Syllabus
Astronomy 103 Laboratory
Section 12 – Honors, Fall 2008

The laboratory is a mandatory part of Astronomy 103, and it is to provide practical experience with astronomical observations, measurements in general, and with the underlying scientific concepts. Half of the labs are indoors, so they are kept *rain or shine*.

Time and Place of Laboratory

Thursday at 9:00 – 10:50 PM in Lewis Hall basement

Lab Instructor

Brian Mazur

bmazur@olemiss.edu

Office Hours

Tuesday and Thursday 2:00 – 3:00 pm in Lewis Hall 104

Lab book and other materials

Lab materials are provided by the instructor; do not buy the lab book.

A calculator is needed in each class.

General information:

(1) There is no lab manual for this section. The instructor will provide all necessary materials. Students will require only a calculator. Basic familiarity with personal computers is assumed.

(2) Because the lecture part is the same as the class for all the other sections, and there is no homework for lecture, all the extra work pertaining to an honors class will be made part of the lab only. Honors students will be expected to do a small amount of homework, assigned in lab, plus do a semester project, which is done outside regular lab time.

(3) Participation is required in each lab, unexcused missed labs count as zero. In addition, a few rather important labs must be made up if missed (*even with an acceptable excuse!)* Failure to make up each of these particular labs *immediately* will result in an additional zero grade.

(4) A student with more than 3 unexcused absences will fail the course, whatever their grade would be otherwise.

(5) Students must sign in at the beginning of the lab. Lab reports are due either at the end of the lab or a week later, as specified by the instructor. Missing either the sign-in or the report results in a zero grade. Attending a different section of the lab is not acceptable (there is only one honors lab).

(6) The grading scale is A>90%>B>80%>C>70%>D>60%>F.

(7) Changes in lab times will happen a few times in the semester. In addition, a few labs may require advance preparation. These pre-labs will be due in the beginning of the lab. They will be announced a week in advance. Pay attention to these announcements, and check for possible changes in case you have missed a lab!

Semester project:

Honors students will do a semester project during the semester.

This will involve (i) learning the constellations and the use of astronomical telescopes, (ii) taking a detailed CCD image of a deep-sky object, (iii) processing the image, resulting in a "pretty picture", (iv) analyzing the image, explaining everything that it contains, (v) presenting the picture and the findings in a short paper.

The semester project will require studies and work done outside class. Because homework is not assigned either in class or in lab, the total workload in the semester project will correspond to the regular workload in a science course.

Special care should be taken due to the unreliability of weather in Mississippi. It is imperative that each student uses the first available clear night in the semester, even if it is at an inconvenient time. The consequences of missed clear nights (and especially missed appointments) are very detrimental for both the quality of work and for grades.

Because observational sessions require a significant effort and time from the instructor, last minute cancellations will not be generally possible. Mark your assigned telescope time in your calendar, and make sure you do not create a conflict with it! (For general information, any missed appointment or last-minute cancellation on a clear night will cost about one full letter grade.)

The finished reports are due in 10 days after all raw images have been taken.

The measure of success depends in part on factors outside the students' control. For this reason, the grades on the semester project will be based on a combination of actual success, the effort exerted by the students, the appropriateness of the students' preparation for the observational sessions. (Note that, in order to use all available telescope time, the instructor will give extensive help even if a student is **not well prepared**, or fails to sign up or show up, but any such occurrence **will work against the affected student**.)

Have fun!