**Course syllabus**

**Numeriska metoder för datorgrafik**
**Numerical Methods in CAGD**

**FMNN35, 6 credits, A (Second Cycle)**

Valid for: 2017/18  
Decided by: PLED F/Pi  
Date of Decision: 2017-04-06

**General Information**

Elective for: C5, D5-bg, E5-bg, F5, F5-bg, Pi4  
Language of instruction: The course will be given in English on demand

**Aim**

Today’s CAGD software is based on efficient numerical methods to construct curves and surfaces. The goal of the course is to explain in depth the basic algorithms and their foundations.

**Learning outcomes**

*Knowledge and understanding*

For a passing grade the student must

- be able to construct computable approximations to curves and surfaces
- be able to independently implement and apply such algorithms.

*Competences and skills*

For a passing grade the student must

- be able to independently select, implement and apply computational algorithms
- be able to independently evaluate both accuracy and relevance of numerical results.

*Judgement and approach*

For a passing grade the student must

- be able to write a logically well structured report, using suitable terminology, on the construction of basic numerical methods and algorithms
- be able to write a well structured report, using suitable terminology, on the numerical
approximation of curves and surfaces.

Contents

Examination details
Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)
Assessment: Homework reports with oral presentation.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission
Required prior knowledge: FMAB20 Linear Algebra, FMAA01/05 Calculus in One Variable, FMNF05/FMNF10 Numerical Analysis, EDAF80 Computer Graphics or equivalent.
The number of participants is limited to: No
The course overlaps following course/s: FMA135, FMN100

Reading list

Contact and other information
Director of studies: Anders Holst, Studierektor@math.lth.se
Course coordinator: Carmen Arevalo, carmen@maths.lth.se
Course administrator: Patricia Felix Poma de Kos, patricia.felix_poma_de_kos@math.lth.se
Course homepage: http://www.maths.lth.se/na/courses/FMN100