

OSU SPEARS SCHOOL OF BUSINESS
Department of Finance
FIN 5550.27104 Energy Finance (Online)
Course Syllabus, Spring 2018

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Course Site: Brightspace by D2L: <http://online.okstate.edu> or <http://my.okstate.edu>
 (choose Online Classroom after logging in)
Online Learning Support: spearsonline@okstate.edu, Phone: 405-744-4048
Facebook: Follow Spears School Online Learning on Facebook! <https://www.facebook.com/SpearsOnline/>

Overview of the Course

In this energy finance course, students will study the current energy outlook, introduction to the oil and gas industry, industry structure and terminology, financial statement analysis, capital budgeting and risk analysis, relative valuation, renewable energy finance, and risk management in the energy industry. Students will also analyze case problems addressing various course topics and learn to apply finance theories to “real world” practice.

Course Prerequisites

FIN 5013 or equivalent

Course Objectives and Goals

Course Objective	Program Learning Goal
1. To acquaint students with basic knowledge, key concepts, terminology, industry structure, supply and demand issues and related concepts about the “energy value chain”.	<ul style="list-style-type: none"> • Business Knowledge & Competency • Technological Competence
2. To learn how to understand and analyze the financial statements of oil and gas companies including energy ratio analysis.	<ul style="list-style-type: none"> • Business Knowledge & Competency • Written Communication • Critical Thinking
3. To conduct capital budgeting and risk analysis in the oil and gas industry.	<ul style="list-style-type: none"> • Business Knowledge & Competency • Critical Thinking
4. To explore value creation and decision making in the energy industry.	<ul style="list-style-type: none"> • Business Knowledge & Competency • Technological Competence
5. To learn basic hedging techniques in energy risk management.	<ul style="list-style-type: none"> • Business Knowledge & Competency • Critical Thinking
6. To gain a firm understanding of the importance of the energy industry and the role renewable energy sources can provide (and not provide) in meeting our energy needs and energy finance.	<ul style="list-style-type: none"> • Ethical Decision Making • Business Knowledge & Competency • Innovation

Texts and Supplementary Materials

Required Materials:

- *Energy Finance and Economics: Analysis and Valuation, Risk Management, and the Future of Energy*, Wiley, 2013. The best price is available through Amazon at: <http://www.amazon.com/Energy-Finance-Analysis-Valuation-Management/dp/1118017129>. The book is also available in the university bookstore. Other readings and course materials listed on the class schedule are posted to the class website.

- Financial Calculator: Students will need to have a Texas Instruments BA II Plus financial calculator for exams. You are not allowed to use a programmable calculator on exams. Note: The BA II Plus has also been approved for use on the following professional exams: Chartered Financial Analyst® (CFA®), Certified Financial Planner® (CFP®), GARP® Financial Risk Manager (FRM®), and the Certified Management Accountants exam. “Don’t leave home without it!”

Other Required Materials: Other materials will be available from Brightspace. You will also find it useful to use your primary text from your first corporate finance class for additional background reading on certain topics. Also, I encourage you to read the online *Wall Street Journal*. As a student in the Spears School of Business, you have access to a free online subscription. The link to access your free subscription is posted to Brightspace.

Optional Materials: Students may read one of the following books for extra credit. Requirements for the extra credit book report are posted in the “Course Information” folder on Brightspace Content, which is the first folder. The extra credit points are discussed on the next page under “Grading”. The books acceptable for extra credit are: *The First Billion is the Hardest* by Boone Pickens, ISBN 1-58798-109-3; *The Prize: The Epic Quest for Oil, Money, and Power* by Daniel Yergin; *The Quest: Energy, Security, and the Remaking of the Modern World* by Daniel Yergin. Note: Students are not allowed to do the extra credit book report on the same book they used in FIN 5550 Introduction to Energy Business.

