Course description and objectives

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.

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 using 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 about other core sciences, to explain complex phenomena.

Course-level student learning objectives
- Explain how the Scientific Method works, apply it to evaluate good vs. bad science, analyze and assess data, and draw conclusions about the world.
- Develop a better understanding and appreciation for the world we live in, extending beyond our home planet Earth.
- 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 assessing what it means.

Course details


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, 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.

https://voyager.jpl.nasa.gov/
Course Evaluation and Assessment

Exams are cumulative. An exam will always cover materials from all preceding instructions. The number of exam questions increases from midterm 1 to midterm 2 to the final exam. Please complete your online exams on time. If you miss a midterm 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 in 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. 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 and homework before the due date.
Successful people seek out help from others when needed. The University of Hawai‘i at Mānoa has many services intended to help you as you strive to successfully achieve your goals. I encourage you to reach out to me or other professionals on campus. Here is some information that might be helpful to you.

**Disability Access**

The Earth Science Department will make every effort to assist those with disabilities 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):

(808) 956-7511  
kokua@hawaii.edu  
www.hawaii.edu/kokua

**Learning Assistance Center (LAC)**

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.

http://manoa.hawaii.edu/undergrad/Learning/

**Gender-Based Discrimination or Violence**

The University of Hawai‘i 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.manohaawaii.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, 9uhm@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.