Instructor: Dr. Elizabeth C. Koeman-Shields
Email: ekoemanshields@angelo.edu
Phone: 325-486-6767 (office)
Office: VIN 124

Office Hours: MWF 10:00 am-11:00 am, M 3:00pm-5:00pm, and W 4:00pm-5:00pm, or by appointment

Course Information

Student Learning Outcomes
The student will learn and practice how to study and work together and how to carefully defend their thinking when answering questions or participating in a discussion. Learning outcomes will be evaluated by homework, in-class assignments, discussions, and exams. Upon completion of this course, students will be able to:

- Describe the origin of the elements we see on earth and in the solar system
- Calculate and predict chemical reaction behavior during a range of geological processes
- Identify appropriate radioactive dating methods for geological material and calculate ages
- Analyze and evaluate geochemical research and data related to geochemical principles

Course Delivery
This is a face-to-face course with learning resources and supplemental materials posted in Blackboard. A typical class meeting will combine mini-lectures, discussions, group activities, multimedia presentations, and other demonstrations and activities to give you an opportunity to learn concepts in as active a manner as possible.
Required Texts and Materials
All required readings will be given in class and/or posted in Blackboard. There is no required book for this course.

Communication
Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails, include the course name and section number in your subject line. I will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Technology
You may use a laptop, tablet, or cell phone to take notes during class. Please do not disturb others with their use. Please keep all electronics on vibrate or silent. 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.

Grading
Evaluation and Grades
Course grades will be determined as indicated in the table below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class activities</td>
<td>20</td>
</tr>
<tr>
<td>Journal article summaries and discussions</td>
<td>15</td>
</tr>
<tr>
<td>Journal article presentation</td>
<td>10</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>20</td>
</tr>
<tr>
<td>Exams (open book/notes)</td>
<td>20</td>
</tr>
<tr>
<td>Final exam (cumulative; open book/notes)</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Grading System
Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

A = 90.00-100%
B = 80.00-89.99%
C = 70.00-79.99%
D = 60.00-69.99%
F = 0-59.99% (Grades might be rounded up)
Attendance and Assignment Policy
Attendance is not included in your final grade. However, it will be extremely difficult to get a high grade in this course if you do not show up to class. Also, there will be no make-ups for homework, in-class projects/assignments, or exams. Make-up exams will be given for tests ONLY under extenuating circumstances. Prior email notification is needed for a make-up exam. NOTE: You are NOT automatically dropped if you stop attending class. March 26th is the last day to drop a course.

General Policies Related to This Course
All students are required to follow the policies and procedures presented in these documents:
- Angelo State University Student Handbook
- Angelo State University Catalog

Academic Integrity
Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university’s Statement of Academic Integrity.

Accommodations for Students with Disabilities
ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:
Incomplete Grade Policy
It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Plagiarism
Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list. I encourage you to work together on homework assignments and to study together for exams. However, anything you turn in must be in your own words.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the ASU Writing Center.

Student Absence for Observance of Religious Holy Days
A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

Title IX at Angelo State University
The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating
violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.
## Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Topics</th>
<th>Assigned Reading</th>
<th>Exams and Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1: 1/14, 1/16</td>
<td>Syllabus Periodic Table</td>
<td>TBD</td>
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<tr>
<td>#2: 1/21, 1/23</td>
<td>Basic Principles of Chemistry</td>
<td>TBD</td>
<td></td>
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<tr>
<td>#3: 1/28, 1:30</td>
<td>Formation of the Elements The Solar System</td>
<td>TBD</td>
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<tr>
<td>#4: 2/4, 2/6</td>
<td>Chemical Differentiation of the Earth Trace Elements in Igneous Processes</td>
<td>TBD</td>
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<tr>
<td>#5: 2/11, 2/13</td>
<td>Fundamentals of Thermodynamics</td>
<td>TBD</td>
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<tr>
<td>#6: 2/18, 2/20</td>
<td>Fundamentals of Thermodynamics</td>
<td>TBD</td>
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<tr>
<td>#7: 2/25, 2/27</td>
<td>Mineral Stability Diagrams</td>
<td>TBD</td>
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<tr>
<td>#8: 3/3, 3/5</td>
<td>Mineral Stability Diagrams</td>
<td>Exam 1</td>
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<tr>
<td>3/9-3/13</td>
<td>Spring Break</td>
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<tr>
<td>#9: 3/17, 3/19</td>
<td>Geoanalytical Techniques</td>
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<tr>
<td>#10: 3/24, 3/26</td>
<td>Radiogenic Isotopic Geochemistry</td>
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<tr>
<td>#11: 3/31, 4/2</td>
<td>Radiogenic Isotopic Geochemistry</td>
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<tr>
<td>#12: 4/7, 4/9</td>
<td>Stable Isotope Geochemistry</td>
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<tr>
<td>#13: 4/14, 4/16</td>
<td>Cosmochemistry</td>
<td></td>
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<tr>
<td>#14: 4/21, 4/23</td>
<td>Aqueous Geochemistry</td>
<td>Exam 2</td>
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<tr>
<td>#15: 4/28, 4/30</td>
<td>Potpourri</td>
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<td></td>
</tr>
<tr>
<td>#16: 5/7</td>
<td>8:00-10:00am</td>
<td>Final Exam</td>
<td>Cumulative</td>
</tr>
</tbody>
</table>

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2. https://www.angelo.edu/catalogs/
4. https://www.angelo.edu/services/disability-services/
5. https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
7. https://www.angelo.edu/dept/writing_center/academic_honesty.php
8. https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of