Grading Policy

Final grades will be based on a 1,140 point total as follows:

Exams (3 exams @ 250 pts each)	750
Assignments (20 points each; 7 assignments, lowest dropped)	120
MLP Case Study Assignment	40
Student Information on Discussions (Post by Sunday, Jan. 28)	15
Discussion Board (for posting seven comments during the semester)	35
Energy Finance Company Analysis Project	80
Research Report (Due by Friday of Dead Week; Topic proposal due Feb. 25)	100
Total Points	1140

Grading Scale (1100 points possible)	
Letters grades will be determined based on a standard grading scale (i.e., 90% minimum for A, 80% for B, 70% for C, 60% for D, and below 60% failing).	A = 1026 points & above B = 912 – 1025 points C = 798 – 911 points D = 684 – 797 points F = 659 points and below

Grading and Testing

- **Exams:** Exams are proctored and must be taken through a certified testing center. Within the first week of class, go to the Spears School of Business Online Learning website to choose a proctor at: <https://spearsonline.okstate.edu/> and click on “Select Testing Center” at the top right of the page. Follow the instructions to identify your testing center. Up to one week before each exam start date, make your appointment directly with your testing center to take each exam while being monitored by a proctor for test security reasons. The exam and/or exam instructions will be sent to your testing center 3 days prior to the exam start date. Contact the Spears School Online Learning office at spearsonline@okstate.edu, or call (405) 744-4048 if you have any questions regarding the testing center sign up process. You may also visit <http://spears.okstate.edu/online/guide>.

There are three exams worth 250 points each. Exams must be taken during the period indicated on the schedule located at the end of this syllabus. The exams will be available through Brightspace using the Quiz software on Brightspace. Exam 1 will be immediately graded by the software and students will be able to see their grade after completing the exam. The actual graded questions and answers will be visible after all students have taken the exam. Exams 2 and 3 will take longer to be graded and we strive to complete this within one week.

Exam Make-up Policy

Students are expected to take each exam on the date given and submit each assignment in a timely manner. If for any reason a student cannot attend an exam, he or she must notify the instructor prior to the examination.

- **Assignments:** Most assignments are done through the Quiz software on Brightspace. Submit assignments on the due date to Brightspace. Do not submit homework/project by email. Late assignments/project are not accepted; however, there are seven graded homework assignments worth 20 points each, with the lowest score being dropped. So if you miss one assignment, it is still possible to get full credit on the assignments component of your grade. For most assignments, grades will be available immediately after the assignment is completed when automatically graded by Brightspace. Students will be able to see the graded questions and answers within a day after the assignment is due. A few assignments may take more time to grade and we strive to have these assignments graded within one week after the due date. [Here is how you view past assignments or exams: 1. Go to Content on the class website for the Quizzes tab. 2. Click on the item that you wish to view. 3. Use the dropdown arrow and select "Submissions". Then select Attempt 1. You will then be able to view your assignment/exam. You should be able to view all of the questions and answers from that assignment/exam.]

Important note: Brightspace will not allow an assignment to be visible later if a student does not attempt it. So it is very important that you attempt all assignments, not just to get the points but also to view them later. Otherwise, you will not be able to view them when studying for exams. **So do not forget to attempt all assignments if you want to have access to them at all!**

- **Energy Finance Company Analysis Project**
Requirements for the Energy Finance Capital IQ Project are posted to Brightspace in the Content folder for Week 4, when we cover that unit.
- **Student Information on Discussions:** You are required to introduce yourself in the Discussions folder call “Student Introductions”. In the Discussion folder, it tells you what to post. This is due by the date indicated on the detailed course schedule below. Very briefly, we ask you to post:

1. Name and major
2. Why are you taking the class?
3. Where are you from?
4. What do you hope to learn in the class?
5. Area of career interests and if you are already working full-time, please share this.
6. Hobbies?
7. Please tell us something about yourself that most people do not know. [You may wonder what is meant by this. For example, I had a student that was one of the semi-finalists a number of years ago, to be one of the people on a survivor show. He did not make the final cut. I had another student that was talented in singing the alphabet backwards. Another student shared that they had been to over 10 countries around the world.]

Discussion Board:

Post at least 7 comments during the semester to the course Discussion Board on the class website. Each posting is worth 5 points for a total of 35 points of your grade (see the Discussion Rubric on the right). These comments need to be thought provoking statements related to energy finance and/or replies to someone else's posting. ALWAYS provide your source and provide the [link](#) if you are citing an article or pasting comments from another source. At least 5 of the comments must be posted to the "Current Events and Topics in Energy Finance" folders to receive credit.

