

Syllabus

ASTR 511 - Galactic Astronomy

Cross-listed as ASTR 497C

Instructor: [James Davenport](#) (Jim)

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Office #: [B315](#)

Class coordinates: Tuesdays & Thursdays, 2:00-3:20, PAB305

Lectures will be streamed via Zoom, link shared on Slack ([#astr511-w23](#))

Course Goals

The title of this course is written as: “Galactic Astronomy”, “Galactic Structure” or sometimes simply as “Galaxies”. This is an impossibly broad topic area to cover in 10 weeks. If there are questions or topics you would *like* us to focus more on, please let me know!

Thanks to the ongoing Gaia mission (and other surveys, as we’ll see!) this is a new golden age for studying the Milky Way, and we will therefore focus heavily on the contents, history, and dynamics of our own galaxy. We will also discuss the observation and study of other nearby galaxies.

The assignments are heavily focused on coding and data analysis, with the goal of exposing students to modern and relevant types of astronomy data and models.

Code of Conduct

We all agree to abide by the relevant [codes of conduct](#) for UW, including those regarding academic misconduct and personal behavior. All cases of suspected academic misconduct will be reported to the Dean’s office. Absolutely no harassing or disruptive behavior will be tolerated, either in-person or online. If you experience anything untoward during the course, by any classmate or the instruction team, please report it promptly to the professor or the Astronomy Department’s academic coordinator.

Covid-19 Considerations

We are still likely to experience disruption from the ongoing global pandemic, especially following the winter travel season *and* the AAS meeting. You or people who depend on you may get sick. Your instructors or their dependents may get sick. We shall all show grace and compassion wherever possible. Please be honest and considerate about where your comfort level is, and I will do the same. Masking in class is encouraged, and we will enforce any relevant UW and State guidelines for pandemic activities.

Lectures will be streamed and recorded via Zoom. Students are welcome to join online for any reason. If you are able to join in-person, I request that you do (so I don’t get lonely!)

If you are feeling unwell please do not come to class!

Course Evaluation

Homeworks: 75% Final Project: 25%

The majority of your grade will come from homework assignments. These will be coding and data analysis focused, and hopefully mirror actual research you might do.

This is a graduate level course. All assignments will come with a “due date”, which is more of a suggestion really... I need everything turned in by Tuesday of finals week so I can grade them!

Group work is encouraged! The homework may be challenging to many of you, and in real academic research we rarely work alone. Therefore you are encouraged to form homework alliances (even one class-wide super-team if you wish), and work on assignments together. *However, A) you must include written acknowledgment of your collaborators with each assignment* (hint: make sure partners are acknowledging each other, or there will be questions about the nature of the “collaboration”), and **B) every student must turn in unique homework** with their own code/results/answers/text.

In general: solve the problems together, do the write-ups yourself!

There is no extra credit available.

There is no final exam. The final project will consist of 1) writing a review paper, and 2) giving a short conference-style talk. See the [Final Project](#) assignment for detailed instructions and requirements.

Astronomy course “mastery” is satisfied by receiving a 3.0 grade in the course.