

ASTR 1020: Stellar and Galactic Astronomy

Lab Syllabus

Spring 2020, 721 Langdale Hall

Lab Instructor's Name: Mary Geer Dethero

Lab Instructor's Email: dethero@astro.gsu.edu

Lab Instructor's Office: 1 Park Place, Office 709

Lab Instructor's Website: <http://www.astro.gsu.edu/~dethero/>

Course Description: This course is consisted of 10 activities and two projects which are designed for helping students understand the key concepts discussed in the lecture, ASTR 1020: Stellar and Galactic Astronomy.

Student Materials: Bring the following to class **every** lab period,

- Pencils & Eraser.

Lab Grades (130 points total):

1) Lab Activities: 10 points each. 90 points total.

- Laboratory work is to be completed in class and turned in at the end of each lab period. **Late labs, or lab work done outside of class will not be accepted.**
- Each completed lab will be scored on a scale of 0-10 points. Your **lowest lab score will be dropped.** If you miss lab for any reason, that lab will be dropped.
- Your average lab score will count as 25% of your overall ASTR 1020 grade.
- Failure to attend at least a half of the lab (6 or more) will automatically result in an F for the lecture course because this is a lab science and lab attendance is required. Only failure of attendance will result in an F for the lecture, all other scenarios regarding lab grades will factor into your lecture grade normally

2) Term Project: 20 points. You can choose any topic related to the **ASTR 1020** course (Stellar and Galactic Astronomy) for your project. The type of project can vary by your lab instructor's discretion. Projects are presented at the end of the semester.

3) Visiting an Observatory: 10 points. You are expected to submit a report after attending one of the On-Campus Observations, any public observatory, or completion of "Exploring a Research-Grade Telescope."

4) Lab Evaluation: 10 points. You will complete the lab evaluation in the last day of the lab. Attendance to this lab is mandatory.

Attendance: You must attend the lab section for which they have enrolled **every week.** You are not allowed to attend another section to make up a missed lab.

Tardiness: Arriving late to lab will result in a deduction on that day's lab in an amount decided by your lab instructor. If you arrive more than 30 minutes late, you will not be allowed to complete that day's lab and will receive a 0 for that lab.

Honesty Policy: Students are expected to follow the honesty policies of the university. Any work that does not represent your own efforts will receive a score of zero. When group work is done, it is expected that each student in the group will reply to questions using their own words. **Do not copy other student's lab work or observation report.**

Lab Website: More information about labs, observing sessions, teaching schedules, extras can be found at <http://www.astro.gsu.edu/lab>

Tentative Weekly Schedule

Dates	Description
Jan 13 - 17	Organization Day. NO LABS MEET!
Jan 20 - 24	MLK Day Week. NO LABS MEET!
Jan 27 - 31	Lab 11: Rotation of the Sun Final reports: Term project: Project Presentation (20 pts) Visiting an Observatory (10 pts) Both are required and cannot be dropped.
Feb 3 - 7	Lab 10: Spectroscopy and Atomic Structure
Feb 10 - 14	<i>Handout:</i> Classification of Stellar Spectra
Feb 17 - 21	Lab 12: Eclipsing and Spectroscopic Binary Stars. Project outline due (4 points towards your project grade)
Feb 24 - 28	<i>Handout:</i> Photometry of the Pleiades
Mar 2 - 6	Lab 13: Ages and Distances of Star Clusters
Mar 9 - 13	Lab 14: The Period-Luminosity Relationship
Mar 16 - 20	Spring Break. NO LABS MEET!
Mar 23-27	<i>Handout:</i> Galaxy Classification
Mar 30 - Apr 3	<i>Handout:</i> The Tully-Fisher Relation
Apr 6 - 10	Lab 15: Hubble's Law
Apr 13 - 17	Term project due: Project Presentation. Attendance is required .
Apr 20 - 24	Lab Evaluation. Observatory report due. Attendance is required . To receive credit for this lab, you must turn in the completed and signed page from Observatory report in your lab manual. Your lab instructor will announce, in lab, evening observations to be held on campus to complete this requirement, OR you can attend any public night at a local observatory such as Fernbank Science Center , or Hard Labor Creek Observatory .

If you encounter problems that your lab instructor cannot handle, please contact your lecture class instructor.