The Solar System CRN 31637 April 2, 2012

This first term of introductory astronomy covers the history of astronomy, the origin of the solar system, extra-solar planets, and what is known about the Sun, Earth, Moon, and other planets. This course requires minimal mathematics – some arithmetic and a little algebra.

Classes: Mondays, Wednesdays, and Fridays 11:00 to 11:50 in Room 207 Chapman Hall.

Instructor: Roger Haydock (haydock@uoregon.edu), 172 Willemette Hall, 346-5221. Office hours – Tuesdays 08:00 to 09:00, Thursdays 08:00 to 09:00, or by appointment.


Alternative: Instead of buying the text, students may choose to attend all classes and take thorough notes. Approval from the instructor is required for this option.

Homework: Prepare for each class by reading the assigned material in the text and answering the appropriate questions from the self-tests. After class reread the material and write out the answers to the Homework questions on that material, which are linked to the Course Plan below on the on-line version of this Course Information. Be sure to use complete sentences as well as diagrams and formulas in answering the homework questions. You should be spending about 6 hours per week, outside of class, studying the text, answering questions, and solving problems. This homework will not be collected, but the examinations will consist of questions from the homework.

Midterms: Friday, April 20, and Friday, May 11, there will be midterms in class. Each midterm will consist of ten questions similar to Homework questions. The purpose of the midterms is to tell you how you are progressing with the course. Only your midterms which are better than your final examination will be averaged into your final grade.

Final Exam: Wednesday, 13 June, at 10:15 in Room 207 Chapman Hall is required for a pass or a grade. This examination will consist of twenty questions similar to Homework questions.

Project: Because this is a four credit course meeting three hours per week, each student is required to plan, conduct and report on a quantitative determination of some astronomical quantity relevant to the course. Examples of the kind of observations appropriate for this project are measurement of positions at various times for the sun, noon, satellites, or planets. Other kinds of observations are possible, but should be discussed in advance with the Instructor. Examples of quantities to be determined in these projects are rotational tilt, orbital periods, or inclination of the orbits of the Earth, Moon, or other planets, satellites, and so forth. Again, other ideas are encouraged but should be discussed in advance with the Instructor. Data obtained other than by direct observation, for example data downloaded from the Internet, is not acceptable.

The grade for each project will be based on a written report which is due at the final exam. The report is limited to 1,000 words, but may contain sketches, graphs, photographs, equations, and so forth. Reports should be written so as to be understandable to other members of the class and should include an introduction to the project, a description of how the observations were made, the data obtained, and a discussion of whether or not the results agree with accepted values of the quantity being determined.

The total effort on the project should be about 3 hours per week, or a total of 30 hours for the course.

Grading: The Final grade is 75% Exams + 25% Project. The exam grade is the average (weighting individual questions equally) of the Final Exam and any Midterms which were better than the Final. The principle for grading exams is that demonstration of understanding of 2/3 or more of the material is at least