

Physics 102 – Astronomy of Planets Spring 2003

Professor: Phone Office E-mail
Dr. Julie A. Rathbun x2927 Duke 111 Julie_Rathbun@redlands.edu
Office Hours: MWF 10:30-11:30 am, drop-in, or by appointment

Class meeting:

Section 1: MWF 1:00-2:20 Section 2: MWF 2:30-3:50 Duke 100
Lab: W 6:30-9:20 pm instructor: Dr. Tyler E. Nordgren Duke 102

Texts:

“Pale Blue Dot” by Carl Sagan
“The Solar System: The Cosmic Perspective (2nd ed.)” by Bennett, et al.
Recommended: “Cosmos” by Carl Sagan

Content: The course will cover selected topics in planetary science. This semester we will discuss impact hazards, manned space exploration, unmanned space exploration, and planetary geology, among other topics.

Prerequisite: You must have a good working knowledge of high school math. Algebra, trigonometry, and geometry will be used in this class. If you had lots of trouble with math in high school (or college) then this course is not for you.

Goals: 1. To gain an appreciation of discovery in the context of other worlds.
2. To understand that science is a method, to take part in that method, and to know how to apply that method to problems.
3. To discuss recent findings of planetary science and see where NASA is spending your tax money.

Class Web Site: http://newton.uor.edu/FacultyFolder/julie_rathbun/phys102/

Organization: This is not a lecture class. Most class periods will be spent discussing the reading assignments. The reading is important and must be done on time. Some of the reading assignments are available only online or in the library, please plan for this.

Evening Sessions: The three-hour evening block (Wednesdays 6:30-9:20) isn't really a laboratory. Instead, this time will be used primarily for movies, exams, and observing. Movies will be shown in the large lecture hall (Duke 102). Many of these are long and will last the entire 2 hour and 50 minute period. During each movie you will be given a question sheet that must be answered. The outdoor observing sessions will occur either on campus or at our mountain observing site. There are no makeups for the observing sessions.

Assignments: At almost every class some type of assignment will be collected. These assignments include homework and quizzes, laboratories and exercises, and projects. Assignments will be primarily based on the assigned reading. All assignments will be graded either numerically or with a letter grade (no +/- for the letter grades).

Homework & Quizzes: All homework is due at the beginning of class and will not be accepted late. All quizzes will be given at the beginning of class and late students will not be allowed to take the quiz. All homework may be sent to me as e-mail, either as plain text, Microsoft Word, html, or PDF. No other formats will be accepted. The lowest 2 grades in this category will be dropped.

You are encouraged to work together with your classmates on the homework provided each person comes to an understanding of the questions and problems and submits a separate set of solutions. Copying another student's homework or quiz or allowing your homework or quiz to be copied is cheating and neither will be taken lightly. If two assignments look similar to me, this is considered copying. For the first offense, neither student's homework will get credit.

Laboratories & Exercises: During many classes assignments will be completed during class. Some assignments will be laboratory activities (but performed during normal class time) and others will be exercises such as answering questions about a movie you are watching. The lowest single grade in this category will be dropped.

Projects: Certain longer, very important assignments are considered projects. None of these will be dropped. All supervised observing activities are considered part of the project grade.

Exams: The two midterm exams will be given during lab time and are not cumulative. They will be based on material covered in class and in assignments and may take the entire lab time. The final is scheduled according to the laboratory meeting time and is cumulative. There will be no make-ups for exams.

Final Exam: The final exam will be Wednesday, April 23rd at 6:00 pm. Note that this is the time associated with lab, not lecture. This time cannot be changed.

Absences & participation: Attendance is required and will count toward your final grade. This is because the course is basically a discussion course and you cannot participate in discussion if you are not here. Points will be awarded for attendance (1 point every time you are on-time to class) and class participation (1 to 4 points per class period); points will be subtracted for lack of citizenship. Citizenship includes alertness in class, respect of other classmates and the instructor, following class rules, and cleanliness in lab. Note that in this scheme, full attendance with no participation will get you a failing grade, you must **both** attend class and participate in discussion. If you will be absent from class for a valid reason (such as university approved events), you must inform me in advance in order to have any opportunity to make up missed work. Make-up work will usually involve writing papers and/or oral exams on the missed topics. No make-ups will be given for missed quizzes, homeworks, exercises, and labs since the lowest grade for each of these will be dropped. If you are shy about class participation, I would still like to work with you to hear from you during class. However, if you speak with me I may be willing to give an extra-credit paper to make up for lack of participation (only if your attendance is very good).

No late assignments: All assignments are due at the beginning of class on the due date. Any assignment can be turned in early. Homework assignments are not accepted late (even by a minute). I will, however, drop the lowest grades. Also, quizzes will be given at the beginning of class; if you come in late you will not be allowed to take the quiz.

Class Rules: You are required to act responsibly in this class. A non-inclusive list of rules you must follow is included on the class web page. Ignorance of these rules will not be tolerated.

Schedule: The schedule of class topics, reading assignments, homework assignments and paper assignments is available on the class web page. I will try to mention the assignments in class, but if I forget you are still responsible as they are on the web page.

Technology: This class will involve extensive use of computers. I require all students to have an e-mail address (the University will give you one for free) since some assignments will be required to be turned in by e-mail (and most are accepted that way) or on the class discussion board. I will occasionally send e-mail messages to the class. Also, some of the labs will involve computers. Finally, many of the reading assignments are available over the internet, a few are available only through the internet. If you are not comfortable with computers, I am willing to assist you in becoming so, please stop by.

Grading:

Final grades will be based on the following:

Class Participation, attendance, citizenship	20%
Homework and quizzes	20%
Laboratories and in-class exercises	20%
Projects	10%
2 midterm exams	15%
Final Exam	15%

What letter grades mean (summarized from p.24 in the University catalog) :

A: Outstanding – student has a complete grasp of the material, all work is insightful and shows evidence of original thought

B: Excellent. – student has a thorough grasp of the material and does an excellent job on assignments

C: Acceptable – student does most of the work required, with reasonable competence

D: Poor

F: Unsatisfactory

This syllabus is subject to change. The most recent version will be kept on the class web page.