



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 2021
- Programme start: August 2021

Programme overview

Biotechnology is a key enabling technology that offers strong innovation potential for the sustainable development of society. Research and development in biotechnology continue to improve processes and develop products that have profound impact on various sectors, such as healthcare and pharmaceuticals, agriculture, food and feed, environmental remediation, as well as production of chemicals and biofuels.

Lund University is among the leading universities in the world for research and education in biotechnology. It is home to several world-renowned scientists who have strong links to the industry – from large multinational companies to small enterprises based on research developed within our departments.

The Master's in Biotechnology is a broad programme covering scientific and technological aspects of biotechnology tools and processes for industrial production and environmental remediation, biocatalysts including enzymes and microorganisms, process monitoring, product recovery and process design. To prepare our students for their final semester Master's thesis, nearly all of our courses include practical exercises. 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 a high level of general skills in the various aspects of biotechnology processes.
- Have improved your communication skills by way of discussions and by practising written and oral presentations.

- Be able to suggest processing conditions for the industrial manufacturing of biotech products with regard to the production systems, choice of raw materials, biological catalysts, energy efficiency 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 guest lecturers from biotech companies working with, for example, product development and marketing. Your future job could be anywhere in the world – in a small start-up or 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.

Entry requirements and how to apply

ENTRY REQUIREMENTS

A Bachelor's degree in biotechnology, biochemical engineering, food technology or equivalent. Completed courses in mathematics/calculus and microbiology or biochemistry. English 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, which allows the candidate to thoroughly enjoy the subject and acquire deep knowledge.”

Uthra Gowthaman from India





6 (equivalent to IELTS 6.5, TOEFL 90). See www.lunduniversity.lu.se for details on proficiency levels.

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
 - **Programme-specific supporting documents:** For information on programme-specific documentation, please check the programme webpage.
- 3. Pay the application fee** (when applicable).

SELECTION CRITERIA/ADDITIONAL INFO

The selection is based on academic qualifications and on a statement of purpose.

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.

About the Faculty of Engineering

The Faculty of Engineering, LTH, is as a place for dreams and discoveries. We inspire creative development of technology, architecture and design and teach some of Sweden's most attractive Master's programmes, all built on a broad research base. LTH is among the leading engineering faculties in Europe with close to 10 000 undergraduate students. Over 1 000 researchers at LTH work hard to improve the quality of life for people and promote a more careful use of the Earth's resources. Our vision is: Together we explore and create – for the benefit of the world. A world record in 5G technology, solar cell-driven water purification, early cancer diagnosis, nanotechnology for more efficient solar panels, and a health-promoting oat drink are some of the innovations developed at LTH.

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 more than 8 000 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 degree programmes and courses in Scandinavia, based on cross-disciplinary and cutting-edge research. Because of its wide disciplinary range, interdisciplinary collaborations and engagement with wider society, Lund University is particularly well equipped to meet complex societal challenges. With partner universities in around 70 countries, the University's profile is distinctly international.

Lund University has an annual turnover of more than EUR 830 million, of which two-thirds go to research in our nine faculties, enabling us to offer one of the strongest and broadest ranges of research in Scandinavia.

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 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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