

Study programme

SEMESTER 1

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Mathematics 1 (E)	CP1S01001	30	60	-	-	-	-	-	90	7
2	Technical drawing (E)	CP1S01002	15	-	-	-	45	-	-	60	5
3	Analog technology and fundamentals of electronics (E)	CP1S01003	30	15	15	-	-	-	-	60	5
4	Engineering software	CP1S01004	15	-	-	-	30	-	-	45	3
5	C programming	CP1S01005	15	-	-	-	30	-	-	45	3
6	Operating systems	CP1S01006	15	-	-	-	30	-	-	45	3
7	Occupational safety, health and ergonomics	CP1S01007	15	-	-	-	-	-	-	15	1
8	New trends in AEE and ID technologies	CP1S01008	15	-	-	-	-	-	-	15	1
	Innovative solutions for engineering problems	CP1S01009									
9	Methodology of studies	CP1S01010	30	-	-	-	-	-	-	30	2
	Development of professional career	CP1S01011									
10	Physical education 1	CP1S01012	-	30	-	-	-	-	-	30	-
		TOTAL	180	105	15	-	135	-	-	435	30

SEMESTER 2

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Mathematics 2 (E)	CP1S02001	45	45	-	-	-	-	-	90	8
2	Physics (E)	CP1S02002	30	30	-	-	-	-	-	60	5
3	Electronic components and subsystems	CP1S02003	15	-	30	-	-	-	-	45	3
4	Mechanical components and subsystems	CP1S02004	15	-	-	-	30	-	-	45	3
5	Python programming 1	CP1S02005	15	-	-	-	30	-	-	45	3
6	3D prototyping and additive manufacturing	CP1S02006	15	-	-	-	15	-	-	30	2
7	Metrology (E)	CP1S02007	15	-	30	-	-	-	-	45	4
8	Foreign language 1	CP1S02008	-	30	-	-	-	-	-	30	2
9	Physical education 2	CP1S02009	-	30	-	-	-	-	-	30	-
		TOTAL	150	135	60	-	75	-	-	420	30

SEMESTER 3

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Fundamentals of control (E)	CP1S03001	30	-	30	-	30	-	-	90	7
2	Fundamentals of robotics (E)	CP1S03002	30	30	30	-	-	-	-	90	7
3	Computer aided design 1	CP1S03003	15	-	-	-	30	-	-	45	3
4	Computer aided design 2	CP1S03004	15	-	-	-	30	-	-	45	3
5	Python programming 2	CP1S03005	-	-	-	-	30	-	-	30	2
6	Digital signal processing (E)	CP1S03006	15	-	30	-	-	-	-	45	4
7	Materials processing technologies	CP1S03007	15	-	-	-	-	-	-	15	1
8	Foreign language 2	CP1S03008	-	30	-	-	-	-	-	30	2
9	Intellectual property protection	CP1S03009	15	-	-	-	-	-	-	15	1
	Legal aspects of industry digitization	CP1S03010									
TOTAL			135	60	90	-	120	-	-	405	30

SEMESTER 4

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Automatic control (E)	CP1S04001	30	-	30	-	-	-	-	60	6
2	Fluid drive systems	CP1S04002	15	-	30	-	-	-	-	45	3
3	Electric drive systems	CP1S04003	15	-	30	-	-	-	-	45	3
4	Programming of mobile applications	CP1S04004	15	-	-	-	30	-	-	45	3
5	PLCs programming (E)	CP1S04005	30	-	45	-	-	-	-	75	7
6	Computer networks and wireless systems	CP1S04006	15	-	30	-	-	-	-	45	3
7	Sensors and measurement systems (E)	CP1S04007	15	-	-	-	30	-	-	45	3
8	Foreign language 3	CP1S04008	-	30	-	-	-	-	-	30	2
TOTAL			135	30	120	-	105	-	-	390	30

SEMESTER 5

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Programming of autonomous robots (E)	CP1S05001	15	-	30	-	-	-	-	45	4
	Applications of autonomous robots (E)	CP1S05002									
2	Programming of industrial robots (E)	CP1S05003	15	-	30	-	-	-	-	45	4
	Applications of industrial robots (E)	CP1S05004									
3	Programming of embedded systems	CP1S05005	15	-	30	-	-	-	-	45	3
4	Databases	CP1S05006	15	-	-	-	30	-	-	45	3
5	Cybersecurity	CP1S05007	15	-	15	-	-	-	-	30	2
	Security and reliability of computer systems	CP1S05008									
6	Process visualization	CP1S05009	15	-	-	-	30	-	-	45	3
7	Industrial networks 1 (E)	CP1S05010	15	-	45	-	-	-	-	60	6
8	Internet of Things	CP1S05011	15	-	30	-	-	-	-	45	3
9	Foreign language 4	CP1S05012	-	30	-	-	-	-	-	30	2
TOTAL			120	30	135	-	105	-	-	390	30

SEMESTER 6

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Robotization of industrial processes	CP1S06001	15	-	-	-	30	-	-	45	4
2	Algorithms of artificial intelligence 1 (E)	CP1S06002	15	-	-	-	30	-	-	45	4
	Algorithms of intelligent controllers (E)	CP1S06003									
3	Image processing algorithms (E)	CP1S06004	30	-	-	-	30	-	-	60	6
	Object recognition in industrial processes (E)	CP1S06005									
4	Interim team project	CP1S06006	-	-	-	30	-	-	-	30	3
5	Cloud databases	CP1S06007	15	-	-	-	30	-	-	45	3
6	Systems virtualization	CP1S06008	15	-	-	-	30	-	-	45	4
	Cyberphysical systems	CP1S06009									
7	Industrial networks 2 (E)	CP1S06010	15	-	45	-	-	-	-	60	6
TOTAL			105	-	-	30	195	-	-	330	30

SEMESTER 7

No	Course name	Course code	Hours per week							Hours per semester	ECTS credits
			L	C	LC	P	SW	FW	S		
1	Digital factory	CP1S07001	15	-	30	-	-	-	-	45	4
	Digitization of factory processes	CP1S07002									
2	Algorithms of artificial intelligence 2	CP1S07003	15	-	-	-	15	-	-	30	3
	Knowledge based control systems	CP1S07004									
3	Diploma seminar	CP1S07005	-	-	-	-	-	-	30	30	3
4	Realization of diploma thesis	CP1S07006	-	-	-	-	-	-	-	-	15
5	Vocational training*	CP1S07007	-	-	-	-	-	-	-	-	4
6	Economics	CP1S07008	15	-	-	-	-	-	-	15	1
	Organization and management	CP1S07009									
TOTAL			45	-	30	-	15	-	30	120	30

*Vocational training of at least four weeks, carried out until the end of the seventh semester.