Introduction to Geological Field Methods GEOL 3326  
Department of Physical & Environmental Sciences  
Spring 2015

A. COURSE INFORMATION

Course number/section: GEOL 3326.001  
Class meeting time: Monday 09:00 – 09:50  
Class location: OCNR - 222  
Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Dr. Valeriu Murgulet  
Office location: CS 205  
Office hours: Monday 10:00 – 1:00  
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)

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
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>15</td>
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<tr>
<td>Final Exam (Comprehensive)</td>
<td>25</td>
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<tr>
<td>Textbook Exercises</td>
<td>10</td>
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<tr>
<td>Weekly Quizzes</td>
<td>10</td>
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<tr>
<td>Report</td>
<td>40</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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<tbody>
<tr>
<td>January 26</td>
<td>Topographic Maps</td>
<td>Chapters 1,2</td>
<td>Exercises</td>
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<tr>
<td>February 2</td>
<td>Geologic Maps</td>
<td>Chapters 1,2</td>
<td>Exercises</td>
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<tr>
<td>February 9</td>
<td>Preparation of Geologic Maps</td>
<td>Chapter 3</td>
<td>Exercises</td>
</tr>
<tr>
<td>February 16</td>
<td>Identification and Description of Sedimentary Rocks</td>
<td>Chapter 4</td>
<td>Exercises</td>
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<tr>
<td>February 23</td>
<td>Interpretation of Surficial Geologic Maps</td>
<td>Chapter 6</td>
<td>Exercises</td>
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<tr>
<td>March 2</td>
<td>Introduction to Geologic Maps of Bedrock</td>
<td>Chapter 7</td>
<td>Exercises</td>
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<tr>
<td>March 9</td>
<td>Midterm Exam</td>
<td></td>
<td>None</td>
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<tr>
<td>March 16</td>
<td>Spring Break – No classes</td>
<td></td>
<td>Exercises</td>
</tr>
<tr>
<td>March 23</td>
<td>Geologic Maps of Homoclinal Beds</td>
<td>Chapter 8</td>
<td>Exercises</td>
</tr>
<tr>
<td>March 30</td>
<td>Unconformities</td>
<td>Chapter 9</td>
<td>Exercises</td>
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<tr>
<td>April 6</td>
<td>Folds on Geologic Maps</td>
<td>Chapter 10</td>
<td>Exercises</td>
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<tr>
<td>April 13</td>
<td>Faults on Geologic Maps</td>
<td>Chapter 11</td>
<td>Exercises</td>
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<tr>
<td>April 20</td>
<td>Igneous and Metamorphic Rocks</td>
<td>Chapter 12</td>
<td>Exercises</td>
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<tr>
<td>April 27</td>
<td>Project Discussion</td>
<td></td>
<td>None</td>
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<td>May 4</td>
<td>Final Exam (comprehensive)</td>
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<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 late and/or missed work. It is 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, or by pre-excused permission of the instructor.

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

K. COLLEGE AND UNIVERSITY POLICIES

- Academic Integrity (University)
  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.
  See Full University Policy at http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity

- Classroom/Professional Behavior

- 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 10, 2015. No student is eligible to receive a W without completing the official drop process by this deadline. Visit the Office of the University Registrar for the Course Drop Form that must submitted. After April 10, 2015 a student will not be allowed 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
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/

L. OTHER INFORMATION

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 may 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.