Faculty of Science

NUMN27, Numerical Analysis: Seminar, 7.5 credits
Numerisk analys: Seminariekurs, 7,5 högskolepoäng
Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2020-06-11 and was last revised on 2023-03-28. The revised syllabus applies from 2023-03-28, spring semester 2024.

General Information

The course is a compulsory course for second-cycle studies for a Degree of Master of Science in mathematics with specialisation in numerical analysis and an alternative-compulsory course for a degree of Master of Science in Computational Science with specialisation in Scientific Computing.

Language of instruction: English

Main field of studies	Depth of study relative to the degree requirements
Mathematics	A1N, Second cycle, has only first-cycle course/s as entry requirements
Computational Science	A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

The overarching goal of the course is that students after completing the course will have aquired in-depth knowledge in a specialised area of numerical analysis and are introduced to current research in the subject. Furthermore, the students will develop their ability to independently assimilate and critically analyse research literature and communicate the content to a wider public. The course is preparatory for a master's thesis in numerical analysis.

Knowledge and understanding

After completing the course the student should be able to:

- summarise current research and development in a sub-area of numerical analysis;
- explain current research and development work in a sub-area of numerical analysis and relate it to relevant issues.

Competence and skills

After completing the course the student should be able to:

- systematically and critically analyse and summarise current research questions in a written report based on available information;
- orally present an independently conducted literature study to a wider public;
- plan and execute qualified tasks within given time frames;
- give constructive criticism of other students' written and oral presentations.

Judgement and approach

After completing the course the student should be able to:

- take responsibility for identifying and obtaining the knowledge required to carry out an independent work.

Course content

The course treats current research literature in numerical analysis and scientific computing.

Course design

The teaching is given in seminar form. During the course, the student will engage in independent literature studies that will be analysed and summarized in a written report and presented orally at a seminar. Students will review other students' written reports and provide constructive criticism to others' oral presentations. Participation at the seminars is compulsory.

Assessment

The examination takes place during the course through a written report and an oral presentation of a completed literature study as well as through peer review of another student's written report and oral response to their oral presentation. Written reports and oral presentations that are not approved at the assigned seminar session may be re-made shortly thereafter.

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.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass.
To obtain the grade Pass it is required to pass the written report and the oral presentation as well as to have completed a peer review of another student's written report and responsed to their oral presentation.

Entry requirements

For admission to the course, English 6 / B and 90 higher education credits in mathematics and numerical analysis are required, including knowledge equivalent to the course NUMA41 Numerical analysis: Basic course, 7.5 credits.

Further information

The course cannot be credited in a degree together with NUMN17 Numerical analysis: Seminar, 7.5 credits.

The course is offered by the Centre for Mathematical Sciences, Lund university.

Subcourses in NUMN27, Numerical Analysis: Seminar

Applies from V21

2101   Written Report, 4,0 hp
        Grading scale: Fail, Pass
2102   Oral Presentation, 3,0 hp
        Grading scale: Fail, Pass
2103   Peer review, 0,5 hp
        Grading scale: Fail, Pass