Discussion Rubric				
Rubric Components	5	3	0	Total
1 st comment or reply in the Current Events and Topics in Energy Finance folder	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	
2 nd comment or reply in the Current Events and Topics in Energy Finance folder	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	
3 rd comment or reply in the Current Events and Topics in Energy Finance folder	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	
4 th comment or reply in the Current Events and Topics in Energy Finance folder	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	
5 th comment or reply in the Current Events and Topics in Energy Finance folder	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	
1 st comment or reply in Exams or Assignments folders	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	
2 nd comment or reply in Exams or Assignments folders	Both more than 8 words and not more than 2 in one week	One of these: more than 8 words and not more than 2 in one week	None of these: more than 8 words and not more than 2 in one week	

It is acceptable if all 7 comments are posted only to "Current Events and Topics in Energy Finance". Replies to someone else's posting will count if they have content too (at least 10 words or more). Please note: The postings are not to be questions directed me. What I want is a discussion among students and I will add our insights where needed. Also, be sure to read other posts in Discussions.

All discussion board postings need to be posted by Monday, April 23rd. No more than two postings per week will count so start posting at the beginning of the semester. In other words, comments cannot be posted all at once towards the end of the semester -- only two postings a week will count. At most, two questions/comments about exams or assignments will count for discussion points and these must be posted to the exams folders and/or assignments folders, respectively.

Extra Credit: Requirements for the extra credit book report are posted to Brightspace in the “Course Information” folder, which is the first folder in Content. You can read one of the books mentioned on page 1 of this syllabus for extra credit. This will add 15 points to your overall course average. This means that if you have an overall course average of 88.5% (a grade of B) before the extra credit, then you will have a 90% average if you do the extra credit assignment – and as a result, you will earn an A in the course instead of a B. The extra credit assignment is due the last day of classes before the final exam week. No extra credit work will be accepted after that date.

Course Policies and Communication: There is a lot of reading material in this class so please keep up! I will be sending emails during the semester to remind you to keep up since this is a Distance Learning class. The assignments also help you keep up with the material. Sometimes, I will post new short (just a few minutes) videos to remind you where you should be in working on the course materials – and/or about current events.

During the week, we will do my best to respond to emails within 24 hours. On weekends, we always try to respond within 48 hours. Please note that we often receive around 150 work emails per day so before asking questions, make sure they are not already answered in the FAQ. It is important that course related questions are to be posted to Brightspace Discussions so that all students can benefit from the Q & A. Of course, if the email is personal in nature, you should email me directly. Again, before making posts with questions, make sure they are not already answered in the Frequently Asked Questions or the Discussion Board in prior Q&A.

- **Professionalism in Email:** Please be professional when corresponding with me and other OSU employees via email. Use a proper opening (i.e., Dear Dr. XYZ or Dear Professor XYZ), grammar, punctuation, and closing. Also, this policy will help you establish professionalism in digital communications when looking for a job and working in a professional position.
- **Frequently Asked Questions (FAQ):** There is a list of frequently asked questions about the course posted to the main class webpage on Brightspace. Please read these at the very beginning of the semester and make sure you have read these before posting course questions to Brightspace because they may already be answered here.
- **Netiquette:** A melding of the words "network" and "etiquette", **netiquette** refers to the manner in which communication is conveyed in an electronic environment. Here are some guidelines for communication within this course:
 - REFRAIN FROM USING ALL CAPS. It is considered SHOUTING when communicating online.
 - Always add in the subject line a concise statement describing the email or discussion post.
 - Do not post or forward offensive or racially insensitive jokes or comments.
 - Be careful with humor and sarcasm.
 - Don't respond to personal attacks: Contact the instructor for action and referral.
 - Respect others' opinions. If you disagree with what another has said, post your thoughts in an objective, respectful manner. Do not make remarks that can be taken personally.
 - Reflect upon the text you have entered before posting.
 - Keep the discussion within the scope of the course material.
 - Communication should be grammatically correct. Adhere to correct sentence structure, grammar, and spelling conventions. Proofread for errors before posting a message.
 - Before you respond to a threaded message, read all the messages related to that message that have been previously posted.

