ASTR 1010L & 1020L

INTRODUCTION TO ASTRONOMY LAB

SPRING 2021

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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 3:30 – 5:00 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. Students who choose not to come in may be asked to complete different assignments from those who attend in-person.

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.
4) Studying the motion of the Sun, Moon, and any naked-eye planet.
5) Light pollution assessment. Includes exploration of effects of light pollution from your at-home observing spot, 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 beginning of the semester – so DRESS WARMLY and be prepared to spend a good deal of time outside in the cold weather. Because of the COVID-19 pandemic, masks must be worn while outside and all social distancing conventions must be followed. Failure to follow the TAs’ directions will be considered disruptive to the class and the student(s) will be asked to leave and will receive a 0 for the assignment in question.
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**

Given the issues raised by the ongoing COVID-19 pandemic, class will be given in hybrid mode. That is, no more than about half of the class will be allowed to attend in person on any given class day. The rest of the class will follow the lectures via Zoom. A Zoom invitation will be sent to everyone a few minutes before each class.

In-person attendance, if desired, will be based on the first letter of the last name. If your last name begins with a letter from A to M, then you may attend on those days labeled (A). If your last name begins with a letter from N to Z, then you may attend those days labeled (B). Exceptions to the above rules can be discussed with me by email. In-person attendance is not compulsory, but encouraged.

**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, April 27, from approximately 8:00-8:30pm.

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**

**Face Coverings:**

As a reminder, the University of Georgia—along with all University System of Georgia (USG) institutions—requires all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at https://drc.uga.edu/.

**DawgCheck:**

Please perform a quick symptom check each weekday on DawgCheck—on the UGA app or website—whether you feel sick or not. It will help health providers monitor the health situation on campus: https://dawgcheck.uga.edu/

**What do I do if I have symptoms?**

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

Any student with a positive COVID-19 test is **required** to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.
What do I do if I am notified that I have been exposed?

Revised Guidelines for COVID-19 Quarantine Period

Effective Jan. 4, 2021, students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for 10 days (consistent with updated Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines). Those quarantining for 10 days must have been symptom-free throughout the monitoring period. Please correspond with your instructor via email, with a cc: to Student Care & Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined.

We strongly encourage students to voluntarily take a COVID-19 test within 48 hours of the end of the 10-day quarantine period (test to be administered between days 8 and 10). Students may obtain these tests at Legion Field (https://clia.vetview.vet.uga.edu/) or at the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in the University Health Center without an appointment. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies

If the test is negative, the individual may return to campus, but MUST continue to closely monitor for any new COVID-19 symptoms through 14 days. DawgCheck is the best method for monitoring these symptoms. If new symptoms occur, the individual must not come to campus and must seek further testing/evaluation.

If the test is positive at the end of the 10-day period, the individual must begin a 10-day isolation period from the date of the test.

How do I participate in surveillance testing if I have NO symptoms?

We strongly encourage you to take advantage of the expanded surveillance testing that is being offered from January 4 – 22: up to 1,500 free tests per day at Legion Field and pop-up locations. Testing at Legion Field can be scheduled at https://clia.vetview.vet.uga.edu/. Walk-up appointments can usually be accommodated at Legion Field, and pop-up saliva testing does not require pre-registration. For planning purposes, precise sites and schedules for the pop-up clinics are published on the UHC’s website and its social media as they are secured: https://www.uhs.uga.edu/healthtopics/covid-surveillance-testing.
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.

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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1)</td>
<td>Jan. 26</td>
<td>Introduction; Celestial Coordinates (A)</td>
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<td>2)</td>
<td>Feb. 2</td>
<td>Lecture on telescope, learning to use telescopes (B)</td>
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<td>3)</td>
<td>Feb. 9</td>
<td>Indoor exercise on the celestial sphere (A)</td>
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<td>4)</td>
<td>Feb. 16</td>
<td>Learning the night sky – observational session or indoor exercise (B)</td>
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<td>5)</td>
<td>Feb. 23</td>
<td><strong>Quiz on the celestial sphere</strong> – Learning the night sky (A)</td>
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<td>6)</td>
<td>Mar. 2</td>
<td>Observational session or indoor exercise (B)</td>
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<td>7)</td>
<td>Mar. 9</td>
<td>Observational session or indoor exercise (A)</td>
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<td>8)</td>
<td>Mar. 16</td>
<td>Observational session or indoor exercise (B)</td>
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<td>9)</td>
<td>Mar. 23</td>
<td>Observational session or indoor exercise (A)</td>
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<td>10)</td>
<td>Mar. 30</td>
<td>Observational session or indoor exercise (B)</td>
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<td>11)</td>
<td>Apr. 6</td>
<td><strong>Quiz on the night sky</strong> – Observational session or indoor exercise (A)</td>
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<td>12)</td>
<td>Apr. 13</td>
<td>Observational session or indoor exercise (B)</td>
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<td>13)</td>
<td>Apr. 20</td>
<td>Observational session or indoor exercise (A)</td>
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<td>14)</td>
<td>Apr. 27</td>
<td><strong>Lab Final</strong> (B)</td>
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