

## Engineering Project (E701052)

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

**Credits 5.0**

**Study time 150 h**

**Course offerings and teaching methods in academic year 2023-2024**

A (Year)

Dutch

Gent

lecture

**Lecturers in academic year 2023-2024**

Gekiere, Kathleen

TW14

lecturer-in-charge

Pollefliet, Leen

TW05

co-lecturer

**Offered in the following programmes in 2023-2024**

**crdts**

**offering**

Bachelor of Science in Engineering Technology(main subject Chemical Engineering Technology)

5

A

Bachelor of Science in Engineering Technology(main subject Civil Engineering Technology)

5

A

Bachelor of Science in Engineering Technology(main subject Electromechanical Engineering Technology)

5

A

Bachelor of Science in Engineering Technology(main subject Electronics and ICT Engineering Technology)

5

A

Bachelor of Science in Engineering Technology(main subject Information Engineering Technology)

5

A

Bachelor of Science in Engineering Technology (Joint Section)

5

A

**Teaching languages**

Dutch

**Keywords**

CDIO, teamwork, written report, oral presentation

**Position of the course**

In this course you learn how to setup and execute a project in a team consisting of several students. You will report the outcome of the project both in a written report and by means of an oral presentation . Each student will participate in 2 projects.

**Contents**

**Project work:**

The projects are performed in a team (typically 5 students) by using the CDIO model. The students will learn how to brainstorm and realize technical solutions within the context of the project. Apart from acquiring technical knowledge students will also train their skills to demonstrate and to communicate to other people.

In the second semester, also a company visit is included

**Lectures on communication skills and knowledge clips:**

- Communication session 1: Writing a report. First the students are introduced to communication principles. Next they learn how to create business emails, create a technical report (structure, referencing, correct grammar).
- Communication session 2: Preparing a presentation: in this session you will learn how to set up a good presentation based on your technical realization during the project work. The presentation is a team effort and focus is on the structure, generating strong powerpoint slides, correct use of language and body language

**Lecture on sustainability and environmental awareness (2h)**

**Initial competences**

Final competences secondary education

**Final competences**

- 1 You can successfully run a project in a team, taking care of deadlines, durability and environmental issues and specific limitations (depending on the project).
- 2 You know how to gather scientific and technical information and how to use it.
- 3 You use software packages for technical drawings, graphs and calculations.
- 4 You know how to write a technical report.
- 5 You can give a good technical 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**

Excursion, Lecture

#### **Extra information on the teaching methods**

- Lectures and teamwork
- Excursion

#### **Learning materials and price**

Teamwork

- PowerPoint presentations available on the electronic learning platform.
- Extra information on the projects available on the electronic learning platform.

Communication partim (learning path from the first bachelor up to the first master's year)

- Syllabus: 'Communicatie in drie modules' (250 pages, available on via the electronic learning platform), to be used from the first bachelor's year up to the first master's year (and afterwards).
- Handbook: 'Scoren met je scriptie - Het standaardwerk voor verslagen, rapporten en projecten, off- en online' (355 pages + QR codes to instructional videos and interactive language and writing exercises) - Owl Press (<https://borgerhoff-lamberigts.be/boeken/scoren-met-je-scriptie>, ISBN 9789463937276), student price 30 euros: compulsory handbook for the communication partim on writing (reports, bachelor's thesis, master's dissertations), to be used from the first bachelor up to the first master's year (and afterwards).
- PowerPoint presentations/hand-outs/knowledge clips on writing and presenting available on the electronic learning platform.

#### **References**

- Projects: learning materials on <http://www.cdio.org>
- Communication partim (learning path from the first bachelor up to the first master's year): 'Bij wijze van spreken – Het standaardwerk voor mondelinge communicatie' (550 pagina's) - Owl Press (<https://borgerhoff-lamberigts.be/owlpress>, ISBN 9789463934381, student price: 39,90 euros).

#### **Course content-related study coaching**

The project teams typically consist of 5 students. Each team has a technical mentor who is guiding the team.

#### **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**

Professional practice, Peer and/or self assessment, Assignment

#### **Possibilities of retake in case of permanent assessment**

examination during the second examination period is not possible

#### **Extra information on the examination methods**

##### **Project semester 1:**

- Intermediate written report evaluated on grammar
- Final report evaluated on technical content, structure, references, grammar.
- Peer assessment in the project team
- Product evaluation by the technical mentors

**Project semester 2:**

- Final report evaluated on technical content, structure, references, grammar. The final report also includes a reflection on the excursion.
- Group presentation: evaluation of content, structure, spoken language and body language
- Peer assessment of the presentations
- Peer assessment by the team members
- Evaluation of the final product by the technical mentors based on the predefined technical requirements

**Calculation of the examination mark****Project semester 1: 40 %**

- Written report (30 % of the score in semester 1)
- Product and process (70 % of the score in semester 1)
- Peer evaluation among the project team members. Results will be available in the electronic learning environment.
- Individual score = score of the group \* factor of the peerassessment and a factor of the coach concerning individual work and commission, to meet an appointment.

**Project semester 2: 60 %**

- Oral presentation (25 % of the score in semester 2)
- Final written report (25 % of the score in semester 2)
- Product and process (50 % of the score in semester 2)
- Peer evaluation among the project team members. Results will be available in the electronic learning environment.
- Individual score = score of the group \* factor of the peerassessment and a factor of the coach concerning individual work and commission, to meet an appointment.