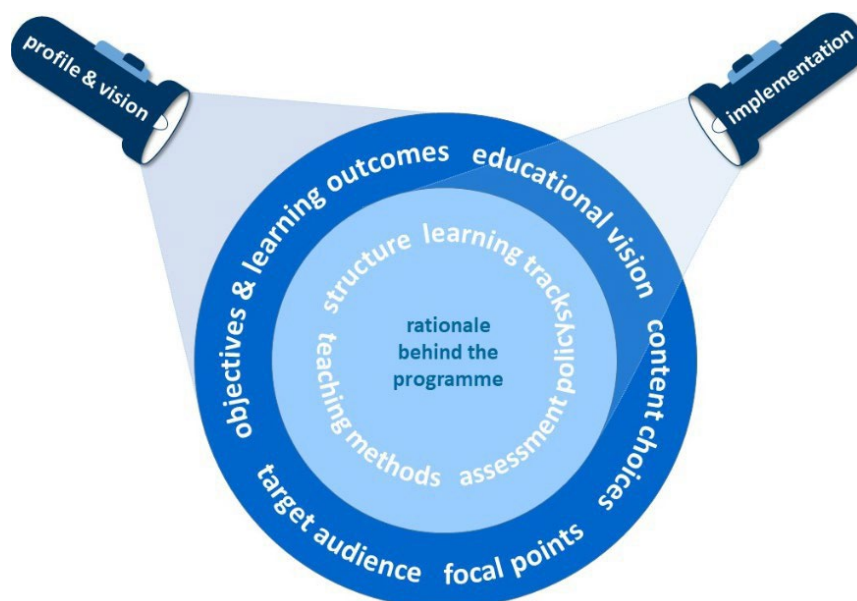


BLUEPRINT

ADVANCED MASTER IN HUMAN
SETTLEMENTS

FACULTY OF ENGINEERING SCIENCE



January 2023



Advanced Master in Human Settlements

Profile and vision

The Faculty of Engineering Science brings the intellectual and human capital of each individual student to a higher level by offering them a research-based education. The Faculty stimulates students to practice in-depth learning by addressing and challenging their 'disciplinary future self', to make them aware of who they wish to become as a professional (Beruf) and as members of society in general (Bildung). We value both breadth and depth of knowledge, expanding the reasoning, communication and problem-solving abilities, in order to prepare students for life-long learning. The research-oriented education is based on research programmes which are defined and developed in close collaboration with recognised international peers and with industry.

The Master of Science in Human Settlements addresses rapid urbanisation in worldwide contemporary urban transformations within the scope of sustainable development. This intensive, one-year programme focuses on issues of housing, building and urban transformation in contexts of development with diminishing resources and pressing social and environmental constraints. Architecture, urbanism and spatial planning are the core disciplines of the programme. In fact, the discipline of Human Settlements emerged from concerns about the built environment in relation to the global urban development agenda of the UN formulated at the first Habitat Conference (Vancouver 1976).

Goals and learning outcomes

The programme provides insight into the problems of human settlements as related to rapid change and to the interaction between modernity and tradition, formal and informal city-making. It also aims to strengthen capacities to tackle the growth of spontaneous settlements, the design of large-scale housing projects, the development of appropriate building materials and techniques, the systematic approach to complex programmes (e.g. hospitals, schools) and the planning of neighbourhoods, villages, towns with up-to-date techniques. Its graduates have a thorough understanding of the dynamic and multi-functional aspects of the built environment, they have the skills to devise interventions that are context-responsive and sustainable and are at ease in moving back-and-forth between academic theory and day-to-day professional practice.

The programme aims at forming students in various roles: experts in their discipline, researchers, problem solvers and designers, with special attention to the international context. The vision of the programme is translated into a list of concrete,

operational learning outcomes. The specific outcomes of the Advanced Master in Human Settlements are available on this webpage :

https://onderwijsaanbod.kuleuven.be/opleidingen/e/CQ_50268930.htm#activetab=doelstellingen.

Target group

Admission to the programme requires incoming students to hold a professional degree in Engineering: Architecture or Architecture (in European terms, this is a master's degree, in other contexts it might be a 4 or 5-year bachelor's degree). There is also the possibility to enter the program from an allied field (urban planning, landscape architecture and others). The prerequisite of professional degree is important because the programme responds to a general challenge of sustainable urban development in contexts of development. It also addresses an agenda to a variety of decision makers and professionals dealing with issues and problems in the built environment.

In some countries this agenda is assigned specifically to a Ministry of Human Settlements, but in general the human settlements agenda is handled by a variety of administrations and policy sectors on different levels dealing with a diversity of problems and issues of the built environment: housing, urban planning, urban policy, development, environment, etc.