Useful Websites to Monitor: A couple of my favorites are:

- www.wtrg.com (Energy Economist website, written and owned by James Williams, who is my co-author on “Chapter 3: Energy Economics” of the textbook.)
- <http://www.api.org/>; If you want to stay on top of news in the petroleum industry, I encourage you to sign up for API’s free newsletter, *API SmartBrief*. To sign up, go to: <https://www.smartbrief.com/api/index.jsp>.
- <http://eia.doe.gov>

University Drop Policy: Information about university drop policy and dates is at this website: <http://registrar.okstate.edu/>. Click on “class schedules,” and “short, internet, and outreach courses”. To drop this course, contact the Registrar’s office, (405) 744-6876, or drop through Banner Self Service, <http://my.okstate.edu>

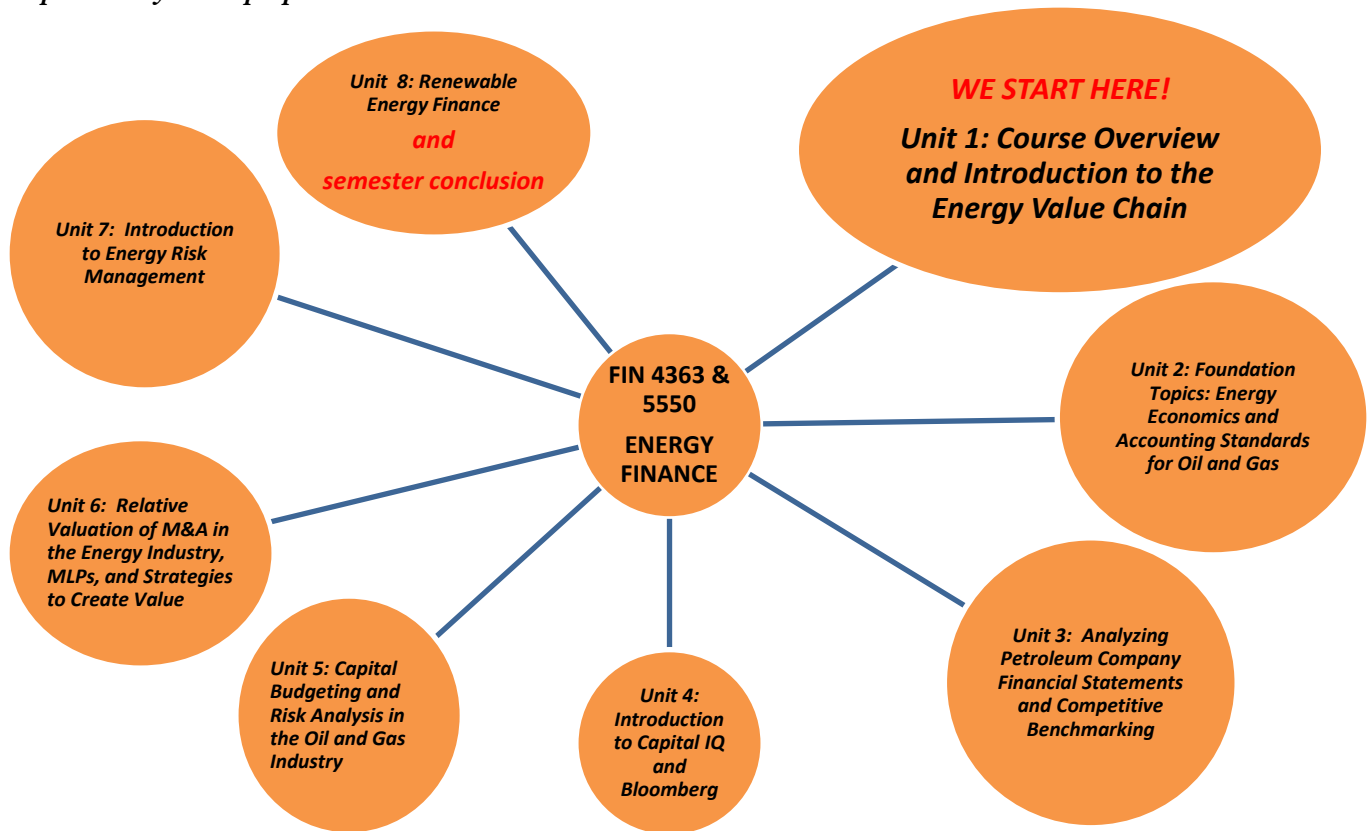
Academic Integrity Policy: Oklahoma State University is committed to the maintenance of the highest standards of integrity and ethical conduct of its members. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in your being sanctioned. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript (F!), and being suspended from the University. You have the right to appeal the charge. Contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627, <http://academicintegrity.okstate.edu/>.

