GEOL 1303 – Physical Geology Syllabus – Kelsch – Fall 2020

Sul Ross State University, Department of Biological Geological & Physical Sciences

Instructor:  Ms. Jesse Kelsch, MS

Class time:  MWF 11-11:50 (001); TR 9:30-10:45 (002); TR 2-3:15 (003)

Email:  jkelsch@sulross.edu  ** When you email me, include at least “GEOL 1303” in the subject line**

Office Hours online in Blackboard Collaborate Meeting Room via our course room on Blackboard:  TBD by consensus the first week of class, then posted on Blackboard

Course Purpose:
The objective of this course is to provide the student with an understanding of how the Earth works within the context of SCIENCE, which is a methodical, consistent and unbiased method of gathering facts to understand processes in the natural world.   The student will gain a theoretical foundation of geology including not just the knowledge accumulated by geoscientists over the past few hundred years, but also the explanations for how Earth scientists know this knowledge to be true.  Topics to be discussed include plate tectonics, earthquakes, volcanoes, massive movements of the Earth’s crust, the interior of Earth, the ocean basins, the building-up and wearing down of the continents, groundwater hydrology, rivers, glaciers, Earth’s hydrosphere and atmosphere, and its climate’s energy budget and long-term carbon cycle.

Text and Materials:
HIGHLY RECOMMENDED supplemental text:  Earth Revealed by Carlson, Plummer and Hammersley, 9th edition.  Earlier editions 6th or later will suffice.  Two copies are on reserve in the SRSU Library.  This whole text is also available as an Open Educational Resource pdf file at:  https://silo.pub/physical-geology-earth-revealed-9th-edition.html

The majority of the class content will be delivered to you through classroom lectures and material posted in our Blackboard class space, but reading the well organized and illustrated textbook as a supplement will help you really ACE this course.

Methods of Evaluation and Grading:

Quizzes:  The course content will be presented in class, unless we switch during the semester to online instruction because of an increase in local Covid-19 cases, in which case the class material will be presented in live online lectures (at our class time,) slideshows, and videos that are distributed through Blackboard.  Each course topic will be accompanied by a quiz to be taken online.  Weekly quizzes must be taken by the Friday of that content week, and each must be completed in one sitting.  Your best score of two attempts for each quiz is what will be kept.  You are expected to complete quizzes on your own, using only your notes and the course materials but without any other humans’ or robots’ input or assistance.  The total of all the quizzes from all three modules comprises 30% of your total grade.

Homework:  There are several assignments over the term designed for you to apply the class content to solve Earth-science problems and to evaluate physical relationships.  Some of them use the free software Google Earth Pro, which you can download to your own computer or use in the campus computer labs.  Some require an active internet connection during your completion of it.  Some of them require Adobe Flash Player.  Homeworks are due to Blackboard at midnight on the Mondays after the week that content is covered in class.  Your own work is required, unless teamwork is specified as part of it.  Some of these homeworks require a sketch, so you will have to scan or photo your completed homework to turn it in via Blackboard.  Scans must be legible, so if you do not own a scanner and you are not proficient at taking steady photos of documents, you should use an app like CamScanner.  The total of all the homeworks comprises 35% of your total grade.
Exams: Exams will be taken online. There will be three module exams, the last of which will be taken during finals week. Your lowest module-exam grade will be dropped from your final course grade. Exams will only be available for a one-day period stated in the semester schedule. Material will come from the lecture (classroom or online,) slideshows, and class discussion. **No make-up exams will be given unless prior arrangements have been made.** You are expected to complete the exams on your own, using only your notes and the course materials but without any other humans’ or robots’ input or assistance. Refer to the section on Academic Integrity. The total value of the exams (two highest grades from the module exams, and the final exam) is 25%.

**Total Attendance**: Students are expected to participate in classroom and online discussions, which counts as attendance. You will be assessed on course-content-related questions AND answers that you post in the discussion board, in particular when you answer a question from one of your fellow classmates in a way that instructs them. I will be looking for 7 questions and 7 answers total posted or asked in class or office hours. This component makes up 10% of your final class grade.

