

## Bio-inspired Project (C004101)

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.

<b>Course size</b>	<i>(nominal values; actual values may depend on programme)</i>		
<b>Credits</b> 9.0	<b>Study time</b> 270 h	<b>Contact hrs</b>	38.7 h

### Course offerings and teaching methods in academic year 2022-2023

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

### Lecturers in academic year 2022-2023

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

### Offered in the following programmes in 2022-2023

<a href="#">Master of Science in Biology</a>	<b>crdts</b>	<b>offering</b>
	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**

Guided self-study, group work, lecture, project, seminar

#### **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, where 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.

#### **Evaluation methods**

end-of-term evaluation and continuous assessment

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

Oral examination, report

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

Oral examination, report

#### **Examination methods in case of permanent evaluation**

Oral examination, portfolio, participation, peer assessment

#### **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**

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**