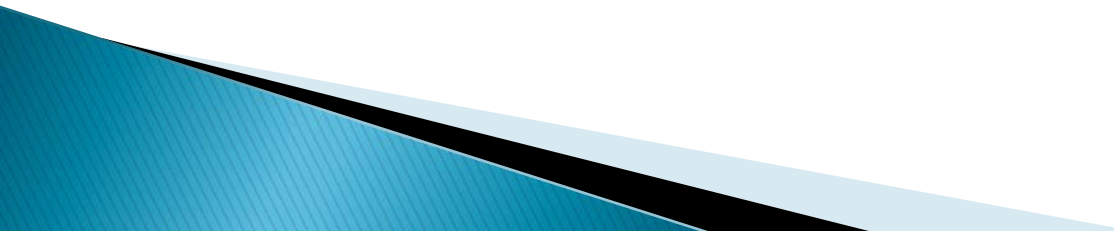


Tools for Decision Making under Uncertainty in Electricity Markets

Instructors: Juan M. Morales (IMM)
Salvador Pineda (CET)

Description

- ▶ This course is aimed at providing tools for decision making in electricity markets under uncertain parameters.
 - ▶ The course will primarily rely on self-study and presentations by the students. There will be lectures on basic concepts and applications of stochastic programming.
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Structure

Lectures (basic concepts and exercises)
Time: 8 weeks

Project mentoring
Time: 8 weeks

Project presentation
Time: 2 weeks

Structure

Lectures (basic concepts and exercises)
Time: 8 weeks

Project mentoring
Time: 8 weeks

Project presentation
Time: 2 weeks

Introduction to decision making under uncertainty

Stochastic programming: formal concepts

Market clearing under uncertainty

Optimal offering for a thermal producer

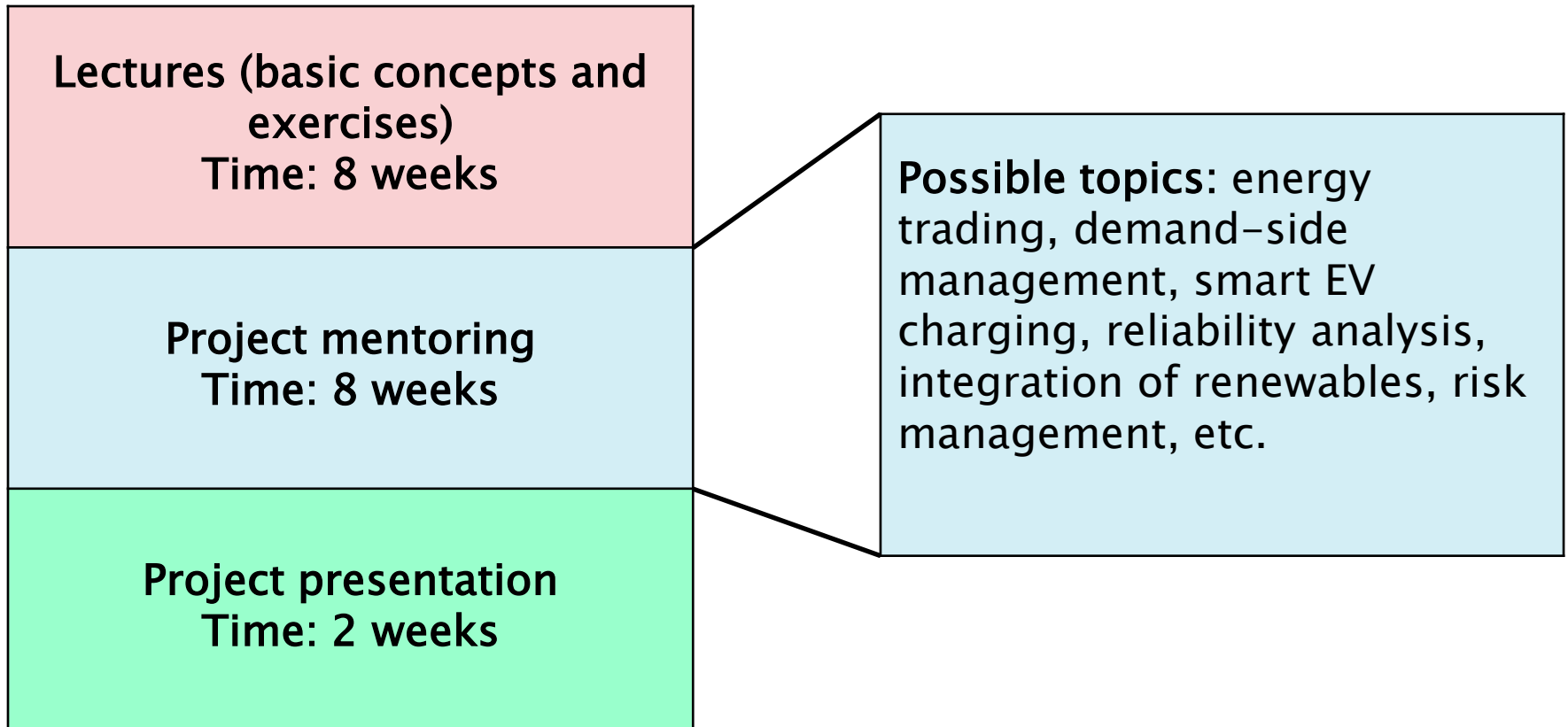
Optimal offering for a wind power producer