Accessibility: Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact the instructor as soon as possible, so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunity. For more information about OSU Student Disability Services, please go to: <http://sds.okstate.edu>.

OSU Syllabus Attachment: Other important academic information and university policy can be found on the syllabus attachments that can be downloaded from the OSU websites at official syllabus attachment and the Registrar’s Enrollment Guide: <http://academicaffairs.okstate.edu/>

CLASS SCHEDULE FOR Spring 2018

Note to Students: You are expected to read the assigned materials, watch all videos (online students), and keep up with the content the week it is covered in class. See the detailed schedule below. It is your responsibility to keep up with the material.



W E E K	Week of:	TOPIC	READINGS AND ASSIGNMENTS (All reading material available in the textbook or on Brightspace.) <i>BE SURE TO WATCH ALL OF THE VIDEOS OVER THESE TOPICS IF YOU ARE IN THE ONLINE CLASS!</i>
1	Jan. 15	Unit 1: Course Overview and Introduction to the Energy Value Chain	Course syllabus and Lecture: Introduction to Energy Finance Video: About Me – so you know a little about me (just 10 minutes)
2	Jan. 22	Unit 2 Foundation Topics: Energy Economics	PowerPoint slides & lecture: Energy Value Chain (Upstream, Midstream, Downstream) Reading, PowerPoint slides & lecture: Chapter 3 -- Energy Economics: Past, Present, and Prospects for the Future Assignment #1: Available on Brightspace (Due Sunday, Jan. 28 by 11:45pm) Student Introductions post to Discussions is due by Sunday, Jan. 28 at 11:45pm

3	Jan. 29	Unit 2 Foundation Topics: Accounting Standards for Oil and Gas & Unit 3 -- begin	Reading, PowerPoint slides & lecture: Ch. 8 Accounting Systems for Oil and Gas Worksheet on Ch. 8 DD&A calculations Begin Unit 3 (start on it) Watch Robert Bryce video: http://ra.okstate.edu/stw_ssb/cepd/Conferences/2013Energy/OSUEnergyConference2013Part3RobertBryce.mp4 Assignment #2: Available on Brightspace (Due Sunday, Feb. 4 by 11:45pm)
4	Feb. 5	Unit 3: Ch. 9 Analyzing Petroleum Company Financial Statements and Competitive Benchmarking	Reading/Lecture: Ch. 9 -- Analyzing Financial Statements of Oil and Gas Companies and Competitive Benchmarking, energy ratio Assignment #3: Available on Brightspace (Due Sunday, Feb. 11 by 11:45pm)
5	Feb. 12	Unit 3 continued and Exam 1	Finish Chapter 9 Exam 1 – Wednesday-Friday, Feb. 14-16
6	Feb. 19	Unit 4: Introduction to Bloomberg and Capital IQ	Complete any remaining material on Unit 3 Introduction to Bloomberg and Capital IQ Assign Capital IQ Project
7	Feb. 26	Unit 5: Capital Budgeting and Risk Analysis in the Oil and Gas Industry	Reading/ Lecture: Capital Budgeting Teaching Note PowerPoint slides and lecture: Part 1: Capital Budgeting and Risk Analysis in the Oil and Gas Industry – Sensitivity, Scenario Analysis, and Monte Carlo Simulation Mini-case: ConocoPhillips Natural Gas Acquisition project Energy Finance Company Analysis Project Part 1 due Sunday, March 4 by 11:45pm
8	March 5	Unit 5 continued and Unit 6: Relative Valuation of M&A in the Energy Industry, MLPs, and Strategies to Create Value	PowerPoint slides and Lecture: Unit 6: Financial Strategies in Challenging Times for the Oil and Gas Industry Assignment #4: Available on Brightspace (Due Sunday, March 11 by 11:45pm)
9	March 12	Unit 6 continued	Reading: Chapter 7: How Our Political Views Affect Our View of Energy Prices Reading/PowerPoint slides/Lecture: Relative Valuation Using Market Comparables; from Titman/Martin book Reading: Chapter 22: Exxon Mobil's Acquisition of XTO Energy, Inc. Mini-Case on valuation (to be announced) Assignment #5: Available on Brightspace (Due Monday, March 26 by 11:45pm)
SPRING BREAK WEEK OF MARCH 19			
11	March 26	Unit 6 continued and Exam 2	Reading/PowerPoint slides/Lecture on Master Limited Partnerships (MLPs) Finish any uncovered material and review for Exam 2 Exam 2 –Wednesday through Friday, March 28-30
12	April 2	Unit 7: Introduction to Energy Risk Management	Reading/PowerPoint slides/Lecture: Chapter 15: Energy Derivatives and Markets Reading/PowerPoint slides/Lecture: Chapter 16: An Introduction to Energy Risk Management MLP Case Study Assignment Due on Sunday, April 8 by 11:45pm
13	April 9	Unit 7 continued	Reading/PowerPoint slides/Lecture: Chapter 17: Risks in Trading Energy Commodities Reading/Lecture: "The 10 biggest energy risk management disasters of the past 20 years" from <i>Energy Risk</i> (2014) Assignment #6: Available on Brightspace (Due Sunday, April 15 by 11:45pm)
14	April 16	Unit 7 continued	Assignment #7: Available on Brightspace (Due Sunday, April 22 by 11:45pm)
15	April 23	Unit 8 Renewable Energy Finance	Reading/PowerPoint slides/Lecture: Renewable Energy Finance Energy Finance Company Analysis Project Part 2 due by April 29 at 11:45pm All Discussion board posts due by Monday, April 23rd (online class only)

