

5.6 Modul Analog Electronics II

Modulbezeichnung	Analog Electronics II
Kürzel für Stundenplan	AEII
Semester	4
Modulverantwortliche(r)	Prof. Dr. Martin Ryschka
Dozent(in)	Prof. Dr. Martin Ryschka
Sprache	Englisch
Zuordnung zum Curriculum	KIM - ISE - Pflichtmodul
Lehrform / SWS	3 V with integrated exercises, max. 30 students per group 1 Pr max. 12 students in the lab
Arbeitsaufwand	3 SWS x 16 weeks = 48 h presence, class 62 h preparation and wrap-up for class incl. exercises 1 SWS x 16 weeks = 16 h presence, laboratory 24 h preparation and wrap-up for laboratory total 150 h
Kreditpunkte	5
Voraussetzungen	Passed exam in "Bauelemente und Analoge Elektronik I" (FHL) or "EE-210 Electronic Devices and Computer Interfacing" (MSOE)
Course Objectives	Students should be able to analyze and design basic analog electronic circuits, to select the appropriate components and to calculate their quantities.
Inhalt	<p>Class</p> <ul style="list-style-type: none"> • Real Operational Amplifiers (Workload 18 h) • Stability - Oscillations • Voltage Regulators (Workload 24 h) • Active Filters (Workload 20 h) • Advanced Operational Amplifier Applications (Workload 20 h) • Phase Locked Loop <p>Laboratory</p> <ul style="list-style-type: none"> • Operational amplifier • Current sources, differential amplifier • Step-up-converter
Literatur	<ul style="list-style-type: none"> • S. Franco: Design with Operational Amplifiers and Analog Integrated Circuits, McGraw-Hill, 2006 ISBN 0-07-232084-2
Studien-/Prüfungsleistungen	Pr (Studienleistung), V (Prüfungsleistung): Klausur (120 Minuten)