

- Master of Science in Physics
- 2 years, full-time, 120 ECTS credits
- Department of Astronomy and Theoretical Physics and Department of Physics
- Lund Campus
- Application deadline: January 2021
- Programme start: August 2021

## Programme overview

Do you want to understand the inner workings of nature from a theoretical viewpoint? At the Department of Astronomy and Theoretical Physics, together with the Department of Physics in Lund, we offer a broad programme covering a wide range of topics in theoretical and mathematical physics. You can choose from studying the smallest constituents of matter and their interactions within theoretical high-energy physics, as well as nuclear and solid state physics within mathematical physics. In all cases, you will get a solid basis of theoretical knowledge needed to develop new models and to better understand how nature works.

As a Master's student, you will become part of a vibrant research community engaged in cutting-edge theoretical studies. You begin your studies by taking a number of courses, some of them general, some more specialised, and you have a lot of freedom to tailor your own studies. The programme concludes with a Master's project within one of the research groups.

## Programme modules/courses

The programme offers a wide range of courses. You can choose from more specialised courses, such as Advanced Quantum Mechanics, Astroparticle Physics and Cosmology, Quantum Field Theory, Quantum Chaos, Solid State Theory and Theoretical Nuclear Physics, as well as more general courses, such as Chaos for Science and Technology, Classical Mechanics, Computational Physics, Electromagnetism, General Relativity, Mathematical Methods of Physics and Statistical Mechanics.

At the end of the programme, you complete an individual Master's degree project corresponding to 30 or 60 ECTS credits.

For information on specialisations and elective courses, see [www.fysik.lu.se/english/education/start-studying/masters-programme](http://www.fysik.lu.se/english/education/start-studying/masters-programme).

## Career prospects

The Master of Science in Theoretical Physics will give you ample opportunities for pursuing a wide variety of careers depending on your specialisation. Whereas many students go on to do a PhD in theoretical physics and related subjects, it is also possible to find suitable careers outside academia, for example in the fields of information and communication technology or energy production, where advanced programming and modelling skills are needed.

Two international research facilities create opportunities for theoretical physics graduates in Lund – MAX IV, a synchrotron radiation laboratory that opened in June 2016, and ESS, the European Spallation Source, that is currently under construction.

## Entry requirements and how to apply

### ENTRY REQUIREMENTS

A Bachelor's degree of at least 180 credits in physics or the equivalent. The degree must include at least 90 credits in physics. English Level 6 (equivalent to IELTS 6.5, TOEFL 90). 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/theoretical-physics](http://www.lunduniversity.lu.se/theoretical-physics). 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 INFORMATION

The selection will be based on grades awarded for previous academic courses, particularly qualifying courses, and the statement of purpose (from the applicant's 'Summary Sheet').

### 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 Department of Astronomy and Theoretical Physics

The Department of Astronomy and Theoretical Physics spans a very large range of research activities: theoretical particle physics, computational biology and biological physics, theoretical astrophysics, observational astronomy and research on atomic data, as well as on instrument development. We have vibrant and active research groups in all areas.

## 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](http://www.lunduniversity.lu.se)

Ask questions and follow news at

[facebook.com/lunduniversity](https://facebook.com/lunduniversity)

### CONTACT

#### Programme webpage

[www.lunduniversity.lu.se/theoretical-physics](http://www.lunduniversity.lu.se/theoretical-physics)

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