Faculty of Technology and Science

PROGRAMME STUDY PLAN

Programme Code  TGHBY

Programme Approval  The Programme Study Plan was approved by the Faculty Board of Technology and Science on 10 May 2007 and is valid from the autumn semester of 2007 at Karlstad University.

Programme Title  Study Programme in Building and Construction Engineering

Credits  180 ECTS

Language of Instruction  Swedish

Degree Level  Bachelor

Degree Type  Professional degree

General  General admission requirements plus upper secondary school level Mathematics D, Physics B (i.e. Standard Eligibility 8), or General admission requirements plus upper secondary school level Mathematics 3c, Physics 2 and Chemistry 1 (i.e. Standard Eligibility A8), or equivalent.

General Information  The construction industry offers many opportunities for the construction engineer to perform diverse tasks and play many roles. This programme aims at preparing future construction engineers for a broad construction industry area, with a focus on building and the areas environment, production management and design.
Aims
Upon completion of the programme students should, beyond the general requirements for a Bachelor's degree specified in the Higher Education Ordinance, SFS 2006:1053, be able to:
• choose appropriate construction solutions, and design and dimension a building with regard to solidity, structural engineering and building physics, based on the present conditions, current norms and considering economical and environmental aspects,
• plan, organise, calculate and manage a construction project towards its objectives on the basis of given conditions and with regard to current regulations, quality and the environment,
• apply a systems perspective throughout the construction process in order to achieve quality and sustainable development,
• contribute to quality assurance and sustainable development in the construction industry by adopting a holistic perspective.

Programme Structure
In the first year students study basic and introductory courses. In the second year there are building technology courses which are further developed and continue in year three.

Instruction is in the form of lectures, exercises, laboratories, individual and group projects, study visits, etc. Some course components such as laboratory work and study visits are mandatory. Group projects require students to be present beyond scheduled hours. In many courses students are examined continuously. A degree project concludes the study programme.

One of the grades Fail (U), Three (3), Four (4), or Five (5) is awarded in the examination of most courses in engineering programmes. Exceptions are specified in course syllabi.

Karlstad University has exchange agreements with universities abroad. Students who plan to study part of the degree programme abroad should secure the approval of the Director of Studies in advance.

Programme Curriculum
The programme comprises the following courses:
- mathematics, 15 ECTS cr.
- environmental and energy engineering, 15 ECTS cr.
- economy, 7.5 ECTS cr.
- degree project, 22.5 ECTS cr.
- mandatory courses in the major field of study building technology, 60 ECTS cr.:
  o basic building technology, 7.5 ECTS cr.
  o structural and solid mechanics, 15 ECTS cr.
  o building and urban planning, 7.5 ECTS cr.
  o construction design, 7.5 ECTS cr.
  o construction management, 7.5 ECTS cr.
environmental aspects of building technology, 15 ECTS cr.
- electives in the major field of study, 45 ECTS cr.
- electives, 15 ECTS cr.

**Degree Title**
Degree of Bachelor of Science in Engineering

**Credit Transfer**
According to the *Higher Education Ordinance* (Ch 6, § 12-14), students may transfer credits from previously completed university courses subject to approval. Transfer of credits for a course module, or university studies generally, is subject to the approval by the course examiner. Transfer of credits for a full course is subject to the approval by the Rector.

**Additional Information**
Students who enrolled in the programme before 1 July 2007 will complete their studies in accordance with the requirements of the earlier curriculum. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

In order to move up to the next level, students on the programme must have completed 75% of the credits in the previous year subsequent to the re-sit period at the start of the next year.

Students are not allowed to start working on their Degree projects until they have completed 80% of the previous programme credits.

The local regulations for undergraduate studies at Karlstad University stipulate the obligations and rights of students and staff.