

## Welcome to Astr507 Stellar Archaeology (Sp2024)

### Classes are in person.

Meetings are Tuesdays 1-4 pm in ELL038

### Description:

In this course we will discuss the field of Galactic Archaeology in the Milky Way with a focus on stellar analyses and recent developments in this field. The course starts with lectures on background material, methods, and open questions in Milky Way and Local Group research. We will discuss how studying stars helps us to understand galaxy formation and evolution in general and the formation and evolution of the Milky Way in particular. The lectures will include guest presentations on recent research in this field.

### Grading Scheme:

Small assignments (6-8)	70% (5-10% each)
Class participation	10%
Final presentation (written + oral)	20%

### Learning Outcomes:

At the end of the course, students will be able to:

1. describe how studying stars helps us to understand galaxy formation and evolution in general, in the Milky Way, and in the Local Group.
2. describe how positions, distances, velocities, metallicities, chemical abundances, and ages are measured for different stellar populations, and discuss limitations in the methods.
3. discuss the role of simulations and models in furthering our understanding of the Milky Way and Local Group.
4. summarise a picture of the Milky Way and Local Group, the main components, and its formation history in broad terms.
5. critically discuss and assess recent research results in the field of Galactic Archaeology.