

Interdisciplinary Study of the Climate Neutral City Mission (I002890)

Due to Covid 19, the education and assessment 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 5.0 **Study time 150 h** **Contact hrs** 50.0h

Course offerings in academic year 2021-2022

A (semester 2) English Gent

Lecturers in academic year 2021-2022

de Caluwé, Evelyne	LA58	staff member
Meerburg, Elise	LA24	staff member
De Vrieze, Jo	LA25	lecturer-in-charge
Rabaey, Korneel	LA25	co-lecturer

Offered in the following programmes in 2021-2022

	crdts	offering
Master of Science in Bioscience Engineering: Environmental Technology	5	A

Teaching languages

English

Keywords

Climate neutral city; mission

Position of the course

The EU increasingly works with missions for the large societal goals we want to achieve. An example of such a goal is the ambition to have 100 climate neutral cities by 2030. In this course we will use the city of Ghent as an example and study first the key drivers for this climate neutrality: why would we want this? What is a climate neutral city actually? Subsequently we will investigate interventions that can help in terms of energy consumption, water footprint, air quality... based on the drivers the goals are set, with the technology the approach is set hence what remains at the end of the program is to integrate the legal, economic and societal drivers in one proposal for a climate neutral city.

Contents

In this course we want to hand the building blocks necessary to consider a complex problem, such as a climate neutral city, and to provide a defined contribution. The structure is as follows: 1. Introduction to mission driven actions, context; 2. Building blocks: over a period of 9 weeks both technological and societal building blocks will be introduced by expert speakers from 9 different institutions; 3. Action: over the course of 1 immersion week the students will gather in teams to elaborate a case study on the city of Ghent, this can involve a topic (water, energy...) or a district (Muide, city center...). The case study is elaborated into a presentation, presented by the students to a panel including also societal actors.

Initial competences

BSc Degree

Final competences

Apply insights from different academic disciplines on problems related to climate adaptation and effective mitigation in the City of Ghent; Explain and discuss diverse technologies and interventions at urban/city level to improve performance from a sustainability perspective; Explain and discuss legal, economic and societal drivers and bottlenecks towards climate positive interventions; Create a coherent proposal for a city-wide approach with an interdisciplinary and international team;

Present a proposal to stakeholders invested in energy transition within the City of Ghent; Reflect on personal growth

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

Group work, Guided self-study, Lecture, Self-reliant study activities, Project

Extra information on the teaching methods

The course consists of lectures provided by international partners of the ENLIGHT network spanning key aspects related to achieving climate neutrality at city level. Students are expected to work together in teams to create a proposal including societal, legal, economic, technological considerations. For this, students will be split in teams which will meet during one immersion week to develop their case study and defend it.

Learning materials and price

The course material is available free of charge via the Ufora learning platform, there are no additional costs.

References

Mariana Mazzucato: Mission Economy: A Moonshot Guide to Changing Capitalism. Penguin Group

Course content-related study coaching

Assessment moments

continuous assessment

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

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

Examination methods in case of permanent assessment

Report, Participation, 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

Oral defense of case study; Paper with personal reflection and self-assessment; Participation during teaching activities

Second examination opportunity: Thorough reworking of the case study or elaborating an individual case study

Calculation of the examination mark

The final grade will be determined by the quality of the oral presentation (30%), the report containing the personal reflection and self-evaluation (50%) and the participation during the class activities (20%). Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.