

## **Syllabus**

### **BUSE 3331 From Prospect to Production to Kilowatts: The Business of Energy**

**Instructor: Bruce Bullock, Director Maguire Energy Institute**

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### **Meeting Time**

Class: Mondays, Wednesdays 11:00-12:30 Maguire Building 356

Office Hours 9:00-10:30 Thursday

### **Key Learning Objectives**

- To understand the history, role, structure and function of the global energy industry, one of the largest, most complex and global of all industries
- To gain an in depth understanding of the following energy industry market segments including history, structure, key business drivers, and technologies:
  - Petroleum
  - Natural gas
  - Oilfield service
  - Midstream
  - Power generation
  - Alternative fuels
- To hear perspectives on the industry from senior level energy professionals to gain a better understanding of the management, strategies and corporate cultures within the industry.
- To explore and understand key business issues facing the energy industry today including sustainability, globalization, geopolitics, risk management, emerging business models, and technological innovation.

### **Summary**

This course is designed to provide the business student with an overview of the major business aspects of the energy industry in order to prepare them to either take additional courses in the subject or pursue careers in the industry. In one semester, we will “put the massive puzzle together’ that is today’s global energy industry. When you walk into an interview, pick up an annual report, or discuss the issue with a colleague, you will understand the history, terminology, market dynamics, structure and function of most elements of the industry.

## **Texts/Articles**

### **Emails:**

Tudor Pickering and Holt, Daily Email Briefing on the Oil and Gas Industry. (will be forwarded to you daily)

### **Texts:**

*The Oil and Gas Industry, A Nontechnical Guide.* Joseph F. Hilyard

*Power Hungry,* Robert Bryce

### **Reports and Articles Available on Blackboard:**

Complete Landman Training Manual

Citibank Report, *Energy 2020 North America, The New Middle East?*

Credit Suisse Report, *MLP Primer Part Deux*

Edison Electric Institute, *Key Facts about Electricity*

National Association of Publicly Traded Partnerships, *MLP 101*

## **Teaching Methods**

- Readings
- Lectures
- Guest lectures from industry professionals
- Simulations/Discussions

## **Grading and Evaluation**

- 10% class participation and involvement. Quick quizzes will be given to assess your understanding of the material, and evaluate the success of our teaching methods. Hints for good participation credit
  - Attend each class and do the reading
  - Look at some external business web sites (CNBC, Oil and Gas Journal etc) and the daily email you receive for any news that may relate to the days subject matter.
  - If participation lags, the probability of quizzes increases. Quizzes will count toward participation grades.
  - Note that lectures will not always repeat or summarize the readings. In many cases, we will explore a company that highlights a particular sector of the industry as a case study or example. Thus, to adequately understand and learn the material, you will need to attend class.

- 20% Take Home Mid-term Exam. Four questions, pick three requiring critical thinking and analysis. Approximately 1 to 1 ½ typewritten pages per question.
- 45% Three Part Exercise and Term Paper.

You will select a publicly traded energy company to research from a list of selected companies including oil and gas companies, oilfield service companies, and power generation companies.

Part One 10%. Basic Report. Part one consists of two short exercises designed to orient you to the company you are researching and where to find the appropriate information. Most of what you find will be used in Parts 2 and 3 so this is merely prep work. You will listen to the company's second or third quarter earnings conference call and give a no more than a one page, double spaced summary of what you heard, with key highlights of their earnings. Second, you will browse the Company's 2012 10-K and provide a list of three industry risks and three company specific risks outlined in the report. You just need to list the risk, not the explanation. Again, it should be no more than one page double spaced.

Part Two 15%. Risk Management Exercise. You will track the share price, West Texas Intermediate crude oil prices, and Henry Hub natural gas prices and answer a series of short essay questions about the company's exposure to the volatility of the company's share price to those commodity prices. Part one will be worth half of the total project grade or 20% of the total course grade. The grade will be based upon the completeness of the graph and your time, effort and understanding of the subject matter expressed in the answers.

Part Three 20%. Competitive and Equity Analysis. s You will profile the company and provide an overview of its performance versus its peers. You will then identify four areas where its performance has been either superior and/or inferior to its peers and explain why. Examples include exploration success, acquisitions, reserve replacement, return on capital etc. For service companies, examples include backlog versus competitors, new contracts with E&P companies, margins, and exposure to growing markets. Sources include analysts' reports, annual reports, 3<sup>rd</sup> quarter conference calls, and company analyst presentations. Part two will be worth half of the total project grade or 20% of the total course grade. Papers should be at least 5 pages in length, double-spaced not including exhibits such as graphs, charts etc. Specific style requirements will be handed out closer to the assignment.

- 25% Take Home Final Exam. Four questions, pick three requiring critical thinking and analysis. Approximately 1 to 1 ½ typewritten pages per question.

The University grading scale is the basis for assigning a letter grade e.g. 93 points and up is an A, 90-92 is an A-, 87-89 B+ etc.

