Linnæus University

Dnr: 2020/2817-3.1.2.2

Course syllabus

Faculty of Technology

Department of Physics and Electrical Engineering

2ED353 Mikrovågsteknik, 7,5 högskolepoäng
2ED353 Microwave technology, 7.5 credits

Main field of study
Electrical Engineering

Subject Group
Electrical Engineering

Level of classification
First Level

Progression
G2F

Date of Ratification
Approved 2015-10-05
Revised 2020-09-03 by Faculty of Technology. Prerequisites are revised.
The course syllabus is valid from autumn semester 2021

Prerequisites
At least two years of study in electrical engineering (120 credits) incl. the courses Introduction to tele and data communications 7.5 credits credits (1ED044), Signals and Systems 7.5 credits (1ED053), or the equivalent.

Objectives
The course covers the central concepts of microwave technology. The student is expected to combine knowledge of mathematics, electronics and radio science to obtain a deeper knowledge of this part of high frequency technology. Problem solving is practiced on a set of assignments.

Content
The course consists of the following topics

- Transmission line theory
- Multiports and s-parameters
- Noise and autocorrelation
- Waveguides
- Microstrip lines

Type of Instruction

Lectures and practicals.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assignments, practicals and an optional exam for higher grade.

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University.

If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

Credit Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course: 2ED053 Microwave technology, 7.5 credits

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Pozar D. M., *Microwave and RF Design of Wireless Systems*, Wiley, 2001. Pages 100 (350).