



**LUND**  
UNIVERSITY

# MSc in Wireless Communication

LUND UNIVERSITY, SWEDEN

- Master of Science in Communication Systems
- 2 years, full-time, 120 ECTS credits
- Faculty of Engineering
- Lund campus
- Application deadline: January 2019
- Programme start: August 2019

## Programme overview

The Master's programme in Wireless Communication prepares students for an exciting career within a rapidly expanding industry. The Shanghai ranking (ARWU) ranks Lund University among the top 20 universities in the world in the field Electrical and Electronic Engineering for the year 2017. The University has excellent resources in the area of wireless communication and can offer students the opportunity to learn from world-leading researchers, in state-of-the-art laboratory facilities. Research and education are closely linked within the department. All of our teachers are themselves educated to PhD level or higher and are actively engaged in research.

The Wireless Communication programme focuses on the physical and lower layers of wireless communication. The aim is to give our students in-depth system knowledge, which in turn requires insights into the various components in a wireless system. The courses included in the programme all hold a high international standard.

In addition to the taught courses, all of our students undertake a research project for their Master's thesis. The project can be academic in nature, or developed within industry, and can be carried out either in Lund or abroad. These projects can sometimes lead to patent registration and successful entrepreneurial initiatives.

The programme features both theoretical and practical learning, as well as plenty of group assignments and presentations, allowing students to develop supplementary skills that further increase their attractiveness on the job market.

## Programme modules/courses

**COMPULSORY COURSES AND NUMBER OF CREDITS:** Digital Communications (7.5), An Introduction to Wireless Systems (7.5), Digital Communication – Advanced Course (7.5), Antenna Technology (7.5), Wireless Communication Channels (7.5), Network Architecture and Performance (7.5), Wireless System Design Principles (7.5), Multiple Antenna Systems (7.5), Project in Wireless Communications (7.5), Master's degree project (30), electives (22.5 in total).

## Career prospects

The programme provides students with a solid grounding for a career in wireless communication – either in industry or academia. On completion of the programme, our graduates have the necessary skills for both research and development, e.g. understanding and developing future wireless systems, developing wireless networks for special applications and understanding and enhancing existing solutions. The programme also provides an excellent foundation for PhD studies in the field, as shown by the fact that almost 40 percent of our students have continued towards a PhD degree after graduation.

The skills our alumni possess are in high demand globally, particularly within developing markets, and former students can be found all over the world. Many have found work and started their careers in Australia, China and the USA, as well as here in Lund.

The surrounding area is home to a number of global household brands such as Sony, Ericsson and Nokia. Other companies with operations close to the University include Huawei, ARM Sweden and Axis. A large proportion of students start working with these companies directly after graduation. Within the near future, we will also have new neighbours in the form of two large-scale European and international research centres – ESS and MAX IV – which will both create exciting opportunities for our students.



“The teachers are researchers as well, so we are aware of what is going on with the latest research. This close relation between education and research provides first-hand knowledge about how things are right now within industry, what is being developed in terms of trends or technology, such as 5G. Lund University is one of the most important research players in this area right now.”

Andrés Felipe García Albarracín from Colombia





## Entry requirements and how to apply

### ENTRY REQUIREMENTS

A Bachelor's degree in electrical engineering, computer engineering, information technology or equivalent. Completed courses in mathematics (including calculus, linear algebra and probability theory) of at least 30 credits/ECTS. The applicant must also have knowledge in signals and systems (including linear systems and transforms), basic programming, electromagnetic field theory and circuit theory, corresponding to at least 30 credits/ECTS. 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/wireless](http://www.lunduniversity.lu.se/wireless). Click on "Apply" and follow the instructions for the online application at the Swedish national application website [www.universityadmissions.se](http://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](http://www.universityadmissions.se)
  - **Programme-specific supporting documents:** For information on programme-specific documentation, please check the programme webpage.
- 3. Pay the application fee** (when applicable).

### SELECTION CRITERIA/ADDITIONAL INFO

The selection is based on academic qualifications.

### 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.

### CONTACT

Programme webpage

[www.lunduniversity.lu.se/wireless](http://www.lunduniversity.lu.se/wireless)

Programme Director

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## About the Faculty of Engineering

The Faculty of Engineering at Lund University (LTH) is among the leading engineering faculties in Europe with over 9,000 undergraduate students and 800 postgraduates. LTH is one of the few comprehensive engineering faculties in Sweden, and in addition to traditional engineering programmes we also offer programmes in architecture and industrial design. With a 50-year long history of research and education excellence, we are well equipped to meet the increasing global demand for more sustainable, connected and user-driven technologies, and to provide our students with the knowledge and skills they need in order to succeed within their chosen field.

## 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 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. Lund University offers one of the broadest ranges of programmes and courses in Scandinavia, based on cross-disciplinary and cutting-edge research. The University has a distinct international profile, with partner universities in over 70 countries.

Lund University has an annual turnover of SEK 8 billion, two-thirds of which are destined for research. Our eight faculties conduct strong research in many different areas, including over thirty research fields in which we are world-leading. Many scientific breakthroughs and pioneering innovations have originated from Lund University.

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

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