



**LUND**  
UNIVERSITY

# MSc in Pharmaceutical Technology: Discovery, Development and Production

LUND UNIVERSITY, SWEDEN

- Master of Science in Pharmaceutical Technology
- 2 years, full-time, 120 ECTS credits
- Faculty of Engineering
- Lund campus
- Application deadline: January 2020
- Programme start: August 2020

## Programme overview

The Master's programme in Pharmaceutical Technology will prepare you for an exciting career in pharmaceuticals, no matter if you aim for working in the pharmaceutical industry, regulatory authorities or for future PhD studies. The programme is one of few with a broad approach that includes the entire pharmaceutical process; from discovery and identification of the active substance, to the development and production of the final drug, which includes both biomolecules and small organic pharmaceutical molecules. The programme aims to expose students to as authentic industrial development scenarios as possible, with strong emphasis on laboratory practice and project-based learning.

The Master's programme in Pharmaceutical Technology focuses on three main areas:

- Small organic molecule drug discovery including pharmacology
- Biological drug discovery including pharmacology
- Product development, production and quality assurance

The Master's programme in Pharmaceutical Technology engages teachers from several strong interdisciplinary research departments at Lund University. It builds on well-established collaborations with the pharmaceutical industry as well as with other national and international, highly ranked, universities. For the final Master's thesis project, these collaborations will provide excellent opportunities for research beyond Lund University within a wide range of pharmacy-related research areas, in either academia or industry. Students in this programme

will become part of a strong international research environment with access to excellent lab facilities and key equipment utilised within the pharma industry.

## Programme modules/courses

### COMPULSORY COURSES AND NUMBER OF CREDITS:

Medicinal Chemistry (7.5), Biological Drugs (7.5), Pharmaceutical Formulation and Production (7.5), and Project in Chemistry and Biologics (15) and Project in Life Science/Formulation (15).

**MANDATORY ELECTIVE COURSES:** Organic Chemistry (7.5), Biophysical Chemistry (7.5), Analytical Chemistry (7.5), Surface and Colloid Chemistry (7.5), Quality and Product Safety (7.5), Chemometrics (7.5), and Immunotechnology (7.5).

## Career prospects

The pharmaceutical industry experiences a continuing and growing demand for the recruitment of highly skilled employees with insight and knowledge covering the entire development process leading to a drug. Graduates of the programme will be well-prepared to meet future challenges in an international, multidisciplinary pharmaceutical environment.

The programme is closely connected to one of northern Europe's strongest biotech regions, the Medicon Valley, hosting at least 200 international pharmaceutical companies and affiliates. Globally, the trend of small companies delivering lead compounds, analytical methods, and advanced formulation solutions to large pharmaceutical companies is widely spreading. This is a rapidly growing industry in need of qualified employees.

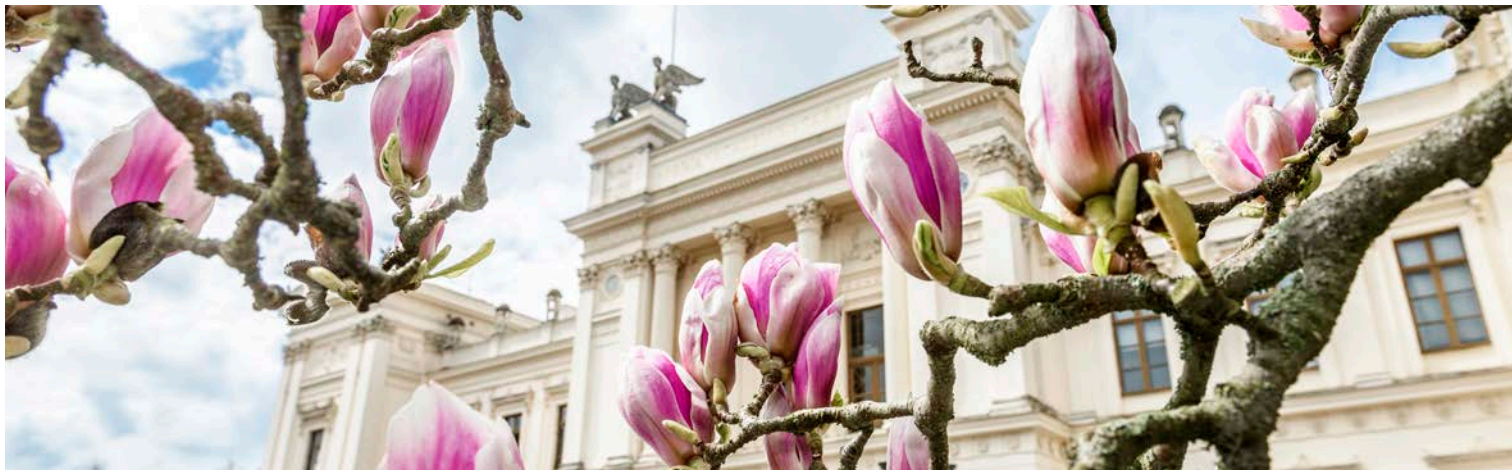
A likely first position for a student from this programme would be as organic or analytical chemist, as biochemist developing new biological pharmaceutical substances, as formulator of new drug products, at a position in the quality assurance field or within a regulatory authority. Alternatively, graduates could aim for further specialised studies as a PhD student.



“In our experience, the need for educated young professionals in the area of pharmaceuticals has never been higher. The industry expresses a growing demand for students with broad competences covering the whole development chain as well as the demands for large-scale production. We are proud to launch this new programme, tailor-made to not only meet the needs from industry, but also to pursue a career in academic research.”

Jenny Schelin, Programme Director





## Entry requirements and how to apply

### ENTRY REQUIREMENTS

A Bachelor's degree in chemical engineering, biotechnology, chemistry or medicinal chemistry. Completed courses of at least 10 credits/ECTS in mathematics (including algebra, analysis and statistics) and at least 60 credits/ECTS in chemistry, chemical engineering or biotechnology, of which at least 5 credits/ECTS in organic chemistry, 5 credits/ECTS in biochemistry/cell biology, and 5 credits/ECTS in analytical chemistry. English Level 6 (equivalent to IELTS 6.5, TOEFL 90) is also required. See [www.lunduniversity.lu.se](http://www.lunduniversity.lu.se) for details on English proficiency levels.

### HOW TO APPLY

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

- **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](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. 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 7 600 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.

Learn more at [www.lunduniversity.lu.se](http://www.lunduniversity.lu.se)

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### CONTACT

Programme webpage

[www.lunduniversity.lu.se/pharmaceutical-technology](http://www.lunduniversity.lu.se/pharmaceutical-technology)

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