



LUND
UNIVERSITY

MSc in Energy-Efficient and Environmental Building Design

LUND UNIVERSITY, SWEDEN

- Master of Science in Energy-Efficient and Environmental Buildings
- 2 years, full-time, 120 ECTS credits
- Division of Energy and Building Design, Department of Architecture and Built Environment (coordinator)
- Campus Helsingborg
- Application deadline: January 2019
- Programme start: August 2019

Programme overview

Buildings are responsible for a large share of our global energy use. Energy use is in fact the main determinant of a building's global environmental footprint, considering its total life span.

Lund University is internationally renowned for high-quality research related to energy-efficient buildings. Our expertise is centred on a whole-building perspective, which accounts for inhabitant needs as well as their comfort and health. The University's advanced research, and its close ties to the building industry, create an excellent foundation for a strong Master's programme with a largely unique focus on buildings.

Our students will graduate with advanced knowledge, skills and competencies within the area of energy-efficient and environmental building design in cold climates. Our goal is to train highly skilled professionals, who will significantly contribute to and influence the design, building or renovation of energy-efficient buildings, taking into consideration the architecture and environment, the inhabitants' behaviour, needs, health and comfort, as well as the overall economy.

The carefully tailored theoretical courses are complemented with practical modules, in which students apply their new knowledge. This pedagogical approach enables a strong learning progression and is the reason why the programme is shaped by tailor-made mandatory courses. Our students work together in small teams to design energy-efficient concepts and buildings and to analyse the consequences of various design alternatives using an integrated design process. The student teams are intentionally mixed both in terms of cultural background and academic background, such as in architecture and engineering. The purpose is to get training in the interdisciplinary design process and in team work, which is very important for their future careers. Courses also

include site visits, guest lecturers from the industry and tours of existing good examples of energy-efficient building design.

The programme involves teachers from different departments at Lund University. The main ones are: Department of Architecture and Built Environment (Divisions of Energy and Building Design and Environmental Psychology) and Department of Building and Environmental Technology (Divisions of Building Physics and Building Services).

Programme modules/courses

COURSES AND NUMBER OF CREDITS: Energy Use and Thermal Comfort in Buildings (7.5), Moisture Safety Design (7.5), Passive House – Integrating Thermal and Moisture Issues (15), Ventilation and Indoor Air Quality (7.5), Daylighting and Lighting of Buildings (7.5), Energy-Efficient Office Building – Integrating Daylight and Ventilation (15), Building Integrated Solar Energy Systems (7.5), Life-Cycle Perspective and Environmental Impact of Buildings (7.5), Public Building – Integrating Solar Energy, Costs and Environmental Issues (15). Degree project in Energy-Efficient and Environmental Buildings (30).

Career prospects

The rising global awareness of environmental concerns, coupled with increasingly demanding building regulations, means there is a high demand for professionals that are skilled within energy-efficient building design.

With a specialisation in cold climate building considerations, graduates become attractive candidates on e.g. the European, Russian, Chinese and North American job markets. The methodologies and knowledge gained can to a large extent also be of use for building design in temperate climates.

The local Swedish market has seen a significant surge in the demand for energy-efficient buildings in the last ten years, and we are among the leading countries in the world in practising these principles.

The programme leads to a Master of Science degree in Energy-efficient and Environmental Buildings. As a graduate, you will be able to work in design teams responsible for planning and designing energy-efficient and environmental buildings, including renovation of the existing building stock. You will be able to take a leading role in companies (e.g. building consultancies, architect



“My experience of the Master's programme is strongly positive, both personally and professionally. It is the first of its kind in Scandinavia, and one of the pioneers in Europe in the field of energy-efficiency in buildings. Among its teachers are experienced professionals who are in close contact with the industry and its needs. The academic level was demanding but not overwhelming and provided me with the tools and knowledge to be off to a good professional start.”

Alejandro Pacheco Diéguez, from Spain, alumnus, now working as an environmental specialist and architect at White Arkitekter in Stockholm





firms, construction companies) and municipalities pursuing energy and environmental aspects, with a whole-building perspective in mind. You will also be well prepared to pursue further studies at the doctoral level.

Entry requirements and how to apply

ENTRY REQUIREMENTS

A Bachelor's degree in architecture, civil engineering, architectural engineering or equivalent. Completed courses within the three subjects: building technology/structural engineering, building physics/science and building services. A minimum of 3 credits/ECTS is required for each of these three subjects. In addition, a total of 30 credits/ECTS is required as the sum of any combination of courses within energy and building technology/structural engineering, building physics/science, building services, building materials and architecture. English Level 6 (equivalent to IELTS 6.5, TOEFL 90). See www.lunduniversity.lu.se for details on English proficiency levels.

HOW TO APPLY

1. Apply online: Go to www.lunduniversity.lu.se/eebd Click on "Apply" and follow the instructions for the online application at the Swedish national application website www.universityadmissions.se.

Rank the chosen programmes in order of preference.

2. Submit your supporting documents:

- **General supporting documents:** Check what documents you need to submit (i.e. official transcripts, degree diploma/proof of expected graduation, translations, proof of English, passport) and *how* you need to submit them at www.universityadmissions.se
- **Programme-specific supporting documents:** For information on programme-specific documentation, please check the programme webpage.

3. Pay the application fee (when applicable).

SELECTION CRITERIA

The selection is based on academic qualifications.

TUITION FEES

There are no tuition fees for EU/EEA citizens. For non-EU/EEA citizens the tuition fee for this programme is SEK 145 000 per year. See www.lunduniversity.lu.se for details on tuition fees.

CONTACT

Programme webpage

www.lunduniversity.lu.se/eebd

Programme Director

Maria Wall, eebd@lth.lu.se

+46 (0)46 222 9662

About the Faculty of Engineering

The Faculty of Engineering at Lund University (LTH) is among the leading engineering faculties in Europe with over 9,000 undergraduate students and 800 postgraduates. LTH is one of the few comprehensive engineering faculties in Sweden, and in addition to traditional engineering programmes we also offer programmes in architecture and industrial design. With a 50-year long history of research and education excellence, we are well equipped to meet the increasing global demand for more sustainable, connected and user-driven technologies, and to provide our students with the knowledge and skills they need in order to succeed within their chosen field.

About Lund University

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has 40,000 students and 7,400 staff based in Lund, Helsingborg and Malmö. We are united in our efforts to understand, explain and improve our world and the human condition.

Lund is the most popular study location in Sweden. Lund University offers one of the broadest ranges of programmes and courses in Scandinavia, based on cross-disciplinary and cutting-edge research. The University has a distinct international profile, with partner universities in over 70 countries.

Lund University has an annual turnover of SEK 8 billion, two-thirds of which are destined for research. Our eight faculties conduct strong research in many different areas, including over thirty research fields in which we are world-leading. Many scientific breakthroughs and pioneering innovations have originated from Lund University.

Learn more at www.lunduniversity.lu.se

Ask questions and follow news at

facebook.com/lunduniversity



LUND
UNIVERSITY