APPLIES TO ACADEMIC YEAR 2016/2017

GRA 8510 Leadership Analytics of the Energy Sector for the Future

Programme
Executive Master of Management in Energy (EMME)

Responsible for the course
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Department
Department of Leadership and Organizational Behaviour

Term
According to study plan

ECTS Credits
5

Language of instruction
English

Introduction
This course is part of the Executive Master of Management in Energy in cooperation with BI Norwegian Business School and IFP School.

Shaping the future of the energy sector is a particularly challenging task.
How to perform leadership that fits the challenge of the future issues and challenges, and how to organize the companies and the associated collaboration and co creation between clients and contractors.

This course in module 5 sets the leadership direction and issues necessary for shaping the future in the energy sector.

Learning outcome

The course focuses on how leadership interacts with analytical disciplines in the modern age to shape adequate leadership style for the energy sector in the future.
The course outcome provides you with concepts and analytical models that qualify you to leadership positions in the future energy industry, including the capability of understanding the impact of the digital transformation on to the leader performance and mastering new business models, new market patterns and new ways of organizing and collaborating in the industries for electricity, oil & gas.

Acquired Knowledge
This course provides you with,
- Leadership role awareness
- Knowledge about the power and limitation of analytics in leadership
- Some fundamentals in the science of prediction
- Psychological processes involved in reality construction

Skills
Skills developed upon completion of the course include the abilities to,
- Decision making under uncertainty
- Support to co-workers and subordinates
- Interpretation of data
- Ability to apply visions to scenarios to support decisions

Reflection
Reflection goals cover such as,
- Complexity as a fundamental characteristic of leadership tasks
- Organizational personal ambitions
- Limits of computability in business
- Proactive roles of leaders in business environment
- Personality and mindsets as prerequisites for leadership behaviors

Prerequisites
Granted admission to the Executive Master of Management in Energy programme.

Compulsory reading

Books:
Arnulf, J. K.. 2014. A brief introduction to leadership. Universitetsforlaget.
Axelrod, R. M., & Cohen, M. D. 1999. Harnessing Complexity: organizational implications of a scientific frontier. New York: Free Press
Pries, K. H., & Dunnigan, R.. 2015. Big data analytics: A practical guide for managers. Boca Raton, FL: CRC Press Taylor & Francis Group. chapters 1, 2, 6, 12 and 13
Taleb, N. 2004. Fooled by randomness: the hidden role of chance in life and in the markets. 2nd Ed. New York: Thomson/Texere

Recommended reading

Other:
A selected set of publications at Conferences and in Scientific Journals with latest updates on trends in leadership performance and impact of the digital technology on strategic management, value generation and value control through value networks and value shops, as well as on operations.

Course outline
Key topics are in this course:
- Core concepts of leadership, management and uncertainty
- The inherent conflict between making and predicting future states of organizations
- Technical and social validation of decisions
- Decision making in the light of creating emergent realities
- Approaches and limitations to analytics in leadership and organizations
- Prediction and methodologies
- The leader as a ticket to the future

Computer-based tools
It's Learning

Learning process and workload
1 ECTS credit corresponds to a workload of 26-30 hours.

Attendance to all sessions in the course is compulsory. If you have to miss part(s) of the course you must ask in advance for leave of absence. More than 25% absence in a course will require retaking the entire course. It's the student's own responsibility to obtain any information provided in class that is not included on the course homepage/ It's learning or other course materials. Sessions include lectures, seminars and group work.

Examination
The students are evaluated through an individual 72 hours home exam, counting for 5 credits.

Specific information regarding student evaluation beyond the information given in the course description will be provided in class.

Examination code(s)
GRA 85101 - Home exam; counts for 100% to pass the course GRA 8510; 5 credits.

The course is a part of a full Executive Master of Management in Energy (EMME) and examination in all courses must be passed in order to obtain a certificate.

Examination support materials

Re-sit examination
Re-takes are only possible at the next time a course will be held. When course evaluation consists of class participation or continuous assessment, the whole course must be re-evaluated when a student wants to retake a exam. Retake examinations entail an extra examination fee.

Additional information