



**MGT 532.01W**  
**RISK MANAGEMENT IN THE ENERGY INDUSTRY**  
**FALL SEMESTER 2014**  
**Course Syllabus**

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**COURSE NUMBER:** MGT 532.01W  
**COURSE TITLE:** Risk Management in the Energy Industry  
**COURSE TIMES:** August 25 – December 12, 2014

**CATALOG DESCRIPTION:**

This course is designed to reflect the dynamic nature of the field of risk management, present the timely issues of risk, and prepare students for long-term and effective management of risk in energy industry business undertakings.

**PREREQUISITES:** None specified.

**COURSE TEXT/RESOURCES:**

**Title:** *Risk Management for Enterprises and Individuals*

**Author(s):** Etti Baranoff, Patrick Lee Brockett, Yehuda Kahane

**e-ISBN:** 978-1-4533-2691-6

To purchase the textbook online, connect with the course URL listed below - this URL is unique for your class:

<http://studentsworkflow.flatworldknowledge.com/course?cid=1706565&bid=29698>

This publisher offers students four format options to choose from. They are: Study Pass (online access to the text: \$24); Digital All Access Pass (their bestseller that offers multiple formats for both on-line and off-line access to their textbook and study aids such as flashcards and quizzes which includes PDF's and files for e-readers, tablets, and smartphones: \$39); Black and White Print Textbook with access to online and eBooks (\$59); and Color Print Textbook with access to online book (\$139). Your professors recommend options 2, 3, or 4.

These product options are listed in the above course page link. Please note that pricing is subject to change to accommodate production costs.

**Journal Articles**

The assigned journal articles will be accessible via Blackboard:

Schroeder, B. and J. Jackson (2007) “Why Traditional Risk Management Fails in the Oil and Gas Sector: Empirical Front-Line Evidence and Effective Solutions” 2007 AACE International Transactions.

Gorbach, G. and P. Miller (2011) “Reducing risk in upstream operations” Offshore Automation Solutions. April 2011: 28-29.

Ramos, S. and H. Veiga. (2010). “Risk factors in oil and gas industry returns: International evidence.” Energy Economics. 33:525-542.

Lavingia, N. (2005) “Managing Risk for Global Energy Projects” 2005 AACE International Transactions.

Stauffer, T. (2002) “Risk measurement for oil and gas exploration: The marriage of geological and financial techniques” Organization of the Petroleum Exporting Countries.

In addition, PowerPoint Notes will be accessible within the course shell on Blackboard.

### **STUDENT LEARNING OUTCOMES:**

Upon completion of this course, the student will be able to:

1. Discuss the concept of risk and its relationship to uncertainty.
2. Apply risk measurement techniques to assess the severity and consequences of a given risk.
3. Demonstrate how Utility Theory impacts attitudes toward risk.
4. Explain and use techniques to manage risk in global economy.
5. Apply the analytical tools/process to improve risk management including liability risk and financial risk in the energy industry.
6. Apply the conceptual framework for analyzing risk and making related decisions in energy industry businesses.

### **COURSE TOPICS:**

1. The Nature of Risk: Losses & Opportunities
2. Risk Measurement & Metrics
3. Risk Attitudes: Expected Utility Theory & Hedging
4. Evolving Risk Management: Fundamental Tools
5. The Evolution of Risk Management: Enterprise Risk Management
6. The Insurance Solution and Institutions
7. Insurance Operations
8. Insurance Markets and Regulation
9. Fundamental Doctrines Affecting Insurance Contracts
10. Structure and Analysis of Insurance Contracts
11. Property Risk Management
12. The Liability Risk Management

**MBA GRADUATE DEGREE GOALS:** At the completion of your degree TAMU-T graduate students should be proficient in several areas. You can access these goals at: [http://tamut.edu/Academics/COB/Learning\\_Goals.html](http://tamut.edu/Academics/COB/Learning_Goals.html).

**COURSE REQUIREMENTS & METHODOLOGY:**

MGT 532: Risk Management in the Energy Industry is a course being offered in a nontraditional format using web-based technology. Access to course materials is through “Web for Students” and Blackboard. That site contains support materials including the course syllabus with the student learning outcomes, PowerPoint Notes, and energy industry literature materials. . Student/professor communications including correspondence, submission of papers, and feedback will be transmitted exclusively through Blackboard.

The course begins with the study of several general risk management topics guided by the progression through the text book chapter reading assignments. This will be followed by more energy industry specific topics in risk management guided by the related journal articles posted on Blackboard.

