

## Interdisciplinary Study of the Climate Neutral City Mission (I002890)

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** 5.0      **Study time** 150 h      **Contact hrs** 50.0 h

### Course offerings in academic year 2021-2022

A (semester 2)      English      Gent

### Lecturers in academic year 2021-2022

Rabaey, Korneel      LA25      lecturer-in-charge

### Offered in the following programmes in 2021-2022

	crdts	offering
<a href="#">Master of Science in Bioscience Engineering: Environmental Technology</a>	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

Guided self-study, group work, lecture, project, self-reliant study activities

## 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

## Evaluation methods

continuous assessment

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

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

## Examination methods in case of permanent evaluation

Oral examination, participation, peer assessment, report

## 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

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.*