

Instructor: Dr. Alan Grafe
Office: 167 MSB
Office hours: MTWR, 2:00-3:30, 217 MSB, or by appointment
Phone: (810) 766-6632
Email: grafe@umich.edu
Web page: <http://spruce.flint.umich.edu/~grafe>

Materials*Required:*

A scientific calculator

Recommended:

A star guide (personal taste on these varies a lot; take a look at several and get the one you like)

Laboratory Description

The purpose of the laboratory will be to reinforce and explore basic astronomy concepts. The student is expected to perform and understand the assigned experiments. Normally, the material will be completed during the lab meeting, but certain parts will occasionally be assigned as lab homework.

Laboratory Requirements

As the laboratory experience is very important to integrating the concepts of astronomy into your personal experience, laboratory attendance is mandatory. In general, it is usually not possible to make up a lab. Please do not arrive late for lab! If you are more than 30 minutes late, you will be considered as missing a lab. ***If you miss three or more labs, your course grade will be an E.***

In-Lab Work

We will spend 4 lab periods at Longway Planetarium, with a primary objective of the orientation of the student to the night sky at different times of year, and secondary objectives of familiarization of the student to various astronomical phenomena. The other lab periods will be spent in various more “hands-on” activities and computer-based work.

Out-of-Lab Work

As a general rule, each non-planetarium lab will have an associated group lab report—although some in-class time may be available for writing lab reports, lab reports will typically be finished outside of class. Additionally, each student will be expected to complete a self-selected project.

Grading

Your grade will be based on the total points accumulated from exams and homework as follows:

Planetarium practical:	25 points
Self-selected project:	25 points
Laboratory reports:	50 points

Total: 100 points

A range:	90 and above
B range:	80-89.999
C range:	70-79.999
D range:	60-69.999
E range:	below 60

If the class average is less than 80 points, the course *may* be curved at the instructor's discretion, but the above point totals guarantee the above grades.