

# PTYS 596A – Planetary Surface Processes Seminar Spring 2023

Kuiper Building, Room 309, Wed. 2:30 pm-3:30 pm

Zoom link (for simultaneous hybrid format if people need to be remote, but please try to attend in person): <https://arizona.zoom.us/j/82189140492>

**Instructor:** Virginia (Ginny) Gulick; [vgulick@arizona.edu](mailto:vgulick@arizona.edu)

**Office Hours:** By appointment (e.g., after class, or another date), contact me via email to set a time.

**Presentation list:** <https://www.lpl.arizona.edu/research/surfaces/meeting/>

**Course Description:** This seminar course will focus on discussion of planetary surfaces and their evolution, including geology of rocky planets and moons, icy surfaces and moons, regolith development, surface-atmosphere interactions, sub-surface structure and interiors, and climate change. The course will involve the exchange of scholarly information in a small group setting, including presentations and discussions of student research, reviews of recent science results and discussion of proposal ideas. Students will be expected to lead 1-2 presentations and participate in group discussions. This course is intended for graduate students; senior undergraduates may be able to enroll with permission of the instructor.

## **Course Learning Objectives:**

- Students will expand their expertise in the subject area by reviewing, reporting, and discussing current research/literature in the topic area with other students, postdocs, and faculty.
- Students will incorporate and apply theoretical and practical (e.g., field studies, spacecraft mission data) knowledge to the development of their own research ideas.
- Students will demonstrate their understanding of planetary surface processes and improve their presentation skills by leading 1-2 presentations.
- Students will develop science critical thinking and team work skills by analyzing the work of others, asking/answering questions, and providing constructive comments during the discussion.

**Course Learning Outcomes:** Upon completion of the course, students will be able to knowledgeably describe and discuss the planetary surfaces research topics covered in the course, including critical analysis of the topics. They will also have improved presentation and scientific discussion skills in an informal setting.

## **Grading Scale and Policies:**

Grades (pass/fail) will be determined by participation and 1-2 presentations during the semester. Students will be expected to lead either one 50-60 min discussion/presentation, or lead two 20-30 minute discussions. Students should read any papers for discussion prior to the class period, and are expected to participate by asking questions and contributing to the discussion when others are presenting.

This seminar is informal and the presentations should also be informal, including time for discussion and expanding with background material as needed. Students may present their research results, research proposal ideas, summaries of key results from workshops they attended, reviews

of current topics of interest, reviews of journal articles, or other topics relating to planetary surfaces research. Topics should be approved by the instructor.

For a passing grade, students must attend most sessions for the full 50 minutes, participate in the discussion on at least some occasions, and must give presentations as specified above. S grades may be obtained for going above and beyond, for example giving more than the required presentations, presenting something more complicated like lab tours or demonstrations, or helping to organize the seminar or find external speakers.

Issues Related to COVID-19 or other illness and missing class:

- The health and wellbeing of everyone in this class is important. Accordingly, we are all required to follow the university guidelines on COVID-19 mitigation. Please visit [www.covid19.arizona.edu](http://www.covid19.arizona.edu) for the latest guidance.
- If you feel sick or test positive for COVID-19 please stay home and follow appropriate guidelines. You can call into the Zoom version of the class if you are feeling well enough to participate.
- Please notify me if you will be missing class because you are sick. If needed we can arrange for rescheduling of your presentations.

**Missing class for other reasons:**

- It's common for grad students to have other activities (observing, conference, field trip, etc.) that cause them to miss class. This is fine, but please let me know.

**Physical and mental-health challenges:** If you are facing physical or mental health challenges this semester, please note that Campus Health provides quality medical and mental health care. For medical appointments, call (520-621-9202. For After Hours care, call (520) 570-7898. For the Counseling & Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.

**University Policies:**

All other university policies related to a syllabus are available at:  
<https://academicaffairs.arizona.edu/syllabus-policies>.

**Subject to Change Statement:**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.