Descriptions of courses ECTS for Automatic and robotics
Specialization - Industrial automatics
Academic Year 2018-2019

Semester III (limit ECTS - 30)

I. Obligatory Courses (limit ECTS - 30)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Foreign Language - English	30	0	30	0	0	C	2	9,1
Materials Durability	45	30	15	0	0	C	3	6,0
Physical Education	30	0	30	0	0	C	1	16,1
General Mathematics	60	30	30	0	0	E	5	11,1
Database	60	30	0	0	30	C	4	11,0
Basis of Automation and Control Theory	60	30	30	0	0	E	5	6,0
Electrotechnology and Electrical Machines	60	30	15	0	15	C	4	6,2
Basis of Machines Constructions	75	30	15	30	0	C	6	6,6

Semester IV (limit ECTS - 30)

I. Obligatory Courses (limit ECTS - 28)

Courses	no. of hours per semester	Lecture	Exercise/ practice	Project	Lab	Exam/Credit	ECTS	Course code
Foreign Language - English	30	0	30	0	0	E	2	9,1
Physical Education	30	0	30	0	0	C	1	16,1
Numerical Methods	45	15	15	0	15	E	4	11,0
Automated and Robotized Machines and manufacturing System	45	30	0	0	15	C	3	6,0
Logical Systems	45	15	15	15	0	C	3	6,0
Microprocessor Electronics and Technology	60	30	0	15	15	E	5	6,5
Basic Science of Engineering Materials	60	45	0	0	15	C	3	6,7

Automatic Control of Discrete and Continuous Processes	75	30	15	0	30	E	5	6,0
Machines Technologies	30	15	0	15	0	C	2	6,0

II. Training (limit ECTS - 2)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Training (2 weeks)						C	2	

Semester V (limit ECTS - 30)

I. Obligatory Courses (limit ECTS - 15)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Theory of Systems and Signals	75	30	15	0	30	E	5	6,0
Basics of Control of Machines and Technological Systems	30	30	0	0	0	C	2	6,0
Transport System	15	15	0	0	0	C	1	6,0
Drive Systems of Machines, Robots and Transport System	45	15	15	0	15	C	3	6,0
Basics of Fluid Mechanics	45	15	15	0	15	C	5	6,1
Ecology and Environment Management	30	30	0	0	0	C	1	7,2
English Language in Technology	15	0	15	0	0	C	1	9,0

II. Specialization Courses (limit ECTS - 15)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Diagnosis of Integrated Technology Systems	30	15	0	0	15	C	2	6
Machines Programming and Manufacturing Systems	75	30	15	15	15	E	5	6,6
Engineering Calculations Systems	45	15	0	0	30	C	4	6
Computer-Integrated Manufacturing	30	30	0	0	0	C	2	6,6
Production Control	30	15	15	0	0	C	2	6,6

Semester VI (limit ECTS - 30)

I. Obligatory Courses (limit ECTS - 9)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Artificial Intelligence in Manufacturing	30	15	0	0	15	C	2	11,4
Pneumatic and Hydraulic Automation Systems	30	15	0	0	15	C	2	6,0
Robotic Control Systems and Programming Robots	30	15	0	0	15	C	2	6,0
Design of Digital Systems	45	15	15	15	0	E	3	6,0

II. Obligatory Courses to Choose from: (limit ECTS - 2)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Computing Systems - Matlab	30	15	0	0	15	C	2	11
Computing Systems - LabView	30	15	0	0	15	C	2	11

III. Training (limit ECTS - 2)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Training (2 weeks)						C	2	

IV. Specialization Courses (limit ECTS - 17)

Courses	no. of hours per semester	Lecture	Exercise/practice	Project	Lab	Exam/Credit	ECTS	Course code
Modelling and Optimization of Automation Systems	60	30	15	0	15	E	4	6
Components, Systems and Industrial Automation Systems	60	30	0	15	15	E	4	6
Mechatronics in Production	45	15	0	15	15	C	3	6
Real-time Systems	30	15	0	0	15	C	2	6
Modelling and Optimization of Automation Systems	60	30	15	0	15	C	4	6