**Assessments**: The required projects, quizzes and exams total 100%:

- Online Quizzes in sum 30%.
- Homeworks in sum 35%
- Top two Exams in sum 25%
- Total attendance 10%

*Total % 100*

*Your accumulated grades will be recorded on Blackboard in the Grade Center.*

**Grading**: Final course grade will be based on a percentage of the total points as follows:

- 90.00-100% A
- 80.00-89.50% B
- 70.00-79.50% C
- 60.00-69.50% D
- Less than 60.00% F

**Student Learning Outcomes**: Each student will demonstrate the ability to:

1. Identify and interpret the origin of common rocks and minerals
2. Determine the relative ages of rocks and geologic structures using relative geologic dating principles
3. Understand the internal and external processes that create Earth’s major landforms such as plate tectonics and weathering
4. Identify and evaluate structural features in Earth’s crust such as faults and folds, and interpret their history.
5. Demonstrate the mechanisms and processes that create earthquakes, and how the location and strength of earthquakes are determined
6. Explain and evaluate the relationships between plate tectonics and the formation of mountains, igneous bodies and earthquake zones.
7. Discuss the value of the scientific method in Earth Science
Relevant Sul Ross State University Policies:

**Academic Integrity:** Academic dishonesty hurts everyone and reduces the value of college degrees. Doing someone else’s work, presenting the ideas and work of others as your own, submitting the same paper for multiple classes, and/or failing to cite your sources when you utilize the ideas of others, are all examples of academic dishonesty. It is your responsibility to read and understand the university’s policy on academic dishonesty in the SRSU Student Handbook, as all violations will be taken seriously and handled through the appropriate university process. The Student Handbook can be found at: [https://www.sulross.edu/page/2454/student-handbook](https://www.sulross.edu/page/2454/student-handbook) (page 80).

In addition, please note that plagiarism detection software will be used in this class for written assignments, as well as monitoring software for course exams.

If you have any questions about this, please ask!

**SRSU Library Services**

The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library’s website, library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@ sulross.edu), or by phone (432-837-8123).

**Student Accommodations**

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student’s responsibility to initiate a request for accessibility services. If you have a disability, find out what your resources are: Students seeking accessibility services must contact Becky Wren in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is PO Box C-171, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8203.

**Distance Education Statement:** Students enrolled in distance education courses have equal access to the university’s academic support services, library resources, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should submit online assignments through Blackboard or SRSU email, which require secure login information to verify students’ identities and to protect students’ information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

**Fall 2020 In-Person Classroom Protocols (Subject to Change)**

1) **Masks:** Face coverings are required indoors and outdoors on SRSU campuses unless you are in a private space or are engaged in an activity for which wearing a covering is impractical. In this class, if a student refuses to wear a mask/wear a mask properly, the student will leave class, and according to SRSU policy, I will be forced to report the student to the Dean of Students office. Please note that a face mask that has an exhalation valve or vent is not acceptable.
2) **Assigned Seating:** There will be an assigned seating chart for each class to encourage social distancing and to provide information for contact tracing in the event that Covid-19 spreads.

3) **Disinfection of Classroom Surfaces:** Each person should disinfect their space at the beginning and end of each class meeting. The university has provided disinfectant wipes in our classroom. When you enter the classroom, please take two wipes and use one to clean your space before settling in. Use the 2nd wipe to clean your space before you leave. Although SRSU will provide access to hand sanitizer at the entrances to classroom buildings, I encourage you to also carry your own sanitizer with you in public.

4) **Orderly Dismissal:** When class is over, I will dismiss students row by row, starting with the row closest to the exit. Each day, I will end class a little early so that you have enough time to wipe down your desk and wait to be dismissed by row.

5) **Food & Drinks:** There will be no eating or drinking in the classroom. If you need to take a sip of your drink during class time, you may leave the room to do so.

6) **Paperwork:** In order to maintain social distancing and reduce the transmission of germs via paper, all paperwork requiring faculty signatures should be sent as digital documents via email, e.g., athletic schedules, doctor’s notes, SSD forms, etc. I will not pass out any papers to students and I will not accept any papers from students.

7) **Limited in-class interaction:** We will do our absolute best to maintain social distancing in the classroom. Please stay 6 feet away from my desk. I will be happy to answer general questions during class time, but I recommend that you address personal questions virtually.

