CASPER COLLEGE COURSE SYLLABUS
EXTR 2530 Oil & Gas Production

Semester/Year: Spring 2016

Lecture Hours: 3 Lab Hours: .5 Credit Hours: 3.5

Class Time: Moodle Days: Moodle Room: Moodle

Instructor’s Name: Ken Kreckel

Instructor's Contact Information: e-mail preferred Office Phone: 268-3457 Email: kkreckel@caspercollege.edu

Office Phone: 307 251 1370 Office Hours: Make appointment via email or 307 251 1370

Course Description: An introduction to the basics of oil and gas production. Topics will include a quick overview of the history of production, oil and gas reservoirs, drilling, testing, and completing wells. The main focus will be on oil and gas properties, production methods, enhanced recovery methods, field processing, and well maintenance.

Statement of Prerequisites: Permission of the instructor.

Goal: Acquire an understanding of terminology, equipment and techniques used in the production of oil and gas. This will include an introduction to such topics as reservoir engineering, petroleum geology and production engineering.

Outcomes: Upon completion of this course, the student will:

1. Be familiar with upstream oil and gas exploration and production concepts.
2. Demonstrate knowledge of the basic mechanisms for producing oil and gas from reservoirs.
3. Communicate their comprehension of the basic of oil and gas field production.
4. Demonstrate knowledge of the basics of oil and gas maintenance.

In pursing these outcomes, students will:
1. Demonstrate effective oral and written communication
2. Use the scientific method
3. Use appropriate technology and information to conduct research
4. Use quantitative analytical skills to evaluate and process numerical data

Methodology: Moodle will be the main delivery system for this course. The course is divided into weeks [see Moodle page] which correspond to the major topics on the syllabus. Each week will have some combination of the following:

1. Reading assignment
2. Power point presentation [.pdf]
3. Online activity: either a learning site, enrichment, or other relevant site
4. Other activity: problem solving, mapping or chart example, etc.
5. Discussion forum[online]: On some weeks I will post a series of questions on the forum covering
the major points for that week. Participation is mandatory and a portion of your grade will be based on the quality of your participation [see Forum Rubric example]  
6. Test or quiz periodically

Note: Student feedback is valuable as the instructor uses course evaluations in determining course methodology.

**Evaluation Criteria:** There will be three hours of lecture per week, plus weekly activities. Tests [50-60%] and weekly work equal 100% of the course grade. Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

**Required Text, Readings, and Materials:** Moodle. Raymond, Martin S. and Leffler, William L., Oil and Gas Production in Nontechnical Language

**Class Policies:** Last Date to Change to Audit Status or to Withdraw with a W Grade: as per Casper College policies (withdrawal deadline; see: “Admission and Registration – Schedule Changes” in the catalog)

**Student Rights and Responsibilities:** Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

**Chain of Command:** If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean, and lastly the Vice President for Academic Affairs.

**Academic Dishonesty:** (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

**Official Means of Communication:** Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also where you will find course evaluation links during course evaluation periods.

**ADA Accommodations Policy:** If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college’s Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

**Calendar or schedule indicating course content:** See course Moodle page for details and updates

Week 1  Introduction of course; class expectations  
  Overview of oil and gas industry and history

Week 2  History topics continued  
  Who does what to support production
Week 3  Overview of oil and gas reservoir geology

Week 4  Reservoirs

Week 5  Fluids

Week 6  Lease ownership
   Drilling operations

Week 7  Testing and completing wells
   Original hydrocarbon in place
   Well completions

Week 8  Hydrocarbons

Week 9  Hydrocarbons
   Gas vs. Oil Wells
   Phase diagrams

Week 10 Basics of production: primary, secondary, and tertiary recovery
   Pressure maintenance

Week 11-12 Field processing: gas & oil treating
   Water disposal
   Well testing
   Measurements and metering
   Storage

Week 13-14 Well maintenance & repair
   Service rigs
   Well problems

Week 15 Well workovers & stimulation
   Basic economics
   Plug and abandon (P&A)

Week 16 Course review