

Course Specifications

Valid as from the academic year 2020-2021

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 6.0 Study time 180 h Contact hrs 90.0 h

Course offerings and teaching methods in academic year 2020-2021

A (year)	Dutch, English	Kortrijk	group work	30.0 h
			seminar	30.0 h

Lecturers in academic year 2020-2021

Detand, Jan	TW18	lecturer-in-charge
Emmanouil, Marina	TW18	co-lecturer

Offered in the following programmes in 2020-2021

	crdts	offering
Bachelor of Science in Industrial Design Engineering Technology	6	A
Bachelor of Science in Public Administration and Management	6	A
Bachelor of Science in Business Administration	6	A
Bachelor of Science in Economics	6	A
Bachelor of Science in Business Economics	6	A
Master of Science in Biology	6	A
Exchange Programme in Political and Social Sciences	6	A
Ghent University Elective Courses	6	A
Ghent University Elective Courses	6	A
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Teaching languages

Dutch, English

Keywords

Co-creation; Transdisciplinary research through design; Design thinking; Entrepreneurship; Communication skills

Position of the course

An important goal of the university is to stimulate multi-perspectivism. Transdisciplinary research is an appropriate method to bring motivated stakeholders from different education programs and disciplines together. Transdisciplinary collaboration is such interrelated that the individual disciplines can not be distinguished. Problems are no longer solved by using elements of all disciplines but through collaboration and integration. Interaction and mix are essential parameters of transdisciplinarity. At UGent, there is a wide range of highly ranked expertise and knowledge in many disciplines, but often they are only recognized and applied within the specific domain or education program. The envisaged transdisciplinary project wants to break these barriers by merging expertise of different research domains. In order to maximize the

effect of transdisciplinarity, a yearly social theme will be selected to allow collaboration. An overview of theoretical principles of cocreation, design thinking and multidisciplinary will be offered and verified by a specific project that a student will choose out of a list of proposals, according to relevant interest and background. The project follows the basic methodology of design thinking that has user-centered design as a main focus:

- empathize
- define
- ideate
- prototype
- test

This process is performed iteratively.

In addition, a co-creation methodology is adopted in which all student-stakeholders out of different disciplines get an equal and significant role and interact with each other accordingly in order to integrate all results appropriately.

The foundry and design campus Kortrijk will be the designated venues for lectures and to develop and execute the project work.

Contents

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Theory, exercises and workshops

A multitude of lectures and workshops are organised around the following topics:

- 1 Models for co-creation
- 2 Design Thinking, creativity and prototyping
- 3 Entrepreneurship
- 4 Communication (internal, with stakeholders, presentation techniques)
- 5 Human aspects of co-creation
- 6 Economic aspects of cocreation
- 7 Technological aspects of co-creation
- 8 Deontology

Lectures are given by a team of experts and/or students from one domain. For each subject, an introductory lecture will be given followed by a debate from all involved disciplines.

Workshops focus on hands-on training, where students of a specific domain are the trainers for other students. Methods, tools and techniques are demonstrated using specific cases.

Group work - project

The end-user is the central focus when performing group work. Starting from the question posed by a specific client, the design thinking process is performed iteratively (empathize, define, ideate, prototype, test with the client and all involved stakeholders). Transdisciplinarity, integration, interaction and communication are central themes. Prototypes are used as a particular integration and communication tool. This method of materialization gives all stakeholders the skills and mental space to concretize ideas and come to new insights.

The project will be coached by a daily supervisor and a mentor. Various techniques and design thinking methods and tools will be available and practiced in order to achieve the predefined goal.

Attendance and active participation during these activities are mandatory.

Initial competences

Basic knowledge about methods, tools and techniques from student's own research discipline.

Be open to diverse aspects of multi-perspectivism (transdisciplinarity, entrepreneurship, deontology, communication, design thinking).

Final competences

- 1 Observe and control behavior in multiple context and achieve a level of repeatability by iteratively applying all steps of design thinking.
- 2 Empathize and conceive real requirements for one specific client.
- 3 Use complementary skills and resources of the team in an effective and creative manner.
- 4 Design a dialogue/interaction between all involved stakeholders.
- 5 Identify and use all relevant social, economic and technical aspects.

