Name of the subject: Analog and digital technics	NEPTUN code: KEXDTBABNE	Weekly hours: 2 lec + 2 pr + 0 lab	Credit: 5 Req: Examination
Subject leader: Márk Horváth	engineering teacher	**Prerequisites:** KEXETBABNE	

Description of the subject:

Aims: The subject's aim is to understand the basic properties and applications of basic semiconductor devices and circuits such as diodes, transistors and operational amplifiers.

This course will give an overview of the basic concepts and applications of digital technics. In the course of lectures, classroom-tutorials and laboratory exercises the future technical management should acquire solid knowledge and sufficient proficiency in the functioning, operation, design and applications of digital systems.

Topics to be covered: P-N junction, diodes. Bipolar transistors. Field-effect transistors. Operational amplifiers. Fundamentals of digital technics. Logic (Boolean) algebra, logic operations and functions. Combinational logic, analysis and synthesis and implementation of logic circuits. Logic building blocks. Binary arithmetics, algorithms and circuits. Code systems, code conversion. General structure and operation of processors and computers.

Literature

Rita Lovassy: Digital Technics http://uni-obuda.hu/users/lovassyr/Lovassy_Digital_technics.pdf

Additional electronic literature will be given by teacher (found at mti.kvk.uni-obuda.hu)