Introduction to Geological Field Methods GEOL 3326
Department of Physical & Environmental Sciences
Spring 2018

A. COURSE INFORMATION
Course number/section: GEOL 3326.001
Class meeting time: Monday 04:00 – 04:50 pm
Class location: BH - 128
Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION
Instructor: Dr. Valeriu Murgulet
Office location: CS 205
Office hours: M 10:00 am – 12:00 pm; Wednesday 09:00 am – 12:00 pm or by appointment
Telephone: 361-825-6023
e-mail: valeriu.murgulet@tamucc.edu
Appointments: by email

C. COURSE DESCRIPTION
Introduction to the basic techniques of geological fieldwork. Note taking in the field, proper use of geological field equipment, measurement and description of rock sections by several methods and degrees of detail, plus small area mapping of several types of terrain with topographic maps. Reports, sections, and maps will be produced from the field notes. Field trips required. Geological field methods provide a critical element to our knowledge and understanding of geologic concepts and theories of how the Earth works.

D. PREREQUISITES AND COREQUISITES
Prerequisites
Physical Geology (GEOL 1403), Historical Geology (GEOL 1404), and Mineralogy (GEOL 3411); SMTE-0094 Geology Lab Safety Seminar
Corequisites
Mineralogy (GEOL 3411) may be taken concurrently

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES
Required Textbook
Optional Textbook(s) or Other References
Supplies
A bound notebook (with at least 20-30 free pages, no loose pages or note pads)  
Mechanical pencil, lead size of 0.5 mm or finer  
Colored pencils  
Metric ruler (cm/mm markings)  
Protractor or a ruler/protractor  
Eraser  
Pencil sharpener  
10 sheets of metric graph paper (cm/mm ruling)

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT
Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

This class is designed to introduce you to the basic techniques of geologic fieldwork. By the end of this course, you should be able to:

1. observe, measure, and describe rock units in igneous, sedimentary, and metamorphic terrains,
2. take notes in the field,
3. properly use a geological compass,
4. present geologic data and write scientific reports

G. INSTRUCTIONAL METHODS AND ACTIVITIES
The class will meet on Mondays throughout the semester in the classroom to cover the theoretical and practical aspects of geological field techniques. Lecture power point slides, class exercises, discussions will be used while in the classroom. Some activities may take place on campus outside the classroom. This course also includes three weekends of field exercises. Class lectures prepare you for the field trips and for working the field trip assignments. In addition, you are expected to read relevant textbook chapters as announced in class in preparation for lecture and field trips.
H. MAJOR COURSE REQUIREMENTS AND GRADING

The following assessment tools will be used:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
<td>10</td>
</tr>
<tr>
<td>Final Exam (Comprehensive)</td>
<td>20</td>
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<tr>
<td>Quizzes</td>
<td>20</td>
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<tr>
<td>Report</td>
<td>50</td>
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I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
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</thead>
<tbody>
<tr>
<td>01/22</td>
<td>Topographic Maps</td>
<td>Chapters 1,2</td>
<td>Exercises</td>
</tr>
<tr>
<td>01/29</td>
<td>Geologic Maps</td>
<td>Chapters 1,2</td>
<td>Exercises</td>
</tr>
<tr>
<td>02/05</td>
<td>Preparation of Geologic Maps</td>
<td>Chapter 3</td>
<td>Exercises</td>
</tr>
<tr>
<td>02/12</td>
<td>Identification and Description of Sedimentary Rocks</td>
<td>Chapter 4</td>
<td>Exercises</td>
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<tr>
<td>02/16-02/18</td>
<td>Field Trip I</td>
<td></td>
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<tr>
<td>02/19</td>
<td>Interpretation of Surficial Geologic Maps</td>
<td>Chapter 6</td>
<td>Exercises</td>
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<tr>
<td>02/26</td>
<td>Introduction to Geologic Maps of Bedrock</td>
<td>Chapter 7</td>
<td>Exercises</td>
</tr>
<tr>
<td>03/05</td>
<td>Geologic Maps of Homoclinal Beds</td>
<td>Chapter 8</td>
<td>Exercises</td>
</tr>
<tr>
<td>03/12</td>
<td>Spring Break – No classes</td>
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<tr>
<td>03/19</td>
<td>Midterm Exam</td>
<td></td>
<td>None</td>
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<tr>
<td>03/26</td>
<td>Unconformities</td>
<td>Chapter 9</td>
<td>Exercises</td>
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<tr>
<td>03/29-04/01</td>
<td>Field Trip II</td>
<td></td>
<td></td>
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<tr>
<td>04/02</td>
<td>Folds on Geologic Maps</td>
<td>Chapter 10</td>
<td>Exercises</td>
</tr>
<tr>
<td>04/09</td>
<td>Faults on Geologic Maps</td>
<td>Chapter 11</td>
<td>Exercises</td>
</tr>
<tr>
<td>04/16</td>
<td>Igneous and Metamorphic Rocks</td>
<td>Chapter 12</td>
<td>Exercises</td>
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<tr>
<td>04/23</td>
<td>Project Discussion</td>
<td></td>
<td>None</td>
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<tr>
<td>04/30</td>
<td>Final Exam (comprehensive)</td>
<td></td>
<td>None</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES

Attendance/Tardiness

Attendance on a regular basis will be essential to the successful completion of the course. Three or more absences will result in a failing grade. Exceptions are granted only in cases of illness or under other unforeseeable circumstances and require a written petition with supporting documentation (e.g. doctor’s statement). Field trips: Attendance of all field trips is required to obtain full credit on the trip assignment. Vehicles will leave at the specified time even if you oversleep or are late. There will be no later opportunities to make up missed field trips. Transportation will be provided in university vehicles. University policy does not allow the use of private vehicles.

Late Work and Make-up Exams

There is no provision for making up quizzes and late/missed work. Textbook exercises are due after one week, according to the due dates set in Turnitin Direct Assignment. It is also your responsibility to obtain notes and announcements from fellow students in the event you miss a class.

Extra Credit
None

Cell Phone Use
Not allowed in the class.

Food in Class
Not allowed in the class.

Missed Exam
Make-up exams will be given only on presentation of approved medical excuse.

Participation
Group discussion and collaboration are highly encouraged during field trips and class exercises.

K. 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)**
  The grade of W will be assigned to any student officially dropping a course by Friday, April 8, 2016. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must be submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar ([http://www.tamucc.edu/academics/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.

L. **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.

We will make every effort to make this course a positive, fun, and safe learning experience. To achieve this goal, we have to ask all students to participate and to adhere to established class policies. This includes that you engage actively in camp activities such as cooking and clean up. Please respect sleeping hours between 10 pm and 6 am by keeping the noise down. By signing up for this class you agree to refrain from any activities that expose you or others to unnecessary risk. The ultimate decision as to what behavior constitutes a risk is solely with the instructors. We will be camping and working in state parks. It is your responsibility to familiarize yourself with all applicable laws, regulations, and policies. This includes minimizing your impact on the natural environment and any unnecessary disturbance of the wild life. These rules apply to the entire duration of the trips. Violations result in a failing grade.

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.