Conditions for credit contract

Access to this course unit via a credit contract is unrestricted: the student takes into consideration the conditions mentioned in 'Starting Competences'

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Group work, seminar

Extra information on the teaching methods

Lectures & Workshops:

A multitude of lectures and workshops are organised focusing on a theme as indicated above. Lectures will be given by a team of experts and/or students from a specific domain. For each theme an introduction will be presented followed by a debate form various specialisations and backgrounds. Workshops focus on hands-on training in which students train and tutor other students about specific methods and tools by means of real-world case-studies.

Attendance and active participation are mandatory for these activities.

Group work and project:

The project is coached by a daily supervisor and mentor. Tools and methods of design thinking are provided and practiced in order to obtain the envisaged goals.

Attendance and active participation are mandatory for these activities.

All intermediate results are communicated towards all team members, mentor and involved stakeholders using an online platform that enables to follow-up on the progress of the project. There is also a two-weekly meeting planned (in presence of the mentor). Each meeting results in a report with minutes, appointed tasks and deadlines. Each student must share the obtained results via the online platform and report on the progress on a regular basis.

The mentor/coach will follow a predefined roadmap to coach and advise in direct response with the responsible teacher. On a regular basis, the responsible teacher will monitor with the coach/mentor the progress and adjust the targets whenever necessary.

At the end of the project, all results are compiled in a final report and the results are presented to a professional jury.

Learning materials and price

Learning material will be offered through the electronic learning environment and will be available in the foundry and industrial design center Campus Kortrijk.

Keep into account travel expenses (Ghent/Kortrijk) and prototyping costs (estimated 50 EURO per student).

References

Jones, P., & Kijima, K. (2018). *Systemic Design* (Vol. 8). Translational Systems Sciences.

Plattner, H., Meinel, C., & Weinberg, U. (2009). *Design-thinking*. Landsberg am Lech: Mi-Fachverlag.

Cross, N. (2011). *Design thinking: Understanding how designers think and work*. Berg.

Sanders, E. B. N., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *Co-design*, 4(1), 5-18.

Christensen, B. T., Ball, L. J., & Halskov, K. (2017). *Analysing design thinking: Studies of cross-cultural co-creation*. CRC Press.

Course content-related study coaching

Evaluation methods

end-of-term evaluation and continuous assessment

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

Assignment, report

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

Assignment, report

Examination methods in case of permanent evaluation

Participation, job performance assessment, peer assessment, report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is not possible

Extra information on the examination methods

Permanent evaluation

Active participation: a student may not limit him/herself to be present in the lectures, workshops and project sessions, but should actively participate in dialogues, and performs a significant part of the project work. The latter is checked by a pre-station table that is included in the final report (work piece).

Performance assessment: This aspect will be evaluated by observing the student's behaviour such as entrepreneurial spirit, critical reflection, positive communication and

the will to collaborate towards a common goal. Additionally, the student will be assessed whether he/she is able to operate in a transdisciplinary team and is able to perform other tasks than only tasks within his/her own discipline. Finally, the student must be able to integrate different disciplines.

Intermediate report and final report: all project results are collected on an online documentation platform, that gives an overview of all project steps that were performed. Each student has to do a significant part of the reporting process.

Peer evaluation: your team mates will make a peer evaluation that evaluates on individual effort, communication skills and the will to contribute to the common goals from the own perspective, knowledge and expertise.

Periodic evaluation

PE_A1: final presentation, report, work piece (prototype)

The work piece comprises a final documentation which the most significant aspects of the realized project is described. In addition, there is a working prototype that was tested with the involved end-user and assessed from a number of related disciplines that have to be defined in advance. Finally, the project team will present the obtained results to an external jury.

PE_B1: Evaluation of lectures and workshops

Each student makes an essay (report) that gives a critical reflection on the themes that were addressed during lectures and workshops. The validity of the essay will be judged by several staff members from within the research discipline of the student.

Division Dutch / English:

- Seminars: in English
- Group work / Project: coaching in English or Dutch according to the preference of the students
- Essay in English
- Final presentation, paper and reports in English

Calculation of the examination mark

- NPGE: 40%
- PGE_A1: 30%
- PGE_B1: 30%

In order to succeed, the student must obtain a score for each part ≥ 10 . If this condition is not met, the score will be reduced to a non-tolerable score.