



**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 2020
- Programme start: August 2020

## 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 processes, biocatalysts including enzymes and microorganisms, 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 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 6 (equivalent to IELTS 6.5, TOEFL 90). See [www.lunduniversity.lu.se](http://www.lunduniversity.lu.se) for details on proficiency levels.

“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





#### HOW TO APPLY

- 1. Apply online:** Go to [www.lunduniversity.lu.se/biotechnology](http://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](http://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](http://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.

#### 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](http://www.lunduniversity.lu.se) for details on tuition fees.

### 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 40 000 students and 7 600 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 around 70 countries.

Lund University has an annual turnover of SEK 8.5 billion, more than half of which is 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.

The world-leading research facilities MAX IV and ESS which are being established in Lund will be of great significance for research and industrial development within materials and life sciences. MAX IV is the world's foremost synchrotron radiation facility and the ESS will be the most powerful neutron source in the world once it opens for research in 2023. Science Village Scandinavia is developing nearby and is destined to become a meeting place and a test environment for research, education and entrepreneurship.

Learn more at [www.lunduniversity.lu.se](http://www.lunduniversity.lu.se)  
Ask questions and follow news at  
[facebook.com/lunduniversity](https://facebook.com/lunduniversity)



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#### CONTACT

**Programme webpage**

[www.lunduniversity.lu.se/biotechnology](http://www.lunduniversity.lu.se/biotechnology)

**Programme Director**

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