

COURSE CATALOGUE – MECHATRONICS

Type of Study: Undergraduate professional study

Semesters: 6

ECTS: 180

	Code	Course	Student workload (L + S + T)	ECTS credits
1st semester (Winter)	184535	Mathematics I*	45 + 0 + 45	6
	184536	Mechanics I*	30 + 0 + 45	6
	184537	Basics of Electrical Engineering I*	30 + 0 + 30	5
	286343	Programming Languages and Algorithms*	30 + 0 + 30	5
	184539	Technical Presentation Skills*	15 + 0 + 30	4
	184540	Social and communication skills*	15 + 15 + 0	2
	184541	Engineering Calculation Methods*	15 + 0 + 15	2
2nd semester (Summer)	184542	Mathematics II*	45 + 0 + 45	6
	184543	Mechanics II*	30 + 0 + 45	6
	184544	Basics of Electrical Engineering II*	30 + 0 + 30	5
	286344	Mechanics of deformable bodies*	30 + 0 + 30	5
	184546	Materials	15 + 0 + 30	3
	184547	Elements of Mechatronic Systems*	30 + 0 + 30	5
3rd semester (Winter)	206462	Thermodynamics and Fluid Mechanics *	30 + 0 + 30	6
	206487	Firmness*	30 + 0 + 30	5
	206488	Electronic Elements and Assemblies	30 + 0 + 30	5
	206489	Modelling and Simulation	30 + 0 + 30	5
	206490	Sensors*	30 + 0 + 30	5
	206491	Design in 2D*	0 + 0 + 15	2
	206497	Foreign Language I - English*	15 + 0 + 15	2
4th semester (Summer)	206498	Digital technique*	30 + 0 + 45	5
	206499	Signals and Systems	30 + 0 + 30	5
	206501	Microcomputers	15 + 0 + 30	5

	206502	Electromechanical and Electronic Converters*	30 + 0 + 30	4
	206503	Mechanisms*	30 + 15 + 15	4
	206504	Basics of Entrepreneurship*	15 + 15 + 0	2
	206505	Foreign Language II - English*	15 + 0 + 15	2
	206506	<i>Renewable Energy Sources*</i>	15 + 0 + 30	3
	206782	<i>Basics of Machines and Devices*</i>	15 + 0 + 30	3
5th semester (Winter)	217852	Robotics*	30 + 15 + 15	6
	217853	Automation of Machines and Devices	30 + 15 + 15	5
	217854	Pneumatics and Hydraulics*	30 + 0 + 30	5
	217855	Maintenance of Mechatronic Systems*	30 + 15 + 15	5
	217856	<i>PLC Control Systems*</i>	15 + 0 + 30	3
	217857	<i>Design in 3D*</i>	15 + 0 + 30	3
	217858	<i>Basics of Mechanical Operations*</i>	15 + 0 + 30	3
6th semester (Summer)	217861	Production Systems and Technologies*	30 + 0 + 30	5
	217862	Automatic Regulation	30 + 0 + 30	4
	217863	Professional Training	0 + 15 + 80	4
	217864	Communication Skills*	15 + 15 + 0	2
	217865	Final Year Project		15

L - LECTURES, S - SEMINARS, T – TUTORIALS

Elective courses in italic

** Courses with consultative teaching available in English*