

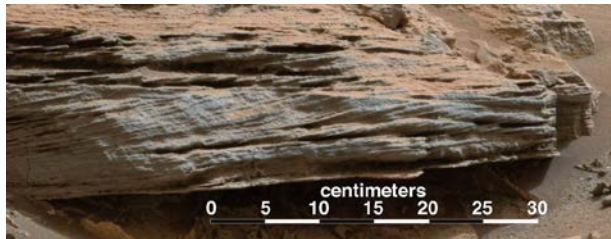
# G456 / G556 Astrogeology

## Spring 2019

CRN 61749 (456 lecture)/CRN 61750 (456 lab)  
CRN 61761 (556 lecture)/CRN 61762 (556 lab)

### Location:

Portland State University  
Lecture CH69, 10:15-11:20 am MW  
Lab CH1 10:15-12:05 am F



### Instructor:

Dr. Alex Ruzicka  
CH 17K, 503-725-3372, e-mail: [ruzickaa@pdx.edu](mailto:ruzickaa@pdx.edu). Office Hours: Regularly scheduled office hours are from 11:30-12:30 on Wednesdays and 9:15-10:15 on Fridays. Please make arrangements with me if you would like to meet outside of this time.

Class website: <http://web.pdx.edu/~ruzickaa/G456>

Course Description: Geology and astronomy are combined to better understand the evolution of the solar system. Comparative geologic evolution of the planets, moons, and smaller bodies in the solar system is emphasized. Other topics include impact cratering as a geologic process, the formation of stars and planetary systems, the origin of the solar system, and meteorites. The laboratory component of the course will give students experience with making observations and measurements that illustrate concepts discussed in lecture.

Text: *Exploring the Solar System* by Peter Bond, Wiley-Blackwell.

Exams: There will be two mid-term exams and a Final. These exams will be multiple choice. In general, no make-up exams will be given except for a medical emergency or unless arrangements to take the test at another time are made with the instructor in advance. On exam days, students should bring scantron forms (buy four copies of Form 882-ES) and a number two pencil to class. Scantrons are available at the bookstore. The **Final** (held in the main classroom on Wednesday June 12, 10:15 am-12:05 pm) will be comprehensive and is mandatory. Questions from the mid-term exams may be re-used on the Final. Answers and score distributions for the mid-term exams will be posted on the class website.

Laboratory assignments: Students will work on laboratory assignments during the scheduled laboratory period and will have one week to complete the assignment. Group work on laboratory assignments is permitted, but each student is required to submit their own work. Students should obtain a copy of the MER2003 data stick, which has material needed for some of the labs. Payment for this is covered by the activity fee paid for the lab.

Homework problems (G556 only): Students enrolled for graduate credit are required to complete some homework problems. Homework assignments and due dates will be posted on the class website.

Other policies: (a) If you feel you have a disability and need an accommodation, contact the Disability Resource Center ([drc@pdx.edu](mailto:drc@pdx.edu), 503-725-4150, 116 Smith). (b) It is the responsibility of the student to arrange makeup tests at the SHAC testing center ([testing@pdx.edu](mailto:testing@pdx.edu), UCB Suite 340) and to work with the instructor so that mutually acceptable times can be arranged. (c) Each student is responsible for all of the content of all of the classes, including lecture material which may not be in the Text. (d) A culture of professionalism and mutual respect is expected. Any incident of discrimination or discriminatory harassment, including sexual harassment, can be reported to the Office of Equity and Compliance, or the Office of the Dean of Student Life. For resources, see

<http://www.pdx.edu/sexual-assault/get-help> . (e) Students who do not turn in a completed Syllabus Acknowledgment form may be withdrawn.

**Grades:** Grading is done on a straight scale although curves will be used at my discretion. Grades will be assigned based on scores as follows: 95% or above = A, 90-94.99% = A-, 87-89.99% = B+, 83-86.99% = B, 80-82.99% = B-, 77-79.99% = C+, 73-76.99% = C, 70-72.99% = C-, 67-69.99% = D+, 63-66.99% = D, 60-62.99% = D-, less than 60% = F. I generally do not give "I" grades. This class can be taken Pass/No Pass. If you elect to change your grading option, please inform me in writing. Letter grades will correspond to the standards given in the PSU course catalog.

Grades for G456 will be determined from performances on:

Laboratory exercises.....	30%
Mid-terms .....	30%
Final Exam .....	40%

Grades for G556 will be determined from performances on:

Laboratory exercises .....	30%
Mid-terms .....	20%
Final Exam .....	30%
Homework problems .....	20%

**COURSE OUTLINE**

	<b>Monday CH 69</b>	<b>Wednesday CH 69</b>	<b>Friday CH1</b>
Week 1	4/1 Survey (Ch. 1)	4/3 Our solar system (Ch. 1)	4/5 Endogenic & exogenic processes overview; Heat Sources; Planetary Interiors (parts of Ch 3-11)
Week 2	4/8 Planetary interiors (parts of Ch. 3-11)	4/10 Collisions & impacts (Ch. 4)	4/12 Collisions lab
Week 3	4/15 Moon (Ch. 4)	4/17 Mercury (Ch. 5)	4/19 Lunar stratigraphy I & II labs
Week 4	4/22 Mars (Ch. 7)	4/24 Mars (Ch. 7)	4/26 Mars I lab
Week 5	4/29 Mars (Ch. 7)	5/1 <b>Exam 1</b>	5/3 Mars II lab
Week 6	5/6 Venus & Earth (Ch. 3, 6)	5/8 Venus & Earth (Ch. 3, 6)	5/10 Io lab
Week 7	5/13 Jovian Planets (planets-- Ch. 8, 9, 10, 11)	5/15 Galilean moons (Ch. 8)	5/17 Galilean satellites lab
Week 8	5/20 Galilean moons (Ch. 8)	5/22 Titan (Ch. 9)	5/24 Triton/Pluto/KBOs (Ch. 11, 12)
Week 9	5/27 Memorial Day Holiday, NO CLASS	5/29 Mid-sized and small moons (moons--Ch. 8, 9, 10, 11)	5/31 <b>Exam 2;</b> Interplanetary worldlets (asteroids & comets) (Ch. 13)
Week 10	6/3 Interplanetary worldlets (asteroids & comets) (Ch. 13)	6/5 Meteorites (Ch. 13)	6/7 Formation of planetary systems (Ch. 1)
Finals		6/12 <b>Final Exam</b> , 10:15-12:05	

ACKNOWLEDGMENT OF SYLLABUS RECEIPT:  
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Astrogeology G456/556  
Spring 2019 PSU

I have received a copy of the course syllabus for this class, and the instructor has discussed the contents of this syllabus.

NAME (please print) \_\_\_\_\_  
Last First MI

Signature \_\_\_\_\_ Date \_\_\_\_\_

A phone number where you can be reached: \_\_\_\_\_

e-mail address: \_\_\_\_\_

Have you had any previous Geology classes. If so, what and where?

What field are you majoring (planning to major, have you majored) in?

Why did you choose to take this particular class?