An exception to these requirements is only made when the applicant has previously acquired sufficient professional experience in human settlements, with a minimum of four years, but normally five years of study.

Realisation

Structure

The programme is organised as a one-year post-professional programme. The specificity of the programme is expressed in its explicit focus on human settlements, a discipline which has emerged over the last decades to address problems and issues of the built environment at various scale levels and in particular contexts of rapid change. The programme integrates approaches from architecture, urbanism and strategic planning. Its structure is organised around:

- (i) compulsory courses
- (ii) design studios
- (iii) optional courses
- (iv) final master's thesis (design or research based)

Table1 illustrates the general setup of the semesters.



	Fall semester	Spring semester
Compulsory courses	<ul style="list-style-type: none"> Human settlements in development Theory and practice of urbanism since 1945 	<ul style="list-style-type: none"> Critical review of sustainable development policies and planning Urban Studies
Design studio	<ul style="list-style-type: none"> Urban Fabrics 	<ul style="list-style-type: none"> Master thesis studio: Landscape Urbanism Written thesis
Optional courses	<ul style="list-style-type: none"> Modernity and Urbanity: Capita Selecta Economic and Sustainability Aspects of Architectural and Urban Design GIS 	<ul style="list-style-type: none"> Strategic spatial planning Landscape urbanism Colonial/post-colonial urbanism Cultural philosophical topics in Architecture and the city Inclusive Design
Optional Courses from CADES and Geography	<ul style="list-style-type: none"> Urban anthropology Cultural Anthropology: Material culture Housing and the City 	<ul style="list-style-type: none"> political ecology

Table 1. Structure of the programme

The learning environment

The three main delivery modes (lecture, practical and assignment) are characterised by the role of the lecturer and the student, respectively. Another delivery mode is the master's thesis. The programme combines the most appropriate delivery modes for each course and a proper balance over the entire curricula is envisaged. The general objective is to activate students, stimulate them to work both independently and in groups, and to have a good balance between the different delivery modes.

A specific form of the delivery mode 'assignment' is the design studios. The studios form an important part of the programme, a status reflected in their credit load. They are organised as two full days of work on Mondays and Tuesdays (to provide an intensive and immersive working environment, as occurs in most professional practices. The studios integrate knowledge from the other courses and seeks to strike a balance between teamwork and individual contributions.

Compulsory courses are related to field and studios themselves, whereas for students selecting a more theoretical-oriented trajectory in line with the programme's profile supporting courses are organised for the elaboration of a research master's thesis.

The programme in human settlements is taught by a core KU Leuven faculty group and complemented by internationally respected specialists from both academic and professional spheres. It targets experienced professionals and postgraduate students with an international, intercultural and interdisciplinary background.

The Faculty and its programmes recognise the importance of a high-quality assessment. High-quality evaluation is therefore fully embedded in the learning environment: it is aligned with the objectives, uses the appropriate evaluation formats, and is

adapted to fit the characteristics of the students concerned, who also receive feedback in a timely and appropriate manner. The policy document 'Tests and Assessments' describes the policy of assessment at the Faculty:

- alignment with programme and learning outcomes,
- feedback,
- quality assurance, transparency and the ombuds service,
- evaluation of final studio/master's theses,
- organisation of assessments, including special provisions for students with a disability.

The implementation of the Faculty's examination regulations, the development of the programmes, the choice of assessment modes, the specific learning outcomes, etc. In short, internal quality assurance is the primary responsibility of the Educational Committee.

Learning pathways

The expert in human settlements

The discipline of human settlements encompasses aspects of architecture, urban design and spatial planning and deals with the problems of the built environment in the context of dynamic change. It approaches the built environment from a perspective of sustainable development and emphasises in that respect the resourcefulness of space. Historically, the discipline of human settlements mainly focuses on developing countries.

Graduates have a deep understanding of the dynamic and multifunctional aspects of the built environment through critical analysis of scientific and design approaches to the professional field of urban design and spatial planning, complemented with approaches from architecture, thereby transcending conventional professional boundaries, and accentuating concepts of



sustainable development. Graduates understand the approaches and possibilities of related disciplines such as urban geography, social and cultural anthropology, material culture and urban sociology and can relate these disciplines to human settlements.

Graduates are able to operate both at the local level and at the international level in the field of human settlements, and are able to synthesise international and intercultural contexts.

Through exposure to stimulating exchange and feedback between academic theory and day-to-day practice, graduates will have acquired the ability to operate as a 'reflective practitioner', wherein they can promote approaches that include reflection (theory, history, critique), action (in the form of design research and strategy development), but also self-reflection (self-criticism and reorientation, personal development through communication and co-learning).

