



Programme Syllabus:

Ecotechnology, 180 credits

General data

Code	NEKOG
Cycle	First cycle
Ref no	MIUN 2006/1395
Credits	180
Answerable department	Department of Ecotechnology and Sustainable Building Engineering
Answerable faculty	Faculty of Science, Technology and Media
Established	2017-07-18
Date of change	2018-10-19
Version valid from	2018-09-01

Aim

The purpose with the Bachelor's Programme in Ecotechnology is that the student shall develop relevant knowledge about sustainable development of society. Of central importance is that the education should provide knowledge about the use of natural resources in a systems perspective and give good insight into global, regional and local environmental problems and their solutions.

Programme objectives

OUTCOMES ACCORDING TO THE HIGHER EDUCATION ORDINANCE

Knowledge and understanding

For a Degree of Bachelor the student shall

- demonstrate knowledge and understanding in the main field of study, including knowledge of the disciplinary foundation of the field, understanding of applicable

methodologies in the field, specialised study in some aspect of the field as well as awareness of current research issues.

Competence and skills

For a Degree of Bachelor the student shall

- demonstrate the ability to search for, gather, evaluate and critically interpret the relevant information for a formulated problem and also discuss phenomena, issues and situations critically
- demonstrate the ability to identify, formulate and solve problems autonomously and to complete tasks within predetermined time frames
- demonstrate the ability to present and discuss information, problems and solutions in speech and writing and in dialogue with different audiences, and
- demonstrate the skills required to work autonomously in the main field of study.

Judgement and approach

For a Degree of Bachelor the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues
- demonstrate insight into the role of knowledge in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the need for further knowledge and ongoing learning.

SPECIFIC OUTCOMES FOR ECOTECHNOLOGY

Knowledge and understanding

The student shall after completed education have

- very good knowledge in environmental science, good knowledge in environmental technology and basic knowledge in one or more other subjects,
- good knowledge of the natural, social and technological opportunities and constraints for sustainable use of natural resources both from a national and an international perspective,
- understanding that environmental problems can be complex, with great variation in space and time, and that knowledge from many disciplines and an interdisciplinary systems approach is needed to understand such problems,
- understanding of how natural resources can be used in a balanced way from a sustainability perspective,
- understanding of how different technological and social systems, innovations and new technologies can contribute to sustainable development, and
- good insight into global, regional and local environmental and natural resource issues in a broad sustainability perspective.

Competence and skills

The student shall after completed education have developed the ability:

- to identify, formulate, analyze and solve given environmental problems, and
- to work interdisciplinary by gathering, implementing, analyzing and evaluating knowledge in interdisciplinary projects / themes.

Judgement and approach

The student shall after completed education be able to:

- make assessments of different activities from a sustainability perspective, from the perspective of natural science and technology, as well as social science,
- assess the opportunities and constraints for a change of society towards sustainable development and how such changes can be implemented, and
- assess, review, criticize and decide on issues / matters relating to environmental and natural resource questions from a sustainability perspective based on scientific, social and ethical aspects.

Content

Environmental Science BA (A), Sustainable Development - an Introduction, 7.5 credits

Environmental Science BA (A), Environment and Natural Resources, 15 credits

Environmental Science BA (A), Energy and Sustainable Land Use, 7.5 credits

Environmental Science BA (B), Project Course with Scientific Writing, 7.5 credits

Environmental Science BA (B), Environmental Law, 7.5 credits

Environmental Science BA (B), Ecosystem Services, 15 credits

Environmental Science BA (C), Sustainable Development – Theory and Practice, 15 credits

Environmental Science BA (C), Individual Assignment, 15 credits

Environmental Engineering BA (A), Environmental Engineering 1, 7.5 credits

Environmental Engineering BA (A), Environmental Engineering 2, 7.5 credits

Environmental Engineering BA (B), Environmentally Driven Innovation, 15 credits

Environmental Engineering BA (B), Life Cycle Assessment (LCA), 7.5 credits

Environmental Engineering BA (B), Ecological Engineering, 7.5 credits

Other programme courses:

Business Administration BA (A), Industrial Economy, 7.5 credits

Mathematics BA (A), Applied Mathematics and Statistics, 7.5 credits

Optional courses, 30 credits

Entry requirements

GENERAL ENTRY REQUIREMENTS

Graduation from a complete upper secondary education in Sweden or abroad with exemption from basic proficiency in Swedish. English course 6/English course B from Swedish Upper Secondary School (Gymnasium) or the equivalent.

SPECIFIC ENTRY REQUIREMENTS

The following course levels from Swedish Upper Secondary School (Gymnasium) or equivalent: Chemistry course A, Mathematics course C, or Chemistry course 1, Mathematics course 3b/3c.

Description of programme

The Ecotechnology Programme is a three-year education leading to a Bachelor's degree in Environmental Science. The programme provides relevant knowledge about the use of natural resources in an international sustainability perspective. The programme integrates environmental issues with entrepreneurship and other skills to provide relevant knowledge for working in the world's fastest growing sector – Ecotechnology and green business.

Selection rules and procedures

The selection process is in accordance with the Higher Education Ordinance and the local order of admission.

Programme with restricted admissions

Specific prerequisites for the courses within the programme are specified in the syllabus.

Teaching and examination

The education is based on full time studies including field studies, laboratory practice, project work, excursions and study visits, seminars and lectures. Part of the education is carried out in thematic projects. The student is trained to systematically solve problems of increasing complexity. Examination is carried out orally or by written exams. The educational languages are English and Swedish. There is always an option in English for non Swedish speaking students. The examination procedures are stated in the syllabus of each course.

Title of qualification

Degree of Bachelor of Arts/Science

Filosofie kandidatexamen med huvudområdet miljövetenskap translated into
Degree of Bachelor of Science with a major in Environmental Science.

Other information

During the programme course names, contents, credit units and schedules may change.