Linnæus University

Jnr: 2015/1234-3.1.2

Course syllabus

Faculty of Technology

Department of Built Environment and Energy Technology

4BT304 Kemisk och termokemisk konvertering av biomassa, 7,5 högskolepoäng

Chemical and Thermochemical Conversion of Biomass, 7.5 credits

Main field of study
Bioenergy Technology, Energy Technology

Subject Group
Chemical Engineering

Level of classification
Second Level

Progression
A1F

Date of Ratification
Approved by Faculty of Technology 2015-04-14
The course syllabus is valid from spring semester 2016

Prerequisites
Basic eligibility for advanced-level studies and special eligibility: Bachelor's degree in engineering or science faculty, or Bachelor of Science degree. At least 15 credits in chemistry / chemical engineering and 2,5 credits in the course 4BT303 Introduction to Conversion in Process in Biofuel Production or equivalent.
English B/ English 6

Objectives

After this course, the students should:• Valuate production paths for different biofuels,• Critical accounting with choice of biomass for a particular biofuel.• Identify and explain the chemical/physical properties of different biofuels• Be able to explain how the biorefinery concept could be applied to different biomasses.

Content

The course contains the following components:
• Biooils origins, reactions, properties• Gasification - Pyrolysis• Producer gas Purification• Synthesis gas Upgrading• Synthetic fuels• Biorefinery

Type of Instruction

This course is given by lectures, seminars and project works.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Written exam, rapports and oral presentations.

Course Evaluation

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Other

Some elements of the course may entail costs defrayed by the student.

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Required literature

Scientific articles by the department. The literature will consist of approximately 200-300 pages.