EE-490(e) **Lab in microwaves**

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Cursus	Sem.	Type
Electrical and Electronical Engineering	MA1, MA3	Opt.
Electrical and electronic engineering minor	H	Opt.

Language of teaching	English
Credits	4
Withdrawal	Unauthorized
Session	Winter
Semester	Fall
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
TP	4 weekly
Number of positions	

Il n'est pas autorisé de se retirer de cette matière après le délai d'inscription.

Summary

This lab teaches the major measurement techniques used in microwaves

Content

- the slotted line
- microwave couplers
- time domain reflectometry
- antenna measurement
- spectrum anayser
- network analyser
- noise measurement

Keywords

microwaves, SA, VNA, slotted line, antennas

Learning Prerequisites

Required courses

electromagnetism

Recommended courses

microwaves (in parallel)

Learning Outcomes

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

- Use tn lmajor measurement techniques in microwaves
- Analyze results
- Estimate measurment precision

- Synthesize results in a report

Transversal skills

- Write a scientific or technical report.
- Collect data.
- Make an oral presentation.

Teaching methods

labs, discussions and presentations

Expected student activities

- do the experiments
- synthetize the results
- present and discuss the results
- do a report

Assessment methods

Both the work in the lab and the reports will be assessed

Resources

Websites

- https://www.epfl.ch/labs/mag/page-141487-en-html/

Moodle Link

- https://go.epfl.ch/EE-490_e