

# COURSE SYLLABUS

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**YEAR COURSE OFFERED: 2022**

**SEMESTER COURSE OFFERED: Spring**

**DEPARTMENT: Supply Chain Management**

**COURSE NUMBER: SCM 4302**

**NAME OF COURSE: Energy Supply Chain Management**

**NAME OF INSTRUCTOR: Dr. S. Radhakrishnan**

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**The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.**

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## **Learning Objectives**

The main purpose of the course is to provide students a basic understanding of the various aspects of the Energy Supply Chain covering the crude oil, natural gas and electric power supply chains. By successfully completing this course, students should understand and be able to articulate the key elements of the businesses in each of the different energy sub-chains and how money is made in them. We will bring “real life industry experience” on different parts of the value chain thru Guest Lecturers. Students will work thru Case studies to learn the different complexities of the industry and how to think more holistically in understanding and addressing the challenges of the industry. The students will work thru some current real world situations whose solutions are still evolving.

## **Major Assignments/Exams**

Each student's final numerical score for the course is based on the following items and weights:

Grading breakdown

<b>Item</b>	<b>Weight</b>	<b>Remarks</b>
1. HW assignments + Pop Quizzes	30%	
2. Group Project	25%+25%	Written report
3. Attendance & Class Participation	20%	

We do not curve grades in advanced courses. We will use the guidelines as suggested by the University for grading

## **Required Reading**

“Oil 101” by Morgan Downey published by Wooden Table Press LLC, First Edition 2009, ISBN: 978-0-9820392-0-5.

## **Recommended Reading**

“Oil and Gas for Beginners – A guide to the oil and gas industry” A Deutsche Bank Report , September 2010.

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Excerpts from the Deutsche report will be posted on Blackboard at the appropriate time during the semester. During the course of the semester several other text books and published articles will be referenced to provide insights on different topics.

## List of discussion/lecture topics

- Crude Oil : Basics of geology, formation of hydrocarbons, discovery, exploration, production & oil and gas reserve classification, production sharing agreements and Crude Oil Characterization
- Natural Gas : Production, transportation, distribution and Shale gas and GTL
- LNG: Liquefaction, Transportation, Regassification and distribution
- Industry Overview – History of Oil, IOCs and NOCs.
- Energy Supply / Demand – history and forecast for the next 20 years
- Pipelines – Structure of the pipeline business, Regulations, International pipelines and the challenges surrounding their construction and operation
- Oil Refining : Basics of refining, Refinery economics, Biofuels and possible future of the refining sector
- Petrochemicals: Basics and trends
- The Power sector: Power generation, distribution, Regulations