

**COURSE SYLLABUS: PTRT 1301 – Overview of Petroleum Industry**

**LOCATION: Houston Community College, North Forest Campus, 6010 Little York Road, Houston 77016; Room 120**

**CLASS DATES: September 24, 2016 to December 10, 2016**

**SECTION: 17376**

**CREDIT HOURS: 3.00**

**CLASS TIME: Saturday 1030am-100pm**

**HOUSTON COMMUNITY COLLEGE (NORTHEAST CAMPUS) MISSION STATEMENT:**

Houston Community College will be the most **relevant** community college in the country. We will be the **opportunity** institution for every student we serve – **essential** to our community's success.

**WELCOME:**

We welcome each of you to a semester of comprehensive study based upon an industry view of the oil and gas industry. With participation, each student will exit this course with a more expanded view of this industry than when they first entered. Technical review and class participation in all of its aspects is the key and that is what will be expected.

**Course Description:** An overview of the petroleum industry will be studied from the engineering technician perspective. The current knowledge and technical aspects of the oil and gas industry will be taught with regard to the various operational functionalities as outlined in the course content.

**Prerequisites:** None

**Learning Objectives:** Upon completion of this course, students will be able to describe the following engineering practices in the petroleum industry – roles and responsibilities, geology, reservoir engineering, drilling engineering, facilities engineering, well operations, refineries, transportation, global reserves and production, data management. Students will be able to speak more responsibly about the oil and gas industry.

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**Instructor Information:**

Instructor: Thomas (Tom) Lane  
Phone Number: 830-832-6018 (cell)  
Email: [Thomas.Lane@hccs.edu](mailto:Thomas.Lane@hccs.edu)

Course schedule: Saturday 1030am-1pm  
Office Hours: NE Campus, Mon-Fri 11-12pm (call /email me to meet)

**Instructors Biography:** Petroleum Engineer, ExxonMobil, 1976-2015

**Education:** B.S Mechanical Engineering, SMU, Dallas, Texas

**TEXTBOOK'S**

**INFORMATION:**

**The Oil and Gas Industry, a Nontechnical Guide, Joseph Hilyard, PennWell, 2012**  
**ISBN-13: 978-1-59370-254-0. Cost \$ 60 at amazon.com**

**Class instruction will be from the textbook. Homework and tests will be from the textbook. Tests are open book. You cannot share with another student or use the instructor's book.**

**Lab Requirements:** No lab.

**Students with Disabilities:**

"Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the

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beginning of each semester. Faculty is authorized to provide only the accommodations requested by the Disability Support Services Office." For questions, contact Donna Price at 713-718-5165 or the Disability Counselor at each college. Also visit the ADA web site at:

<http://www.hccs.edu/students/disability/index.htm>.

Faculty Handbook/Faculty Orientation is also available at <http://www.hccs.edu/students/disability/faculty.htm>.

**TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, 20 U.S.C. A§ 1681 ET. SEQ.**

Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' rights with regard to sex/gender discrimination. Information regarding these rights are on the HCC website under Students-Anti-discrimination. Students who are pregnant and require accommodations should contact any of the ADA Counselors for assistance.

It is important that every student understands and conforms to respectful behavior while at HCC. Sexual misconduct is not allowed and will be addressed promptly. Know your rights and how to avoid these difficult situations. HCC Office of Institutional Equity is responsible. Contact them at 713-718-8271.

**METHOD OF INSTRUCTION:**

A lecture format is used and slides and handouts will supplement the material where needed. A class discussion of key concepts will be employed so that the student will be able to obtain a basic understanding of how information is utilized in the oil and gas industry. Students are encouraged to ask questions and will be expected to participate in class. It is therefore important for each student to read the assignments and come prepared to participate. If you miss a class, you will

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be responsible to getting the information missed. Material will be available on the HCC Learning Web

**CLASS POLICIES:**

**Academic**

**Honesty:**

All HCC rules, policies, and regulations apply as they are described in the 2007 HCC Student Handbook.

**Attendance and**

**Withdrawal Policies:**

All students are required to be present during class sessions. Students must communicate with the instructor in cases they need to be absent from a class period. Withdrawal policies apply as they are described in the HCC policy, rules, and regulations in the HCC Student Handbook and College

**Course Requirements and Grading Policy:**

All students are required to be on time for lectures and highly encouraged and challenged to participate during lectures in the course.

<u>Letter Grade</u>	<u>Test/Project Score</u>
<b>A</b>	<b>90-100</b>
<b>B</b>	<b>80-89</b>
<b>C</b>	<b>70-79</b>
<b>D</b>	<b>60-69</b>
<b>F</b>	<b>0-59</b>

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**Testing:**

Each test and presentation will have a maximum score of 100 points. Students should take each exam on time so they have time to complete it. **Tests** – there will be 7 tests and 1 final test, for a total of 8 tests. The average score of these 8 tests will be 80% of the final grade. All tests are open book. **Technical Presentations** – each student will make 2 presentations and the average score will count 20% of the final grade. No grades are dropped. Tests or presentations not done are given a “0” score. Since there are 11 class sessions, this course has 20 hours e-instruction for time outside of class

**Make-Up**

**Policy:**

make-up tests will be allowed

**Student**

**Survey:**

**Evaluation for Greater Learning Student Survey System**

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time in class, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your division chair.

**Course Content:**

**Text Book**

- Origins of oil and gas
- Oil and gas production
- Searching for oil and gas
- Drilling and completions
- Managing production
- Transporting and processing oil and gas

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**Class Schedule (11 sessions)**

**Sep 24:** First day of Class: Class Overview and Orientation, Review of Class Syllabus, Class Schedules. Course structure and outline. Cover **Chapter 1 and 2**

**Oct 1:** **Chapter 3. Test #1 on Chap 1-3**

**Oct 8:** Chap 4-5. Test # 2

**Oct 15:** Chap 6-7. Test #3

**Oct 22:** **Chap 8-9. Test # 4**

**Oct 29:** Chap 10-11. Test # 5

**Nov 5:** **Chap 12-13. Test # 6**

**Nov 19:** **Chap 14-15. Test # 7**

**Dec 3:** **Final test #8. Can take Dec 3 or Dec 10**

**Dec 10:** **Final test# 8**

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**OTHER STUDENT INFORMATION (CLUBS, TUTORING, WEB RESOURCES, ETC.)**

Students are encouraged to join the SPE, Society of Petroleum Engineers Gulf Coast Section. Additional help and support is available upon request. Class trips may be scheduled at industry sites to further hands-on application. Students will be notified in advance.

Students are encouraged to visit informative sites of:

The American Chemical Society

The American Institute of Chemical Engineers

The Center for the Advancement of Process Technology

The Gulf Coast Process Technology Alliance

The American Chemical Society Students Affiliates Section

**Technical Presentations (students choose their topic):**

Role of drilling, reservoir engineer in drill well planning

Describe how well tests are done and the value of the data

Describe advantages and disadvantages of water injection and gas injection

Visit Contractor web sites (Halliburton, Schlumberger, Baker, Weatherford, WellTec) to see tools and technology available to reservoir, drilling and wellwork engineers

Production data management

Safety Hazards

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**Technical Presentation Format (Power Point preferred, WORD is fine):**

- I. Title Page, date, name
- II. Describe the Issue or objectives
- III. Discuss advantages, disadvantages, or alternative options
- IV. Summary or Conclusion or Recommendation
- V. References used