GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Modelling, Making and Measuring (E098513)

Course size *(nominal values; actual values may depend on programme)*

Credits 4.0 **Study time 120 h**

Course offerings and teaching methods in academic year 2026-2027

A (semester 1)	Dutch	Gent	lecture

Lecturers in academic year 2026-2027

Beunis, Filip	TW06	lecturer-in-charge

Offered in the following programmes in 2026-2027	**crdts**	**offering**
Bachelor of Science in Engineering(main subject Biomedical Engineering)	4	A
Bachelor of Science in Engineering(main subject Chemical Engineering and Materials Science)	4	A
Bachelor of Science in Engineering(main subject Civil Engineering)	4	A
Bachelor of Science in Engineering(main subject Computer Science Engineering)	4	A
Bachelor of Science in Engineering(main subject Electrical Engineering)	4	A
Bachelor of Science in Engineering(main subject Electromechanical Engineering)	4	A
Bachelor of Science in Engineering(main subject Engineering Physics)	4	A
Bachelor of Science in Engineering (Joint Section)	4	A

Teaching languages

Dutch

Keywords

Project work, written and oral presentations

Position of the course

- Learn to work on project basis, in collaboration with fellow students.
- Learn to write reports and to make oral presentations about the project work.

Contents

Lectures for all students

- Introduction: aim of the project course, choice of project subjects, practical organization.
- Feedback about written and oral communication.

Online course material

- Literature sources
- The use of quantities, measurements, modeling, error analysis, data storage, making diagrams, data analysis.
- Written reports: aim of the report, structure of the report (intro, results, discussion, conclusions). language and style, use of figures and tables, referencing.
- Oral presentations: aim of an oral presentation, use of Power Point for making slides, structure, language and style of the presentations, use of figures, diagrams and schemes.
- Safety aspects.

Project work

Students are distributed over the available projects, with about 20 students per project. The projects are organized by a responsible university staff member and a number of supervisors. The project has a design component in addition to construction, modeling or measurements. There are weekly task descriptions for

literature study,
measurements, designs or simulations. Storing the data, making diagrams and simulations are carried out by computer.

- The students are divided in groups of 4 (or 3) and collaborate on the tasks related to the project. They meet weekly with the supervisors during a contact session (1 hour) in a meeting room of the department.
- There is a room in the faculty buildings and a timeslot where the students can work on the tasks in the project under supervision. Alternatively tasks may be carried out at home or in the PC-class rooms.
- Each student is responsible for one intermediate oral presentation and collaborates with the other group members on the final presentation. Each student is responsible for one intermediate report and collaborates with the other group members on the final report. The supervisors give feedback after the intermediate presentations and reports.
- Final report and final presentation in the additional week

Initial competences

Secondary school education

Final competences

1 Concepts: working collaboration in a group, scientific techniques, use of scientific language.
2 Use of software tools to make simulations and diagrams
3 Writing reports
4 Oral presentation

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Group work, Excursion, Lecture

Extra information on the teaching methods

- lectures: introduction, feedback
- online material: scientific methods and communication, written reports and oral presentation techniques
- project work
- company visit (participation required)

Study material

None

References

Course content-related study coaching

Weekly supervision of the projects: 1 hour per week with presentations, discussions, question sessions; 2 hours per week with project work (opportunity to ask advice from
the supervisors). Additional support on request

Assessment moments

continuous assessment

Examination methods in case of periodic assessment during the first examination period

Examination methods in case of periodic assessment during the second examination period

Examination methods in case of permanent assessment

Oral assessment, Participation, Written assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Extra information on the examination methods

During semester: graded project reports; graded oral presentations, graded

project work, attendance on project sessions.

Calculation of the examination mark

Evaluation of the scientific work during the project work. One intermediate report per student, one intermediate presentation per student, one final report per group, one final
presentation per group. Attendance of the project work sessions is required.