Linnæus University

Course syllabus

Faculty Board of Science and Engineering

School of Computer Science, Physics and Mathematics

4MA113 Topologi, 7,5 högskolepoäng
4MA113 Topology, 7.5 credits

Main field of study
Mathematics

Subject Group
Mathematics

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved 2009-12-01
Revised 2012-12-10 by School of Computer Science, Physics and Mathematics.
Revision made for prerequisites.
The course syllabus is valid from autumn semester 2013

Prerequisites
1MA153 Vector analysis 7.5 credits or equivalent.

Objectives
The student should be able to:

- operate with sets
- operate with various topologies
- apply topology for problem solving
- operate with definitions and central notions of the course in coupling with study of various problems
- operate, communicate and present argumentation using mathematical forms of representation
- show applications of topology
- give various examples of topological spaces, in particular compact topological spaces
- work with continuous maps in topological spaces
- use compact topological spaces in applications.

Content
The course content is:

- introduction to set theory
- topological spaces
- continuous functions in topological spaces
- compact topological spaces
- applications of topological spaces.

Type of Instruction
Lectures and seminars. Compulsory assignments may be given during the course.

Examination
The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The student's knowledge is assessed in the form of oral and/or written examination.

Course Evaluation
A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Required Reading and Additional Study Material
Required reading
Fomin S V och Kolmogorov A N *Introductory Real Analysis,
Dover Publication*, INC, New York, 1975. 403 pages.