

# LABORATORY SYLLABUS

## PHY 113 – Introduction to Astronomy - Laboratory

**Credit Hours: 1**

**Summer II - 2007**

**Farrington Building, Room 211**

<b>Mon, Tue, Wed</b>	<b>12:00 – 1:50</b>	<b>(113.04)</b>
	<b>2:00 – 3:50</b>	<b>(113.05)</b>

**Lab Instructor:** \_\_\_\_\_ (fill in name and email for future reference)

**Email:** \_\_\_\_\_

**Supervisor:** Dr. Joel W. Walker  
**Phone:** (936) 294-4803  
**Email:** jwalker@shsu.edu  
**Office Location:** Farrington, room 204 D

**Required Textbook:** Physics 113 Lab Manual (available at Bookstore)

**Required Supplies:** Pencils, Notebook, Scantron “Quiz Strips” (15 question) and a calculator with trigonometric functions.

**Lab Description and Goals:** The PHYS 113 Laboratory is designed to complement and enhance your experience in PHYS 133, “Introduction to Astronomy”. Concurrent enrollment is strongly recommended, although not required. Concepts discussed during the main course will be experienced and tested here in a more hands-on manner. You will practice effective communication of observations and conclusions by the assembly of a lab report for each session.

Role of Lab Instructor:

Your lab instructor's role is to facilitate the efficient and productive operation of the lab meeting. Although the lab is designed to work in tandem with your main course, it is often the case that the order of presentation for certain material will differ. Your instructor will open each meeting (following the quiz) with a sufficiently detailed introduction or review to keep that day's material self contained. During operation of the lab, the instructor is available to aid in setup, clarify procedures, and provide general assistance. They will not however serve as a quick handy reference of packaged answers. It is intended that each student should develop a high degree of independence in their work. The lab instructor has no responsibility to meet with students outside of officially schedule meeting times. If disputes arise, the student should first attempt to resolve their complaint directly with their instructor. If this becomes impossible, or if external mediation is required, the matter should be taken for consultation with the lab supervisor.

Lab Schedule

Date	Laboratory Title
Mon 7/9	Review of Mathematics
Tue 7/10	Cosmic Scale
Wed 7/11	Planetarium
Mon 7/16	Astrometry and Celestial Coordinates
Tue 7/17	Parallax (Bring Ruler and Protractor)
Wed 7/18	Kepler's Laws and the Orbit of Mercury (Bring Ruler and Protractor)
Mon 7/23	Spectrum of Light
Tue 7/24	Telescope Optics
Wed 7/25	Exploring Mars
Mon 7/30	Kepler's 3 <sup>rd</sup> Law and the Mass of Jupiter
Tue 7/31	No Lab - Review Day
Wed 8/1	Laboratory Final Exam

- Attendance:** Attendance is mandatory for each laboratory meeting. Makeup labs are not offered, and all missed work will result in a grade of zero. In extenuating circumstances, an excuse may be granted at the discretion of your lab supervisor (not instructor). No student should leave any lab meeting prior to being excused by their instructor.
- Lab Reports:** The largest portion of your grade (60%) will be determined by the completion and quality of your written lab reports. Each report will be graded for content such as accuracy, soundness of calculations, legitimacy of conclusions, and effectiveness of communication. Points may also be deducted for reports which are visually unclear, which do not adhere to format, or which contain excessive errors of grammar or spelling. Each report should include an original type written summary on standard paper, approximately one page long, 12 point, double spaced. Written in paragraph form, it should reflect a personal understanding of the intention and goals of the current lab exercise. It must go beyond a simple procedural outline, to draw logically consistent conclusions and interpretations. Attempt to relate your lab exercise to the actual practices of professional astronomers, including for example, current applications of the concepts, methods and techniques discussed, and the types of information which they are helping to reveal. Bundle this summary with any “fill in the blank” type pages from your lab manual, typed answers to any numbered questions appearing in the lab manual, and any required supplementary material. Reports are to be written INDIVIDUALLY by each group member, and excessive similarity between reports will result in a grade of zero. Reports are due at the start of the next lab meeting. Late work will not be accepted.
- Quizzes:** A quiz will be given at the beginning of each laboratory. Its main focus is the pre-lab content of the current meeting, but it may also cover any content from the previous lab meeting. The quiz average, after dropping one low score, will account for 25% of the lab grade.
- Final Exam:** A final exam covering ideas from the semester’s experiments will be given as the last lab meeting. You should expect this exam to differ somewhat in style from your class quizzes, which tested your knowledge prior to lab meetings. It is designed to determine how thoroughly you absorbed the spirit, intent, and methodology of the course, once all labs have been completed. It is worth 15%.

**Lab Rules:** All class members are expected to respect the proceedings of this laboratory, and the learning environment of their fellow students. This principle has several practical implications, some of which are enumerated below.

- 1) Do not cheat. Violators are subject to dismissal on a 1<sup>st</sup> offence.
- 2) Regular punctual attendance is expected of all class members.
- 3) **There is to be absolutely no use of Cellular phones** in the classroom, for either voice or text communication.

**Email Guidelines:** Email communication with your instructor should be made in a professional manner. Instant-Message style notes are not acceptable in a business or academic setting. All email should employ the standard features listed following.

- 1) Include your name, course number and class meeting time.
- 2) Include a proper salutation, body and closing.
- 3) Make a reasonable attempt at correct grammar, capitalization, punctuation and spelling.

The following are university-wide official policies which apply to this course. Additional details are available at the web address: <http://www.shsu.edu/syllabus/>

**Academic Dishonesty:** Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom.

**Classroom Rules of Conduct:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination. Students may tape record lectures provided they do not disturb other students in the process.

**Student Absences on Religious Holy Days:** Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work.

**Students with Disabilities Policy:** It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should visit with the Office of Services for Students with Disabilities located in the Counseling Center.

**Visitors in the Classroom:** Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.