

**PE 3413 – Spring 2009**

Subsurface Production Engineering  
University of Oklahoma  
MWF, 12.30 pm to 1.30 pm, N202, SEC

**INSTRUCTOR**

Deepak Devegowda  
Office: T313, Sarkeys Energy Center  
Office Hours: MW: 2.00 to 4 p.m.  
E-mail: [Deepak.devegowda@ou.edu](mailto:Deepak.devegowda@ou.edu)

**TEACHING ASSISTANTS**

Rohann Jose  
Email: Rohann.jose@ou.edu

Shodan D'Souza  
Email: Shodan.J.D-Souza@ou.edu

**PREREQUISITES**

PE 3123 or higher.

**TEXT AND COURSE NOTES**

*Petroleum Production Systems*, Michael Economides, A. Daniel Hill and Christine Ehlig-Economides.

In addition to the textbooks, course notes, handouts and relevant papers will be posted online on D2L (<https://learn.ou.edu/index.asp>). The posted materials are relevant to your understanding of the subject matter and for the quizzes/exams. You need to ensure that you are set-up to receive notifications from D2L.

## **INTRODUCTION AND COURSE OBJECTIVES**

The objective of this course is to evaluate and optimize oil and gas well performance. Key aspects of production engineering from the sandface to the surface will form the primary focus of this course. The primary topics that will be covered are:

1. Reservoir inflow performance,
2. Well completion design and performance,
3. Well stimulation,
4. Production system design
5. Multiphase flow in pipes.
6. Introduction to production logging

The chapters covered in the textbook will be aided and augmented with additional material from published literature.

## **BASIS FOR GRADE**

Class Exams/Quizzes: 30/15%

Final Exam: 30%

Homework: 25%

1. You can expect pop quizzes at any time during the normal course hours.
2. Late homework will receive penalties.

## **GRADING**

≥90% :A

≥80% :B

≥65% :C

≥50% :D

Receiving a grade of "D" or less in this course will stop your progression through the Petroleum Engineering curriculum. You will not be allowed to take advanced PE courses until satisfying the requirement of passing with at least a "C." Be aware that this will add a year to your projected graduation date.

## **HOMEWORK AND ASSIGNMENTS**

All homework is due at the beginning of the class on the assigned due date. Late submissions will be penalized. You may submit handwritten copies as long as your homework is logically ordered, neat and legible. I will not accept printouts of MS Excel pages or homework solutions emailed to either me or the T.A.

Each question in your assigned homework should have the following format:

1. Statement of the problem
2. Details of the procedure
3. Solution

You can discuss your homework solutions and methodology with your classmates as long as you turn in your own work. You are also strongly encouraged to read other sources of information, for e.g. SPE papers and other relevant books which may help you with your homework.

## **REASONABLE ACCOMMODATION POLICY**

The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the instructor as early in the semester as possible. Students with disabilities must be registered with the Disability Resource Center prior to receiving accommodations in this course. The Disability Resource Center is located in Goddard Health Center, Suite 166, (405) 325-3852 (Tel) or (405) 325-4173 (TDD only).

## **UNIVERSITY POLICY ON ACADEMIC HONESTY**

<http://www.ou.edu/provost/integrity>

This page outlines the University's expectations of academic honesty, defines misconduct, provides examples of prohibited conduct, and explains the sanctions available for those found guilty of misconduct. The rules outlined therein will be used for this course.