

Code: IVB041AN

Location: Lecture: Wednesday 16:30-18:00; A306

Laboratory practice: Wednesday 11:15-12:45; B0027

Title of the course: Electronics 2	ECTS Credit: 4
Allotment of hours per week: lecture / seminar / laboratory practice: 2/0/2	
Requirement (exam / term mark / etc): exam	
Semester: 3	
Prerequisite Courses (<i>if any</i>): Electronics 1	
Course description: course aims, program and learning outcomes (short and informative format)	
<p><i>Course aims:</i> The aim of this course is to provide deeper understanding of structure, operation, analysis and design principles of analogue electronic circuits. Methods of electronic circuit analysis and synthesis are presented and illustrated at laboratory practice.</p> <p><i>Course program:</i> Linear circuit analysis under general excitation using Laplace transform. Differential amplifiers. Structure, ideal and real characteristics of operational amplifiers. Applications of operational amplifiers, basic circuits. Comparators, multivibrators. Logarithmic and exponential amplifiers, precision rectifiers. Analogue and switched capacitance filters. Sinwave generators. Analogue and switched mode power supplies. Digital-analogue and analogue-digital converters. Modulators, demodulators, lock-in amplifiers.</p>	
Required and recommended literature (3-5) with bibliographic data (author, title, publication data, ISBN)	
<ol style="list-style-type: none">1. U. Tietze, Ch. Schenk: Analogue and digital electronic circuits2. Ron Mancini (szerk): Op Amps for Everyone, Texas Instruments, 20023. B. Carter, T.R. Brown: Handbook of Operational Amplifier Applications, TI, 20014. Introduction to Power Supplies, National Semiconductor, 20025. K. Lacanette: A Basic Introduction to Filters, National Semiconductor, 20106. Rorabaugh Ch: Modulation and Demodulation, Springfield, 2000	
Academic in charge (name, position, highest scientific degree): János Füzi, professor, PhD	
Lecturers (name, position, highest scientific degree): Viktor Bagdán, lecturer	