

ASTR 1010L & 1020L

INTRODUCTION TO ASTRONOMY LAB

Fall 2021

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary during the course of the semester and will supersede anything written here.

Professor: Loris Magnani, loris@uga.edu Physics 238

Teaching Assistants: Head TA: Lauren Sgro
TA: Robin Allen

Web page: www.physast.uga.edu/~loris

From there, follow the link to ASTR1010L & 1020L. It is imperative that you monitor this page at least on a weekly basis. Important announcements will be posted there throughout the semester.

Class: Tuesday 8:00 – 10:45 PM – Room 202, Physics Bldg.

Office Hours – Dr. Magnani: Monday 4:00 – 5:30 PM or by appointment

COURSE OBJECTIVES

The purpose of this course is to introduce you to the night sky and to small telescopes for making simple astronomical observations. These courses are decoupled from the ASTR 1010 and ASTR 1020 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 using our small telescopes at the not-very-dark-sky sites we use. In the case of ASTR 1010, there are too few solar system objects that are visible from our observing site during any given semester.

The basic aim of the course is to get the student to complete 10 lab assignments, broken up into 8 indoor labs involving written handouts and exercises, and 2 outdoor labs which involve making observations of the night sky with the naked eye and/or with a telescope. This will give the students an introduction to the night sky, to small telescopes, and to online astronomical databases. Because we are at the mercy of the weather (you cannot make visual telescopic observations of the night sky if it's cloudy or raining), the number of outdoor/indoor labs is subject to change if we have very bad conditions during the semester (in which case we will have to do more indoor labs). Regardless, students must complete 10 labs over the course of the semester.

METHODOLOGY

The objectives of the course will be achieved by having the students complete 10 astronomical lab exercises, at least 2 of which involve either visual or telescopic observations of the night sky. There will also be a written lab final exam and 2 in-class quizzes.

The two observing labs are chosen from the following list.

- 1) Learning the constellations. The student will have ample opportunity to learn the Winter and Spring night sky and, for a portion of their grade on this lab, the student will have to identify, to the TAs' satisfaction, several constellations and stars with the naked eye.
- 2) Telescopic sketches of lunar craters with the telescope to determine the height of lunar mountains along the crater rim.
- 3) Telescopic sketches or images of at least 3 "deep sky" objects. Double stars count as "deep sky" objects.
- 4) Studying the motion of the Sun, Moon, and any naked-eye planet.
- 5) Light pollution assessment. Includes exploration of effects of light pollution, as well as identifying constellations.

These observing labs are done outside as are the tutorial sessions for learning the night sky. It will be very cold during the end of the semester – so DRESS

WARMLY and be prepared to spend a good deal of time outside in the cold weather.

In addition to the observing labs you will complete 8 written (indoor) labs during the course of the semester. As noted above, more written labs may be assigned if the weather does not allow us to go outside regularly; likewise, or more outdoor labs may be assigned if the weather is in our favor.

To do the written labs, YOU WILL NEED TO BRING A LAPTOP TO CLASS THAT CAN WIRELESSLY CONNECT TO THE INTERNET. A write-up describing each lab will be on the web page.

YOU WILL NEED TWO APPLICATIONS FOR USE IN THIS CLASS:

- 1) Star Chart smartphone app. This is available for Apple and Android phones. [Link](#)
- 2) Siril image reduction software. Available for Mac, Windows, & Linux. [Link](#)

Please come to the first day of lab activities with these downloaded.

STRUCTURE OF THE CLASS

The class meets Tuesday evenings from 8 PM to as late as 10:45 PM, although on many evenings class will end before 10:45 PM. We will always begin class by meeting in room 202. On some clear nights we may go outside to use the telescopes. The location will be on campus and specified in class. Attendance is not compulsory, but strongly encouraged. Whether you attend class or not, you are responsible for all announcements and material discussed and/or covered in class. This includes revision to this syllabus.

GRADING

Each lab report is 6% of your final grade. Thus, 10 labs contribute a total of 60% to your final grade. The 2 in-class quizzes will each contribute 10% to your final

grade (thus, they will together contribute 20%). The lab-final exam will contribute 20% to your final grade. The final will be offered online the last day of class, November 30, 2021, from approximately 8:00-8:30 PM.

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 try to use the upper exits at the top of the lecture hall when we are in room 202. 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 we will NOT withdraw you from the course for excessive absences.

ACADEMIC HONESTY

The University of Georgia has a comprehensive policy on academic honesty, described in a document entitled A Culture of Honesty. This document is available through the Office of the Vice President for Instruction or online at <https://ovpi.uga.edu/academic-honesty>. This policy covers all academic work.