16	April 30	Course wrap-up	Complete any uncovered material Review for Final Exam * Be sure to complete the course evaluation! Extra credit book reports due by midnight Friday, May 4: Post to the Dropbox on Brightspace
	May 7	Final Exam Week	Final Exam: Monday through Wednesday, May 7-9

Other important dates of optional activities:

- **NGEAO Luncheons:** See <http://www.ngeao.org> for more details. NGEAO stands for Natural Gas and Energy Association of Oklahoma. They also hold monthly luncheon meetings that you can attend, at no cost to you if I sign you up. Let me know if you are interested. These luncheon meetings are usually held on the second Thursdays of each month in either Tulsa or Oklahoma City. This is an excellent networking opportunity! All luncheon times are from 11:30am-1:30pm. Also, check out the NGEAO website about other luncheons during the year and for jobs in the energy industry. If you are interested, please let me know.
- **Young Energy Professionals Chapters:** See <http://www.ypenenergy.org/>. There are chapters in Tulsa and Oklahoma City (among many other cities) and these groups also have monthly meetings.
- **Oklahoma Young Professionals Energy Forum** has a single event each year. This event is sponsored by several professional groups in the energy sector so it is multi-disciplined. See <http://www.okypenergyforum.org>
- **Financial Management Association (FMA):** Join the FMA OSU student chapter. See the information on Facebook at: <http://www.facebook.com/#!/groups/FMA.OKSTATE/>
- **FIN 4550: Cowboys on Wall Street:** Enroll in the 3-credit hour FIN 4550/BADM 5550 NYC course & travel in May 2017. Sign up early because this popular travel course fills up quickly!
- **Business Career Fair:** Check OSU's schedule
- **All students should have a business card. To order OSU business cards, go to:** <http://www.hireosugrads.com/StudentsAlumni/Supplies-BusinessCard.aspx>

ADDITIONAL USEFUL INFORMATION: These are additional tips to help you be successful in courses.

Subscribe to the Brightspace calendar so that you are reminded of important due dates

Students can subscribe to the Brightspace calendar so that it will show up on their computer, tablet, or mobile phone calendar.

To subscribe to your Brightspace calendar (to add it to your own calendar, such as an Outlook or Google calendar): From the calendar widget on the Brightspace main page of a course, choose the black drop down arrow and select Calendar (which should look like the image at the top of this blog), then settings. Check the box next to “Enable Calendar Feeds” and save your choice. Then select “Subscribe”. Copy the link provided and add the calendar via the link to your own calendar.

