



LUND  
UNIVERSITY

# MSc in Applied Computational Science, Biology

LUND UNIVERSITY | SWEDEN

- Master of Science, Major Applied Computational Science with specialisation in Biology
- 2 years, full-time, 120 ECTS credits
- Centre for Mathematical Sciences
- Lund Campus
- Application deadline: January 2023
- Programme start: August 2023

## PROGRAMME OVERVIEW

This interdisciplinary education will give you in-depth knowledge in the field of computational science, but you also study advanced courses based on your subject knowledge in biology from your bachelor's degree. In addition to knowledge of theory of computational science, there will be an emphasis on obtaining knowledge about the practical tools that are used by professionals in the field and you will amongst several things train your skills in programming. You will get generic knowledge and skills of importance for computationally intensive jobs such as problem formulation, information search, data processing, scientific writing, and presentation techniques.

The programme has five separate specialisations: Environmental Science, Biology, Geology, Physical Geography and Chemistry. You will study several courses together with students from another track than your own and there are possibilities to do common projects and thesis work. During your studies, an interdisciplinary perspective is emphasized and you will even study together with students from mathematics and physics.

The education has a strong connection to research. You will meet and be taught by active and internationally well recognized researchers, and you will be in contact with several research groups. You will at the same time be prepared for a career in business and industry.

For programme details, full entry requirements, application steps and selection, visit the programme web page: [www.lunduniversity.lu.se/applied-computational-science-biology](http://www.lunduniversity.lu.se/applied-computational-science-biology)

## PROGRAMME MODULES/COURSES

In the first year of the biology specialisation, you will start studying courses in bioinformatics focusing on data handling and programming. You will also do a course in basic mathematics that will give you knowledge to conduct projects in computational science. Then you will have the possibility to go deeper into biology and ecosystem modelling, courses that builds on your bachelor exam.

The second year your study courses in "modelling in computational science" and "reproducible data science and statistical

learning" as well as courses in "modelling biological systems" and "data handling and analysis of biological data". The last semester is reserved for the master's thesis.

## CAREER PROSPECTS

After graduation, there are several different career paths depending on which subject profile you have chosen. The Master's programme gives you a solid ground for postgraduate education in natural sciences. You can also choose a career path outside academia and then find attractive jobs in areas where there is a need to solve computational problems both in industry and in public administration and other organisations..

## ENTRY REQUIREMENTS AND HOW TO APPLY

### Entry Requirements

Bachelor's degree of at least 180 credits, including 90 credits in science of which 15 credits must be in mathematics, 60 credits in biology and 7.5 credits in statistics. Proficiency in English equivalent to English 6/B from Swedish upper-secondary school. For details on English proficiency levels, see [www.lunduniversity.lu.se](http://www.lunduniversity.lu.se)

### How to apply

1. **Apply online:** Go to [www.lunduniversity.lu.se/applied-computational-science-biology](http://www.lunduniversity.lu.se/applied-computational-science-biology). 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:**
  - **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:** When applying for this programme, you must also submit a 'Summary Sheet' with your application. See the programme webpage for details.
3. **Pay the application fee (when applicable).**

### Selection criteria/additional info

Seats are allocated according to: Previous college/university studies (HPAV): 100 %.





### Tuition fees

Tuition fee SEK 145 000 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 CENTRE FOR MATHEMATICAL SCIENCES

The Centre for Mathematical Sciences is both part of the Faculty of Science and of the Faculty of Engineering. The Centre consists of approximately 120 employees. We carry out research and teaching in mathematics, mathematical statistics and scientific computing. The personnel of the Centre can be clustered according to different non-disjoint criteria, e.g. according to title, faculty, subject or research groups. The three administrative divisions are: Mathematics (Faculty of Science), Mathematics and Numerical Analysis (Faculty of Engineering) and Mathematical Statistics).

### ABOUT LUND UNIVERSITY

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has around 46 000 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 considered one of the most popular study locations 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 unique disciplinary range encourages boundary-crossing collaborations both within academia and with wider society, creating great conditions for scientific breakthroughs and innovations. The University has a distinct international profile, with partner universities in approximately 70 countries.

Lund University has an annual turnover of EUR 912 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.

### CONTACT

Programme webpage:  
[www.lunduniversity.lu.se/  
applied-computational-  
science-biology](http://www.lunduniversity.lu.se/applied-computational-science-biology)

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

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