GEOL 4303: Planetary Geology (3 credits)
Spring 2018
Section 010 MW 10:00-10:50am and R 3:00-3:50pm (VIN R19)

Instructor: Dr. Heather L. Lehto
Email: Heather.Lehto@angelo.edu
Office hours: VIN 127, T 2-4 pm, W 3-4pm, and R 2-3pm or by appointment

REQUIRED TEXTBOOKS:
- Introduction to Planetary Geomorphology; Ronald Greeley

COURSE OBJECTIVES:

At the end of this course you should be able to:
- Use remotely sensed (including images, spectroscopy, etc.) to interpret geology of an area.
- Interpret the geologic history of an area on another planet or solar system body.

Assessment of the above listed objectives will be accomplished through assignments, midterm, final exam, and final project.

EXPECTATIONS:

Workload:

This is senior level course which means you will be given more complicated material and activities and you will be expected to prepare for EACH class!! It is generally agreed upon that students spend one to two hours studying and preparing for each one hour spent in class. As this is a 3 hour course, that means you should be spending 3-6 hours per week studying for this course.

We will NOT be covering every bit of material from each Chapter in class, however it MAY show up on your Exam. This means you are responsible for reading each chapter and studying the material on your own in order to earn an average or better grade. Do NOT underestimate the workload for this course. Stay on top of your reading, ask questions, and participate in class and it will give you the best chance of passing this course.

Attendance:

Attendance is highly recommended as we will be covering a large amount of material in lecture as well as frequent in-class activities, which will be part of your grade.

Excused Absences:

Students are excused from class for university events (e.g. athletics, debate trips, and certain music trips) and circumstances beyond the student’s control such as extended illness, medical emergency, and family emergency. Students will be allowed to make up any in-class assignments or Exams with the proper documentation for the absence (e.g., doctor’s note for illness or injury, and/or email explaining the reason for the absence sent ASAP).
My expectations for you:
- Be prepared for lecture (do the reading prior to class, print off any relevant materials)
- Actively participate in lecture
- Take responsibility for your own learning (seek help if you are having a hard time)
- Be familiar with the course policies in the syllabus
- Do NOT use cellphones in class (they must be turned OFF, NOT silent when you are in class)
- Be respectful of all persons in this classroom (arriving late, leaving early, or talking during class is distracting and discourteous)

What you can expect from me:
- Be enthusiastic and knowledgeable about the course material
- Present course material in an organized way
- Start and end lectures on time
- Set high standards for the class and help you meet those standards
- Treat you with fairness and respect

COURSE WEBPAGE

Blackboard contains class outlines, web links to scenic areas mentioned in class, practice problems, answers to lab assignments, and your official grades.

CELL PHONES AND OTHER ELECTRONIC DEVICES:

Cell phones must be turned off while in class. In addition, it is unacceptable to engage in text messaging during the class meeting time. If you are using any electronic devices other than a calculator (not your phone in calculator mode), a voice recorder, or a laptop computer to take notes, you may be asked by the instructor to leave the classroom for the remainder of the class period. The use of any electronic device not authorized by the instructor during a test may result in the forfeiture of your grade for that test. All electronic devices should be turned off and stored out of sight during tests.

KNOW THE ASU HONOR CODE

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.

Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request such accommodations prior to any accommodations being implemented. You are encouraged to make this request early in the semester so that appropriate arrangements can be made.

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

GRADING:
- Midterm (20%)
- Final exam (20%)
- Assignments (30%)
- Research Paper (15%)
- Comments on Rough Drafts (5%)
- Oral Presentation (10%)

I will NOT accept late exercises.
ASSIGNMENTS

There will be several assignments that will be completed either in-class or as homework. If you have to miss class due to an extenuating circumstance you must notify me ASAP and I will give you the assignment details.

MIDTERM AND FINAL EXAM

There will be one (1) midterm exam and one (1) final exam will be given during the semester. There will be more information available on the midterm and final exams before they occur.

RESEARCH PAPER

You will have an 8-10 page research paper due at the end of the semester. You MUST have your topic approved by me before you may get started. The following is a list of the tasks that will be required as part of the grade for your research paper. Any tasks that are late or not completed will result in a 5% deduction off your final grade.

Paper topics must be on a planet of your choosing (other than Earth). You must be careful to choose a topic that has enough research done on it so that you can discuss it in 8-10 pages. See me if you have questions.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Topic approved by</td>
<td>February 1</td>
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<tr>
<td>Annotated Bibliography Due</td>
<td>February 20</td>
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<tr>
<td>Outline Due</td>
<td>February 27</td>
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<tr>
<td>Rough Draft Due</td>
<td>March 27</td>
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<tr>
<td>Rough Draft Comments Due</td>
<td>April 12</td>
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<tr>
<td>Oral Presentations</td>
<td>April 26 and May 1</td>
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<tr>
<td>Final Draft Due</td>
<td>May 3</td>
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ORAL PRESENTATION

During Dead Week you will present a 5-10 minute oral presentation on your Research Paper topic. This presentation can be anything of your choosing, from a powerpoint talk to a pre-recorded video. Be creative and have fun with this! However, make sure you are conveying the important points of your paper in this presentation.

FINAL NOTE:

This course will require a lot of work, however if you work diligently on studying and preparing for class there is no reason why you would not do well. My goal is to teach you SOME of the real-world information and skills you will need to use as a planetary geologist. There is a lot more information out there and I encourage you to seek it out if you are interested in this field.
## Schedule

All information is subject to change.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Lecture Topic</th>
<th>Reading</th>
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| January 15-19            | **January 16, Holiday**  
Syllabus  
Formation of the Solar System |         |
| January 22-26            | Formation of the solar system and overview of the structure of the solar system | Ch 1    |
| January 29 – February 2  | Remote sensing basics                                                        | Ch 2    |
| February 5-9             | Remote sensing on Earth                                                      |         |
| February 12-16           | Remote sensing of other solar system objects                                 |         |
| February 19-23           | Planetary processes: tectonics and volcanism                                 | Ch 3    |
| February 26 – March 2    | Planetary processes: impacts, atmospheres, weathering, and erosion           |         |
| March 5-9                | **Midterm**  
The Moon | Ch 4 |
| March 12-16              | **Spring Break**                                                            |         |
| March 19-23              | Mercury                                                                     | Ch 5    |
| March 26-30              | Venus  
**Holiday, March 30** | Ch 6    |
| April 2-6                | Mars                                                                         | Ch 7    |
| April 9-13               | Jupiter                                                                      | Ch 8    |
| April 16-20              | Saturn  
Uranus and Neptune                                                      | Ch 9 and 10 |
| April 23-27              | Pluto                                                                        | Handouts |
| April 30 - May 4         | Oral presentations  
Review and Evals                                                        |         |
| TBD                      | **Final Exam**                                                              |         |