TEXAS A&M UNIVERSITY – CORPUS CHRISTI
COLLEGE OF SCIENCE AND ENGINEERING

GEOLOGY 1303.001 – ESSENTIALS OF GEOLOGY

Department of Physical and Environmental Sciences
Fall 2017

A. COURSE INFORMATION
   Course number/section: GEOL 1303.001
   Class meeting time: Tuesday and Thursday 9:30 am to 10:45 pm
   Class location: CS 101
   Course website: Blackboard  http://Bb9.tamucc.edu

B. INSTRUCTOR INFORMATION
   Instructor: Erika Locke
   Office hours: The instructor will be available to meet with students 15 minutes before, or
   15 minutes after, each class meeting or Thursday 2:00 to 3:10 pm (by
   appointment) in CI 214
   Telephone: (713) 823-2701
   e-mail: Erika.Locke@tamucc.edu
   Appointments: Additional hours available by appointment. Please email instructor
   directly for an appointment.

C. COURSE DESCRIPTION
   Catalog Course Description
   Introductory earth science course for students majoring in a non-science subject area. Basic
   geologic material and concepts, such as minerals, rocks, the rock cycle, and plate tectonics
   theory. Origin, composition, and evolution of our planet, as well as geologic phenomena that
   affect everyday life, including global change, earthquakes, volcanism, groundwater and
   mineral resources. May not be counted toward a degree in Geology or Environmental
   Sciences. Will not substitute for GEOL 1403. This course counts toward the natural science
   component of the University Core Curriculum Programs.

   Extended Course Description
   Goal of this course is to give you a well-rounded introduction to your home planet including
   an understanding of natural geologic phenomena and geologic resources. The first half of the
   course will cover basic geologic principles, e.g. plate tectonics and the rock cycle. During the
   second half of the course we will focus on geologic phenomena and topics that affect our
everyday lives, including earthquakes, volcanism, fossil fuels, mineral resources and global change.

D. PREREQUISITES AND COREQUISITES

None.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)


With CONNECT Code (included with this loose-leaf addition of the textbook and is required).

**Supplies**

Pencil, eraser, colored pencils, ruler with mm markings, protractor.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Upon successful completion of this course, you should be familiar with / demonstrate knowledge of the:

1. composition and structure of the solid Earth,
2. theory of Plate Tectonics,
3. various rock types that make up Earth’s crust,
4. internal and external processes that shape our planet,
5. interaction between some of the main components of the Earth System,
6. interdependence of science and technology and their influence on, and contribution to, modern culture,
7. global change including climate change,
8. natural hazards

In addition to the content knowledge above, successful completion of this course also provides you with basic core competencies such as:

1. critical thinking, e.g. when approaching topics using the scientific method
2. problem solving by working collaboratively in teams
3. communication skills, e.g. when presenting some of your work to the class verbally or turning in writing assignments.
4. Empirical and quantitative skills when working with numeral data, reading graphs etc.

Please always remember that you are the one responsible for your success. I will do my best to guide you in your learning process but without YOU assuming an active role, by attending class, completing work, studying outside of class time, asking questions, making use of help offered etc. you may not successfully pass this course.

G. INSTRUCTIONAL METHODS AND ACTIVITIES
Geology is a very visual and hands-on discipline. Power Point slides may be made available to you that include many photos depicting geologic features from around the world. Be sure to add your OWN written comments in addition to the information you are provided. Occasionally students will examine rock and mineral specimens in class. In addition, students will work on in-classroom exercises (sometimes you will be required to complete the work at home) intended to help you deepen your understanding of the course material. These assignments are only for students who attended class and there are no makeups.

In-class Quizzes will test your understanding of the major chapter concepts and help you prepare for each Lecture Exam. Lecture exams will cover content from each chapter and from the Hands-On Exercises.

A portion of your grade will come from on-line Connect Homework: When you start working on a chapter, first read the chapter then after you feel comfortable with the material, start working on Learn Smart practice questions and then do the assignment. Your work in Learn Smart and the Chapter Assignments will improve your overall class performance (some of the Learn Smart questions will be repeated in the Exams). Both the Learn Smart Assignments and Chapter Assignments must be completed by their assigned due dates (no extensions).

Extra credit assignments may be issued during the semester and are an opportunity to earn additional points towards the course total.

### MAJOR COURSE REQUIREMENTS AND GRADING

The student learning outcomes described in Section F will be measured through the assignments listed below. Limited extra credit opportunities may be made available.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>POINTS</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (3@ 150 points each)</td>
<td>450 points</td>
<td>45%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100 points</td>
<td>10%</td>
</tr>
<tr>
<td>Connect LS and Assignments</td>
<td>150 points (30@10pts)</td>
<td>15%</td>
</tr>
<tr>
<td>In class exercises</td>
<td>100 points (5@20pts)</td>
<td>10%</td>
</tr>
<tr>
<td>Comprehensive Final Exam (250 points)</td>
<td>200 points</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>1000 points</td>
<td>100%</td>
</tr>
</tbody>
</table>

All point totals above are approximate and may vary slightly.

