

ASTR 8200: Galactic Structure

Spring 2026 ★ Tue/Thu 12:45 PM – 2:00 PM ★ Room 628, 25 Park Place

Instructor: Professor Todd Henry
Room 618, 25 Park Place
email: thenry88@gsu.edu
research: nearby stars, stellar masses, exoplanets, astrobiology

Office Hours: by appointment

Prerequisite: ASTR 6000 or equivalent

Textbook: current readings in the astronomical literature

Course Objectives: An overview of the structure, kinematics, and dynamics of the Milky Way Galaxy and its various components.

Grades (approximate):

Research Proposal	50%
Presentation	20%
Quizzes	20%
In-Class Participation	10%

How to Do Well in This Class:

The following are highly recommended: (1) showing up to class on time, (2) being an active participant during class, (3) being prepared for quizzes based on readings, and (4) getting an early start on the primary component of the course, the Research Proposal. Each student is expected to do her/his/their own work. Certainly, discussions of more difficult problems with other students are acceptable (and encouraged), but work that is turned in must be your own. Under no circumstances will duplication on assignments or plagiarism in the Research Proposal be tolerated. No AI of any kind may be used for the written Research Proposal, although AI may be used for computational work for which results are incorporated into the proposal.

Dates to Remember:

MAR 13 — Last Day to Withdrawal

APR 14 — Student Presentations I (Tuesday)

APR 16 — Student Presentations II (Thursday)

APR 23 — Research Proposal due at 11:59pm (Thursday)

Lecture Topics: The following is an approximate list of topics for the course. Changes will likely occur, but this is the map for our quest through the Milky Way ...

Date	Topic
JAN 13	Milky Way History I
JAN 15	Milky Way History II
JAN 20	Milky Way Overview
JAN 22	Gaia
JAN 27	Writing Proposals
JAN 29	Proposal Brainstorm
FEB 03	Variable Stars
FEB 05	Stellar Populations I
FEB 10	Stellar Populations II
FEB 12	Clusters I
FEB 17	Clusters II
FEB 19	Milky Way Neighborhood
FEB 24	Disk Overview
FEB 26	Rotation Curve
MAR 03	Arms I
MAR 05	Arms II
MAR 10	Galactic Center
MAR 12	Bulge + Bar
MAR 17	!!!! SPRING BREAK !!!!!
MAR 19	!!!! SPRING BREAK !!!!!
MAR 24	Halo — Globular Clusters I
MAR 26	Halo — Globular Clusters II
MAR 31	Halo — Stellar Streams
APR 02	<i>catch-up/guest</i>
APR 07	<i>catch-up/guest</i>
APR 09	Milky Way Structure Wrapup
APR 14	Presentations Marathon I
APR 16	Presentations Marathon II
APR 21	<i>proposal work</i>
APR 23	PROPOSALS DUE by 11:59pm