Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Syllabus

MS4011.1 Computer Science and Numerical Methods, 7.5 credits

Datalogi med numeriska metoder

The course is given as course independent of study programme

Syllabus discontinued 28 October 2002

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

17 March 1997

The version applies to students admitted from autumn 1999 to autumn 2003

The version is not a module version

Subjects

Computer science/Business Administration/Economics/Forest Management/Technology

Education cycle

First cycle

Modules

Title	Code	Credits
Single module	0101	7.5

Advanced study in the main field

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

Swedish

Prior knowledge

Mathematics (D), Swedish (B), and English (A), from Upper Secondary School.

Objectives

Having completed the course the student should have basic knowledge of computer science and should be able to use it for solving numerical problems. The student should have enough computer knowledge and skill for further development without difficulty. The student should also be familiar with applied mathematics (calculus) and especially with basic numerical methods for a diversity of problem types such as solving linear and general equations, approximations, integration and differential equations. The student should be able to implement this and other techniques in Excel and to use 'Visual Basic for applications' for control purposes and for making calculation programs comprehensible to the user.

Content

An overview of quantitative problems from a wide range of fields within forestry, problems that can be solved with applied mathematics and computer programs (Excel) in symbiosis. General computer science such as the functioning of the interface of the operative system, basic and advanced calculus with Excel, other Excel applications, data security. 'Visual Basic for applications' for controlling, checking and easy user-interface. The overview will include applied mathematics such as applications of simple and partial derivatives, integration, solving equations and differential equations.

Implementation

Lectures ca 50 hours
Exercises and seminars ca 100 hours

Examination

Requirements for examination

Assignments in computer science. One assignment and written examination in numerical methods.

Approved assignments and written examination.

- If the student fails a test, the examiner may give the student a supplementary assignment, provided this is possible and there is reason to do so.
- If the student has been granted special educational support because of a disability, the examiner has the right to offer the student an adapted test, or provide an alternative assessment.
- If changes are made to this course syllabus, or if the course is closed, SLU shall decide on transitional rules for examination of students admitted under this syllabus but who have not yet passed the course.
- For the examination of a degree project (independent project), the examiner may also allow the student to add supplemental information after the deadline. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Additional information

- The right to take part in teaching and/or supervision only applies to the course date to which the student has been admitted and registered on.
- If there are special reasons, the student may take part in course components that require compulsory attendance at a later date. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Responsible department

Department of Forest Resource Management
Cooperating departments:
Department of Forest Economics

Supplementary Information

Finalized by: Programnämnden för skogsvetarprogrammet