Futures and options market trading (risk management)

Scenario generation

Scenario reduction and robust optimization

Structure



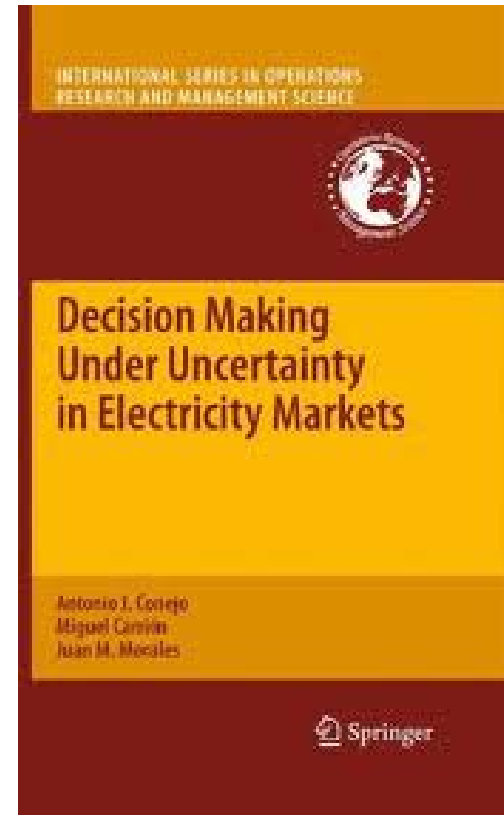
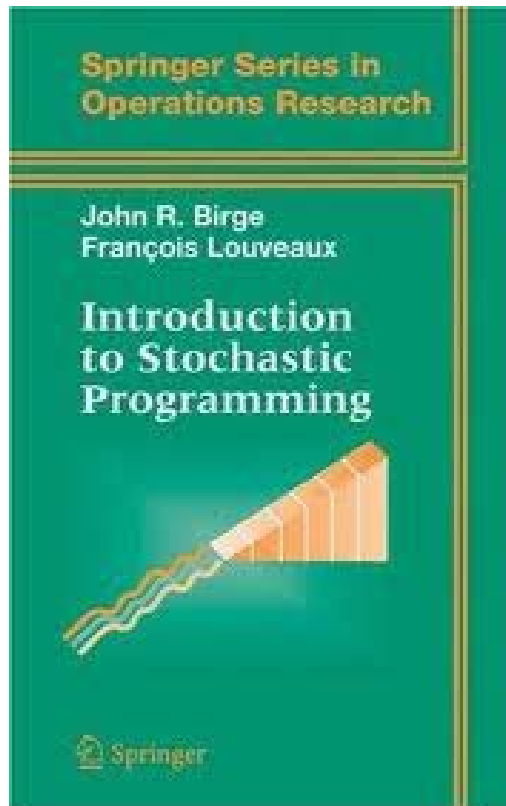
Tentative calendar

Week 7	Presentation	Week 17	Mentoring
Week 8	Lectures	Week 18	
Week 9		Week 19	
Week 10		Week 20	
Week 11		Week 21	
Week 12		Week 22	
Week 13		Week 23	
Week 14		Week 24	
Week 15		Week 25	Presentations
Week 16	Project discussion	Week 26	

Evaluation

- ▶ Attendance at lectures and participation
- ▶ Weekly exercises
- ▶ Final project

Material



Contact information

- ▶ Juan Miguel Morales (jmmgo@imm.dtu.dk)
- ▶ Salvador Pineda (spmo@elektro.dtu.dk)
- ▶ Tentative website:
<https://sites.google.com/site/scdmuuem/>