Master of Science in Energy Management

36 semester credit hours minimum

Faculty


**Professor Emeritus:** Dale Osborne

**Clinical Professors:** John Barden, David Cordell, John Gamino, Randall S. Guttery, Peter Lewin, Jeffrey Manzi

**Associate Professors:** Nina Baranchuk, Zhonglan Dai, Rebecca Files, Kyle Hyndman, Surya N. Janakiraman, Robert L. Kieschnick Jr., Ningzhong Li, Ramachandran (Ram) Natarajan, Naim Bugra Ozel, Gil Sadka, David J. Springate, Kelsey D. Wei, Han (Victor) Xia, Yexiao Xu, Alejandro Zentner, Jieying Zhang, Yuan Zhang, Feng Zhao, Yibin Zhou

**Clinical Associate Professor:** Carolyn Reichert

**Assistant Professors:** Jun Li, Meng Li, Alejandro Rivera Mesias, Alessio Saretto, Simon Siegenthaler, Christian Von-Drathen, Steven Xiao

**Clinical Assistant Professors:** Moran Blueshtein, Ayfer Gurun, Revansiddha Khanapure, Liping Ma, Drew Peabody

Degree Requirements

The Master of Science in Energy Management (MS EM) is a 36 semester credit hours STEM (Science, Technology, Engineering and Mathematics) degree program that prepares students for careers in energy companies including oil, gas, coal, renewable energy and electricity, banks and financial institutions that trade energy commodities, energy-focused consulting firms, and major energy consuming corporations. The curriculum provides a practical learning component through projects developed by industry members that teach students how to value energy companies and projects, develop operating strategies, negotiate contracts and manage energy-specific risks. The development of the program was motivated by a high concentration of energy companies in Texas and the UT Dallas aim to address skill shortages in industries critical to the Texas economy and international needs.

To apply for this degree program, an undergraduate degree is required (all majors are considered). Students must maintain a 3.0 grade-point average (GPA) in both core courses and in all graduate
courses taken in the degree program, excluding program prerequisites to qualify for the MS degree.

Prerequisites

Students pursuing the Master of Science in Energy Management (MS EM) degree program are required to complete one semester credit hour of **MAS 6102** Professional Development. In addition, knowledge of calculus and statistics are required and students who have not completed an undergraduate calculus and statistic courses may satisfy the prerequisites by completing **OPRE 6303** Quantitative Foundations of Business and **OPRE 6301** Statistics and Data Analysis. Degree credit is not earned for program prerequisites, however, the grade achieved in prerequisites will count toward the student's grade-point average (GPA). All program prerequisites must be satisfied within the first semester of graduate study as a degree-seeking student.

Course Requirements

Core Courses: 24 semester credit hours

- **ACCT 6305** Accounting for Managers
- or **ACCT 6301** Financial Accounting and **ACCT 6202** Managerial Accounting
- **FIN 6301** Financial Management
- **MECO 6303** Business Economics
- **OPRE 6302** Operations Management

And choose four courses from the following:

- **ENGY 6330** Energy Law and Contracts
- **FIN 6335** Energy Finance
- **FIN 6336** Energy Joint Interest Accounting
- **MECO 6318** Energy Economics and The Cost of Regulation
- **OPRE 6389** Managing Energy: Risk, Investment, Technology (MERIT)

Elective Courses: 12 semester credit hours

Students may select 12 semester credit hours from the list of elective courses below or from one of specialized tracks as outlined below if they wish to focus and gain an in-depth knowledge in a specific area of the industry. Students may also substitute only one three semester credit hour master's-level course from any unrestricted course/prefix offered within JSOM.

- **ENGY 6009** Energy Management Internship\(^1\) (required elective)
- **ENGY 6331** Capstone Project in Energy
- **ENGY 6332** Energy and Sustainability

Energy Management Tracks

The MS Energy Management degree program offers students with opportunities to focus in a specific track or combination (optional) to obtain an in-depth knowledge in a specific business area depending on their interests.

**Energy Risk Management Track**
- **FIN 6307** Mathematical Methods for Finance
- **FIN 6318** Analytics of Finance
- **OPRE 6335** Risk and Decision Analysis

**Energy Analytics Track**
- **MECO 6312** Applied Econometrics and Time Series Analysis
- **MKT 6337** Predictive Analytics Using SAS
OPRE 6332 Spreadsheet Modeling and Analytics
OPRE 6398 Prescriptive Analytics

International Energy Management Track

IMS 6360 International Strategic Management
IMS 6365 Cross-Culture Communication and Management
OB 6331 Power and Politics in Organization
OB 6332 Negotiation and Dispute Resolution

Energy Operations Track

OPRE 6366 Global Supply Chain Management
OPRE 6370 Global Logistics and Transportation
OPRE 6371 Purchasing, Sourcing and Contract Management
OPRE 6378 Supply Chain Strategy

1. Students may substitute both ACCT 6301 AND ACCT 6202 in lieu of ACCT 6305.
2. Students may use ENGY 6009 only for their first internship and any additional internship must be completed as ENGY 6V98 (3 semester credit hours maximum). Students may also substitute ENGY 6009 with ENGY 6V98 or ENGY 6362 to fulfill internship requirement.

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