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

GEOLOGY 1303.001 – ESSENTIALS OF GEOLOGY  
Department of Physical and Environmental Sciences  

SPRING SEMESTER 2015

Course Information

Course number/section: GEOL 1303.001  
Class meeting time: Tue/Thu, 09:30 to 10:45 a.m.  
Class location: CS 101  

Instructor Information

Instructor: Dr. Tania-Maria Anders  
Office location: CS 202  
Office Hours: Tue/Thu 2:00 to 3:00 pm, Tue 5:00 to 6:00 pm, and Wed 02:00 to 03:00 pm or by appointment. I encourage you to email me with any questions or concerns you may have (see email address listed below).  
Telephone: 825-3755  
E-mail: tania.anders@tamucc.edu

Required texts/material

or other suitable Physical Geology text

Supplies: pencil, colored pencils, ruler

Course Description

Catalog Course Description:  
One-semester 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 semester we will focus on geologic phenomena and topics that affect our everyday lives, including earthquakes, volcanism, fossil fuels, mineral resources and global change.

Prerequisites and Co-requisites

None

Student Learning Outcomes and Assessment

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

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

In addition to the content knowledge the 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 completing work, studying outside of class time, asking questions, making use of help offered etc. you may not successfully pass this course.

You will have an SI (Supplemental Instructions) leader for this course. Please make use of this service! The SI leader will answer questions, explain concepts, and help you develop the important routine of adding extra study time outside of class.

Instructional Methods and Activities

Geology is a very visual and hands-on discipline. I have prepared Power Point slides for 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 I provide to your notes. Occasionally, I will bring rock and mineral specimen to class for our studies. In addition, we will work on five in-classroom exercises (sometimes you will be required to complete work at home) that are intended to help you deepen your understanding of the course material.

Major Course Requirements and Grading

Your final grade will be based on a % curve from the following point distribution:

A) Exams (3@70 points each) 210 points
B) Chapter Quizzes: 5@10 points each  50 points
C) In-classroom exercises  50 points
D) Comprehensive Final Exam  100 points
Total:  410 points

A perfect score in this course would be to earn all 410 points available. There will be no curve at the end of the semester! Final grading will be as follows:

\[
\begin{align*}
A &= 410-369 \\
B &= 368-328 \\
C &= 327-287 \\
D &= 286-246 \\
F &< 246
\end{align*}
\]

Extra Credit
You have three opportunities to earn extra credit points.
1. Turning in your completed score card (posted on blackboard) on the day of the final (5 points). This card will help you to keep track of your grades. Record your grades regularly!
2. Points scored on lecture quizzes beyond the 5 quizzes counting towards your grade.
3. Attending a geology related presentation offered on our campus or in the community (instructor approval required) AND submitting a half to one page summary within ONE WEEK of the talk – up to 10 points

Course Policies

Attendance
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!!

Missed Exams
If you miss an exam (which includes anyone walking in more than 15 minutes late on the day of an exam!) you will be given the opportunity to make up this exam on the day of the final (after you have taken the final). It is your responsibility to contact me within one week of missing an exam to let me know that you wish to make up the exam. You lose the privilege of making up an exam if you fail to notify me during this time period.

Missed Quizzes and In-classroom exercises
Chapter Quizzes and in-classroom exercises happen randomly and help me monitor your progress and regular attendance of the class. Quizzes will consist of a short series of multiple-choice questions to be answered in approximately 5-10 minutes usually at the beginning of the class period. Students who come to class late need to wait outside the classroom until the class has completed the quiz and may not make up the missed quiz at a later time. If you are absent for medical reasons or a University related event, you will be given an opportunity to make up missed quizzes at the end of the semester after the final. Missed exercises should be made up as soon as you return to class. Again, it is your responsibility to contact me regarding the make-up of missed quizzes/exercises within a week (and provide documentation). After that you loose your privilege to make up the missed work. Chapter quizzes may include material covered in previous lectures or from the reading assignments.

Use of Electronics
While in the classroom, please store cell phones and other electronic devises that may distract you or others from actively participating in class in your bags. Laptop computers are allowed for class-related work only. Should you disregard this rule, the entire class with loose the privilege of using laptops in class.
Academic Integrity
It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior. 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, posting material developed by the faculty (e.g. exams) in any form including electronic, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one's own work.) Cheating will not be tolerated and will result in a failing grade in the course and possible further disciplinary action by the university. See Full University Policy at http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity

Classroom/Professional Behavior/Civility
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.

