Programme overview
This programme gives you ample opportunities to interact with users of synchrotron radiation. These users come from various disciplines such as physics, chemistry, biology, medicine and geology. The Master’s programme will give you hands-on experience from an accelerator laboratory. The programme includes specialised courses in accelerator physics and synchrotron radiation-based science. The Master’s degree project is undertaken at MAX IV Laboratory, the national electron accelerator laboratory, where you will work closely with a research group. The remaining courses may be chosen from within the Faculty of Science or the Faculty of Engineering. This means that you are partly able to design your Master’s degree.

Programme modules/courses
COURSES AND NUMBER OF CREDITS: Introduction to Synchrotron Radiation Based Science (7.5), Introduction to Accelerators and Free Electron Lasers (7.5), Experimental Methods and Instrumentation for Synchrotron Radiation Research (7.5), Project in Synchrotron Radiation Based Science (7.5), Master’s degree project in Synchrotron Radiation Based Science (30), elective courses at the Faculty of Science or Faculty of Engineering (in total 60).

Career prospects
With a MSc in Synchrotron Radiation Based Science, you are well prepared for work in industries related to technology for synchrotron light sources, as well as for PhD studies in several disciplines.

Entry requirements and how to apply
ENTRY REQUIREMENTS
A Bachelor of Science or equivalent proficiency. English Level 6 (equivalent to IELTS 6.5, TOEFL 90). For details on English proficiency levels, see www.lunduniversity.lu.se.

HOW TO APPLY
1. Apply online: Go to www.lunduniversity.lu.se/synchrotron-radiation-based-science. Click on “Apply” and follow the instructions for the online application at the Swedish national application website www.universityadmissions.se. 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 submit a statement of purpose and letters of recommendation with your application. We also encourage you to fill in our Summary Sheet that can be found on the programme web page.
3. Pay the application fee (when applicable).

SELECTION CRITERIA/ADDITIONAL INFORMATION
Selection of students is based on previous academic studies and degrees with emphasis on grades in the field of technology/science, degree project (if any), letters of recommendation and statement of purpose.

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. For details on tuition, see www.lunduniversity.lu.se.
About MAX-laboratory and MAX IV

MAX-lab is a national laboratory operated jointly by the Swedish Research Council, and Lund University. The laboratory is a highly international forum. Nearly half of the scientists working at the laboratory are from foreign countries. The common language at the laboratory is English.

MAX-lab supports three distinct research areas: Accelerator Physics, research based on the use of Synchrotron Radiation and Nuclear Physics using energetic electrons. Time at the facility is shared between groups working within these three fields.

The accelerators at MAX-lab consist of three electron storage rings (MAX I, MAX II and MAX III) and one electron pre-accelerator (MAX injector). All three storage rings produce synchrotron light used for experiments and measurements in a wide range of disciplines and technologies. The MAX I ring is also used as an electrons source for experiments in nuclear physics.

MAX IV Laboratory opened in June 2016 and is the world’s foremost synchrotron radiation source. It will replace the existing laboratory. The MAX IV facility is the largest and most ambitious Swedish investment in research infrastructure and it will receive more than 2,000 scientists annually from Sweden and the rest of the world.

About Lund University

Lund University was founded in 1666 and is repeatedly ranked among the world’s top 100 universities. The University has 42 000 students and 7 400 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 programmes and courses in Scandinavia, based on cross-disciplinary and cutting-edge research. The compact university campus encourages networking and creates the conditions for scientific breakthroughs and innovations. The University has a distinct international profile, with partner universities in over 70 countries.

Lund University has an annual turnover of SEK 8 billion, of which two-thirds go to research. Our research is characterised by both breadth and strength and, according to independent evaluations, over 30 of our research fields are world-leading.

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, which was inaugurated in June 2016, 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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