Astronomy 3019: Astronomy & Astrophysics 2

Brief Course Description

This is an introductory course in Astronomy and Astrophysics designed for students majoring in astronomy, physics, math, or engineering. This course pairs with AST 3018, discussing about half of the major topics in astronomy. While the other course focuses on stellar astrophysics and the interstellar medium, this course primarily focuses on planetary science, relativistic phenomena, Galactic and extragalactic astrophysics, and cosmology.

Lecture Times and Locations:

Lecture Location: CSE E121
Lecture Times: MWFs, 3:00 PM – 3:50 PM (Period 8)

Staff:

Instructor: Prof. Paul Torrey
Office: Bryant Space Sciences Center, Room 310
Office Hours: Monday and Wednesday at 4:00 PM – 5:00 PM, and by appointment
Phone: (352) 294–1846
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Course Website: Canvas/E-Learning

*** **Primary TA:** Amy Gottlieb
Office: Bryant Space Sciences Center, Room 401
Office Hours: Thursday at 2:00 PM - 3:00 PM — Room 217
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Teaching Assistant: Billy Schap
Office: Bryant Space Sciences Center, Room 319
Office Hours: Tuesday at 2:00 PM - 3:00 PM — Room 217
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Textbook:

The required text for this course is *Foundations of Astrophysics*, by Ryden, Peterson (ISBN 978-0-321-59558-4). Other references may be used for supplemental information throughout the course as distributed through the course website.

Attendance & Class Participation:

Attendance will be taken in class at random times through occasional, random sign-in sheets or in-class group work, the latter also giving you an opportunity to review the material. The

number and frequency of these is at the discretion of the instructor and 1-2 (depending on the number given during the semester) will be dropped or counted as extra credit for your final grade. Given this lenient policy, please do not contact the instructor about missed classes unless you have a serious ongoing problem or you have excused absences consistent with university policy: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/. You may need to make calculations, so you should always bring a working scientific calculator to class in addition to your usual materials for taking notes.

Disruptive or rude behavior toward any member of the course including the instructor, TAs, classmates, or university staff will not be tolerated. Examples of prohibited behavior include (but are not limited to) excessive talking during lecture that serves to interrupt and ridiculing comments toward others. First offenses will be subject to a written warning from the instructor. Subsequent offenses may result in reduction of a students Class Participation grade.

Homework:

Five problem sets will be assigned as homework throughout the semester. You must submit your completed written homework assignment at the beginning of class on the day that it is due (or it is considered late). Late homework is penalized 20% per day. Working in groups is allowed and encouraged. However, while you are permitted to discuss the problem/solution with your peers any submitted homework must be your own work (i.e. you are strictly prohibited from simply coping another person's work). Additionally, you must write the names of the people you worked with on the submitted homework. Each student is required to show all work and hand in separate homework solutions. No emailed homework.

Exams:

There will be two exams given over the course of the semester: one midterm exam and a final exam. The final exam will be focused on the material after the midterm (generally not comprehensive) but may include concepts from before the midterm; both exams will include material from lecture and the book. The Final Exam is scheduled for:

April 29th, 2020 at 7:30 AM - 9:30 AM

If you cannot make this exam time, you must let the instructor know immediately. Please bring a working non-programmable scientific calculator, at least two pencils (with erasers), and your ID with you to both exams.

Course Grade Summary:

Each of the components of class described above will be assigned the following weights to determine your final score:

- Homework: 35%
- Attendance/Class Participation: 15%

- Midterm Exam: 20%
- Final Exam: 30%

UF grade policies may be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

The strictest grading policy I will adhere to is:

Letter	**%Points**	**GPA**	**Letter**	**%Points**	**GPA**	**Letter**	**%Points**	**GPA**
A	93-100	4.0	B-	80-82	2.67	D+	67-69	1.33
A-	90-92	3.67	C+	77-79	2.333	D	63-66	1.0
B+	87-89	3.33	C	73-76	2.0	D-	60-62	0.67
B+	83-86	3.0	C-	70-72	1.67	E	0-60	0

Honor Code:

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.

Evaluations:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

Students are strongly encouraged to give feedback at any point through the semester. Let's make this an instructive, helpful, positive class for everyone.

Disabilities:

If you require any special accommodations due to a disability, please let the instructor (Prof. Torrey) know right away. Students with disabilities requesting accommodations should

additionally register with the Disability Resource Center (352-392-8565), www.dso.ufl.edu/drc by providing appropriate documentation. Once registered, students will receive an accommodation letter which should be presented to the instructor when requesting accommodation.

Learning Environment and Day-to-Day interactions:

We will all be working closely together throughout the semester, and I expect that all students will contribute to a respectful, welcoming, and inclusive environment. This includes showing respect for all questions asked by members of the class.

Tentative Class Schedule:

Week	**Week of**	**Topic**	**Text & Chapters**
1	1/6	Introduction to the Course; Overview of the Solar System	Chapter 8
2	1/13	Solar System; The Earth + Moon system	Chapter 8/9
		1/20 — No Class — University Holiday	
3	1/20	The Earth + Moon system	Chapter 9
4	1/27	The Planets	Chapter 10
5	2/3	Small Bodies in the Solar System	Chapter 11
6	2/10	The Solar System in Perspective	Chapter 12
7	2/17	Solar System + Relativity	Chapter 12, Relativity
8	2/24	**Midterm**	Midterm; Relativity
		3/2 - 3/6 — No Class — Spring Break	
9	3/9	Stellar Remnants	Chapter 18
10	3/16	Our Galaxy	Chapter 19
11	3/23	Galaxies	Chapter 20
12	3/30	Active Galaxies	Chapter 21
13	4/6	Clusters and Superclusters	Chapter 22
14	4/13	Cosmology	Chapter 23
15	4/20	History of the Universe	Chapter 24
		4/22 — Last Day of Class	
		Final Exam — 4/29 at 7:30 AM - 9:30 AM	