



LUND
UNIVERSITY

MSc in Biotechnology

LUND UNIVERSITY, SWEDEN

- Master of Science in Biotechnology
- 2 years, full time, 120 ECTS credits
- Department of Chemistry,
Centre for Applied Life Sciences
- Lund campus
- Application deadline: January 2018
- Programme start: August 2018

Programme overview

Biotechnology is a globally expanding area with respect to both research and production. Development within this field has the potential to contribute significantly towards a more sustainable society, and has an impact on issues such as health and pharmaceuticals, food production, waste water treatment and other environmental issues, as well as the production of chemicals. Lund University is among the leading universities in the world within biotechnology and is home to several world-renowned scientists and highly knowledgeable and dedicated teachers. We have strong links to the industry – from large multinational companies to smaller local operations borne out of research within our own departments.

The Master's in Biotechnology is a broad programme covering many different aspects of converting raw materials into products using biocatalysts (e.g. enzymes and micro-organisms). Both the development of the biocatalyst and the conversion process are covered, as well as the role of biotechnology in a sustainable society. To help to prepare our students for their final semester Master's thesis, nearly all of our courses include practical projects. It is therefore recommended that students who apply to this programme have acquired laboratory skills during their Bachelor's degree.

After completing this programme you will:

- have achieved a high level of general skills in biotechnology in order to meet challenges in the field

- have improved your communication skills during discussions and by practising written and oral presentations
- be able to suggest processing conditions for the industrial manufacturing of biotech products with regard to raw materials, convenience, energy and sustainability

Programme modules/courses

COMPULSORY COURSES AND NUMBER OF CREDITS: Food Microbiology (7.5), Bioprocess Technology (7.5), Green Chemistry and Biotechnology (7.5) and at least one of Biotechnology, Process and Plant Design (15) or Project in Life Science (15).

ELECTIVES AND NUMBER OF CREDITS (in total at least 37.5): Bioanalytical Chemistry (7.5), Biochemical Reaction Engineering (7.5), Protein Engineering (7.5), Probiotics (7.5), Enzyme Technology (7.5), Metabolic Engineering (7.5), Chromatographic Analysis (7.5), Environmental Biotechnology (7.5), Bioinformatics (7.5), Gene Technology (7.5), Immunotechnology (7.5), Downstream Processing in Biotechnology (7.5).

Career prospects

Due to our close links with local and international industry, the programme is closely aligned to market needs, and there is a clear emphasis on the engineering aspects of biotechnology. During your studies you will meet not only researchers at the departments but also lecturers from biotech companies working with, for example, product development and marketing. Your future job could be anywhere in the world – with a small business, a large multinational company, a government authority or a university. Our alumni move on to roles within research and development, process operations, product development and sales.

The programme also provides an excellent foundation for continuing your studies at PhD level.



“The quality of scientific outcomes and reputation of Lund University was one of the key reasons for me applying here. Every course was unique and designed with care that allows the candidate to thoroughly enjoy the subject and acquire deep knowledge.”

Uthra Gowthaman, from India





Entry requirements and how to apply

ENTRY REQUIREMENTS

A Bachelor's degree in biotechnology, biochemical engineering, food technology or equivalent including courses in mathematics/calculus and microbiology or biochemistry. English Level 6 (equivalent to IELTS 6.5, TOEFL 90). For details on English proficiency levels, see www.lunduniversity.lu.se.

HOW TO APPLY

- 1. Apply online:** Go to www.lunduniversity.lu.se/biotechnology. 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:** 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.
- 3. Pay the application fee** (when applicable).

SELECTION CRITERIA/ADDITIONAL INFO

Selection of students 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. For details see www.lunduniversity.lu.se.

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. We are 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 42 000 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. The University offers one of the broadest ranges of programmes and courses in Scandinavia, based on cross-disciplinary and cutting-edge research. The compact university campus encourages networking and creates the conditions for scientific breakthroughs and innovations. The University has a distinct international profile, with partner universities in over 70 countries.

Lund University has an annual turnover of SEK 8 billion, of which two-thirds go to research. Our research is characterised by both breadth and strength and, according to independent evaluations, over 30 of our research fields are world-leading.

The establishment of the world-leading facilities MAX IV and ESS will have a major impact on future scientific and industrial development in both materials science and life science. MAX IV, which was inaugurated in June 2016, is the leading synchrotron radiation facility in the world, while the European research facility ESS will be the world's most powerful neutron source when it opens for research in 2023. Adjacent to these facilities, Science Village Scandinavia is also being developed into a meeting place and testing environment for research, education and entrepreneurship.

Learn more at www.lunduniversity.lu.se

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CONTACT

Programme webpage

www.lunduniversity.lu.se/biotechnology

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