



LUND
UNIVERSITY

Master's Programme in Physics, Materials Science

LUND UNIVERSITY | SWEDEN

- Master of Science in Physics
- 2 years, full-time, 120 ECTS credits
- Department of Physics
- Lund Campus
- Application deadline: January 2022
- Programme start: August 2022

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 <https://www.fysik.lu.se/en/masters-programme-physics-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 em-

ployment 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.

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:** 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 info

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

Tuition fee SEK 145 000 per year for non-EU/EEA citizens. No fee for EU/EEA citizens. See www.lunduniversity.lu.se for details on tuition fees

ABOUT THE DEPARTMENT OF PHYSICS

The Departments 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 around 44 000 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 almost 70 countries.

Lund University has an annual turnover of more than EUR 880 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 European Spallation Source (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 ESS will feature the world's most powerful neutron source when it starts producing neutrons in 2023. These facilities together with the new University campus in Science Village will constitute a science complex and an international hub for research, education and innovation in which Lund University plays a central role.

CONTACT

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www.lunduniversity.lu.se/physics-materials

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Learn more at www.lunduniversity.lu.se

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