

PETE 662
Production Engineering
Texas A&M University

Instructor: Dr. A. D. Hill
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Fall 2010
TTh 11:10-12:25pm RICH 302

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COURSE SYLLABUS

Description: This course is a survey course in petroleum production engineering, beginning with the material in the textbook, and going beyond this level with the aid of other material from the literature. I will review basic undergraduate production engineering material at a fairly rapid pace. The primary topics that will be covered include reservoir inflow, skin effects and formation damage, well completion performance, multiphase flow in pipes, and well stimulation. A course outline is given below.

Objectives:

- Learn engineering methods to evaluate and optimize oil and gas well performance.

Text: *Petroleum Production Systems*, by M. J. Economides, A. D. Hill, and C. Ehlig-Economides + supplemental papers

Course Schedule

<u>Week</u>	<u>topic</u>	<u>chapter(s) covered</u>
1-2	introduction to production engineering; review of reservoir inflow	1-4
3-5	skin effects and formation damage, well completion performance	5
6-9	well stimulation, formation damage, matrix acidizing	13-15
10-13	multiphase flow in pipes	7, 10
14	artificial lift	19-20
15	class project presentations; overview	

COURSE POLICIES

1. Attendance: Class attendance is important. I will supplement the material in the textbook with additional published and unpublished material, some of which may be presented only during class time. I encourage you to attend class regularly.

2. Examinations: Examinations are not optional. Make-up of major examinations will be given only for university excused absences.

3. GRADING:	Homework & Projects	30%
	Mid-term Exam	30%
	Final Exam	40%

The course grade will be based on homework assignments, a mid-term exam, and a final examination. The final exam will be given at the regularly scheduled time (Friday, Dec. 10, 3-5pm for in-class students). One or more of the homework assignments will be projects of larger scope than the usual homework assignments; these projects will comprise half of the homework grade.

4. Late Work Policy: You are required to complete your work during the time allotted. For homework and project assignments, they are to be handed in at the start of class for in-class students and to be electronically submitted by the assigned date and time for Distance Learning students. Homework or projects turned in after the due time but less than one day late will receive a 50% penalty; homework or projects submitted more than a day late will receive a grade of 0. For Distance Learning students, if you have a short-term work assignment that will prevent you from submitting an assignment on time, you must petition well ahead of time to get an exception to this rule. In general, you are given sufficient time to complete all assignments, so this circumstance should be rare.

The mid-term and final exams are required. For in-class students missing an exam, a valid medical excuse is required or the grade will be 0. Distance Learning students must submit both the mid-term and the final exam by the assigned date and time or the grade will be 0.

5. Academic Integrity Statement: *"An Aggie does not lie, cheat, or steal or tolerate those who do."* Collaboration on examinations and assignments is forbidden except when specifically authorized. Students violating this policy may be removed from the class roster and given a F in the course or other penalties as outlined in the *Texas A&M University Student Rules*. See <http://www.tamu.edu/aggiehonor>

6. ADA Policy Statement: 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 contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall or call 845-1637.