

Course Manual RFSD

RF System Design

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– General information

Long name RF System Design

Approving CModule RFSD_MaCSN

Responsible Prof. Dr. Rainer
Kronberger
Professor Fakultät IME

Valid from summer semester 2021

Level Master

Semester in the year winter semester

Duration Semester

Hours in self-study 96

ECTS 5

Professors Prof. Dr. Rainer
Kronberger
Professor Fakultät IME

Requirements No formal requirements, but students should have knowledge in High Frequency and Microwave Topics

Language English

Separate final exam Yes

Literature

Kraus & Carver Elektromagnetics, McGraw Hill, 2006.

Michale Steer, Microwave and RF Design

Final exam

Details Written Exam

Minimum standard Minimum Score 4.0

Exam Type EN Klausur

– Lecture / Exercises

Learning goals

Goal type	Description
Knowledge	RF System, Applications
Knowledge	Noise in RF systems noise classification and characterization noise calculation noise figure noise matching
Knowledge	Linear and nonlinear circuit behaviour theory nonlinearities with mixers nonlinearities with amplifiers
Knowledge	RF system components receiver components transmitter components frequency generation
Skills	Students learn how to adapt the components to each other and how to plan and design the complete system (transmitter and / or receiver)

Special requirements

High Frequency Technology

Accompanying material

lecture slides printed and in electronic form, list of problems and solutions manual as printed and electronic version

Separate exam

No

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	1
Exercises (shared course)	0
Tutorial (voluntary)	0