



# FIK3613 Techno-Economics of Optical Networks 7.5 credits

Tekno-ekonomi av optiska nätverk

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

## Establishment

Course syllabus for FIK3613 valid from Spring 2013

## Grading scale

G

## Education cycle

Third cycle

## Specific prerequisites

The student should pass the course "IO3654 Advances in Optical Networks" or equivalent.

## Language of instruction

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

## Intended learning outcomes

The course will enable the student to describe, design and calculate the total cost of ownership for any type of access networks, both from technical functionality and performance

perspective taking into account the architecture, deployment, operation, service delivery, market, cost structure and revenue aspects.

## Course contents

- Cost structure considered in total cost of ownership
- Market structure, type of actors and business relations at telecom markets.
- Telecom regulation and type of regulated markets and services.
- History of broadband access technologies
- Network dimensioning principals and related tools and methods
- Business viability evaluation criteria
- Deployment strategies and migration paths

## Disposition

This is a self study course, where student will individually study the provided literatures.

## Course literature

TONIC tool manual

Related published papers

OASE project deliverables

## Examination

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 scale: P/F

## Other requirements for final grade

- Writing a report summarizing the methodology and various important factors for the cost study of optical access networks (3,5 grade scale: P, F).
- Implementation of the method in order to be used in the further projects for cost studies (4.0, grade scale: P, 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.