### Schedule

<u>Date</u>	<u>Subject</u>	<u>Assignment Due for Class</u>	<u>Speaker</u>
8/26	Overview and Expectations – The Role of Energy in the Global Economy	None	Bullock
8/28	Industry Structure Overview Oil Fundamentals	Hilyard Chapters 13, 2	Bullock
9/04	Natural Gas Fundamentals	Hilyard Chapter 3	Bullock
9/9	Energy Economics: Past Present and Future	ExxonMobil Energy Outlook	Bullock
9/11	Energy Economics Past, Present and Future <b>Part 1 of Paper Handed Out</b>	Citibank <i>Energy 2020 Report</i>	Bullock
9/16	Leasing Process/Energy Law	Landman's Guide	Joe Dancy LSGI Funds SMU Law Professor
9/18	Leasing Energy Law and Access		Joe Dancy LSGI Funds SMU Law Professor

9/23	Geology of the Permian Basin	Hilyard Chapter 4 <i>Petroleum Geology: An Introduction</i>	Speaker, Pioneer Natural Resources
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9/25	Drilling and Completing a Well	Hilyard Chapter 5 <i>Schlumberger Annual Report</i>	Mark Teel, Technology Director Schlumberger
9/30	Single Well Economics	Handout on Blackboard	Bullock
10/2	Financing a Project	No reading	Tim Perry Managing Director Energy Investment Banking Credit Suisse
10/7	Offshore Oil and Projects	Hilyard Chapter 6, 7	Invited Speaker
10/9	Managing Oil and Gas Production	Hilyard Chapter 6, 7	Bullock
10/16	Inside Energy Analysis What to Look For	Various Analysts Reports on Blackboard	Jim Wicklund, Lead Oilfield Service Analyst Credit Suisse
10/21	Financial Statement Analysis of Oil and Gas Companies	Handouts on Blackboard	Bullock
10/23	Analysis of Oil and Gas Service Companies	Handouts on Blackboard	Bullock
10/28	Midterm Handed Out Part 1 of Paper Due		
10/30	Midstream Overview	Hilyard Chapter 8	Bullock
11/4	Midstream Overview	Hilyard 9,10	Bullock

	Mid Term Due		
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11/6	Midstream Case	<i>Crosstex Annual Report</i>	Meggan Stall Investor Relations Crosstex Energy
11/13	The Rise of MLPs	<i>Credit Suisse MLP Primer MLP 101 Presentation</i>	Bullock
11/18	Refining and Marketing Part 2 of Paper Due	Hilyard 11,12 <i>XOM Annual Report</i>	Gary Weed ExxonMobil
11/20	Refining and Marketing	Hilyard 11,12	Gary Weed ExxonMobil
11/25	Power Generation	Bryce 1-75 Edison Electric Institute. <i>Key Facts About Electricity</i>	Bullock
12/2	Power Generation:	Bryce 75-201	Bullock
12/4	Power Generation A Commodity Business  Final Handed Out	Bryce 207-299	Steve Muscato SR VP Luminant
12/9	Review and Wrap-Up  Part 3 of Paper Due		Bullock
12/12 11:30	Final Exam Due Will be in class for questions and time to complete exam.	Classroom	Bullock

Note: schedule may change if speakers' business schedules changes. If so an announcement will be put up on Blackboard. The revised calendar will then be put up on Blackboard as a document titled Revised Class Calendar as of that date.

### **Early/Late Policy**

- Like the business world, projects completed early will receive a bonus. For every extra day early you turn a paper or test in, its good for one extra credit point up to a maximum of five.
- Anything turned in late will be penalized 10% per day.
- Exams, quizzes, in-class activities cannot be made up unless you have a documented, excused absence.

### **Grade Appeal Procedure**

While I don't anticipate any problems, to ensure that students feel their grades are fair and unbiased, I provide a procedure for appealing grades. If you think a test or assignment was graded, you may use the following procedure:

1. Within 7 calendar days of receiving the grade, provide me a written appeal. If I do not receive it within seven days, I will assume that you agree with the grade and it will be considered final. Appeals beyond seven calendar days will not be accepted..
2. The written appeal should explain why you think the grade is incorrect or unfair. You must document your reasons by referring to inconsistency in the application of grading standards, etc. Performance reflects a combination of effort, ability and results.
3. Submit a printed copy of the written statement together with the graded material I will evaluate your complaint, re-grade the assignment, and notify you in writing of my decision.
4. One caution, the entire assignment will be re-graded so there is a possibility of a lower grade.
5. Please keep all graded work until the semester is finished and final grades have been posted.

University grievance procedures are available to you to continue your appeal.

### **Statement of University Policies**

### **Disability Accommodations**

If you need academic accommodations for a disability, you must first contact Disability Accommodations & Success Strategies (DASS) at 214-768-1470 or [www.smu.edu/alec/dass.asp](http://www.smu.edu/alec/dass.asp) to verify the disability and to establish eligibility for accommodations. Then you must schedule an appointment with the professor to make appropriate arrangements.

Students who will be requesting a disability accommodation should do so on the first day of the course that they attend.

### **Religious Observance**

Religiously observant students who wish to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

### **Excused Absences for University Extracurricular Activities**

Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work.