After reading the assigned articles, each student will subsequently prepare two 6-page, double-spaced, essays to be submitted with an appropriate cover page.

**Essay #1:** The first will be guided by the following questions:

1. Where are major areas of risk in the energy sector?
2. What are some of the challenges in managing risk?

**Essay #2:** The second essay will be guided by the following question:

1. If you are in charge of an energy company, how would you go about identifying areas of risk and how would you manage them in a systematic way?
2. What would your workflow consist of?

**Risk Analysis and Management Plan:** Each student will participate in a two or three-member project team assigned to prepare and submit a comprehensive case project which should be related to an energy industry company. The company may be one that one of your group works for if you wish. The assignment is to:

1. Perform a risk analysis of your selected energy related company.
2. Prepare a risk management plan for the company.

This assignment will include a written report of your analysis and plan, not to exceed 12 double spaced pages. The paper should include a cover page that identifies the course, the company whose risk is being analyzed and the members of the project team.

The professors will provide contact information for forming the teams through Blackboard. Project team memberships must be reported to the professor no later than the date specified in the class schedule.

Submission deadlines for the three assignments are listed on the class schedule that follows.

Papers should be double-spaced and must exhibit graduate quality writing and source documentation. Generally accepted writing style and citations should be followed. Plagiarism will not be tolerated and could result in a failing grade for the course.

After each paper evaluation by the professors, scores will be posted on Blackboard and graded papers will be returned through Blackboard.

**METHODS OF EVALUATION:**

Mastery of Student Learning Outcomes will be determined by applying Rubrics to the assigned essays, the strategic plan report, and its oral presentation:

- Essays:** Students will be evaluated on the content and quality of the two essays as assigned and described above. (SLO's 1-4) (25% each)
- Risk Analyses & Management Plan:** Students will be evaluated on the content and quality of the submitted written risk analyses and risk management plan. (SLO's 1-6) (50%)

<b>GRADING SCALE:</b>	Two essays valued at 50 points each:	0- 100 points
	Risk Analysis & Management plan	<u>0-100 points</u>
	Maximum Points Available:	200

The applicable grading scale will be: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 0-59%.

- A=180 or more points
- B=160-179 points
- C=140-159 points
- D=120-139 points
- F=fewer than 120 points

**STUDENT PARTICIPATION:**

- a. Participation Policy:** Each student will be a member of a student project team that will perform the research necessary to complete the assigned strategic plan and prepare an audio/visual recorded presentation of the plan to be submitted to the professor for critique and grading. Extensive and continuous communication among team members will be necessary throughout the course. Student teams may select their own avenues of communication to fulfill the requirements of the course.
- b. Course Etiquette:** As business students in a graduate course, interaction with other students and with the professor is expected to be conducted at all times in a professional, ethical, and courteous manner.
- c. Discussion Board Standards:** Discussion boards are available for student communication. Student teams, however, may determine their own avenues for communication among themselves as they progress toward completion of the course.

**DISABILITY ACCOMMODATIONS:**

Students with disabilities may request reasonable accommodations through the Texas A & M University-Texarkana Disability Services Office by calling 903.223.3062.

**ACADEMIC INTEGRITY:**

Academic honesty is expected of students enrolled in this course. Cheating on examinations, unauthorized collaboration, falsification of research data, plagiarism, and undocumented use of materials from any source constitute academic dishonesty and may be grounds for a grade of 'F' in the course and/or disciplinary actions. For additional information, see the university catalog.

#### **A&M-TEXARKANA EMAIL ADDRESS:**

Upon application to Texas A&M University-Texarkana an individual will be assigned an A&M-Texarkana email account. This email account will be used to deliver official university correspondence. Each individual is responsible for information sent and received via the university email account and is expected to check the official A&M-Texarkana email account on a frequent and consistent basis. Faculty and students are required to utilize the university email account when communicating about coursework.

#### **DROP POLICY:**

To drop this course after the census date (see [semester calendar](#)), a student must complete the Drop/Withdrawal Request Form, located on the University website <http://tamut.edu/Student-Support/Registrar/Dropping.html> or obtained in the Registrar's Office. The student must submit the signed and completed form to the instructor of each course indicated on the form to be dropped for his/her signature. The signature is not an "approval" to drop, but rather confirmation that the student has discussed the drop/withdrawal with the faculty member. The form must be submitted to the Registrar's office for processing in person, email [Registrar@tamut.edu](mailto:Registrar@tamut.edu), mail (7101 University Ave., Texarkana, TX 75503) or fax (903-223-3140). Drop/withdraw forms missing any of the required information will not be accepted by the Registrar's Office for processing. It is the student's responsibility to ensure that the form is completed properly before submission. If a student stops participating in class (attending and submitting assignments) but does not complete and submit the drop/withdrawal form, a final grade based on work completed as outlined in the syllabus will be assigned.

