

**SYLLABUS: ASTRONOMY 4010, SPRING 2004
ASTRONOMICAL METHODS LABORATORY**

Timings: Fridays: 1:00–3:30 PM

Room: NSC 272

Coordinator: Prof. Paul J. Wiita

Rm. 715 One Park Place

Phone: 404-651-1367; FAX: 404-651-1389

e-mail: wiita@chara.gsu.edu

The other instructors are: Profs. William Bagnuolo, D. Michael Crenshaw, Bruce Fryxell, Douglas Gies, Todd Henry, Hal McAlister, H. Richard Miller, Unil Perera, and David Wingert. All of these people (except Dr. Perera) have offices on the 7th floor of One Park Place and can be reached via e-mail using: lastname@chara.gsu.edu, with the following exceptions: hal@chara.gsu.edu for Dr. McAlister; thenry@chara.gsu.edu for Dr. Henry. Dr. Perera's e-mail address is uperera@gsu.edu and his office is 507 SA.

GENERAL INFORMATION:

This course is designed to give junior and senior students some exposure to the many types of instruments and approaches used by astronomers and astrophysicists.

The lectures, labs, and demonstrations will be conducted by all of the astronomy faculty. While this division of labor may be somewhat disconcerting for some students, in this way they are exposed to people with substantial expertise in each of the topics covered.

While this is nominally a lab course, many of these topics require instrumentation not available at Georgia State University; so in most cases the presentations will be lectures. Also note that a few afternoon meetings may be converted into evening or night observing sessions requiring traveling to Hard Labor Creek Observatory to learn how specific telescopes and detectors are used.

Students are expected to abide by the Policy on Academic Honesty in the University Catalog.

GRADING:

Grades will be based on attendance (15%), and assigned laboratory projects and problem sets (85%). You can expect one assignment or project from each of your instructors; they will typically be due at the next class meeting.

Table 1: **Class Schedule**

Date	Topic	Instructor
Jan. 16	Telescope Design and Performance	Wingert
Jan. 23	Spherical Astronomy	Gies
Jan. 30	Stellar Spectroscopy	Gies
Feb. 6	CCD Array Photometry	Miller
Feb. 13	Ground Based Astrometry	Henry
Feb. 20	Space Based Astrometry	Henry
Feb. 27	Hard Labor Creek Observatory	Bagnuolo
Mar. 5*	The Multi-Telescope Telescope	Bagnuolo
Mar. 12	NO CLASS, SPRING BREAK	
Mar. 19	Radio Telescopes	Wiita
Mar. 26	Radio Astronomy	Wiita
Apr. 2	Computational Astrophysics	Fryxell
Apr. 9	Ultraviolet Spectroscopy	Crenshaw
Apr. 16	Analysis of Hubble Space Telescope Spectra	Crenshaw
Apr. 23	Infrared Detectors	Perera
Apr. 30	Optical Interferometry and the CHARA Telescope Array	McAlister

*March 5th is the last day to withdraw with a grade of W possible.

Incompletes are authorized by the coordinating instructor for students who for non-academic reasons are unable to complete the course. You must communicate your reasons to Dr. Wiita; an unexplained disappearance will yield the grade of WF or F.

Of course, **modifications to the above schedule may be necessary.** This canonical caveat is particularly important for this course given the large number of very active instructors involved in teaching it. Some of them may need to leave town on observing trips or to scientific meetings that have not yet been scheduled. In such situations the order of topics will have to be changed. You will be given as much advance notice as possible about such changes through student.gsu.edu e-mail, so be sure either to frequently check that account or to forward mail from that account to the account you check often.