

EE-712

Advanced microwaves for wireless communications

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Cursus	Sem.	Type
Electrical Engineering		Opt.

Language of teaching	English
Credits	4
Session	
Exam	Multiple
Workload	120h
Hours	56
Courses	28
Exercises	14
TP	14
Number of positions	20

Frequency

Every 2 years

Remark

Next time: Spring 2026

Summary

This course is intended for doctoral students using microwaves and microwave equipment during their PhD. It starts with a reminder on microwave circuit theory and continues with the main issues linked to microwaves measurement and equipment. The course includes five half days of labs.

Content

- A short summary on Microwave Network Analysis
- Microwave measurement techniques
- Terminal antenna design and optimization
- Selected examples

Keywords

Microwaves, distributed circuits, filter design, measurement.

Learning Prerequisites**Recommended courses**

Microwaves, Electromagnetism, Antennas.

Learning Outcomes

By the end of the course, the student must be able to:

Transversal skills

- Make an oral presentation.
- Summarize an article or a technical report.

Assessment methods

Term paper and project report.

Resources

Moodle Link

- <https://go.epfl.ch/EE-712>