#### **CLASS PARTICIPATION:**

Students are responsible for beginning their participation on the FIRST CLASS DAY by logging on and completing assignments according to the COURSE CALENDAR. Failure to submit online assignments between the first day of classes and the "university census date" (according to the university schedule) will result in an ADMINISTRATIVE DROP from the course. Students who have federal loans and grants must be aware that participation is monitored in online courses. In the event a student withdraws from a course the student will be required to refund all federal funds prorated from the last date of participation. A student's last access to Blackboard would not suffice as participation. The required weekly activity could include a comment to a blog, a discussion board posting, a journal entry, a quiz or exam, a submitted assignment, or other measurable and tracked activity..

#### **STUDENT TECHNICAL ASSISTANCE:**

Solutions to common problems and FAQ's for your web-enhanced and web courses are found at this link: <http://www.tamut.edu/Training/Student%20Training/index.html>

- If you cannot find your resolution there, you can send in a support request detailing your specific problem here: <http://www.tamut.edu/techde/support.htm>
- Blackboard Helpdesk contacts (office hours are: Monday - Friday, 8:00a to 5:00p)

Julia Allen (main contact) 903-223-3154 [julia.allen@tamut.edu](mailto:julia.allen@tamut.edu)

Frank Miller (alternate) 903-223-3156 [frank.miller@tamut.edu](mailto:frank.miller@tamut.edu)

## **TECHNICAL REQUIREMENTS:**

### **Minimum Windows PC Requirements:**

- Pentium IV 1.5GHz+ (preferred: Core Duo)
- 1 GB RAM minimum (preferred: 2 GB)
- 128MB Video Card minimum - Sound Card is required for some courses
- 56K modem minimum (Cable or DSL required for some courses)
- Windows 2000, XP, Vista or 7
- Web browser (Internet Explorer 7.0+; Firefox 3.0+)
- Microsoft Word, minimum Office 97

Some courses will need plug-ins such as Flash player 10 +, QuickTime player 7.0+, Adobe Reader 9.0+, Java Runtime Environment (Java 1.6.0\_15), Windows Media Player 10+, RealPlayer, and Macromedia/Adobe Shockwave.

Some online courses may also require a CD ROM (8x minimum, higher recommended)

Blackboard has certified the following browsers for computers running Windows Operating Systems:

- Internet Explorer 8 or 9 (IE is not supported on Windows XP)
- Mozilla Firefox 3.6+
- Google Chrome

### **Minimum Apple Macintosh Requirements:**

- Intel Core 2.0GHz+
- 1 GB RAM (preferred: 2 GB)
- 128MB Video Card minimum - Sound Card is required for some courses
- 56K modem minimum (Cable or DSL required for some courses)
- Web browser (Firefox 3.0+ ; Safari 3.0+)
- Microsoft Word, minimum Office 97

Some courses will need plug-ins such as Flash player 10+, QuickTime player 7.0+, Adobe Reader 9.0+, Java Runtime Environment, RealPlayer, and Macromedia/Adobe Shockwave.

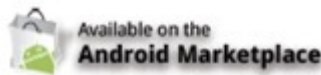
Some online courses may also require a CD ROM (8x minimum, higher recommended)

Blackboard has certified the following browsers for computers running Macintosh Operating Systems:

- Mac OS 10.2 (Jaguar): (Safari 1 is compatible)
- Mac OS 10.3 (Panther): Safari 1.2 (Firefox 1.5 is compatible)
- Mac OS 10.4 (Tiger): Safari 2 and Firefox 1.5
- Mac OS 10.5 (Leopard): (Firefox 2.0 is compatible)

## **I-OS and Android Devices**

These devices are currently supported using the Blackboard Mobile App, available for free from your App Store or scan the code below:



To access Texas A&M University - Texarkana, there is an individual license fee of \$1.99 per year or \$5.99 lifetime. This fee gives you access to the university from all your (same platform) devices; it is not necessary to pay the fee for each device you own.

