

# Energy Trading Systems

## Course Syllabus, Fall 2014

ACCT 4397 FINA 4397 MIS 4390 MIS 7397

### Course Objectives

1. Familiarize graduate and undergraduate students with energy business processes related to physical and financial commodity trading, scheduling, risk analysis, controls & compliance, and accounting
2. Provide hands-on exposure to software tools used by major energy firms in the industry
3. Illustrate the IT needs that these tools create, and provide a look into the business of providing technology services to energy firms
4. Provide interaction between talented students and the energy trading community.

### Fundamental Concepts

Structural overview of the **Energy Industry Supply Chain** with a focus on natural gas trading, logistics, and technology. We will be concentrating on natural gas in this class for the following reasons:

- Natural gas is becoming a very attractive "bridge" fuel
- Recent discoveries/technology advancements in shale gas extraction will ensure natural gas' prominence
- Natural gas is a fundamental commodity for almost all energy traders
- Natural gas provides a basis for understanding commodity trading without over-complicating the subject
- The technological tools currently available to Bauer students are natural gas-focused

We will survey different segments of the natural gas industry:

- Renewable and Non-Renewable Energy
- Production and Exploration
- Marketing
- Processing
- Transportation
- Storage
- Delivery
- The roles of producers, processors, marketers, pipelines, utilities and end-users in the energy value supply chain

We will learn about physical commodity trading and logistics and how they relate to financial trading and hedging.

We will look at internal and financial controls and the role of the risk manager as the "cop on the beat."

Finally, we will account for, and report the transactions we study to give the student a practical, "hands on" experience with a physical and financial accounting close. Remember, **"If it doesn't make it to Accounting, it never happened."**

## Class Information

Class will meet Saturday mornings, 8:50 am – 11:50 am. in room 170 of Melcher Hall. We will also have a speaker series where industry experts will come to speak on some class days.

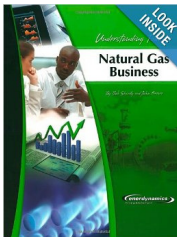
## Instructors & Office Hours

- J. Frank Peña, CPA (fpena@dmshouston.com): Office hours are on Saturdays after class, or by appointment. You may contact him by e-mail.
- Tricia Peña (tpeña@dmshouston.com): Office hours are on Saturdays after class, or by appointment. You may contact her by e-mail.
- Daniel Kinard (dkinard@dmshouston.com): Office hours are on Saturdays after class, or by appointment. You may contact him by e-mail.

## Textbooks

We will be using the following book in this class:

1. Shively, B. and Ferrare, J., Understanding Today's Natural Gas Business, Enerdynamics, 2011  
ISBN: 978-0-9741744-0-2



This book is available on Amazon.com and in the bookstore.

## Clickers

You will need a clicker for this class. Clickers and their use will be discussed during the first week of class.

## Systems Access

In this class, we will be using the GasPro energy transaction risk management system (ETRM) by Data Management Solutions (DMS). DMS has provided a real world, laboratory environment for you to gain hands-on experience with the subject matter presented in this class. The client for the system is delivered through the Internet via a Citrix plug-in. We will establish laboratory accounts for you.

## Class Attendance

We expect you to attend class. We will be covering a lot of material each week. You will find it difficult to make up lost class time – this is the only section of the class. Do everything you can to make class **AND BE ON TIME.**

## Policy on Late Submissions

In the business environment, completing assignments and projects after their established deadlines can potentially cost your company a substantial amount of money and you, your job. Timeliness matters. Therefore, in this class any papers or written assignments that are turned in after their due date will be docked appropriately for each day they are late.

## Administrative Notes

### Important Dates

Sat	August 30	First day of class
Wed	September 10	Last Day to Drop without receiving a grade
Sat	October 4	Exam 1
Fri	October 31	Last Day to Drop with a "W"
Sat	November 8	Exam 2
Sat	November 29	Thanksgiving Holiday
Sat	December 13	Final Exam (in class at normal time)

### Drop Policy

It is the student's responsibility to know published drop dates and to act on those dates if necessary or desired.

