

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

Programme overview

Materials make up everything around us and their properties are critical to the performance of any system or device where they are used. Almost every aspect of modern society is touched by a technology made possible by advances in materials. Mobile phones, light-emitting diodes (LEDs), solar cells, catalytic converters, optical fibres and smart window materials are all examples of modern technology based upon tailored materials. Since the properties of a material (which determine its function) are determined both by its structure, constituents and the way that the material is assembled, the study of materials involves many different approaches. Materials science is inherently multidisciplinary and often relies on both theoretical modelling and experimental characterisation.

Lund hosts two of the world's best large-scale facilities for materials science research: The world's first 4th generation synchrotron radiation source, the MAX IV Laboratory, started operation in 2016, and the European Spallation Source (ESS) for neutron-based research is currently under construction. Education in the Master's programme in Physics, Materials Science is strongly linked to research at these two infrastructures. You will learn how to study important properties of materials by spectroscopy, diffraction and microscopy. The Master's programme is flexible and interdisciplinary, with a clear foundation in physics, and it is possible to combine theoretical or computational studies with experimental approaches.

The goal of the Master's programme is that you become a physicist who is able to apply the principles of materials science for carrying out engineering and/or research projects. The programme emphasises application of advanced technologies in materials science. The close proximity to large-scale facilities and excellent materials science research groups provides excellent opportunities for inspiring Master's thesis research projects.

Programme modules/courses

Please see www.fysik.lu.se/english/education/start-studying/masters-programme/materials-/science for details on compulsory and elective courses.

Career prospects

Materials science is an important field for a variety of areas of science and engineering and graduates will be qualified for employment in fields ranging from industry to research laboratories in areas such as electronics, communications, life sciences, energy-related materials and at facilities such as the MAX IV Laboratory or the European Spallation Source (ESS). Graduates of the programme will be well qualified for PhD programmes in physics and physical chemistry.

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 for details on English proficiency levels.





HOW TO APPLY

- 1. Apply online:** Go to www.lunduniversity.lu.se/physics-materials. Click on "Apply" and follow the instructions for the online application at 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.
 - **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 for details on tuition fees.

About the Department of Physics

The Department of Physics has over 300 researchers, teachers, technicians and administrators. We work to extend the understanding of physics and its applications, and to communicate our findings, and those of others, to new generations. We also teach the basics of physics to over one thousand students every year.

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

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CONTACT

Programme webpage

www.lunduniversity.lu.se/physics-materials

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