The researcher

Research and education are closely related in the Faculty as it is the Faculty's policy to support programmes with strong research activities. The departments of the Faculty have an excellent research record and run many research projects, both with national and international partners.

The programme aims to give students a solid scientific basis and the necessary research skills in the various disciplines within the broad field of human settlements. The programme is carried out in an intercultural and interdisciplinary environment and provides students the capacity to operate independently and critically at a high level within the field of human settlements; and to contribute significantly to (sustainable) development by applying context-responsive approaches, including the cultural dimension of context, to construction and local development challenges.

Graduates will have acquired and deepened their scientific knowledge in human settlements and will have gained the experience necessary for mastering research methodologies and practices in the field of human settlements. Since they will have learned to use literature and image sources, they will be able to approach problems in a scientific way and acknowledge the potential of design. They will also have gained experience in interdisciplinary research and studio work in a team in order to prepare them to act / work constructively in a multilevel, multi-sectoral environment.

Every student is required to complete a master's thesis. Students can either focus on a final studio project (with a research component) or a written thesis, guided by full-time faculty. Students will be made aware of the research interests/expertise of various faculty members and can directly approach a potential promotor by introducing their own research proposal.

To support students in the process, the Educational Development Unit of the Faculty, in co-operation with the Campus Library Arenberg, organises master's thesis workshops about information literacy, intellectual integrity and plagiarism and academic writing.

The problem solver and designer

All programmes of the Faculty of Engineering Science put strong emphasis on transferable and transversal skills such as written and oral communication, group work, leadership, project management, responsibility and norms of engineering practice, taking initiative, and entrepreneurship, information literacy, intellectual integrity and plagiarism and academic writing. As this concerns an advanced master's programme, a general achievement of all these skills is expected from incoming students. As with other general research skills, students will continue to develop these research-related skills within the specific scientific context of human settlements.

The professional

During the programme, university professors and professionals from the field share their expertise that is not only technical or of engineering nature, but also related to human factors and organisational aspects needed in the wider context of human settlements.

Graduates will have strengthened their capacity to deal professionally with problems of human settlements, particularly as they relate to modernisation. Hence, graduates will be familiar with specialised methods and skills for intervention that reflect context-responsive concepts of sustainable development and are able to deal with the different levels of the built environment (from individual buildings to entire cities) and use design as a medium to address the resourcefulness of space. They will be able to apply basic up-to-date techniques (e.g. GIS, cost control at different scale levels) required for relevant professional involvement in urban development.

Students are expected to not only come from a variety of geographic backgrounds, but also professional ones, with students active as practitioners, officials in public authorities, NGO workers, etc. The resulting mixture of fresh graduates and professionals in the same classroom gives rise to mutually beneficial interactions.

In an international context

This master's programme is embedded in the Faculty of Engineering, a faculty with a strong international reputation that aims at developing an international open policy and atmosphere. The Faculty not only encourages its (master's) students, researchers and scholars to have an international experience, but is also home to a vibrant community of international students, staff and researchers. Hence, the Faculty's and the programme's international activities are



extensive and diverse, allowing all of its students to profit from the international atmosphere at the Faculty. Some examples of international activity:

- The Faculty is a member of several distinguished networks of technical universities in Europe such as CLUSTER, CESAER, and ATHENS.
 - The Faculty does not only participate in an Erasmus Mundus programme and EIT-KIC programmes, but also provides several English master's programmes for incoming students.
 - The Faculty offers (master's) students mobility and staff exchange on a European (Erasmus) and intercontinental level. By having good contacts with a selected number of international universities, the high-level quality of the education, taken abroad, is assured. Furthermore, students and researchers get the opportunity to participate in international research projects, international internships and development cooperation projects
- The Master of Human Settlements is also an ICP-UOS programme, with supportive partners across the globe: the University of Architecture Ho Chi Minh City (Vietnam), University of Witwatersrand (Johannesburg, South Africa), University of Guayaquil (Ecuador), Technical University Kenya (Nairobi, Kenya), ²Universidade Eduardo Mondlane (Mozambique) and Birzeit University (Palestine). Every year, partner co-production reinforces the unique and distinctive trait of the MaHS, namely that of an integrated approach to urban development that finds its best expression in the design studio where real-world problems are tackled. These intensive and shared design experiences are jointly organised with ICP partners as a way to balance fundamental and applied knowledge within a research-oriented approach. This enables MaHS students to travel and work with local partners on the field.

KU Leuven
Faculty of Engineering Science

Kasteelpark Arenberg 1 box 2200
B-3001 LEUVEN
tel. + 32 16 32 13 50

KU LEUVEN



FACULTY OF
ENGINEERING SCIENCE