GHENT UNIVERSITY

Course Specifications

From the academic year 2019-2020 up to and including the academic year

Bio-inspired Project (C004101)

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

Credits 9.0	**Study time 270 h**	**Contact hrs**	38.7h

Course offerings and teaching methods in academic year 2022-2023

A (Year)	English	Gent	seminar	27.5h
			lecture	2.5h
			group work	8.75h

Lecturers in academic year 2022-2023

Christiaens, Yannick	TW18	staff member
Shawkey, Matthew	WE11	lecturer-in-charge

Offered in the following programmes in 2022-2023	**crdts**	**offering**
Master of Science in Biology	9	A

Teaching languages

English

Keywords

Innovation, bio-inspired, project, creativity, entrepreneurship

Position of the course

This course is an obligatory course within the minor program 'Bio-inspired Innovation and Sustainability' of the Master program in Biology. Students will put into practice the conceptual and theoretical knowledge and skills obtained from the compulsory courses within that minor program, and will allow students to fully develop and control the complete process from brainstorming till product development (relevance depending on the project topic).

Contents

The course comprises (1) a lecture to inform the students about the content, planning and expectations of the course, (2) two workshops on the process of working out a concept design, building up a portfolio, basics of budget planning, etc., (3) min. 2 guest lectures by people from the professional field, (4) min. 3 follow-up meetings with the course lecturers on the project progress, (5) pitch presentation by students on their project idea and plans, and (6) project presentation by students of the realized outcomes in their project.

Initial competences

No specific competences are required. Having followed the compulsory courses ('Dare to venture' and 'Basic entrepreneurship') is strongly advised.

Final competences

1 Rely on biological knowledge and skills to identify materials, designs, processes, etc. that can have potential for innovation and sustainability.
2 Develop and fine-tune ideas towards specific concept designs with a valorization potential.
3 Translate conceptual ideas from biology towards applicable tools that meet existing potentials relevant for society, industry, biomedicine, ...
4 Work out a realistic business plan related to the project topic.
5 Present the idea and potentials towards stakeholders, to attract collaboration, funding, ...
6 Translate conceptual ideas towards product development.
7 Work in a team context, including planning, task division, ...

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, Guided self-study, Seminar, Lecture, Project

Learning materials and price

References

Product Design Portfolio (A. Milton, 2011) (https://www.amazon.com/Product-Design-Portfolio-Alex-Milton/dp/1856697517)

Course content-related study coaching

Several contact moments are planned by default, were students interact one-on-one with the lecturers about the progress, pitfalls, problems, opportunities, etc. of their project. Additional contact moments are possible on the demand of the student.

Assessment moments

end-of-term and continuous assessment

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

Report, Oral examination

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

Report, Oral examination

Examination methods in case of permanent assessment

Participation, Portfolio, Oral examination, Peer assessment

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

Report: students write a business plan related to the project topic and planned outcome
Oral examination: pitch presentation (at start), final project presentation (at the end)
Portfolio: students compile a portfolio of the progress, self-evaluation and remediation of the process they make (evaluated during the intermediate contact moments)
Participation: students are evaluated on different aspects related to their active participation (incl. taking initiative, working focused, interacting with stakeholders and users, ...)
Peer-assessment: team work is being evaluated by co-members of the team

Calculation of the examination mark