

Course Syllabus

Academic year: 2018-2019

Institution	University of Petroșani
Faculty	Mechanical and Electrical Engineering
Field of study	Industrial engineering
Level	Bachelor
Program of study	Machine Building Technology

Course	Elements of electronics and automation
Code	2BB5OD40
Year of study (semester)	III (V)
Number of hours	56
Number of credits	4
Professor	Assoc. Prof., Ph.D. CASAVELA Stelian-Valentin

No.	Topic
1.	Discrete Electronic Circuit Components: Rectifier diode, stabilizer diode, bipolar transistor, field effect transistor, multi-junction devices, optoelectronic devices
2.	Functional types of electronic circuits: Rectifiers, Stabilizers, Amplifiers, Oscillators, Limitators, Circuits of derivation, Integration circuits, Tilting circuits, Variable linear voltage generators.
3.	Converters without switching: static disconnectors, alternating current converters, external switching converters, switching power supplies (inverters), direct switches with mains switching, converters with internal switching, (forced switching) : DC voltage variators, forced-frequency inverters, static frequency converters