### H. COURSE CONTENT/SCHEDULE
<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 09/05</td>
<td>Classes begin. Introduction/ What is Geology?</td>
<td>Chapter 1.</td>
</tr>
<tr>
<td>R 09/07</td>
<td>Plate Tectonics – The Unifying Theory. Last day to register Jan 25th</td>
<td>Chapter 19.</td>
</tr>
<tr>
<td>T 09/12</td>
<td>Topic Cont.</td>
<td>Chapter 19</td>
</tr>
<tr>
<td>R 09/14</td>
<td>Atoms, Elements, and Minerals</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>T 09/19</td>
<td>Topic cont. Last day to drop without &quot;W&quot; 09/09.</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>R 09/21</td>
<td>Magma and Intrusive Igneous Rocks</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>T 09/26</td>
<td>Topic Cont.</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>R 09/28</td>
<td>Volcanism and Extrusive Igneous Rocks</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>T 10/03</td>
<td>Topic cont.</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>R 10/05</td>
<td>Exam 1 (Ch. 1-4, 19)</td>
<td></td>
</tr>
<tr>
<td>T 10/10</td>
<td>Weathering and Soil/ Sediments and Sedimentary Rocks</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>R 10/12</td>
<td>Sediments and Sedimentary Rocks</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>T 10/17</td>
<td>Metamorphism and Metamorphic Rocks</td>
<td>Chapter 7</td>
</tr>
<tr>
<td>R 10/19</td>
<td>Topic Cont.</td>
<td>Chapter 7</td>
</tr>
<tr>
<td>T 10/24</td>
<td>Time and Geology</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>R 10/26</td>
<td>Topic Cont.</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>T 10/31</td>
<td>Exam 2 (Ch. 5-8)</td>
<td></td>
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<tr>
<td>R 11/02</td>
<td>Geologic Structures</td>
<td>Chapter 15</td>
</tr>
<tr>
<td>T 11/07</td>
<td>Topic Cont.</td>
<td>Chapter 15</td>
</tr>
<tr>
<td>R 11/09</td>
<td>Earthquakes</td>
<td>Chapter 16</td>
</tr>
<tr>
<td>T 11/14</td>
<td>Earth’s Interior and Geophysical Properties</td>
<td>Chapter 17</td>
</tr>
<tr>
<td>R 11/16</td>
<td>Groundwater. Last day to drop 11/15.</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>T 11/21</td>
<td>Exam 3 (ch. 11, 15-17)</td>
<td></td>
</tr>
<tr>
<td>R 11/23</td>
<td>NO CLASS: THANKSGIVING</td>
<td></td>
</tr>
<tr>
<td>T 11/28</td>
<td>Resources</td>
<td>Chapter 22</td>
</tr>
<tr>
<td>R 11/30</td>
<td>Global Climate Change</td>
<td>Chapter 21</td>
</tr>
<tr>
<td>T 12/05</td>
<td>Topic Cont.</td>
<td>Chapter 21</td>
</tr>
<tr>
<td>R 12/07</td>
<td>NO CLASS: READING DAY</td>
<td></td>
</tr>
<tr>
<td>T 12/12</td>
<td>Final Exam 8:00 – 10:30</td>
<td>*date/time subject to change</td>
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</tbody>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor.

I. COURSE POLICIES

Attendance/Tardiness
The grade you will receive for this course is based on your performance on exams, quizzes and exercises. Missing any of these opportunities to collect points towards your point total will affect your grade. So: attend class.

Late Work and Make-up Exams
Work is due by the stated deadlines. No late work accepted past due date. Exams may be made up only in cases of an excused absence and students should contact the instructor in advance to make prior arrangement if at all possible. No makeup for quizzes or in-class assignments.

Extra Credit
There may occasionally be extra credit questions on quizzes or tests. There may be one or more opportunities for extra credit assignments.

Cell Phone Use
The instructor highly discourages the use of electronic communication devices such as cell phones (texting, etc.) during class because they distract other students from the learning experience. Please place such devices in silent mode during class. If you must answer an emergency call, please walk unobtrusively out of the class, finish the conversation, and return to your seat equally unobtrusively.

Laptop Use
You are welcome to bring a laptop or other device to class with the presumption that you are using it to facilitate your own learning (take notes, research an issue, etc.). The use of laptops for other uses is not allowed.

Food in Class
Students’ schedules may be hectic and may not allow time between classes for meals. If consuming food and drink in the lecture classroom please respect the facilities by cleaning up all spills immediately and removing all trash.

Missed Exam
Students who must miss an exam due to an excused absence (documented hospitalization, death in the family, significant illness, etc.) should contact the instructor in advance to make arrangements to make up the missed exam. If the absence is unplanned, you should contact the instructor as soon as possible about the situation.
Students who miss an exam due to an excused absence and provide documentation, may be able make it up. Exam makeups should be completed as soon as possible.

**Participation**
Students are encouraged to actively participate in lecture discussion. Generally students who participate more actively are able to learn the material more effectively and earn a higher grade in the class.

I. **COLLEGE AND UNIVERSITY POLICIES**

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial
Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

  If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

  http://disabilityservices.tamucc.edu/

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi;
this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

- **Related Issues**
  There is a reliance on technology in this course that impacts the need to have assignments completed on time. Having ample time to complete an assignment will be the responsibility of the student. It is also the student’s responsibility to find solutions to technical problems with sufficient time to complete the required tasks. Do not wait until a due date is near to discover/report lack of access to software, inability to connect to a network, etc. It is not the instructor’s responsibility to provide technical support. Technical help can be accessed by calling the IOL Helpdesk at (361) 825-2692 or submit a request via email to iol.support@tamucc.edu. For help with the CONNECT system please contact McGraw-Hill Customer Experience at (800) 331-5094.

**J. OTHER INFORMATION**

- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.