8) **No in-person office hours.** My office is not large enough to accommodate the CDC’s recommendations for social distancing; therefore, all office hours will be held virtually. Regular office hour times will be determined the first week of classes and then posted on the Blackboard course home page.

9) **Travel:** If you have travelled internationally, you are required to self-quarantine for 14 days upon your return. If you have travelled locally or out of state, you are required to self-quarantine for 14 days only if the local destination or state you traveled to is under a CDC COVID-19 travel advisory.

10) **Illness:** Students who are experiencing COVID-19 symptoms, have been diagnosed with COVID-19, or have been in close contact with a person who has been diagnosed with COVID-19, PLEASE DO NOT COME TO IN-PERSON SESSIONS.
# Semester Schedule: Module topics, dates available, and recommended reading:

*This calendar is subject to change with notice at the instructor’s discretion.*

<table>
<thead>
<tr>
<th>Module beginning</th>
<th>Week of</th>
<th>Lecture topic</th>
<th>Supplemental reading in opt/OER textbook</th>
<th>Online quiz (by Friday); Exam on Thursday</th>
<th>Homework due the next Monday</th>
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</thead>
<tbody>
<tr>
<td>1: Earth Processes</td>
<td>24-Aug</td>
<td>Science &amp; Geoscience; Time; Earth’s Interior</td>
<td>Ch. 2: Earth’s Interior</td>
<td>Intro quiz</td>
<td>Introductory HW</td>
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<tr>
<td></td>
<td>31-Aug</td>
<td>Earth’s Interior</td>
<td>Ch. 2: Earth’s Interior</td>
<td>Interior quiz</td>
<td>Spheres HW</td>
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<td></td>
<td>7-Sep</td>
<td>Plate Tectonics</td>
<td>Ch. 4: Plate Tectonics</td>
<td>Isostasy &amp; magnetism quiz</td>
<td>Plate Tectonics HW</td>
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<td>14-Sep</td>
<td>More plate tectonics; Geologic Structures</td>
<td>Ch. 5: Mountain Chains; Ch. 6: Geologic Structures</td>
<td>Plate Tectonics quiz</td>
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<td>21-Sep</td>
<td>Earthquakes</td>
<td>Ch. 7: Earthquakes</td>
<td>Module I Exam</td>
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<td>2: Earth Materials</td>
<td>28-Sep</td>
<td>Rock Cycle; Minerals; Volcanoes</td>
<td>Ch. 9&amp;10: Atoms, Elements, Minerals; Volcanoes</td>
<td>Rock cycle &amp; minerals quiz</td>
<td>Volcanic Hazards HW</td>
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<td></td>
<td>5-Oct</td>
<td>Other igneous rocks; metamorphic rocks</td>
<td>Ch. 11&amp;15: Igneous Rocks, Metamorphic Rocks</td>
<td>Igneous &amp; metamorphic quiz</td>
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<td>12-Oct</td>
<td>Weathering and sediment</td>
<td>Ch. 12: Weathering &amp; Soil</td>
<td>Sedimentary quiz</td>
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<td>19-Oct</td>
<td>Sedimentary rocks; Geologic time</td>
<td>Ch. 14&amp;8: Sediment &amp; Sed Rocks; Geologic Time</td>
<td>Geologic time quiz</td>
<td>Relative Age HW</td>
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<td>3: Earth’s Water</td>
<td>26-Oct</td>
<td>Hydrologic Cycle</td>
<td>Module II Exam</td>
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<td>2-Nov</td>
<td>Glaciers; Ice ages and interglacials; paleoclimate</td>
<td>Ch. 18: Glaciers</td>
<td>Glaciers quiz</td>
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<td>9-Nov</td>
<td>Atmosphere, water vapor, greenhouse gases, Earth’s carbon cycle</td>
<td>Climate quiz</td>
<td>Climate Change HW</td>
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<td>16-Nov</td>
<td>Rivers</td>
<td>Ch. 16: Streams</td>
<td>Rivers quiz</td>
<td>Rivers HW</td>
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<td></td>
<td>23-Nov</td>
<td>Ground water</td>
<td>Ch. 17: Ground Water</td>
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<td>30-Nov</td>
<td>More ground water</td>
<td>Ground water quiz</td>
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<td></td>
<td>Finals week</td>
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<td>Module III Exam</td>
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