Course Subject, Number and Title:
Astronomy 730: Galaxies
Credits: 2

Course URL: user.astro.wisc.edu/~mab/education/astro730/
Handouts, lectures and homework and readings will be posted.

Course Designations and Attributes
Level - Graduate
Grad 50% - Counts toward 50% graduate coursework requirement

Meeting Time and Location: MW 1:20-12:10 PM, 3517 Sterling Hall

Instructional Mode: Face-to-face.

How Credit Hours are met by the Course: Traditional Carnegie Definition – One hour (i.e. 50 minutes) of classroom or direct faculty/instructor instruction and a minimum of two hours of out of class student work each week *per credit* over approximately 15 weeks, or an equivalent amount of engagement over a different number of weeks. This is the status quo and represents the traditional college credit format used for decades. This class has regular classroom meetings and assigns reading, writing, problems and research projects.

INSTRUCTORS AND TEACHING ASSISTANTS

Instructor Title and Name: Professor Matthew Bershady

Instructor Availability: Office hours shall be on Wednesdays by appointment.

Instructor Email / Preferred Contact: mab@astro.wisc.edu

Teaching Assistant: N/A
TA Office Hours: N/A
TA Email/Preferred Contact: N/A

OFFICIAL COURSE DESCRIPTION

Course Description: Stellar content and dynamics of the Milky Way and other galaxies; galaxy types, evolution of normal galaxies, active nuclei, quasars, radio galaxies.

Pre-Requisites: Astronomy 700 or instructor consent

LEARNING OUTCOMES

Course Learning Outcomes: The course outline attached to the course web page details the topics and concepts the student will be expected to master by the end of the course. The student will acquire skills associated with defining and executing a small, well-defined astronomical research project.

GRADING

- The approximate weights will be given to your final grade: Class participation – 20% Assignments – 20% Project – 60%

DISCUSSION SESSIONS: N/A

LABORATORY SESSIONS: N/A

REQUIRED TEXTBOOK, SOFTWARE & OTHER COURSE MATERIALS

- **Textbooks**: See web site.
- **Supplemental Reading:** We will be using a number of additional sources throughout the semester from primary professional (peer-reviewed) journals, including *ApJ, AJ, A&A,* and *MNRAS*, as well as other journals including *Science* and *Nature*. Links to these journals and database servers are on the course web page. You will be reading and commenting on articles in class.
- **Software***:* You will need access to a computer with astronomical imaging and spectroscopy software which may include IRAF, python (and suitable libraries) or IDL.

PROJECT & OTHER MAJOR GRADED WORK

- **Project:** A large project is due at the end of the semester. Project definition and milestones are given in the on-line course outline and introduction notes.
- **Classroom assignments:** There will be a mix of problems and a few puzzlers given. Your solutions will be evaluated in class via presentations.

RULES, RIGHTS & RESPONSIBILITIES

- See the Guide's Rules, Rights and Responsibilities

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: "The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA." http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

DIVERSITY & INCLUSION

Institutional statement on diversity: "Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world." https://diversity.wisc.edu/