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.

Notice to Students with Disabilities and Veterans
Disability Services (DS) is the hub for coordinating services and accommodations to ensure accessibility and utilization of all programs for all Texas A&M University-Corpus Christi students with disabilities. Our services are designed to meet the unique educational needs of enrolled students with documented permanent or temporary disabilities. DS provides intake and consultation services to students seeking to register with our office. DS reviews an individual's documentation of disability and assesses eligibility for services and the determination of reasonable accommodations. For more information visit the Disability Services Office at 116 Corpus Christi Hall or go to http://disabilityservices.tamucc.edu/

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 or visit Disability Services at (361) 825-5816 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.

**Academic Advising**
The College of Science and 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. The College’s Academic Advising Center is located in Center for Instructions CI 350, and can be reached at 825-3928.

**Grade Appeal Process**
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 (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.

**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.

**Dropping a Course**
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 me before you decide to drop to be sure it is the best thing to do. 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. **April 10, 2015** is the last day to drop a class with an automatic grade of “W” this term.

**Reading Assignments**

All reading assignments are to be read prior to the class in which the material will be discussed. Your text is accompanied by an online Study Guide, which can assist you in understanding the content of the textbook. It also provides valuable guidelines regarding general study skills, note taking, and test preparation. The following lecture schedule will be followed as closely as possible although some revisions may become necessary during the semester.
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 regular scheduled lecture periods.

Important Dates

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<thead>
<tr>
<th>January 22</th>
<th>February 17</th>
<th>March 16-20</th>
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<tbody>
<tr>
<td>First class day</td>
<td>Exam 1</td>
<td>Spring Break</td>
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<td>March 12</td>
<td>Exam 2</td>
<td>April 16</td>
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<td>May 07</td>
<td>Final exam (08:00-10:30 am)</td>
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Lecture Schedule

January
Thu 01/22  Introduction / And Just What is Geology?, Prelude
Tue 01/27  Chapter 1: The Earth in Context
Thu 01/29  Chapter 1: The Earth in Context cont.

February
Tue 02/03  Chapter 2: The Way Earth Works: Plate Tectonics
Thu 02/05  Chapter 2 cont.
Tue 02/10  Chapter 2 cont., Chapter 8: A Violent Pulse: Earthquakes, Int. D
Thu 02/12  Chapter 8 cont.
Tue 02/17  EXAM 1
Thu 02/19  Chapter 3: Patterns in Nature: Minerals
Tue 02/24  Chapter 3 cont.
Thu 02/26  Chapter 4: Up from the Inferno: Magma and Igneous Rocks, Int. A

March
Tue 03/03  Chapter 4 cont.
Thu 03/05  Chapter 4 cont., Chapter 5: The Wrath of Vulcan: Volcanic Eruptions
Tue 03/10  Chapter 5 cont.
Thu 03/12  EXAM 2
Tue 03/17  Spring Break, no classes
Thu 03/19  Spring Break, no classes
Tue 03/24  Chapter 6: Pages of Earth’s Past: Sedimentary Rocks, Int. B
Thu 03/26  Chapter 6 cont.
Tue 03/31  Chapter 7: Metamorphism: A Process of Change, Int. C

April
Thu 04/02  Chapter 7 cont.
Tue 04/07  Geology of Texas (includes parts of Ch. 9 and 10)
Thu 04/09  Geology of Texas cont.
Tue 04/14  Geology of Texas cont.
Thu 04/16  EXAM 3
Tue 04/21  Chapter 12: Riches in Rock: Energy and Mineral Resources
Thu 04/23  Chapter 12 cont.
Tue 04/28  Chapter 12 cont.
Thu 04/30  Chapter 19: Global Change in the Earth System
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<tbody>
<tr>
<td>Tue</td>
<td>05/05</td>
<td>Chapter 19 cont. (last day of class)</td>
</tr>
<tr>
<td>Thu</td>
<td>05/07</td>
<td>Comprehensive final exam (08:00 to 10:30 am)</td>
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