



# Master's Degree Programme in Wireless Communications Engineering (WCE)



The Master's Degree Programme in Wireless Communications Engineering is a two-year master's programme concentrating on wireless communications network technology.

As a graduate of WCE you will possess the essential knowledge on the design of wireless communications networks on the system level.

The skills provided in the Master's Degree Programme offer a solid academic training that answers to the demands of wireless communications industry.

## Content

Teaching in WCE is provided by the University of Oulu which is internationally esteemed in the field of ICT for its high-quality research and teaching.

WCE offers concise information on the essential areas and topics in wireless communications. Students are provided with core knowledge on

- information theory
- advanced wireless communication systems
- communication networks
- signal processing
- radio engineering

Graduating from WCE, you will be considered as a most eligible candidate even for the more demanding jobs in the field of telecommunications.

## Structure

The Master's Degree Programme in Wireless Communications Engineering is composed of the obligatory basic module and the advanced studies module.

Courses in the basic WCE studies module concentrate on providing students with excellent basic knowledge on wireless communications, mobile telecommunication systems, radio techniques and telecommunication signal processing.

The advanced WCE studies module aims at deepening the essential knowledge acquired in the basic studies module.

As optional courses, students can select from a wide array of master's courses allowing the student to gear specifically, e.g., towards

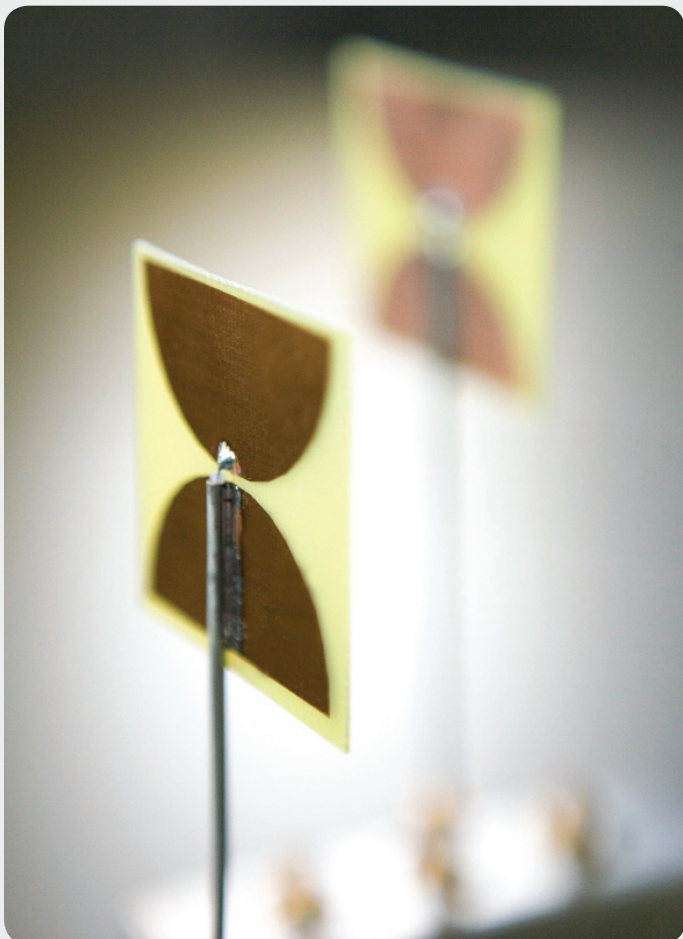
- computer networks
- electronics design
- embedded systems
- mobile applications
- multimedia mobile services
- telecommunication software

An integral part of the studies is the practical training done in industry. The objective of the training is to help students test their theoretical knowledge in practice and offer useful insights on the latest technological developments.

To finalise the two-year studies, M.Sc. thesis is written under the supervision of experts either in a university laboratory or in industry. Your thesis topic will provide you a great starting point for your future work.

Basic WCE studies module	44 ECTS
Advanced WCE studies module	33 ECTS
Optional courses	10 ECTS
M.Sc. Thesis work	30 ECTS
Practical training	3 ECTS
<b>In total</b>	<b>120 ECTS<sup>1</sup></b>

<sup>1</sup>ECTS = European Credit Transfer and Accumulation System ECTS is based on the principle that 60 credits measure the workload of a full-time student during one academic year which equals around 1500-1800 hours per year. Thus, one credit stands for 25-30 working hours.



## Admissions

The first academic year of WCE begins in early September 2012. The intake of the programme has been set to 20 students each year.

## Selection criteria

Students applying for the programme must possess an applicable B.Sc. degree in one of the following fields of study:

- communication engineering
- electrical engineering
- computer engineering

Sufficient basic knowledge is required of mathematics, programming skills, signal theory, radio engineering, radio channels, signal processing, and modulation methods. The B.Sc. degree is expected to be taken with good marks.

Students who are on their last term/semester of Bachelor's studies can apply for the WCE Master's Degree Programme. Applicants with excellent academic records can be offered a conditional study placement. Those who wish to apply during their last semester have to submit a written statement by their home institution confirming the expected date of graduation. In the case that the applicant is accepted in the Programme, he/she has to submit the Bachelor's Degree documentation in July-August 2012. The exact date will be confirmed later.

## Applications

Applications can be submitted from 21 November 2011 to 31 January 2012. Detailed instructions on the application procedure are available at:

<http://www.degree oulu.fi/admission/how-to-apply/>

## Contact

Please e-mail all questions concerning the admission and online application to [admissions.officer@oulu.fi](mailto:admissions.officer@oulu.fi) and WCE and the selection criteria to [tl-wce@ee.oulu.fi](mailto:tl-wce@ee.oulu.fi).

## More information

The Master's Degree Programme in Wireless Communications Engineering

<http://www.ee.oulu.fi/En/Admissions/Masters>

Department of Communications Engineering

<http://www.cwc.oulu.fi/>

Oulu Master's Degrees

<http://www.degree oulu.fi/>

University of Oulu

<http://www.oulu.fi/english/>

City of Oulu

<http://www.ouka.fi/english/index.asp>

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