



Syllabus

TN0104.1 Solid Biofuels, 15.0 credits

Fasta biobränslen

The course is given as course independent of study programme

Syllabus discontinued 7 December 2010

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

11 June 1998

The version applies to students admitted from autumn 1999 to autumn 2011

The version is not a module version

Subjects

Technology

Education cycle

First cycle

Modules

Title	Code	Credits
Single module	0101	15.0

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), Physics (A), and Chemistry (A) from Upper Secondary School; and 10 Swedish University Credits (SUC) of basic (A-level) courses in Biology.

Objectives

The course will give the students basic knowledge of the solid biofuels of significance for present and future energy systems. Having completed the course the students will have:

- good knowledge of requirements for production, production techniques, handling and upgrading of solid biofuels
- knowledge of environmental effects during production and handling of solid biofuels
- knowledge to perform economic analyses concerning production of different solid biofuels

Content

The course considers the following solid biofuels: wood fuels (forest fuels, saw mill waste), peat fuels, agro fuels (salix, straw fuels and raw materials for production of biogas, ethanol, vegetable oils) and waste fuels. For each fuel potential, production, production techniques, handling and properties of the mentioned fuels are discussed. In addition, economy and environmental aspects concerning production and handling of the fuels are considered. Finally, techniques for production and handling of upgraded solid biofuels together with their properties are discussed.

Implementation

Lectures ca 60 h

Exercises ca 40 h (compulsory)

Study tours ca 20 h (compulsory)

Excursions ca 30 h (compulsory)

Examination

Requirements for examination

Written examination, report of exercises.

Approved written examination and exercises, and participation in compulsory parts of the course.

- 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 course is planned for 35 students. The course is part of a co-operation between SLU and Umeå university concerning education in bioenergy. According to the agreement with Umeå university, students from the programme of Energy engineers have precedence to the course.

- 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 Biomaterials and Technology

Supplementary Information

Finalized by: Programnämnden för skogsvetarprogrammet