

GEO1201 Land Surveying 2 - Study plans 2016-2017

Course code:

GEO1201

Course name:

Land Surveying 2

Course level:

Bachelor (syklus 1)

ECTS Credits:

10

Duration:

Autumn

Duration (additional text):

For campus students: October - December

For net based students: August - December

Language of instruction:

Norwegian

Prerequisite(s):

GEO1191 Land Surveying 1

Expected learning outcomes:

Knowledge in:

- Basic measuring methods
- Use of measurement instruments
- Manual computation of coordinates and heights, accuracy computation.
- Documentation and standards.

Skills:

- Ability to work with measuring instruments
- Ability to use software to process survey data

General competence:

- Basic use of measuring instruments and software, ability to process data both manually and in software, do documentation and write reports.

Topic(s):**Instruments:**

- Focus is on physical instrumental mechanisms, and quality controls/calibrations:
- Instrument checking, calibration and documentation

Measurement techniques:

- Surveying with total stations
- Polar setting out
- Resection
- Setting out for roads
- Setting out for tunnels

Computations:

- Transformations
- Simple manual computation of coordinates and heights
- Survey computation programs' introduction and elementary use:
 - GIS-LINE
 - GEMINI
- Road alignment computations
- Documentation
- Computing standards, Geodatastandarden

Accuracy:

- Theories and practices necessary to be able to follow the topics introduced under Instruments, Techniques and Computations
 - Combining the estimated errors of independent observations
 - Weighting
 - Correlation

Additional topics:

- Interpretation of technical drawings
- Movement of digital data between PCs and electronic field controllers
- Reports writing

Teaching Methods:

Lectures

Group works

E-learning

Exercises

Project work

Tutoring

Teaching Methods (additional text):

Campus students: Lectures, Group works, Exercises, Project work, Tutoring.

Net based students: Net based learning, Group works, Exercises, Project work, Tutoring.

Form(s) of Assessment:

Digital exam

Grading Scale:

Alphabetical Scale, A(best) – F (fail)

External/internal examiner:

Project reports are evaluated by nominated lectures.

External moderators regularly assist in reviewing content and evaluating arrangements for grading assessment.

Re-sit examination:

Together with the next class, one year later.

Tillatte hjelpemidler:**Coursework Requirements:**

The course work requirements must be conducted on campus NTNU in Gjøvik. Time of completion given at semester start.

5 to 6 mandatory tasks that must be approved before the exam.

Academic responsibility:

Faculty of Technology, Economy and Management

Course responsibility:

Stein Ivar Øvergaard

Teaching Materials:

- Skogseth, T. (1998). Grunnleggende landmåling. Oslo: Universitetsforlaget (ISBN: 82-00-42453-7).
- Statens kartverk. (2001) Geodatastandarden.
- Statens kartverk. (2001) Geodatastandarden, grunnlagsnett.
- Statens Kartverk. (2005). Satellittbasert posisjonsbestemmelse.
- Vegdirektoratet. (2007). Vegdirektoratets håndbøker, 017 Geometrisk utforming.
- Vegdirektoratet. (2005). Vegdirektoratets håndbøker, 018 Vegbygging.
- Instrument and program manuals (regularly updated on WWW or built in to system hel files).

Additional information:

The courses "GEO1191 Basic Land Surveying 1" and "GEO1201 Basic Land Surveying 2" covers 100% of "GEO1181 Basic Land Surveying" course.

The course "GEO1201 Basic Land Surveying 2" is not approved as "GEO1181 Basic Land Surveying".

Publish:

Yes