



## HÖGSKOLAN I GÄVLE

### Degree project for a Bachelor of Science in Engineering (Land management/surveying) 15 cr

*Examensarbete för högskoleingenjörsexamen i lantmäteriteknik 15 hp*

Set by Faculty of Engineering and Sustainable Development

**Version**

**Set at**

**Valid from**

7/3/13

VT2013

<b>Level</b>	GXX
<b>Education level</b>	First cycle
<b>Course identifier</b>	SBG800
<b>Credits</b>	15 cr
<b>Main field of study</b>	Surveying Technology
<b>Subject group</b>	Civil and Environmental Engineering
<b>Disciplinary domain</b>	Technology 100.0 %

**Learning outcomes**

The course is designed to give the student deepened knowledge in the subject land management/surveying and is one of the requirements for obtaining a bachelor's of science in engineering degree in subject land management/surveying. On completion of the course, the student has shown ability to:

1. independently plan, execute and present a degree project in the field of subject land management/surveying
2. demonstrate proficiency in oral and written communication
3. write a thesis in accordance with established scientific rules (i.e., following IMRaD style, etc.)
4. show good competence in information literacy; this includes both understanding relevant technical literature in subject land management/surveying as well as using it properly in the thesis
5. produce a poster (similar to conference posters) containing the main findings of the degree project.

**Course content**

Independent work, corresponding to 10 weeks of full-time work, where earlier knowledge acquired in previous courses is applied

Project proposal  
Literature study  
Studies and/or field work related to the specific project  
Report writing  
Poster production  
Defense of thesis  
Opposition of other student's thesis

**Teaching**

Project supervision, seminars.  
The supervisor(s) is appointed in consultation with the Head of the Geomatics division. The supervisor must be involved during the writing of the project proposal, in order to make arrangement, content and limitations of the project and thesis in agreement with the requirements of extent and academic depth of the thesis, as well as during planning of the work. The supervisor helps the student to get familiar with scientific thinking and method. A time schedule is made and the supervisor should be engaged in the work enough to certify that the work is progressing according to the intended time schedule. More than one supervisor may be appointed depending on the content of the project. If the project is carried through in the business world or similar, the practical part of the supervision may be carried out there. The scientific supervision is normally received from the university.

**Prerequisites**

Approved courses of minimum 120 credits, whereof 75 credits in spatial planning  
Approved courses that are of high importance for the execution of the degree project, i.e. "Scientific theory and writing" and one additional C-level course of relevance given in the "Programme in Land Management/Surveying".

**Examination**

Project proposal  
Halfway seminar  
Thesis report  
Oral presentation  
Opposition  
Poster

To pass the course, all above given examination parts must have been passed.  
An examiner is appointed by the Head of the Geomatics division. The examiner is responsible to examine that the thesis is fulfilling the requirements set by the university. Before the degree project work starts, the examiner is responsible for judging the content and scientific depth of the proposed project. For this, the application form "Examensarbete för ingenjörutbildning (B-nivå), 15 hp" is used. Finally, the examiner is completing the examination and decides if the thesis, the presentation of the thesis, and the defense of the thesis is up to standards of the university. If so, the thesis is approved and graded by the examiner.

**Grade**

A, B, C, D, E, Fx, F

**Limitations**

For degree project work performed in industry or equivalent, rights to e.g. patents and ownership have to be stated in a written agreement before starting the work. After examination and approval of the examiner, the thesis is official and treated as a public document. The degree of publicity may be limited partly or totally by means of an agreement of confidentiality. Such an agreement of confidentiality is made with the University of Gävle, normally at the time when the project is formulated. However, a minimum requirement is that the official part of the thesis consists of an abstract written in both Swedish and English.

**Other regulations**

The report is written in Either Swedish or English with abstracts in both Swedish and English. If the work is confidential, the thesis has to be presented in two versions. One complete version is presented to the examiner and supervisors, and another version to the public where confidential parts are omitted.  
The thesis is defended publicly in a seminar. At the same occasion, an A2 poster over the research project must be provided. The student must also act as an opponent of another thesis and be present at presentations of at least another two theses before graduating. These activities are noted in a personal examination record (the Green Book) by the examiner in duty.

**Sustainable environment**

Content with sustainable development is not relevant to this course.

**Module**

0010	Project proposal	1 cr	Grade: UG
0020	Halfway seminar	3 cr	Grade: UG
0030	Thesis report	8 cr	Grade: UG
0040	Oral presentation	1 cr	Grade: UG
0050	Opposition	1 cr	Grade: UG
0060	Poster	1 cr	Grade: UG