Theory of Calculus, second course

Programme course

4 credits

Matematisk fördjupning fk

TATA73

Valid from: 2017 Spring semester

Determined by
Board of Studies for Electrical Engineering, Physics and Mathematics

Date determined
2017-01-25

Main field of study
Mathematics, Applied Mathematics

Course level
First cycle

Advancement level
G1X

Course offered for
- Mathematics, Bachelor´s Programme

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Calculus in one and several variables

Intended learning outcomes
To give theoretical knowledges in calculus of one and several variables. After the course the student must be able to
- cite and use the definitions and theorems of limit, continuity, derivatives, indefinite and definite integrals, Taylor and Maclaurin series.
- prove central theorems in calculus of one and several variables.

Course content
Calculus in one variable: Theory of lindefinite and definite integrals, Taylor and Maclaurin series.
Calculus in several variables: Theory of limit, continuity, derivatives, integrals, Taylor and Maclaurin series.

Teaching and working methods
Seminars including oral presentations.

Examination

UPG1	Assignments	0.5 credits	U, G
TEN1	Written examination	3.5 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Matematiska institutionen

Director of Studies or equivalent

Jesper Thorén

Examiner

Irina Asekritova

Course website and other links

http://www.mai.liu.se/und/kurser/index-amne-tm.html

Education components

Preliminary scheduled hours: 44 h
Recommended self-study hours: 63 h

Course literature

Forsling, G. och Neymark, N.: Matematisk analys, en variabel. Liber. Persson, A. och Böiers, L.-C.: Analys i flera variabler. Studentlitteratur.

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.