

- Master of Science in Chemistry
- 2 years, full-time, 120 ECTS credits
- Department of Chemistry
- Lund Campus
- Application deadline: January 2024
- Programme start: August 2024

## PROGRAMME OVERVIEW

Would you like to become an expert on how proteins are structured and how they work? Equipped with this expertise, you will be at the knowledge frontier and able to help solve medical and biochemical problems at the molecular level. You can pursue a career as a biochemist both within academia and at research-intensive companies.

This Master's programme provides you with specialised knowledge in protein chemistry, molecular biophysics and structural biochemistry. During the programme you will examine molecular structures and functional mechanisms in a large number of proteins. You will obtain ample experimental experience and learn to master methods for cloning, expression and purification of proteins. You will also learn a number of specialised techniques used to analyse proteins such as mass spectrometry and X-ray crystallography. You will practice independently planning, conducting and critically evaluating experiments.

You will also learn to use scientific literature as well as manage and analyse data in various forms. Teaching takes place on modern premises and in laboratories with advanced equipment. The format of the Master's programme varies and includes lectures, seminars, group exercises, extensive laboratory work, calculation exercises, computer exercises and project work, including oral and written presentations.

The programme has strong ties with research. All of the teaching staff are researchers, and the course content is continuously adapted based on current research. The Department of Chemistry is characterised by a broad spectrum of basic research and applied research, as well as close contact with industry and external research centres. Lund is also home to two unique research facilities – the MAX IV Laboratory and the ESS (European Spallation Source) neutron source, the latter of which is currently being constructed. The facilities offer applications in many areas of chemistry. The language of instruction is English in the Master's programme.

## PROGRAMME STRUCTURE

You can influence and plan your study design to a large extent. During the first semester you will initially take a course on molecular driving forces and chemical bonding, or a course on experimental protein chemistry. You will thereafter study structural biochemistry. In the spring semester you can choose e.g. molecular microbiology or molecular biotechnology as well as advanced biochemistry.

In the second academic year you can add more courses depending on the scope of your degree project. The degree project can be worth 30, 45 or 60 credits and is conducted in a research team or at a company. If you decide to do a degree project worth less than the maximum number of credits, you can do a second project. The Master's programme offers the option of doing an internship, which can provide valuable professional contacts during the programme.

## PROGRAMME MODULES/COURSES

**COURSES AND NUMBER OF CREDITS:** The recommended structure for the programme includes the following courses: Experimental protein chemistry (15 ECTS), Structural biochemistry (15 ECTS), Advanced biochemistry (15 ECTS) and a master's degree project (30, 45 or 60 ECTS).

**COMPULSORY COURSES:** Advanced level courses in chemistry comprising 30 ECTS credits, of which 15 ECTS should be in the fields of biochemistry or molecular biophysics, and a Master's degree project comprising at least 30 credits.

## CAREER PROSPECTS

Programme graduates are highly skilled in conducting research and development work within the life sciences, biochemistry and protein science. The Master's programme provides a good foundation both for doctoral studies and a career at research-intensive companies. Half of our Master's students continue to doctoral studies, and half begin working in industry in Sweden or abroad.



“The best part about the Master's programme in Biochemistry is that I can design my studies to suit more than just my interests in chemistry. I can choose from a wide selection of courses and I can also do a project course where I can do more of the laboratory work together with a research group.”

Oliwia Kolodziejczyk from Poland





## ENTRY REQUIREMENTS AND HOW TO APPLY

### Entry requirements

A Bachelor's degree of at least 180 credits or the equivalent, including at least 90 credits in chemistry, of which at least 15 credits must be in biochemistry. English Level 6.

### How to apply

- 1. Apply online:** Go to [www.lunduniversity.lu.se/chemistry-biochemistry](http://www.lunduniversity.lu.se/chemistry-biochemistry). Click on "Apply" and follow the instructions for the online application at [www.universityadmissions.se](http://www.universityadmissions.se), the Swedish national application website. 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).
- 3. Pay the application fee (when applicable).**

### Selection criteria/additional info

The selection will be based on grades awarded for previous academic courses in science, engineering and mathematics.

### Tuition fees

Tuition fee SEK 170 000 per year for non-EU/EEA citizens. No fee for EU/EEA citizens. See [www.lunduniversity.lu.se](http://www.lunduniversity.lu.se) for details on tuition fees

## ABOUT THE DEPARTMENT OF CHEMISTRY

The Department of Chemistry at Lund University provides world-class education and research within a wide area of chemistry. The Department of Chemistry is situated at Kemicentrum, Scandinavia's largest center for research and education in chemistry. It is a unique research environment close to several major research centers, research parks and industries. Our education is closely integrated with the department's research and all our students will have the opportunity to be involved in ongoing research projects during their studies.

The Department of Chemistry has a unique strength in undergraduate and postgraduate education in all areas of chemistry, as we belong to both the Faculty of Science and the Faculty of Engineering (LTH). The student services and support at the department is well-known and much appreciated by our students.

## CONTACT

### Programme webpage:

[www.lunduniversity.lu.se/chemistry-biochemistry](http://www.lunduniversity.lu.se/chemistry-biochemistry)

### Programme Coordinator:

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Lund University was founded in 1666 and is repeatedly ranked among the world's top universities. The University has around 45 000 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.

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



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