Linnæus University

Dnr: LNU-2024/1559

Course syllabus

Faculty of Technology
Department of Mathematics

1MA030 Förberedande matematik för internationella studenter, 7,5 högskolepoäng

Preparatory Mathematics for International Students, 7.5 credits

Subject
Mathematics

Level
First cycle

Progression
GXX

Date of Ratification
Approved 2024-04-08.
The course syllabus is valid from spring semester 2025.

Prerequisites
General entry requirements + Mathematics 3C + English 6

Objectives

After completing the course, the student should be able to

- solve problems, perform calculations and reason within the part of mathematics covered by the course and be able to communicate these solutions, calculations and reasoning in writing and orally

Content

Arithmetic (fractions, powers), first and second degree equations, systems of linear equations, absolute values, inequalities.
Definition of function, elementary functions (power, exponential, logarithmic and trigonometric functions)
Limits, continuity, differential calculus (derivation rules, geometric interpretation),

integral calculus (fundamental theorem of analysis, primitive function, geometric interpretation)

Type of Instruction

Lectures and seminars.
Participation in seminars is mandatory.

Examination

The course is assessed with the grades Fail (U) or Pass (G).

The student's knowledge is assessed in form of

- seminars; 2.5 credits
- written exam; 5 credits

Resit examination is offered in accordance with Linnaeus University’s Local regulations for courses and examination at the first- and second-cycle levels.
In the event that a student with a disability is entitled to special study support, the examiner will decide on adapted or alternative examination arrangements.

Course Evaluation

A course evaluation should be conducted during the course or in connection with its conclusion. The results and analysis of the completed course evaluation should be promptly communicated to students who have completed the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:
Preparatory mathematics II,1MA012/1MA022, 1.5 credits
Preparatory mathematics III,1MA013/1MA023, 3 credits
Preparatory mathematicsIV, 1MA015/1MA024, 3 credits

Required Reading and Additional Study Material

Carl Stitz, Jeff Zeager (2013), Precalculus,
https://www.stitz-zeager.com/szprecalculus07042013.pdf, 300 (1079)

Material from the department