
[SYLLABUS ASTR 430: Teaching Astronomy Laboratory, Spring 2014](#)



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Overview

This course introduces teachers (inservice or preservice) to the fundamentals of astronomical hardware and software, including telescopes, binoculars, sky software, spectroscopy, digital cameras, movie-making, CCD imagery, planetariums, etc.

Prerequisite: ASTR 402 or ASTR 403, or permission of instructor. Any teacher presently teaching Astronomy at any level is welcome without prerequisite.

Instructor: Professor Patricia Reiff (reiff (at) rice.edu)

With help from: Adjunct Professor Carolyn Sumners, HMNS

Classroom: HBH 223, 6:00 - 9 pm MONDAYS starting January 13, plus observatory (BRK400), planetarium (BRK250) and lab sessions TBD

Also used: Oncampus Observatory, HMNS Planetarium, George Observatory and HBH 254. One overnight at George Observatory TBD.

Text: "Space Update" DVD-Rom (\$10) and other handouts.

Required software: Personal laptop with "Quicktime 7 Pro" (\$30 from [Apple](#)) and "Stellarium" (free planetarium software from stellarium.org)

Also suggested: "Peterson's Guide to Stars and Planets"; planisphere; binoculars; digital camera; thumb drive

[Course Schedule](#)

[Homework and Projects:](#)

Stereo Project: use two digital photos to create a red/green anaglyph 3D image

Movie Project: use a sequence of digital photos and "Quicktime Pro" to make a stop-action movie (e.g. shadows during the day or during the year)

Educational Project: Create and demonstrate an observing project you can do with your class

Public Education: Help with public observing nights at the Rice campus observatory and/or at Sun-Earth Day (March 20 at HMNS) or at NSTA-national.

[Observing Project](#): make careful observations of at least 6 astronomical objects; at least one CCD sky image taken.

Special Accommodations: Any student with a disability requiring accommodations in this course is encouraged to contact me after class or during office hours. Additionally, students will also need to contact Disability Support Services in the Allen Center.

Last Update: January 7, 2014