Instructional Philosophy of the Course

The overarching goals of this course are for you to understand the nature of science through engagement with planetary science and astronomy and to develop a lifelong interest in our solar system and the universe beyond. To meet these goals, I have designed a sequence of learning tasks and assessment procedures.

Course information

This is an online course that explores our Solar System.

Course Technologies and Equipment

We will use Laulima, the university's course support system, and WebAssign course support. WebAssign provides access to online materials including the course textbook, uploaded audio, video and PowerPoint files, announcements, and additional reading. Reading assignments, online homework and exams will also be managed through WebAssign. A WebAssign link is be provided in Laulima. Please follow the WebAssign link instructions on how to purchase WebAssign and Textbook access.

Textbook

Foundations of Astronomy by Michael A. Seeds and Dana E. Backman, 14th edition, Cengage 2019. The ISBN of the softbound edition is 978-1-377-39991-0. The book will be available through WebAssign, see above.

Instructor

Peter Englert, Hawaii Institute of Geophysics and Planetology
Contact information: office - POST 508 B, penglert@hawaii.edu; phone: 808-384-3500

Office hours

If you have questions or concerns email me at the address provided or through the communication tools of WebAssign and I always respond as quickly as I can. I will "officially" be able to answer emails 3days/week, Tuesday through Thursday from 7am - 11pm. I will also respond to your messages throughout the remainder of the week and on weekends. You can request office hours through Zoom by appointment as needed. Please ask for a Zoom meeting via email.

Learning Objectives/Course Objectives

University-Level Learning Objectives

The design and structure of the course delivers learning outcomes aligned with the University of Hawaii Institutional Learning Objectives for Undergraduate Students. The course:

- Gives in depth experience in the conduct of scientific inquiry and research;
- Engages students in continuous practice with critical and creative thinking;
- Is structured around procedures of conducting research in Earth and planetary science;
- Engages students through intensive interaction with instructors and peers by means of classroom activities and projects;
- Directly cultivates the habits of scholarly inquiry and intellectual curiosity, including inquiry across disciplines.

Department-Level Learning Objectives

- Students can explain the relevance of Voyage through the Solar System outcomes to human needs;
- Students can apply knowledge of relevant research methods, and the supporting disciplines to solve real world problems;
- Students use the scientific method to define, critically analyze, and solve a problem in solar system science;
- Students can report solar system knowledge in both oral presentations and written reports;
- Students can evaluate, interpret, and summarize the basic principles of solar system science, and their context in relationship to other core sciences, to explain complex phenomena.

Course-Level Student Learning Objectives:

1. Explain how the Scientific Method works, apply it to evaluate good vs. bad science and to analyze and assess data and draw conclusions about the world;
2. Develop a better understanding and appreciation for the world we live in, extending beyond our home planet Earth; and
3. Demonstrate improved communication skills that will serve you throughout life by collaborating in writing, presenting & displaying data to communicate your knowledge, analysis, synthesis of data and ideas and your assessment of what it means.

Course Evaluation and Assessment

For this course I will use the following activities for grading:

- **Online homework:** Assigned weekly through WebAssign, following 'lectures' and major reading assignments.
- **'Regular' homework**: Up to four homework assignments that require essay style responses to questions related to 'lectures', regular or special reading assignments. These assignments will be posted online on Laulima.
- **Exams:** Two midterms scheduled throughout the semester, and one final examination, scheduled during finals week.

Types of Assignments (through WebAssign)

Readings (weekly, specified textbook chapters and other materials posted)
Audio PowerPoint presentations (weekly)
Online homework assignments (weekly)
*Regular homework assignments (up to four in total, posted on **Laulima**)*

Reading assignment rules
There will be weekly reading assignments. They contain one online problem that you should solve. The total of all reading assignment problems will count as extra points at the value of one online homework.

Online homework rules
Online homework assigned through WebAssign will consist of different question categories. Please complete your online homework on time. If you miss a due date, I will extend the due date – no need to give a reason. If you miss the second due date for a reason, write to me. Online homework assignments will generally allow you multiple attempts (5-8) to solve a problem. The correct solution can be found in 'lecture' materials and textbook reading assignments. You are allowed to consult with others to complete your online homework. You must submit your own answers. You must actively submit your homework before the due date.

Regular homework rules
Regular homework will require short written text answers, to be completed on Laulima.

Exam rules
Exams (midterms and finals) will be online. They will be based on your online homework assignments, 'lecture' materials, and textbook reading assignments. Exams are cumulative. An exam will always cover materials from all preceding instruction. The number of exam questions increases from midterm 1 to midterm 2 to final exam.

Please complete your online exams on time. If you miss a midterm a due date, I will make the exam available with an extended second due date. This does not hold for the final exam which you must complete during finals week.

- You will have two attempts to answer each exam question.
- Exams will be available for completion for about a week. An exam time limit is not set.
- You may utilize all resources available to you to answer exam questions.
- You must actively submit your exams before the deadlines.

Contribution to grade
Each of the course activities will contribute to your course grade as follows:

- Online homework – 15%
- Regular homework – 10%
- Midterm 1 – 20%
- Midterm 2 – 25%
- Final – 30%

Note: Plagiarism and/or cheating will result with an F for the test or assignment.
Grading Scale: A=90-100%, B=80-89.99%, C=70-79.99%, D=60-69.99%, F=Less than 60%.
Plus/minus grading conventions of the University of Hawaii apply.

Tips for success
Lectures: Follow your reading assignments and associated Audio PowerPoint lecture materials, as they are the key to your success in this course.
Homework: Do *each* homework assignment and submit each one on time. Homework assignments help you learn the material and are a great study guide for the exams.
Exams: Do not miss an exam. They provide the most points towards your grade.
Questions: Questions are welcome and encouraged. Your questions are likely to help other students as well, so you should always ask questions about course material.
Read: Your reading assignment will reinforce lecture materials, so complete each assignment. Read each week to keep up.
Class participation: Be sure to always read class-related emails and online announcements to enhance your participation and stay current.

Other Resources

Disability Access:

The Earth Science Department will make every effort to assist those with disability and related access needs. For confidential services, please contact the Office for Students with Disabilities (known as "Kokua") located in the Queen Lili'uokalani Center for Student Services (Room 013): 956-7511, kokua@hawaii.edu, www.hawaii.edu/kokua

Learning Assistance Center (LAC) is here to help students:

- Use appropriate study skills to achieve academic goals.
- Learn how to adjust learning approaches to fit their individual learning needs.
- Learn how to study effectively with others.
- Use effective learning practices.
- Use self-reliant learning behaviors.
- Have a functional understanding of course content. www.manoa.hawaii.edu/learning

Gender-Based Discrimination or Violence

University of Hawaii is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. If you or someone you know is experiencing any of these, the University has staff and resources to support and assist you. Staff can also direct you to community resources. Here are some options:

- If you wish to speak with someone **CONFIDENTIALLY**, contact the confidential resources available here: http://www.manoa.hawaii.edu/titleix/resources.html#confidential
- If you wish to **REPORT** an incident of sex discrimination or gender-based violence, contact: **Dee Uwono**, Title IX Coordinator, Hawai'i Hall 124, t9uhm@hawaii.edu, (808) 956-2299
- **As members of the University faculty, your instructors are required to immediately report any incident of potential sex discrimination or gender- based violence to the campus Title IX Coordinator.** Although the Title IX Coordinator and your instructors cannot guarantee confidentiality, you will still have options about how your case will be handled. Our goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.