INSTRUCTOR
Dr. Valeriu Murgulet
Email: valeriu.murgulet@tamucc.edu
Office: CS 205

LECTURES: MW 03:30 – 04:45 PM; CS-114

LABS: W 05:00-06:50; CI-214

OFFICE HOURS: TBA and/or by appointment

COURSE DESCRIPTION
Basic concepts of petroleum geology and techniques used in the exploration and production of hydrocarbon systems. Lectures and lab exercises will cover principles of stratigraphy, sedimentology, hydrocarbon generation, hydrocarbon-trapping mechanisms, reservoir characterization, seismic interpretation, well-log interpretation, and geologic risk analysis. Prerequisites: GEOL 4411.

COURSE OBJECTIVES
This course will give students the skills to:
1. Identify and describe the major components of petroleum systems.
2. Understand generation and migration of petroleum and the formation of traps and seals.
3. Understand sedimentary basin and tectonic settings associated with petroleum systems.
4. Acquire the concepts and methods in petroleum exploration and development.

TEXTBOOK

COURSE GRADING
Two Midterm Exams: 20% each
Final Exam (Comprehensive): 40%
Labs (assignments and participation) 40%

GRADING POLICY
A: 90-100%; B: 80-89.9%; C: 70-79.9%; D: 60-69.9%; F: 0-59.9%

ATTENDANCE POLICY
All students are expected to attend class. Poor attendance will result in missed lecture material and may reflect in less than desired class performance. It is the students’ responsibility to acquire class notes from peers if class is missed. Lab attendance is mandatory. One excused absence
(with documentation) will be allowed but will result in the removal of that grade from the average. Unexcused absences result in a zero. It is the students’ responsibility to acquire the missed material from their peers.

**EXAMS**
Each student is expected to take all exams at the designated time and place. Students who miss an exam will receive a grade of zero for that exam. Make-up exams will be given only on presentation of approved medical excuse, or by pre-excused permission of the instructor. No exceptions! One and only one make-up exam will be given after each regularly scheduled exam. Time and place for the make-up exam will be arranged at the next regularly scheduled class following each exam. The format of make-up exams may differ from that of the regular exam. All exams are closed book, however, the use of a calculator is permitted. Students who want to appeal a grade should do it in writing, at latest one day after the exam was returned. Please note the date of the final exam. No final exam will be given at an earlier date. Disability accommodations must be documented and approved by the Office of Disability Services.

**GRADE APPEALS**
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 on 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 on the process, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, consult Texas A&M University-Corpus Christi University Procedure 13.02.99.C2.01 Student Grade Appeal Procedures (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 or the College of Science and Engineering Dean’s Office.

**NOTICE TO STUDENTS WITH DISABILITIES AND VETERANS**
Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office, located in Corpus Christi Hall (CCH) 116, at 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 the Center for Instruction, room 350, and can be reached at 825-6094.
ACADEMIC INTEGRITY
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. Please be advised that the penalty for cheating is a failing grade and possible further disciplinary action by the university.

*The university policy of scholastic dishonesty will be followed in the event of academic misconduct. Academic misconduct includes all acts of dishonesty in any academically related matter and any knowing or intentional help or attempt to help, or conspiracy to help, another student.*

TENTATIVE LECTURE AND LAB SCHEDULE*

08/27
Introduction. The context of petroleum geology.
LAB: No Lab

Week beginning with 09/01**
The physical and chemical properties of petroleum.
LAB: TBA

Week beginning with 09/08
The subsurface environment.
LAB: TBA

Week beginning with 09/15
**Generation and migration of petroleum.** Origin of petroleum. Formation of kerogen.
LAB: TBA

Week beginning with 09/22
**Generation and migration of petroleum.** Petroleum migration. The petroleum system.
LAB: TBA

Week beginning with 09/29
10/01 EXAM# 1
LAB: TBA

Week beginning with 10/06
**The reservoir.** Reservoir continuity. Reservoir characterization. Reserve calculations. Production methods.
LAB: TBA
Week beginning with **10/13**

**Traps and seals.** Distribution of petroleum within a trap. Seals and cap rocks. Structural traps.
LAB: TBA

Week beginning with **10/20**

LAB: TBA

Week beginning with **10/27**

Sedimentary basins and petroleum systems.
LAB: TBA

Week beginning with **11/03**

Nonconventional petroleum resources.
**11/05 EXAM# 1**
LAB: TBA

Week beginning with **11/10**

**Methods of exploration.** Well drilling and completion. Formation evaluation.
LAB: TBA

Week beginning with **11/17**

**Methods of exploration.** Geophysical methods of exploration. Borehole geophysics.
LAB: TBA

Week beginning with **11/24**

**Methods of exploration.** Subsurface geology. Remote sensing.
LAB: TBA

Week beginning with **12/01**

Conclusions. Final Exam Review
LAB: TBA

**FINAL EXAMINATION TBA (2.5 hour exam)**

**READING:** Reading material will be assigned at the end of each lecture session.

*NOTE:* The syllabus is subject to change at the instructor’s discretion.

**NOTE:** No classes on 09/01 (LABOR DAY HOLIDAY)