As a UGA student, you are responsible for knowing and understanding this policy. If you have any question about the appropriateness of your actions or your work, you are obligated to ask me for clarification.

CORONAVIRUS INFORMATION FOR STUDENTS FOR FALL 2021 CLASSES

Face coverings:

Following guidance from the University System of Georgia, face coverings are recommended for all individuals while inside campus facilities.

How can I obtain the COVID-19 vaccine?

University Health Center is scheduling appointments for students through the UHC Patient Portal (https://patientportal.uhs.uga.edu/login_dualauthentication.aspx). Learn more here – <https://www.uhs.uga.edu/healthtopics/covid-vaccine>.

The Georgia Department of Health, pharmacy chains and local providers also offer the COVID-19 vaccine at no cost to you. To find a COVID-19 vaccination location near you, please go to: <https://georgia.gov/covid-vaccine>.

In addition, the University System of Georgia has made COVID-19 vaccines available at 15 campuses statewide and you can locate one here: <https://www.usg.edu/vaccination>

What do I do if I have COVID-19 symptoms?

Students showing COVID-19 symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5p.m.). Please DO

NOT walk-in. For emergencies and after-hours care, see, <https://www.uhs.uga.edu/info/emergencies>.

What do I do if I test positive for COVID-19?

If you test positive for COVID-19 at any time, you are required to report it through the [DawgCheck Test Reporting Survey](#). We encourage you to stay at home if you become ill or until you have excluded COVID-19 as the cause of your symptoms. UGA adheres to current Georgia Department of Public Health (DPH) quarantine and isolation [guidance](#) and requires that it be followed. Follow the instructions provided to you when you report your positive test result in DawgCheck.

Guidelines for COVID-19 Quarantine Period (As of 8/1/21; follow DawgCheck or see DPH website for most up-to-date recommendations)

Students who are fully vaccinated do not need to quarantine upon exposure unless they have symptoms of COVID-19 themselves. All others should follow the Georgia Department of Public Health (DPH) recommendations:

Students who are not fully vaccinated and have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for 10 days. Those quarantining for 10 days must have been symptom-free throughout the monitoring period and continue self-monitoring for COVID-19 symptoms for a total of 14 days. You should report the need to quarantine on [DawgCheck](#) (<https://dawgcheck.uga.edu/>), and communicate directly with your faculty to coordinate your

coursework while in quarantine. If you need additional help, reach out to Student Care and Outreach (sco@uga.edu) for assistance.

Students, faculty and staff who have been in close contact with someone who has COVID-19 are no longer required to quarantine if they have been fully vaccinated against the disease and show no symptoms.

Well-being, Mental Health, and Student Support

If you or someone you know needs assistance, you are encouraged to contact Student Care & Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu/>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

UGA has several resources to support your well-being and mental health: <https://well-being.uga.edu/>

Counseling and Psychiatric Services (CAPS) is your go-to, on-campus resource for emotional, social and behavioral-health support: <https://caps.uga.edu/>, TAO Online Support (<https://caps.uga.edu/tao/>), 24/7 support at 706-542-2273. For crisis support: <https://healthcenter.uga.edu/emergencies/>.

The University Health Center offers FREE workshops, classes, mentoring and health coaching led by licensed clinicians or health educators: <https://healthcenter.uga.edu/bewelluga/>

Tentative Class Schedule

Any modifications to this schedule will be announced during class. Be prepared for class by reading the assigned chapter before class. Exam dates below are tentative (except for the final). Any changes will be announced well ahead of time during classes.

Week	Date	Topics
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| 1) | Aug. 24 | – No class meeting, class begins on August 31, 2021 |
| 2) | Aug. 31 | – Introduction, syllabus review, the celestial sphere |
| 3) | Sep. 7 | – More on the celestial sphere |
| 4) | Sep. 14 | – Telescopes and the telescope lab |
| 5) | Sep. 21 | – Quiz on the celestial sphere – Learning the night sky |
| 6) | Sep. 28 | – Observational session or indoor exercise |
| 7) | Oct. 5 | – Observational session or indoor exercise |
| 8) | Oct. 12 | – Observational session or indoor exercise |
| 9) | Oct. 19 | – Observational session or indoor exercise |

Monday, October 25 – withdrawal deadline

- 10) Oct. 26 - Observational session or indoor exercise
- 11) Nov. 2 – Observational session or indoor exercise
- 12) Nov. 9 - **Quiz on the night sky** - Observational session or indoor exercise
- 13) Nov. 16 - Observational session or indoor exercise
- 14) Nov. 23 - Observational session or indoor exercise
- 15) Nov. 30 – Lab final**
- 16) Dec. 7 – **No class** – Friday schedule