### Course Evaluations

The C.T. Bauer College of Business requires all its instructors to be evaluated by their students. The results of these evaluations are important to provide feedback to instructors on how their performance can be improved. We encourage students to provide feedback to instructors through the evaluation process.

### Academic Honesty

The University of Houston Academic Honesty Policy is strictly enforced by the C.T. Bauer College of Business. No violations of this policy will be tolerated in this course. A discussion of the policy is included in the University of Houston Student Handbook which can be downloaded at <http://www.uh.edu/dos/publications/handbook.php>. Students are expected to be familiar with this policy. Pay particular attention to the list of behaviors that are considered academic dishonesty in [Section 3.02 Academic Dishonesty Prohibited](#).

Items (d) and (h) say:

(d) Representing as one's own work the work of another without acknowledging the source (plagiarism). **This would include submitting substantially identical laboratory reports or other materials in fulfillment of an assignment by two or more individuals, whether or not these used common data or other information, unless this has been specifically permitted by the instructor;**

(h) **Using another's laboratory results as one's own, whether with or without the permission of the owner;**

Do not copy or share your work with other students. ***If you do, you risk the possibility of failing the class.***

### Accommodations for Students with Disabilities

The C. T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. To this end, in order to receive academic accommodations, students must register with the Center for Students with Disabilities (CSD) (telephone 713-743-5400), and present approved accommodation documentation to their instructors in a timely manner.

## Grades and Grading

Your grades will be based on the following individual assignments:

<b>Grading</b>	
<b>Lab Assignments – GasPro System</b>	25 points
<b>Weekly Quizzes</b>	20 points
<b>Exam 1</b>	15 points
<b>Exam 2</b>	15 points
<b>Final Exam</b>	25 points
<b>Total Possible</b>	100 points

Overall grading scale for the class will be:

A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	
A- 90-92	B 83-86	C 73-76	D 63-66	F below 60
	B- 80-82	C- 70-72	D- 60-62	

## Class Agenda

Week	Date	Quizzes	Class Description
1	30-Aug		<b>Introduction</b> The Energy Industry & Our Focus on Natural Gas
2	6-Sep		<b>Physical &amp; Operational World</b> The Nature of the Natural Gas Industry And The Responsibilities Required to Manage the Industry Logistics
3	13-Sep	Quiz 1	<b>Acquisition</b> The Role of Supply & the Functions Required to Make It Happen
4	20-Sep	Quiz 2	<b>Processing</b> Providing the Industry with Market Ready Gas
5	27-Sep	Quiz 3	<b>Storage</b> Ensuring Gas Availability During Critical Peak Periods
6	4-Oct		<b>Exam 1</b>
7	11-Oct	Quiz 4	<b>Dispositions</b> The Role of Demand & the Customers That Demand It
8	18-Oct	Quiz 5	<b>Transportation</b> The Logistical Component That Ties It All Together
9	25-Oct	Quiz 6	<b>Trading &amp; Scheduling</b> The Process That Makes the Industry Work
10	1-Nov	Quiz 7	<b>Physical and Financial Hedge Trading</b> The Business Of Ensuring Prices & Margins By Mitigating Risk
11	8-Nov		<b>Exam 2</b>
12	15-Nov	Quiz 8	<b>Controls &amp; Compliance</b> Ensuring an Accurate, Seamless Flow of Transactions
13	22-Nov	Quiz 9	<b>Accounting &amp; Settlement</b> The Business Transactions Ultimate Destination
14	29-Nov		<b>Thanksgiving Holiday</b>
15	6-Dec	Quiz 10	<b>The Natural Gas Industry</b> One Final Look / Review for Final Exam
16	13-Dec		<b>Final Exam</b>