

**Course Syllabus: PTRT 2470 – Production Data Management III - Facilities**

**Location: Furr High School**

**Class Dates: January 4, 2017 to May 25, 2017**

**Section: 20839**

**Credit Hours: 4.00**

**Class Time: Monday – Friday, 740-855am**

**Houston Community College (Northeast Campus) Mission Statement:**

HCC 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.

We welcome you to a semester of comprehensive study of the oil and gas industry. With participation, each student will exit this course with a more expanded view and understanding of this industry than when they first entered. Technical review and class participation is the key to success for all students.

**Course Description:** An overview of the production data management for surface facilities will be studied from the engineering technician perspective. The technical and operational aspects of surface production facilities in the oil and gas industry will be covered.

**Prerequisites:** None

**Learning Objectives:** Upon completion of this course, students will be able to describe the production data management for surface facilities in the petroleum industry – roles and responsibilities, Christmas trees, chokes, gas lift input equipment, sand probes, fluid sampling taps, flowline, test and production separators, meters, control valves, instrumentation, pressure relief valves, ESD systems, vent and flare systems, pipelines, pigging, pumps, storage tanks, dehydration, gas sweetening, corrosion and HSE – health, safety, environmental data. Students will be able to speak more responsibly about the oil and gas industry.

**Instructor Information:**

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**Instructor:** Thomas (Tom) Lane. 830-832-6018 (cell)

**Email:** [Thomas.Lane@hccs.edu](mailto:Thomas.Lane@hccs.edu)

**Office Hours:** During class

**Instructors Biography:** Petroleum Engineer, ExxonMobil, 1976-2015  
HCC Instructor, August 2015 - present

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

**Textbook:** **Existing Furr classroom textbooks**  
**Class instruction will be from the textbook. Homework and tests will be from the textbook. Tests are open book.**  
**Textbooks are supplied by Houston ISD.**

**Lab Requirements:** No lab.

**Students with Disabilities:** "Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty will provide the accommodations requested by the Disability 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

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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.

### **INSTRUCTION:**

A classroom discussion is used with slides and handouts for supplemental material. A class discussion of key concepts will be completed so that the student will be able to obtain a basic understanding of the technical and operational 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. Material will be available on the HCC Learning Web

### **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 per the HCC Student Handbook

### **Course Grading:**

<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>

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**D**

**60-69**

**F**

**0-59**

**Testing:**

Each test, presentation and report will have a maximum score of 100 points. Students should take tests on time so they have time to complete it. **Tests** – there will be an estimated 10 tests and 1 final test, for a total of 11 tests. The average score of these tests will be 65% of the final grade. All tests are open book. **Technical Presentations** – each student will make 3 Petroleum data management for facilities presentations and the average score will count 30% of the final grade. Presentations can be done with another student. **Technical Report** – each student will hand in one 5-page written report on a course topic. This will count 5% of the final grade. **Summary** - No grades are dropped. Tests, presentations or report not done are given a “0” score.

**Make-Up**

**Policy:**

Make-up tests will be allowed the following week. If not turned in within one week, the grade is zero.

**Student Survey:**

**Evaluation for Greater Learning Student Survey System**

At HCC, we believe that student feedback is necessary to improve teaching and learning. During class, you will be asked to answer a short online survey related to the class. The survey is anonymous for the HCC Department Chair’s use.

**Course Content:**

**Text Book**

- Various textbooks
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**Class Schedule (20 weeks, 95 sessions)**

Jan 4:	First day of class, orientation, syllabus review
Jan 9-13:	Roles and responsibilities. Test #1
Jan 17-20:	Christmas tree and choke. Test #2
Jan 23-27:	Flowlines
Jan 30-Feb 3:	Test and production separator. Test #3
Feb 6-10:	Presentation #1
Feb 13-17:	Oil and gas meters. Test #4
Feb 20-24:	Instrumentation
Feb 27-Mar 3:	Instrumentation. Test #5
Mar 6-10:	Presentation #2
Mar 13-17:	No classes- Spring Break
Mar 20-24:	Pipelines, pigging, corrosion. Test #6
Mar 27-31:	Dehydration. Test #7
Apr 3-7:	Gas sweetening. Test #8
Apr 10-13:	Presentation #3. Turn in Technical Report
April 17-21:	Pumps & compressors. Test #9
April 24-28:	HSE – health, safety, environmental
May 1-5:	HSE – health, safety, environmental. Test # 10
May 8-12:	Final exam test. HCC grades submitted Fri, May 12
May 15-19:	Furr HS classwork
May 22-25:	Furr HS classwork

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

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Students are encouraged to join the SPE, Society of Petroleum Engineers Gulf Coast Section. Class trips may be scheduled at industry sites to further hands-on application. 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 can choose their own topic related to facilities data management).** Refer to syllabus course outline and existing text books for ideas. Topics should be of interest to student and others in class

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

Title Page, date, name. Describe the Issue or objectives. Discuss advantages, disadvantages, or alternative options. Summary or Conclusion or Recommendation. References used.

Technical Report – 5 pages. Use WORD. Include photos and graphs. On atopic related to the data management of facilities – technical or operations issues.