Course G1467: ENERGY SYSTEMS

GENERAL INFORMATION

Spring Semester
6 ECTS credits

INSTRUCTOR(S)

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Description

This course introduces energy systems with emphasis on design and costs. The course presents a systems approach to energy needs, covering carbon-based, nuclear, and renewable energy sources, including solar energy, small-scale hydropower, wind, bio-conversion processes, and house energy balances.

TEXTBOOK

Textbook. *Energy Systems Engineering: Evaluation and Implementation.* Francis Vanek and Louis Albright

SYLLABUS

1. Introduction
2. Basic Concepts
3. AC Circuit Analysis
4. Three-phase Systems
5. Electrical Machines
6. Power Systems
7. Power Converters
8. Renewable Energies and Grid Integration