



Faculty of Health, Science and Technology
Geo-Science

Syllabus

Applied geodesy

Course Code:	NGGB64
Course Title:	Applied geodesy <i>Tillämpad geodesi</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

Major Field of Study:
MAT (Surveying and Mapping)
NGA (Physical Geography)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2016-03-03, and is valid from the Autumn semester 2016 at Karlstad University.

Prerequisites

The course Geodesy (NGGA24), 7.5 ECTS cr or Introduction to Engineering Surveying (NGGA26), 15 ECTS cr, or equivalent.

Learning Outcomes

Upon completion of the course, students should be able to:

- independently perform coordinate estimation using data manually and in geodesy software programme,
- give an account of quality aspects of measuring and assure the quality of measurement,
- use an estimation programme in connection with a minor measuring task,
- plan and carry out a measuring task,
- estimate the cost of a surveying assignment,
- give an account of the rules applying to detail measuring according to the manual HMK,
- apply the set of regulations pertaining to MBK (measuring, estimation and cartography) in the case of new construction sites,
- control, calibrate and adjust geodetic measure-equipment.

Content

Instruction is in the form of lectures, mandatory field measuring exercises and data analysis.

Areas included are:

- managing instruments (setting-up, batch measuring)
- different measuring methods, plane and height
- positioning buildings

- traffick line marking
- cartography measurement
- planning, marking and measuring base-lines
- coordinate estimation
- processing measurement data
- measurement rules
- theory of error,
- classification of measuring errors
- error propagation, estimated according to the least square method
- quality assurance

Reading List

See separate document.

Examination

Assessment is based on a written exam, and on individual and group hand-in assignments.

Grades

One of the grades 5 (Distinction), 4 (Some Distinction), 3 Pass , or Fail (U) is awarded in the examination of the course .

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The course NGGB64 cannot be included in the same degree programme as the course NGGA28.

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

Required course for the surveying and mapping engineering programme.