Professor: Loris Magnani
Office: Physics 238
E-Mail: loris@physast.uga.edu
Web Page: www.physast.uga.edu/~loris follow the link to ASTR1120L & 2030L. IT IS IMPERATIVE THAT YOU MONITOR THIS WEB PAGE AT LEAST ON A WEEKLY BASIS. Important announcements for the course will be posted there throughout the semester.
Phone: 542-2876
Office Hours: Mondays 3:30 PM – 5:30 PM or by appointment

Class: Tuesday 8:00 – 10:45 PM. Except for the first class on August 21, which meet in room 202 Physics, we will begin each class in room 221 Physics. When we will use the small telescopes to make observations we will be outdoors in the quadrangle directly east of the Physics Building and directly south of the Geography/Geology Building. Be sure to wear warm clothing if the evening is cold. Sometimes we will use the larger telescope on the roof of the Physics Building. Although we will be inside the dome, the temperature in the dome is virtually the same as outside, so be sure to wear warm clothing if it is cold outside.
COURSE OBJECTIVES

The purpose of this course is to introduce the student to the night sky and to small telescopes for making simple astronomical observations. These courses are de-coupled from the ASTR 1010, ASTR 1020, ASTR 1110H, and ASTR 1120H lecture courses in the sense that (1) they don’t have to be taken the same semester as the corresponding lecture course and (2) they don’t necessarily cover the subject matter of the lecture course. The reason for not covering the subject matter of the corresponding lecture course is that it is too difficult to observe most of the non-stellar objects discussed in ASTR 1020 or ASTR 1120H using our small telescopes at the not-very-dark-sky site we use.

METHODOLOGY

The objectives of the course will be achieved by having the students complete 7 astronomical lab exercises, 3 of which are completed indoors, 3 of which involve telescopic observations outside or in the telescope dome upstairs, and one of which involves recognizing the constellations visually. This will give the students an introduction to the night sky and to using telescopes. The 3 indoor labs involve using online astronomical databases; an important research technique in modern astronomy. There will also be a written lab final exam and 2 in-class quizzes.

The 3 observing labs involve using both the small 8-inch Celestrons, and the large 24-inch telescope on the roof of the building. The telescope labs are:

1) Determine the mass of Jupiter or Saturn using the motion of their moons and Kepler’s Third Law.
2) Finding the planet Uranus and imaging the satellites of the planet.
3) Take images of at least 5 deep sky objects (explained in class).

In addition to the observing labs you will complete 3 written (indoor) labs during the course of the semester. The 3 indoor labs will be chosen from the following:

1) Star Charts and the Celestial Sphere.
2) Using the Naval Observatory’s star chart database to create maps of small regions of the sky.
3) Using the SIMBAD database to determine physical information on a sample of celestial objects.
4) Using the Virtual Observatory database to study a selected (by me) area of the sky.
5) Kepler’s Laws.

To do the above labs,

YOU WILL NEED TO BRING A LAPTOP TO CLASS THAT CAN WIRELESSLY CONNECT TO THE INTERNET.

I will allow people to work together (see below) so only one person of each group needs to bring a laptop.

By the end of the semester, you will have turned in lab reports on 7 of the above labs (3 observational and 3 indoor) and finished the outdoor lab on recognizing constellations.

A write-up describing each of the outdoor lab is on the web page.

I will break up the class into groups of 3 (or, if the situation calls for it, groups of 4) because it will make the observing sessions more manageable. The composition of these groups will remain
the same throughout the semester. A lab report can be turned in by a group, and it is not necessary that all members turn in an individual lab report. However, the quizzes, the recognizing the constellation lab, and lab final exam are taken individually.

GRADING

Each lab report is 9% of your final grade. Thus, 7 labs contribute a total of 63% to your final grade. The 2 in-class quizzes will each contribute 9% to your final grade (thus, they will together contribute 18%). The lab-final exam will contribute 19% to your final grade. As mentioned above, the lab-final will be given during the last two weeks of class. From the lab reports, the quizzes, and the lab final, your total score on a scale of 100 will be computed. That numerical grade will be turned into a letter grade using the following key:

A is for a score of 90.00 or above, A- is for the range 87.00 – 89.99, B+ is for 84.00 – 86.99, B is for 80.00 – 83.99, B- is for 77.00 – 79.99, C+ is for 74.00 – 76.99, C is for 70.00 – 73.99, C- is for 60.00 – 69.99, D is for 50.00 – 59.99, and F is for any average below 50.00.

STUDENT RESPONSIBILITIES

Please make a reasonable attempt to arrive on time. If you must leave earlier than the scheduled end of class, please do so quietly. Class disruptions or distracting behavior will not be tolerated.
Ask for clarification on anything you find unclear, ambiguous, or unspecified in this syllabus. This includes both course policies and astronomical topics.

Know the rules concerning withdrawals and incompletes, published in the UGA Undergraduate Bulletin. Note that I will NOT withdraw you from the course for excessive absences. Note also that after the midpoint of the semester, a withdrawal is assigned a grade of WF, except in those cases in which the student is doing satisfactory work and the withdrawal is recommended by the Office of Student Affairs because of emergency or health reasons.

ACADEMIC HONESTY

All students are responsible for knowing, understanding, and abiding by the academic honesty policy of the University of Georgia, which can be found online at [http://honesty.uga.edu](http://honesty.uga.edu). If you have any questions about this policy and how it pertains to your work in this course, please ask me for clarification.

TENTATIVE SCHEDULE

Aug. 14 – No class
Aug. 21 – Introduction and Lecture on the celestial sphere – in room 202
Aug. 28 – Lecture on the celestial sphere
Sept. 4 – Indoor exercise on celestial sphere – Lecture on telescopes.
Sept. 11 – Quiz on the celestial sphere – Learning the night sky.
Sept. 18 – Learning the night sky and telescopes.
Sept. 25 – Indoor exercise on star charts or observational session
Oct. 2 – Observational session or indoor exercise
Oct. 9 – Observational session or indoor exercise
Oct. 16 – Observational session or indoor exercise
Oct. 23 – Quiz on the night sky – Indoor exercise on SIMBAD
Oct. 30 – Observational session or indoor exercise
Nov. 6 – Indoor exercise on SKYVIEW or observational session
Nov. 13 – Observational session
Nov. 20 – Thanksgiving Break
Nov. 27 – Lab Final - observational session
Dec. 4 – Last day of class; Friday class schedule; we will use it to finish up any labs exercises.