

COURSE SYLLABUS: PTRT 1313 - 0005 – Industrial Safety

LOCATION: Houston Community College, North Forest Campus, Room TBD

CLASS DATES: Fall Semester – Sept 24, 2016 to Dec 10, 2016

SECTION: 17355

CREDIT HOURS: 3.00

CLASS TIME: Saturday 8am- 1030am

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: A study of industrial safety in the petroleum industry will be undertaken. 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 operational safety engineering in the petroleum industry in the following areas – incident investigation, hazards, risk management, process safety, safety critical equipment, fire hazards and emergency response. Students will be able to speak more responsibly on these subjects in 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

Course schedule: Saturday 8am-1030am
Office Hours: Saturday at North Forest after class. At Northeast Campus 11-1230pm Mon – Friday after Furr HS classes (call/email me to meet)

Instructors Biography: Petroleum Engineer, ExxonMobil, 1976-2015

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

TEXTBOOK

INFORMATION: Introduction to Oil and Gas Operational Safety, Wise Global Training, 2015
ISBN: 978-0-415-73077-8. Cost \$ 96 on amazon.com

Class instruction will be from the book. Homework is from the book. Tests are all open book. You must use your own book. You cannot share with other students or use the instructor's book.

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 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-

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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 condoned 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. Students will be able to obtain a basic understanding of how industrial safety 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 be responsible to getting the information missed. Material will be available on the HCC Learning Web

CLASS POLICIES:

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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. All students must consult the HCC Student Handbook and College Catalogue regarding withdrawal policies.

**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>
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

Testing:

Each test and presentation will have a maximum score of 100 points. Students are advised to attend all exams on time so they have time for completion. **Tests** – there will be 7 tests and

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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, SO YOU MUST HAVE THE TEXT BOOK TO ANSWER THE QUESTIONS. **Technical Presentations** – each student will make 2 presentations to the class and that 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 only 11 class sessions, this course has 20 hours e-instruction for time you are to spend 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, DURING 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 professor and Department Chair for continual improvement of instruction.

Technical Presentations

Students may choose their own topics, in areas that are of interest to them, related to Industrial Safety. See example topics below.

Course Content:

Text Book

- Introduction
- Incident learnings

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- Oil and gas operation hazards
- Risk management
- HSE management
- Process safety – contracts, permits, shift handover
- Plant operations
- Safety critical equipment
- Fire hazards, risks, control
- Emergency response

Class Schedule (11 sessions):

Sept 24:

First day of Class: Class Overview, Review of Class Syllabus, Class Schedules. Course structure and outline, will cover **Chapter 1. Must attend class, as CENSUS Date is Sept 29**

Oct 1:

Chapter 2

Oct 8:

Chapter 3-4. Test #1 on Chap 1-4

Oct 15:

Chap 5-6. **Test # 2 on Chap 5-6**

Oct 22:

Chapters 7-8. Test # 3 on Chap 7-8

Oct 29:

Presentations. Chapter 9-10. Test # 4 on Chap 9-10.

Nov 5:

Presentations. Chap 11-12. **Test # 5, Chapters 11-12**

Nov 12:

Presentations. **Chapter 13-14. Test # 6 on Chap 13-14**

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Nov 19: Presentations. **Chapter 15-16. Test # 7 on Chap 15-16**

Dec 3: **Final Test.** Can take Dec 3 or Dec 10

Dec 10: **Final Test.** Can take Dec 3 or Dec 10

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 Presentation Example Topics:

What is OSHA and what do they do?

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What is BOEM and what do they do?

What are PPE options for head, eye, hand, coveralls, boots, breathing

What is HAZCOM and HAZWOPER?

What is a JSA? Complete a JSA form?

What are safety hazards on land drilling rig?

What are safety hazards on offshore floating drilling rig?

What are safety hazards in a refinery?

You are a new Manager talking to a new employee about your Company's safety expectations.

You are in a 3-minute elevator ride down to the street. What are you going to tell them?

Technical Presentation – Use instructor's computer and projector. Power Point preferred,

WORD is fine, just verbal is ok:

- I. Title Page, date, name
- II. Issue, objectives and options
- III. Describe issue and discuss options, or advantages / disadvantages
- IV. Summary or Conclusion or Recommendation
- V. References – sources used