickly I can sometimes help you.

Attendance is mandatory for all labs and will be recorded for each class session. If you are not present for a lab, you will receive no credit for that lab’s assignments. If you know ahead of time that you will miss a class, you may turn in the previous week’s lab report to the Astronomy Departmental Office in 211 Bryant. Please hand your report directly to a staff member and they will ensure it reaches me. Ask them to please write the date you turned it in on the front. They close at 4:00pm or 4:30pm most weekdays, so keep that in mind. As part of a global policy for all AST1022L courses, you cannot turn late work into me or my office.

Late Work Policy: Lab reports are due at the beginning of class the week after you do the lab. Unfortunately forgetting to turn it in is not a valid excuse. Labs or worksheets that are turned in the day they are due after the beginning of class will be penalized 10 points. This applies whether you turn them in at the end of class or if you turn it in that night. If they are turned in the day after they are due, they will be marked 50% off. Labs turned in more than one day late will receive zero credit. Once again you must turn in late work to the Astronomy Departmental Office in 211 Bryant and hand it directly to a staff member. This means you have to turn it in while the office is open—between 8 am and 5 pm on weekdays (sometimes they leave early). Reports that have been left on my desk, handed into me late, or slid underneath my office door cannot be accepted as part of a global policy for all AST1022L courses.

Make-up Labs: If you missed class unexpectedly, please contact me as soon as possible to discuss turning in the previous week's lab. In general, however, you cannot make up a lab unless arrangements have been made with me before the start of the class the day the assignment is due. Make up labs are only an option in extreme cases (religious holiday, jury duty, military obligation, University sponsored activity, serious health problems, or emergencies) and require official documentation. If you are ill enough that you cannot come to class, please go to the UF infirmary and make sure you get some help (especially if it might be contagious!).

Tardiness: Because this is a lab course, tardiness is extremely disruptive to the entire class. Anyone arriving to class after the lab starts will not be able to complete the lab as it is not fair to the other students in the class to have to teach you the lab. Repeated tardiness will incur a grade penalty. As discussed above, being tardy may cause you to miss a quiz which will be a significant penalty to your grade.
Grading:
Letter grades will then be assigned by the following scale (%):

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<th>Grade</th>
<th>Percentage</th>
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<tr>
<td>A</td>
<td>90 or above</td>
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<td>A-</td>
<td>87 – 89</td>
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<td>B+</td>
<td>84 – 86</td>
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<td>B</td>
<td>80 – 83</td>
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<td>B-</td>
<td>77 – 79</td>
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<td>C+</td>
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<td>C</td>
<td>70 – 73</td>
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<td>C-</td>
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<td>D+</td>
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<td>D-</td>
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The total grade will be weighted as follows:
- Daytime Labs/Worksheets: 70%
- Night Labs: 15%
- Quizzes: 15%

In addition there will be some extra credit opportunities to improve your scores. Extra credit can be applied to any assignments that you attempted but had trouble with and you'd like to improve your score. However, any penalty due to academic dishonesty, missing class, missing a night lab, turning in an assignment late, or not turning an assignment in at all cannot be counteracted with extra credit. For example, there are three night labs, each worth 5% of your grade. If you miss a night lab unexcused you get a zero for that assignment, and the highest grade you can get in the course would then be 95%, regardless of any extra credit exercises you might complete. Of course you can still do extra credit to improve your other grades and hopefully you'll still get that 95% (an “A”).

Incompletes: The College of Liberal Arts and Sciences has a strict policy on incomplete grades. No incomplete grades will be assigned to this course. If at any time you begin to feel you might not be able to complete this course for any reason, do not wait to discuss the matter with myself and/or your academic advisor. The sooner you act the more options you will have available!

Accommodations:
If you are a student with disability and would like to request disability-related accommodations, you are encouraged to contact me and the Disability Resource Center as early in the semester as possible. The Disability Resource Center is located in the 001 Building 0020 (Reid Hall). Their phone number is 392-8565. Please bring the documentation provided by the center.

Code of Conduct:
- It is expected that all students will treat all class participants, instructors and staff with courtesy and respect at all times.
- Cell phones must not be audible at any time during the lab. Students should refrain from text messaging as well.
- There is no food or drink allowed in the laboratory, but you may have water in a spill-proof container.
- Cheating will not be tolerated. Any violation of the student code will mean zero points for the experiment and it may be reported to the Student Conduct and Conflict Resolution.
- If you do not turn in a report for an experiment, you will not receive points for that experiment. Simply being present during an experiment does not earn you credit.