Programme syllabus

Degree Progr. in Construction Management
Högskoleutbildning i byggproduktion

120.0 credits

Valid for students admitted to the education from autumn 09 (HT - Autumn term; VT - Spring term).

This is a translation of the Swedish, legally binding, programme syllabus.

Programme objectives

The degree programme for a university diploma in Construction management educates the student within, among other things, production stages. The programme has a theoretical-practical profile, and after graduation, the student should be able to work in production areas, including project management, estimation, and planning.

After the programme, the student should:

- show fundamental knowledge and skills within construction physics, construction engineering, construction statics and solid mechanics; fundamental technical knowledge about the construction process
- have professional, usable knowledge within construction managements, construction production, and project management.
- have acquired professional skills which are integrated into the programme, for example, the ability to work and lead a group and to communicate, both written and oral
- have practical experience from companies with workplaces within the construction and building industry
- specialise and deepen within the building construction area or the building/infrastructure area

Knowledge and understanding

Skills and abilities

Ability to make judgements and adopt a standpoint

Extent and content of the programme

The regular study time is 2 years, which comprises 120 higher education credits and the courses are given on the first level. The language of instruction in the programme is Swedish.

Eligibility and selection

For eligibility to the programme, basic eligibility is required, and also the special eligibility requirement in Mathematics C where the lowest accepted grade is passed or 3. Selection based on grades is use in one-third of the places in the programme. A fifth of the places are divided on the basis of the higher education institution’s selection criteria. In addition, a selection on the basis of work experience (at least 2 years) within the building and construction sector is done. The remaining places are divided on the basis of national university aptitude tests.
Implementation of the education

Structure of the education

Most of the courses in the programme comprise 7.5 higher education credits, which are graded on a scale of A-E, F and Fx. The study year is normally divided into 4 study periods and, normally, two courses are taken in parallel every study period. The lectures, as well as the examination form vary from course to course. Normally, a portion of the course is constituted of lectures, which give first contact with concepts and theories. The programme includes theoretical elements within construction physics, construction engineering, construction and construction management and lecturing in the form of lectures, exercises, seminars and project work. A large portion of the project is carried out with companies out at work places with the construction and building sectors. During the first and the fourth term, all of the lectures take place at the school, while the theoretical studies are layered with company projects during term two and three. Although, the concluding degree project is carried out during term four in collaboration with industry. At the end of study year 2, a choice of specialisation is made; either building construction or construction/infrastructure can be chosen. Study year 1

An introduction course in “Technical work, methods, and work tools” provides the student an overview over the construction technical area, an insight into what it means to work as a leader in production and knowledge about the leaders’ work methods. The first term includes, in addition, fundamental courses within construction physics, materials, and the construction process. During the second term, theoretical elements are mixed with company projects, and the course Construction management is a course which is partly carried out at a company. It provides knowledge about management methods for construction production, estimation work for smaller construction projects, purchase rules and contract-judicial regulations. Blueprint interpretation and knowledge about a building’s different components and functions is given in the course “Building construction”. In this course, the student learns to work in the drawing programme “CAD”. The course in building construction also includes company projects. The course Field Measurement provides methods from surveying and planning, and also knowledge about how one uses the most common geodetic measurement instruments which are used at the workplace. The knowledge may also be applied out at a company. The term’s final course Statics and solid mechanics provides knowledge in order to understand the connection between external forces and inner magnitudes (momentum and rotational force) and how different materials are affected.

Study year 2

Theoretical and company course elements are also combined during term 3. In the second course in Construction management, the student learns more about work management, quality and risk assessment, but also about environmental and work science and legislation about this. In the course, Economy and Quality, the student gains understanding for the economy, organisation and surroundings in a business. The course Construction production handles, among other things, installations and energy questions, but also new production methods, logistics and industrial construction. The term is concluded with a course in leadership and it prepares the student for the coming profession as production leader. The course includes, beyond work leadership and conflict resolution, even discussions in subjects such as ethics and value questions. During the concluding term, the student takes a course in concrete construction and a course in building engineering. Thereafter, the possibility to choose a specialisation in building construction or infrastructure is given. The programme is concluded with a degree project within the chosen specialisation.

Courses

The programme is course-based. Lists of courses are included in appendix 1.

Grading system

Courses in the first and the second cycle are graded on a scale from A to F. A-E are passing grades, A is the highest grade. The grades pass (P) and fail (F) are used for courses under certain circumstances.
Conditions for participation in the programme
For studies in study year 2, at least 37.5 higher education credits must be completed from study year 1 before the exam period in August. For students which have not fulfilled this requirement, an individual study plan must be created with the study guidance.

Temporary postponement
Temporary postponement means that the student does not participate in lectures during at least one term. Granted temporary postponement gives the student the right to return to the studies at a predetermined point in time. During the temporary postponement, the student may complement incomplete courses, or participate in examinations from earlier started courses. The application for temporary postponement is submitted to the study guidance, which approves or rejects the application. When the student decides to return to the studies, a new application must be submitted according to the above.

Recognition of previous academic studies
The student has the right to receive credit for education from another higher education institution/university within Sweden or abroad. The condition is that the course(s) are of such a nature and have such content that they correspond to the learning outcome goals which apply for the programme. Recognition of an entire course is approved by the GA. Elements of a course can be approved by the examiner.

Studies abroad
There is no possibility to study abroad within this programme.

Degree project
In the programme, a degree project of 7.5 higher education credits is included. This corresponds to around 5 weeks of full-time studies. For the degree project, the following apply:

- It may be started after the assignment has been approved by the programme leader.
- It is based on the knowledge which has been acquired during the time of study and must normally be carried out during the 4th term.
- It must show proof of an independent work comprising theoretical and/or experimental work, with a relevant written report and oral presentation
- The instructor is appointed by the specialisation leader.

Degree
In order to complete the degree programme for a University Diploma in Construction Management successfully, passing grades in all courses which are in the student’s study plan must be achieved. The study plan consists of the obligatory courses, the optional courses the student has chosen and the degree project work. The study plan must comprise at least 120 higher education credits. In order to receive the degree, the student must apply for it on a special form and attach the receipt for the paid student union fee.

Appendix 1 - Course list
Appendix 2 - Programme syllabus descriptions
Appendix 1: Course list

Degree Progr. in Construction Management (TBYPH), Programme syllabus for studies starting in autumn 2009

General courses

Year 1

Mandatory courses (60.0 credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF1700</td>
<td>Mathematics</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1721</td>
<td>Building Technology</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1722</td>
<td>Statics and Strength of Materials</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1723</td>
<td>Technical Work, Methods and Tools</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1726</td>
<td>Construction Management</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1728</td>
<td>Business Economics and Quality Systems</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1730</td>
<td>Building Physics</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1731</td>
<td>The Building Process</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
</tbody>
</table>

Year 2

Mandatory courses (60.0 credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS1724</td>
<td>Civil Engineering</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1725</td>
<td>Building Production and Leadership</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1727</td>
<td>Construction Management 2</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1732</td>
<td>Surveying</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1733</td>
<td>Concrete Structures</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1734</td>
<td>Structural Design</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1735</td>
<td>Project Building and Installations</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
<tr>
<td>HS1736</td>
<td>Civil Engineering - Final Project</td>
<td>7.5</td>
<td>First cycle</td>
</tr>
</tbody>
</table>
Appendix 2: Specialisations

Degree Progr. in Construction Management (TBYPH), Programme syllabus for studies starting in autumn 2009

This programme has no specialisations.