

Course Manual HF

High Frequency Technologies

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– General information

Long name High Frequency Technologies

Approving CModule [HF_BaET](#), [HF_BaTIN](#)

Responsible Prof. Dr. Rainer Kronberger
Professor Fakultät IME

Valid from summer semester 2022

Level Bachelor

Semester in the year summer semester

Duration Semester

Hours in self-study 60

ECTS 5

Professors Prof. Dr. Rainer Kronberger
Professor Fakultät IME

Requirements GE1-GE3, MA1, MA2

Language German

Separate final exam Yes

Literature

Meinke/ Gundlach: Taschenbuch der Hochfrequenztechnik Bd. 1-3 Springer Verlag
Zinke/ Brunwig: Hochfrequenztechnik 1, Filter, Leitungen, Antennen, Springer Verlag
Detlefsen/Siart: Grundlagen der HF-Technik. Oldenbourg Verlag

Final exam

Details Exam with ca. 80% Exercises and ca. 20% Multiple Choice

Minimum standard Minimum score 4.0

Exam Type EN Klausur

– Lecture / Exercises

Learning goals

Goal type	Description
Skills	Students will learn fundamentals in high frequency technologies in theory and application
Knowledge	Introduction to frequency range and high frequency systems Linear, passive circuits with inductances and capacitors Currents, voltages and power in passive high frequency circuits Smith-Diagram Resonance circuits and filters Transmission line theory and application Impedance transformation circuits Scattering parameters and matrices

Special requirements

Fundamentals in Math and electrical Engineering

Accompanying material	Written lecture script (150 pages) Collection of problems related to the lecture
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Separate exam	No
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Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Tutorial (voluntary)	0

– Lecture / Exercises

Learning goals

Goal type	Description
Skills	Exercises and practical work in close relationship to lecture
Knowledge	.Students will learn fundamentals in high frequency technologies in theory and application
Skills	Students will learn fundamentals in high frequency technologies in theory and application

Special requirements

Lecture

Accompanying material	Written lecture script (150 pages) Collection of problems related to the lecture
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Separate exam	No
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Expenditure classroom teaching

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