SYLLABUS

Linear Algebra and Differential Equations 7.5 credits M0031M

Linjär algebra och differentialekvationer

Course syllabus admitted: Autumn 2015 Sp 1 - Spring 2022 Sp 4

DECISION DATE
2015-06-18

Linear Algebra and Differential Equations 7.5 credits M0031M

Linjär algebra och differentialekvationer

First cycle, M0031M

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Matematik	Mathematics

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and Linear Algebra and Calculus M0030M or equivalent.

Selection

The selection is based on 1-165 credits.

Examiner

Stefan Ericsson

Course Aim

The student shall acquire basic skills in ordinary differential equations and linear algebra.

Contents

Complex numbers, algebraic equations, the complex exponential function. Vector spaces, eigenvalues and eigenvectors, orthogonality, inner product spaces, symmetric matrices and quadratic forms. Ordinary differential equations of first and second order.

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
Lectures, problem solving, computer tasks.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.
Written examination and computer tasks.

Overlap

The course M0031M is equal to MAM283, M0039M, M0049M, M0059M

Literature. Valid from Autumn 2009 Sp 1

Lay D:Linear algebra and its applications, Addison-Wesley, Boston (the latest edition).
Dunkels m fl: Derivator, integraler och sånt... Studentlitteratur, senaste upplagan.
MATLAB, An Introduction With Applications,   second edition, John Wiley & Sons, Inc.

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Course offered by

Department of Engineering Sciences and Mathematics

Items/credits

Number	Type	Credits	Grade
0001	Written exam	6.9	G U 3 4 5
0002	Laboration	0.6	U G#

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by HUL Mats Näsström 2015-06-18

Syllabus established

The syllabus is approved by the Department of Mathematics and is valid from August 2007.

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