Courses in English
Course Description

Department 06 Applied Sciences and Mechatronics

Course title Applied electronics

Hours per week (SWS) 4

Number of ECTS credits 5

Course objective Concepts of analog circuits for
- data acquisition
- signal amplification
- signal filtering
- regulated and switched mode power supplies
- low noise applications

Prerequisites Strongly recommended: Undergraduate courses in Electrical Engineering

Recommended reading Reinhold, Elektronische Schaltungstechnik
Horowitz, The Art of Electronics

Teaching methods Lecture & Lab class

Assessment methods Written exam, 90’. Option to improve grade by attending lab class

Language of instruction English

Name of lecturer Prof. Dr. Ulrich Menczigar

Email ulrich.menczigar@hm.edu


Course content Field effect transistors and diodes with emphasis on power electronics
Basic operational amplifier circuits
Frequency behavior of amplifier circuits
Stability of amplifier circuits
Analog filters
Circuits for power supplies (Regulators, DC/DC converters)
Noise in electronic circuits

Remarks