

## Design Project (E033710)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size (nominal values; actual values may depend on programme)  
Credits 9.0 Study time 270 h Contact hrs 30.0 h

### Course offerings and teaching methods in academic year 2020-2021

A (year)	English	Gent	project	30.0 h
B (year)	Dutch		project	30.0 h

### Lecturers in academic year 2020-2021

De Backere, Femke	TW05	lecturer-in-charge
De Turck, Filip	TW05	co-lecturer
Gielen, Frank	TW05	co-lecturer
Stroobandt, Dirk	TW06	co-lecturer

### Offered in the following programmes in 2020-2021

	crdts	offering
<a href="#">Bridging Programme Master of Science in Computer Science Engineering</a>	9	B
<a href="#">Bridging Programme Master of Science in Computer Science Engineering</a>	9	A
<a href="#">Master of Science in Computer Science Engineering</a>	9	B
<a href="#">Master of Science in Computer Science Engineering</a>	9	A

### Teaching languages

Dutch, English

### Keywords

Software design and hardware design, technopreneurial, project-driven en customer-aware design

### Position of the course

This course focuses on the actual application of design principles in a team of students. These design principles are taught in the compulsory courses and in the optional courses. The main goal is to emulate a realistic company environment for the execution of the project. This course enables the students to propose design assignments, defend the proposals, and execute them with in heterogeneous teams (with different backgrounds and interests) in accordance to the chosen courses in their respective curricula. The project realization takes place by the whole team, with a dedicated task assignment, both technical tasks and project management tasks. Execution of the project is composed of: project management, analysis of the requirements, architecture design, detailed design and implementation, evaluation and validation, documentation and prototype design. The projects are also proposed to an (external) expert panel. Project groups vary in size between 6 and 10 students, dependent on the projects' requirements. The project management and the development of entrepreneurial skills, such as customer aware design, are an important part of the project.

### Contents

- Project management and project methodology (incl. dedicated tools).
- Analysis of the requirements.
- Architecture design (software and/or hardware).
- Detailed design and implementation.
- Prototype design and evaluation.
- Documentation.
- Product finalization and cost budget/risk-analysis of the final project results.

### Initial competences

Core courses from the Computer Science program

It is advisable that the student has finished the cross-course project from the third bachelor year and does not do that project at the same time as the design project.

#### Final competences

- 1 Be able to transfer theoretical knowledge from other course to practical applications.
- 2 Be able to realize a prototype given a stringent time frame and limited means which meets the predefined quality criteria.
- 3 Be able to efficiently prepare, organize and lead project reviews.
- 4 Be able to make a planning for a large development team and identify the dependencies.
- 5 Be able to implement the configuration management of complex projects.
- 6 Be able to identify the risks of a project and design a mitigation plan.
- 7 Be able to document a project in a professional way.
- 8 Be able to present project results during a final pitch.

#### 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

Project

#### Extra information on the teaching methods

Guided project work, Autonomous project work, review meetings

#### Learning materials and price

#### References

#### Course content-related study coaching

Interactive support via the electronic learning platform (forums, e-mail), personal (electronic appointments, dedicated and predefined feedback moments, coaching sessions and review sessions), organized workshops with participation from teaching assistants and teachers.

#### Evaluation methods

continuous assessment

#### Examination methods in case of periodic evaluation during the first examination period

#### Examination methods in case of periodic evaluation during the second examination period

#### Examination methods in case of permanent evaluation

Oral examination, participation, skills test, peer assessment, report

#### Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

#### Extra information on the examination methods

Assessment of the project reports, oral presentations. Frequency: weekly. To be allowed for the second exam period, a minimum participation in the project is strictly required.

#### Calculation of the examination mark

Permanent evaluation.