IO2654 Optical Networking 7.5 credits

Optiska nätverk

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

Establishment

Course syllabus for IO2654 valid from Autumn 2008

Grading scale

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

Education cycle

Second cycle

Main field of study

Information Technology, Information and Communication Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

After the course the students should be able to:

*** solve a simple WDM network design and optimization problems**

*** Define the main limitations and possibilities of the optical network technologies**

*** Define the main differences between optical networking and traditional networking**

*** Explain the benefits of optical layer survivability**

*** Describe the main issues in management and control of optical networks-
These goals are both result oriented and easy to examine.**

Course contents

*** Basics on communication networks and layered network models**

*** The optical layer**

*** WDM network elements and design**

*** Optical packet and burst switching**

*** Optical network survivability**

*** Transmission system engineering.**

*** Optical devices and systems**

Course literature

Optical WDM Networks, B. MukherjeeUpplaga: 1 Förlag: Springer År: 2006ISBN: 0-387-29188-1

Examination

- ANN1 - Assignments, 2.5 credits, grading scale: P, F
- TEN1 - Examination, 5.0 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.

Other requirements for final grade

To pass the course one needs to pass a written exam (3 credits) and a homeassignments (4.5 credits).

The final grade will be based on the results from the exam and project work. To pass the course the students shall meet all goals of the course. For higher grade the students shall be able to show that they understand WDM network optimization issues and survivability mechanisms as well as have deeper knowladge about optical network management and control.

From 2007-07-01 the grades will include seven levels (A, B, C, D, E, Fx, F).

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.