



HÖGSKOLAN I GÄVLE

Mathematical Concept Development for Upper Secondary School 7.5 cr

Matematisk begreppsbildning för gymnasieskolan 7,5 hp

Set by Board of Mathematics, Natural and Computer Sciences

Version

Set at	Valid from
8/10/11	HT2008
9/30/14	VT2015

Level	G1F
Education level	First cycle
Course identifier	MA008B
Credits	7.5 cr
Main field of study	Mathematics
Subject group	Mathematics
Disciplinary domain	Natural sciences 100.0 %

Learning outcomes

On completion of the course, the student should be able to:

1. account for current course syllabi in primary and lower-secondary school and upper-secondary school
2. independently carry out lectures in mathematics
3. evaluate the own teaching
4. use subject didactic literature for planning of the teaching
5. acquire good knowledge of concepts, theorems and proofs included in the upper-secondary mathematics courses and use educational aids to illustrate mathematical concepts
6. understand and explain relationships between different mathematical concepts.

Course content

- Concepts, theorems and proofs, terms, conventions and definitions in current upper-secondary courses
- Models that lead to extreme value problems and differential equations
- A symbolic algebra program e g Maple and a calculation program.
- General problem-solving methodology

Teaching	The teaching is given in the form of lectures, teaching sessions, laboratory sessions and seminars in connection with subject didactic assignments
Prerequisites	Ma D or equivalent and Mathematics, 30 HE credits or equivalent.
Examination	Examination is carried out as a written examination and written and oral presentations
Grade	A, B, C, D, E, Fx, F
Other regulations	Grading criteria are provided by the course coordinator or examiner at the beginning of the course.
Sustainable environment	Content with sustainable development is not relevant to this course.

Module			
	0010	Written examination	7.5 cr Grade: AF
	0020	Examination	0 cr Grade: UG
	0030	Examination	0 cr Grade: UG
	0040	Examination	0 cr Grade: UG