

# ASTR 250L : Observational Astronomy Lab

A lab course in modern observational astronomy, with emphasis on “hands-on” use of instruments to acquire data with research-grade telescopes at the college’s Lanihuli Observatory. Remote telescope observations may also be used. Students will gain on-site observing experience with CCD photometry and spectroscopy through direct acquisition and data analysis using modern laboratory data reduction software. Applications to planetary, solar, stellar and, where possible, galactic astrophysics will be covered.

**Credits** 1

**Lab Hours** 3

**Designation**

DY

**Recommended Preparation**

Student should have operational familiarity with high school algebra and basic trigonometry.

**Prerequisites**

Credit or current enrollment in ASTR 250

**Course Outcomes**

- Use appropriate celestial charts and astronomical time system to identify and locate celestial objects, such as stars, nebulae, galaxies, planets, satellites and asteroids.
- Describe the fundamentals optics and telescopic observations.
- Operate and make observations with optical, radio and cosmic ray telescopes.
- Apply basic principals in planetary remote sensing and image processing using both real-time observations and archived data.
- Apply the techniques of astrophotography and spectrometry.
- Use appropriate techniques to analyze astronomical data.