## **GRADUATE DEGREE PROGRAM GOALS:**

At the completion of your degree TAMU-T graduate students should be proficient in several areas. You can access these goals at: [www.tamut.edu/cob](http://www.tamut.edu/cob).

**CLASS SCHEDULE**  
(Subject to Revision)

<b>Week 1</b> <b>8/25-29</b>	<b>Students will become familiar with the course syllabus, course materials, and the Blackboard platform.</b>
<b>Week 2</b> <b>9/1-5</b>	<b>Read Chapter 1: The Nature of Risk: Losses &amp; Opportunities and Chapter 2: Risk Measurement &amp; Metrics.</b>
<b>Week 3</b> <b>9/8-12</b>	<b>Read Chapter 3: Risk Attitudes: Expected Utility Theory &amp; Hedging and Chapter 4: Evolving Risk Management: Fundamental Tools</b>
<b>Week 4</b> <b>9/15-19</b>	<b>Read Chapter 5: The Evolution of Risk Management: Enterprise Risk Management and Chapter 6: The Insurance Solution and Institutions.</b>
<b>Week 5</b> <b>9/22-26</b>	<b>Read Chapter 7: Insurance Operations and Chapter 8: Insurance Markets and Regulation and Chapter 9: Fundamental Doctrines Affecting Insurance Contracts.</b>
<b>Week 6</b> <b>9/29-10/3</b>	<b>Read Chapter 10: Structure and Analysis of Insurance Contracts and Chapter 11: Property Risk Management.</b>
<b>Week 7</b> <b>10/6-10</b>	<b>Read Chapter 12: The Liability Risk Management. Deadline for submitting the names of your project team for preparing the risk analysis and management plan: 11/15/14.</b>
<b>Week 8</b> <b>10/13-17</b>	<b>Read the assigned energy related articles.</b>
<b>Week 9</b> <b>10/20-24</b>	<b>Complete reading the assigned energy related articles.</b>
<b>Week 10</b> <b>10/27-31</b>	<b>Essay #1 due, 10/31/14</b>
<b>Week 11</b> <b>11/3-7</b>	<b>Essay #2 due, 11/3/14</b>
<b>Week 12</b> <b>11/17-21</b>	<b>Work on risk analysis and management plan</b>
<b>Week 13</b> <b>11/24-26</b> <b>(Holidays:</b> <b>11/27&amp;28)</b>	<b>Risk analysis and management plan due, 11/24/14</b>
<b>Week 14</b> <b>12/1-5</b>	
<b>Week 15</b> <b>12/8-10</b>	<b>Course wrap-up</b>



Deloitte's Enterprise Risk Management Model. Risk culture Risk strategy and appetite Risk governance Risk resources/infrastructure External disclosure Risk monitoring and reporting Risk identification Risk assessment Risk management. Oversight Tone from the top. Needs escalation Issues encountered relating to risk routinely have to be escalated to management on an individual and ad hoc basis. LEVEL 2: FRC expectation\*. In place and adhered to There is a formal delegations of authority structure for decisions relating to risk which must be followed, with sanctions for non-compliance. This supplement, titled COSO Enterprise Risk Management - Integrating with Strategy and Performance: Compendium of Examples, was developed from industry practices identified through extensive research conducted when updating the Framework. Each example focuses on specific components covered in the Framework. Enterprise Risk Management "Integrated Framework, the Committee of Sponsoring Organisations, COSO, 2004. The CIMA Official Terminology uses the COSO (Committee of Sponsoring Organisations) definition. However, there is no universally agreed definition and the COSO definition is just one of a number of definitions developed for Enterprise Risk Management. In the last decade, risk management has transformed from the traditional silo approach practised by individual departments and functions to a holistic, co-ordinated and integrated process which manages risk throughout the organisation. This integrated approach has become known as ERM. "Enterprise wide" means the removal of traditional functional, divisional, departmental or cultural barriers. This post explores enterprise risk management, from basics to getting started with the process. Over the years, various frameworks for ERM have been established. Each of them describes a different approach for the identification, analysis, response, and general management of risks and opportunities. Here are a few of the most prominent ERM approaches: ISO 31000. Many risk-management activities at the enterprise level are influenced by various types of pressure. Some are external, such as compliance or regulatory changes, for example. Sometimes, unfortunate events in one's own company or in the industry prompt internal soul searching regarding whether existing risk-management approaches are adequate. Mind-sets and behaviors of individuals and groups inside the organization and not only the risk organization play a crucial role in the execution of a company's enterprise-risk-management strategy.