

ASTRONOMY 1020 – SPRING 2017
STELLAR AND GALACTIC ASTRONOMY

Instructor: Ryan Norris

Office Location: Room 605c, 25 Park Place (it's a cubicle)

Office Hours: Mondays and Wednesdays, 3:30 – 5:00 PM or by appointment.

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Course description: This class is the second part of a two-semester course on astronomy, and covers the physical properties of stars, their formation and evolution, as well as our galaxy and others, and the origin and evolution of the Universe.

Objectives: The three main objectives of this course are: to understand the scientific method and its application to astronomical research; to examine the techniques and methods used in astronomy; and to understand better our place in the Universe.

Prerequisites: None, but proficiency in high school algebra is required.

Class Location: Langdale 300

Class Times: Mondays and Wednesdays 5:30 – 6:45 PM

Lectures: The lectures will consist of slides and audiovisual presentations. After each lecture, the corresponding slides will be posted on iCollege (as soon as possible...might take some time in first weeks of semester). To encourage attendance, we will have regular but unannounced “Pop Quizzes” on topics discussed in class, which will count as extra credit only.

Lecture textbook: Having a textbook is not strictly mandatory for this class, as all the Quiz and Final Exam questions will be from slide material. However it is still recommended you work with one. As most of you probably have already the book from your previous ASTR 1010 class, you may keep it, e.g. *The Cosmic Perspective*, 6th or 7th or 8th edition; Bennett, Donahue, Schneider, and Voit (Pearson/Addison Wesley). If you do not already have a book but want to pick one, you should pick *21st Century Astronomy*, 5th edition by Kay, Palen and Blumental (W. W. Norton & Company) instead. You will not need the extra online material provided by publishers to succeed in this course.

Laboratory: You are required to attend the lab section for which you have registered. Attendance is required in each laboratory session. **To pass the course, you must pass the lab. Failure to attend at least half of the lab classes will result in an F not only in lab but in the entire course!** Labs will start the week of January 23rd, and will take place in Kell Hall 516. The laboratory textbook is *Activities in Astronomy (2013 Edition)* by J.W. Wilson. Please review the lab syllabus at <http://www.astro.gsu.edu/lab> to check if additional material is needed. Your lab instructor will set specific classroom policies and give you the printed syllabus and a lab schedule during your first lab meeting. See her/him for any questions or problems you have. If they cannot resolve your problem, contact the lab coordinator, Dr. John Wilson (713 One Park Place South; 404-413-6035).

Exams: There will be four Quizzes and one Final Exam. Quizzes always cover the last few chapters discussed in class. By contrast, the Final Exam will be comprehensive (will cover all chapters) and will count double. If your average quiz grade is B or lower, the Final Exam is mandatory. If your average quiz grade is B+ or better, you may elect not to take the Final Exam. In all cases, once you take the Final Exam the lowest of your Quiz grades will be dropped. If you are not present for one of the Quizzes or at the Final Exam and do not present any valid justification, you will receive a zero. There will not be any make-up tests, except for official GSU permitted absences (official GSU events; medical emergencies) and only with a written Excuse-for-Absence that can be verified.

Homeworks: Homeworks consist in topics/questions designed to cover material which may not be in the slides. The questions are relatively easy but may require investigation from your part (e.g. online search). Homework will be assigned and due on the quiz days. Collaboration is encouraged between students but plagiarism is not, so the answers you give back for homeworks have to be unique. All homework scores will count equally and the

lowest homework score will always be dropped.

Grading: Your course grade will be determined as follows:

Lab:	25%	A+:	> 97%	A:	93-96%	A-:	90-92%
Homework:	20%	B+:	87-89%	B:	83-86%	B-:	80-82%
Quiz + Exam average:	55%	C+:	77-79%	C:	73-76%	C-:	70-72%
		D:	60-69%	F:	0-59%		

Tentative Class Schedule

Dates	Lecture Topics	Homework schedule
Jan 9, 11	The Sun	
Jan 18, 23, 25	Properties of Stars	
Jan 30	Quiz 1	Homework 1 assigned
Feb 1, 6	Stellar Birth	
Feb 8, 13, 15	Stellar Evolution	
Feb 20, 22	Stellar Death	
Feb 27	Quiz 2	Homework 1 due, Homework 2 assigned
Mar 1, 6	Our galaxy: the Milky Way	
Mar 8	Galaxies & Cosmology	
Mar 20, 22	Galaxy Evolution and Quasars	
Mar 27	Quiz 3	Homework 2 due, Homework 3 assigned
Mar 29	Dark Matter and Dark Energy	
Apr 3, 5	The Big Bang	
Apr 10, 12	Extraterrestrial life	
Apr 17	Quiz 4	Homework 3 due
Apr 19	Analyzing documentaries and news sources (bonus points!)	
Apr 24	Preparation to the Final Exam	
May 1 (Monday)	Final exam (comprehensive) 04:15 – 6:45	

Disclaimers:

This syllabus provides a general plan for the course; deviations may be necessary.

All students should be aware of the University's Policy on Academic Honesty in the Student Handbook and the student Code of Conduct (<http://codeofconduct.gsu.edu/>). This course will adhere to that policy.

Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance of the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State University. Upon completing the course, please take the time to fill out the online course evaluation.