EG2100 Power System Analysis 6.0 credits

Analys av elkraftsystem

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

On 04/21/2020, the Head of the EECS School has decided to establish this official course syllabus to apply from autumn semester 2020, registration number: J-2020-0553.

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Electrical Engineering

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student should be able to

1. create mathematical models, analyse and carry out calculations for an electric power system under symmetrical as well as unsymmetrical conditions in steady state, and for load flow analysis.
2. carry out the above-mentioned calculations numerically in Matlab and present and discuss received numerical results.

Course contents

Fundamental principles for power system analysis, methods for analysis and design of power networks in steady state under symmetrical as well as unsymmetrical conditions.

Specific prerequisites

Completed courses corresponding to:

- SF1624 Algebra and Geometry
- SF1625 Calculus in One Variable
- SF1626 Calculus in Several Variables
- SF1519 Numerical methods and basic programming or SF1546 Numerical methods, basic course or EL1150 Introductory Matlab course
- EJ1200 Electric Power Systems

Active participation in a course offering where the final examination is not yet reported in LADOK is considered equivalent to completion of the course. This applies only to students who are first-time registered for the prerequisite course offering or have both that and the applied-for course offering in their individual study plan.

Examination

- PROC - Project, 1.5 credits, grading scale: P, F
- TENC - Written exam, 4.5 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Transitional regulations

Students who have not completed the course with the earlier examination (TENB) should follow the re-examination (TENC and PROC).

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.