GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Technology-Based Business Models for Circularity (I003039)

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

Credits 5.0 **Study time 150 h**

Course offerings in academic year 2026-2027

A (semester 1) English Gent

Lecturers in academic year 2026-2027

Temiz, Serdar UPPSALO1 lecturer-in-charge

Offered in the following programmes in 2026-2027	crdts	offering
International Master of Science in Sustainable and Innovative Natural Resource Management	5	A

Teaching languages

English

Keywords

Position of the course

Business models and their fundamental components, including analysis of current circular business models used in different technology-intensive industries. Synthesis of new business models and their role as driving force for innovation and sustainability in traditional and new technological industries. Business opportunities and business models for companies working with emerging technologies for circularity at a system level. Patents and other intellectual property rights (IPR). Negotiation of funding through a role-playing game. Adjustment of strategic plans according to market data and competitive signals.

Contents

Business models and their fundamental components. Analysis of current circular business models used in different technology intensive industries. Circularity for a given product by using combinations of reuse, repair, refurbishment, remanufacturing, materials recycling and energy recovery. Synthesis of new business models augmented by technology and their role as driving force for innovation and sustainability, according to the principle of triple bottom line, in traditional and new technological industries. Business opportunities and business models for companies working with emerging technologies for circularity at system level through collaboration between several actors. Dealing with wicked problems. Patents and other intellectual property rights (IPR). Adjustment of strategic plans according to market data and competitive signals.

Initial competences

150 credits in science/engineering/pharmacy including 15 credits at Master's level. Proficiency in English equivalent to the Swedish upper secondary course English 6.

Final competences

1 On completion of the course students should be able to
- identify and develop technology based business models with focus on the creation of circular economy,

2 - analyse and propose business opportunities for companies working with new technologies in order to achieve circularity at system level, through collaboration between several actors,

3 - further develope strategic plans and business tactics by using market data and competitive signals,

4 • perform elevator pitches and business presentations.

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Seminar, Lecture

Extra information on the teaching methods

Lectures, seminars and project supervision.

Study material

None

References

No reading list found.

Course content-related study coaching

Assessment moments

end-of-term and continuous assessment

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

Oral assessment, Presentation, Written assessment

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

Oral assessment, Presentation, Written assessment

Examination methods in case of permanent assessment

Participation, Presentation

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

Oral and written presentation of project work, and active participation i seminars.
If there are special reasons for doing so, an examiner may make an exception from the method of assessment indicated and allow a student to be assessed by another method. An example of special reasons might be a certificate regarding targeted pedagogical support from the disability coordinator of the university.

Calculation of the examination mark