Lab in microwaves

Summary
This lab teaches the major measurement techniques used in microwaves

Content
• the slotted line
• microwave couplers
• time domain reflectometry
• antenna measurement
• spectrum analyzer
• network analyzer
• 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 the major measurement techniques in microwaves
• Analyze results
• Estimate measurement 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
• http://lema.epfl.ch/index.php/teaching/laboratories/microwave-laboratories