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ASTR 134.01: Elementary Astronomy Laboratory I

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The University of Montana

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Astronomy 134

ELEMENTARY ASTRONOMY LABORATORY I

Fall 2000

INSTRUCTOR: Diane Friend
SC 129 (inside SC 126- Physics/Astronomy Dept. office)
PHONE: 243-4299
(Dept. office phone: 243-2073)
OFFICE HOURS: Monday and Friday, 11 a.m. - noon, and by appointment

Required supplies: Faculty pack (available at the UC bookstore), planisphere, calculator, ruler, posterboard, compass (or Missoula map).

COURSE CONTENT

The purpose of this course is to give you some laboratory and observing experience in basic astronomy and solar system astronomy. Past students of this course have found the more in-depth, practical experience of the lab often helps elucidate material covered in the Astronomy 131 lecture. For those of you interested in stargazing, this course will introduce you to what's up in the night sky, how to use star maps and astronomical software to learn the constellations and find deep-sky objects, and the basic use and design of telescopes, in case you ever decide to purchase one of your own.

Throughout the course you will be expected to:

- 1) Read through the experiments (or at least the introductory material in them) before coming to class. Make sure you understand the material from your class notes or text which relates to the subject of the lab.
- 2) Ask questions. Be more concerned with questions about understanding the larger concept or procedure rather than questions about how to do one specific step of the lab. This will also keep you out of trouble on #3, below!
- 3) Do your own work. Even when you collaborate with other people in the lab, your lab write-up must reflect what you understand. I reserve the right to assign zero credit to students I suspect of copying or not contributing to the work of the group. The zero score may be replaced with a full credit grade by scheduling an oral interview in my office which will cover the concepts of that particular lab. If you can convince me you understand the material, I will grade you on the work you turned in.

GRADING

There are NO make-up labs! You may throw out your lowest lab score at the end of the semester from any but the following three labs: Observing the Night Sky, Phases of the Moon, and the Planetary Science Proposal. These three labs are a mandatory part of your grade. (Of course, I will make arrangements with anyone who has verifiable documentation regarding an extended absence or emergency.)

Hence, your grade for the course will be based on 13 labs. Each lab score will be normalized to 10 points, for a total of 130 points for the course. Although I do curve the grades from the combined lab sessions at the end of the semester, the scale usually ends up being very close to the traditional grading scale (90-100% A, 80-89% B, etc.).

Astronomy 134 LAB SCHEDULE

<u>date:</u>	<u>experiment:</u>	<u>location:</u>	<u>different time?</u>
Sept. 8, 11	Star Maps	SC 110	
Sept. 15, 18	Equator System of Astronomical Coordinates	SC 13	
Sept. 25, 26, 27	Observing the Night Sky	Skaggs Rooftop	8:30 p.m.-midnight
	***(backup dates: Sept. 28, Oct. 1, 2, 3, 4)		
On your own:	Phases of the Moon (start on or after Sept. 28)		
Sept. 29, Oct. 2	Eclipses and Orbits	SC 110	
Oct. 8, 9, 10	Lunar Observing	Skaggs Rooftop	8:00 p.m. -11:30 p.m.
	***(backup dates: Oct. 11, 12)		
Oct. 13, 16	Properties of Telescopes, Resolving Power	SC 13	
Oct. 20, 23	Orbit of Mercury	SC 13	
Oct. 27, 30	Lunar Surface Features	SC 13	
Nov. 3, 6	The Surface of Mars	SC 13	
Nov. 13, 17	The Moons of Jupiter	SC 11	
Nov. 20-24	HAPPY THANKSGIVING!		
Nov. 27, Dec. 1	Collecting Micrometeorites	SC 13	
Dec. 4, 8	Astrometry of Asteroids	SC 11	
Dec. 11, 15	Planetary Science Proposal	SC 13	

Please note:

Classes meet in different locations, but most meet at the regularly scheduled class time. However, the two observing labs will meet on different days and times! For these two labs, sign-up sheets will be posted on the Astronomy bulletin board in front of the Physics/Astronomy Dept. office one week before the first day of that lab. Sign-ups are first come, first served. Sign-up early for the best choice of times. Please sign-up for one section only!! The observing labs will meet for one hour only, so please be on time. If you think you might like extra time to look around, or learn how to use the telescopes, please sign up for the last lab of the evening.

If your section is cancelled due to weather, sign-up again as soon as possible for one of the make-up dates. (Sign-up sheets for the make-up dates will be posted the morning after any of the labs are cancelled due to weather.) For all nighttime observing labs, a message will be posted on my answering machine (243-4299) ONE HOUR before the start of that lab updating you on sky conditions and whether or not the lab will be held. Do not call more than an hour before the start of your lab as weather can change rapidly and I will not necessarily make a decision prior to that.