

# **ASTRONOMY 23 – SYLLABUS**

Faculty: Physics staff

Your lab TAs will provide their contact information

**CREDITS:** One

**PREREQUISITE:** **Astronomy 005**, taken previously or concurrently. You do not need to take the lab course in order to take the 005 lecture course. You do eventually need to take the lab if you want to satisfy a physical lab science course with 005.

**LAB SESSIONS: Innovation 330.** There are 9 projects, 6 of which will be done in the lab. The others will involve your own outdoor and online star chart observations. In-lab work will be done in teams of 4. You will do the observing labs individually or with a partner. You will hand in your own individual lab report at the end of each session on the Report Form provided. There are no lab sessions until Sept. 15, so the lecture course topics can stay ahead of the lab projects. Do not come to the lab until then.

**GRADING:** Each project counts 10% for a total of 90% for the course.

**ABSENCES:** You are expected to attend each in-lab session. If you must miss one, contact your TA in advance, and they will try to switch you into another section for that week only. If that can't be done, there will be a makeup session at the end of the semester.

**SUPPLIES:** Bring a pencil, and a simple calculator if you have one. The lab procedure, report forms and any photos or diagrams that you may need will be provided in the lab. Each project and a short help video will also be posted on UVM Blackboard ahead of each lab day, so you can become familiar with the project in advance.

## **PROJECTS:**

*1- Lenses and Telescopes*

*2- Stellar Coordinates and Star Charts*

*3- Mountains and Craters on the Moon*

*4- Retrograde Motion of the Planets*

*5- The Lengths of the Solar and Sidereal Days ("Observing" Lab)*

*6- Interactive Online Star Chart ("Observing" Lab)*

*7- The Synodic and Sidereal Months ("Observing" Lab)*

*8- Star S2 and Our Galactic Black Hole*

*9- Atomic Spectra and the Hubble Law*