EP2420 Network Analytics 7.5 credits

Nätverksanalys

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

Establishment

Course syllabus for EP2420 valid from Spring 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

For single course students: 120 credits and documented proficiency in English B or equivalent

Language of instruction

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

Intended learning outcomes

After passing this course, participants should be able to:

- perform the modeling of a network analytics task

- pre-process data and create predictive models using machine-learning techniques and tools

- assess, interpret and possibly apply the results

- produce a written report describing and explaining the project results

Course contents

This is a project course whereby students, by themselves or in small groups, perform an analytics project using data from a real system, for instance, using operational data from a network or compute cloud.

The course includes:

- introductory lectures on the specific machine-learning techniques used in the project

- an introduction into the tools to be used

- execution of the project by students, supported by message board and project meetings

- preparation of the project report by students

The specific project the students work on can change from year to year.

Course literature

Chapters from textbooks, online material, research papers will selected according to the specific project and will be made made available to students.

Equipment

Students are assumed to have access to computers.

Examination

- PRO1 - Project Work, 7.5 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.

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

Grading will be based on the on the project report and the project interview.

The report and the interview will have equal weight for the grade.

In the project report, the project results will be evaluated in terms of correctness and completeness, and the presentation will be evaluated regarding structure and readability.

In the interview, students will be evaluated for their understanding of the project objective, approach, and results.

Grade A means the student has executed the complete project, has obtained correct results, and has produced a readable and concise report. Further, the student has answered well to all interview questions.

To pass the course, the student has executed the complete project, has obtained correct results for significant project parts, has produced a readable report, and has answered correctly to most interview questions.

Other requirements for final grade

Requirements for passing the course are that the student successfully completes both course projects and passes an assessment interview.

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.