Mobile communication is nowadays a commodity, research is taking it to the next level Master’s programme.

Telecommunications and remote sensing systems form an integral and essential part of modern society for high speed distribution of fast increasing vast amounts of data and for the collection of essential environmental information.

New amenities like the internet, smartphones and digital TV have become available in a very short period of time. Nowadays, it is easy for anyone to exchange any type of information by wired and wireless media at any time and any place. The rise of social media has a significant impact on the bandwidth needed. Safeguarding security and privacy are important social themes, while consumers are asking for smaller and more energy-efficient devices.

Telecommunication engineers develop and manage transmission systems, protocols, networks and services for short-range applications like Wi-Fi and RFID, but also for future mobile and optical fibre networks covering the whole world. Another domain of this master is that of extremely high frequency (microwave and THz) applications and observation systems, including radar and remote sensing technologies for such varied tasks as safety scanners, weather forecasting and inspection of crops.

**Programme**
The TU Delft Master of Science Electrical Engineering offers the track Telecommunications & Sensing Systems. The track is designed for students with a Bachelor in Electrical Engineering.

When you join TU Delft’s Track in Telecommunications & Sensing Systems, you will be trained in the fundamentals to understand, develop, manage and maintain telecommunications technologies and networks as well as remote sensing systems. You will learn to advance the technologies that drive them by developing and delivering innovative applications.
I came to the Netherlands to continue my studies in the MSc Telecommunications & Sensing Systems track. I was soon impressed by the lively and stimulating atmosphere of the faculty and the existing international diversity among the students. The MSc Telecommunications & Sensing Systems track was well-organized into a comprehensive multi-disciplinary program with many different specialization tracks to choose from. The courses were well-designed to familiarize the students with the theoretical aspects of the subject as well as the cutting-edge research topics in the area accompanied by project-based assessment that encouraged group work and developed the problem-solving skills of the students. One of the interesting aspects of the program for me was the existence of a strong link between the university and the industry. After learning the fundamentals in the first-year courses, I was glad to find out there were many different possibilities to do an internship in a company. Therefore, in the second year I started working on my thesis project within a company and put the knowledge and the skills that I had learned in the first-year into practice to tackle real engineering problems. After finishing my master studies, I had the opportunity to start my PhD research in the Circuits and Systems group at TU Delft where I am working on the computational aspects of the next generation radio telescopes now.
Professor Alle-Jan van der Veen

Mobile communication is nowadays a commodity; we expect to be connected to 4G and Wifi any time and anywhere, with devices that easily fit inside our pockets and that can do much more as well. Research is taking this to the next level: think of multiantenna (MIMO) solutions that enable multi-gigabit per second data rates, the Internet of Things where nearly all objects around us are ‘connected’, and positioning systems that also work indoors. In the Circuits and Systems group, we work on the signal processing and physical layer aspects of these; we also work on underwater communication (RF and acoustic), very large phased arrays for communication and radio astronomy, cognitive radio for dynamic spectrum allocation, and satellite systems, e.g. for tracking ships and aircraft. We closely work with the radar group that has a focus on distributed radar systems using small sensor nodes, and using THz technology for security scanners. The department has excellent research facilities like a radar station on the roof, a laboratory for large network simulation, and a design lab for wireless communication. Here we recently built and tested a multi-antenna setup for separating overlapping ship transponder signals. About half our students do their thesis work with companies such as NXP, Philips, IMEC Holst Centre, Thales, KPN, as well as a range of small-size companies. The best students often have an opportunity to stay with us to do a PhD.
Admission requirements and application procedures

Dutch BSc degree
If you hold a Dutch BSc degree closely related to the Master’s programme, you will be admitted directly. However, if your undergraduate programme is not closely related to the Master’s programme you will be required to take additional courses in what is called a bridging programme. This may be a standard programme or it may be tailored to your specific situation.

To see which Master’s programmes are open to you on completion of your bachelor’s degree from a non-technical Dutch university go to www.studychoice.nl If you completed your bachelor’s at a technical university, go to www.doorstroommatrix.nl

Dutch HBO degree
An HBO Bachelor’s degree does not qualify you for direct admission to a TU Delft Master’s programme. You will first need to complete a supplementary programme in order to bring your knowledge to the required level. You can do this during your HBO programme by means of a bridging programme after completing your HBO diploma. Entrance requirements for mathematics and English (some exceptions) apply for the bridging programme.

See www.hbodoorstroom.tudelft.nl for detailed information. Applications through Studielink: www.tudelft.studielink.nl

International applicants
To be considered for admission to an MSc programme you will need to meet TU Delft’s general admission requirements.

1. A University Bachelor’s degree (or proof that you have nearly completed a Bachelor’s programme) in a main subject closely related to the MSc programme to which you are applying, with good grades on the key courses.
2. A BSc Cumulative Grade Point Average (CGPA) of at least 75% of the scale maximum
3. Proof of English language proficiency. A TOEFL (Test of English as a Foreign Language) with an overall Band score of at least 90 and a minimum score of 21 for each section. Please note that we only accept the TOEFL internet-based test. Or an IELTS (academic version) with an overall Band score of at least 6.5 and a minimum of 6.0 for each section. Or proof that you have passed the University of Cambridge ‘Certificate of Proficiency in English’ with a minimum grade B or the University of Cambridge ‘Certificate in Advanced English’

For international students, the application period starts October 1 and closes at April 1. To start an MSc application, please complete the online application and pay the refundable application fee of € 100. Next, you will receive an email with the link to upload the required documents.

For more information about the application procedure and studying at TU Delft in general, go to www.admissions.tudelft.nl

Introduction week
All international students will be welcomed with the award-winning introduction programme. The introduction consists of a variety of workshops and projects, during which you will get to know other international students, visit the highlights of Delft and learn the ins and outs of the TU Delft campus.

After this very interesting and fun week, you will be introduced to the EEMCS faculty. During the Master Kick Off, you will receive helpful information about the Dutch education system and meet the fellow students from your programme in a variety of social and educational activities.

For further information, please contact:
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