

Technical College in Bjelovar



COURSE CATALOGUE

Professional Programme of Study in Mechatronics

Academic year 2016/17

Programme type	Undergraduate professional programme of study	
Programme title	Mechatronics	
Proposing and implementing institution	Proposing institution	Technical College in Bjelovar
	Implementing institution	Technical College in Bjelovar
Programme duration	3 years (VI semesters)	
ECTS	180	
Admission requirements	The programme of study can be entered by candidates who have finished adequate four-year secondary school education and have met all the admission requirements in accordance with the regulations set in the official announcement, which will be issued in the press. In the admission procedure students' secondary school performance and the score won on the admissions test are evaluated. Eligibility for exemption from the regular admission requirements is defined for every academic year by the Programme Council.	
Competences acquired upon completion of the programme of study	<p>Upon completion of the programme of study, bachelors of mechatronics shall have the following competences:</p> <ul style="list-style-type: none"> • Maintenance supervision in industrial plants • Company representatives for the introduction of mechatronic and similar devices • Organizing the process of manufacture of mechatronic elements and devices • Work in departments in charge of the preparation of production and maintenance of mechatronic or similar elements and devices • Entrepreneurial activity related to mechatronic and similar devices. 	
Title or degree obtained upon completion of the programme of study	Bachelor (baccalaureus / baccalaurea) of Mechatronics	

Year: 1st						
Semester: 1st						
COURSE	COURSE INSTRUCTOR	L	PS	S	ECTS	STATUS compulsory 0 elective 1
Mathematics 1	Vlado Halusek, PhD, College Professor	30	45		5	0
Fundamentals of Engineering Calculi	Vlado Halusek, PhD, College Professor		30		2	0
Mechanics1	Vlado Tropša, PhD, Assistant Professor	30	30		5	0
Fundamentals of Electrical Engineering 1	Igor Petrović, PhD, senior lecturer	30	30		5	0
IT and Application	Božidar Hršak, senior lecturer	15	30		3	0
Technical Materials	Stjepan Golubić, MSc, senior lecturer	30	30		5	0
Technical English 1 Technical German 1	Ivana Jurković, lecturer Snježana Krznarić, lecturer	15	30		2	1
Communication Skills	Tatjana Badrov, MSc, senior lecturer	15	30		3	0
Physical Education 1	Damir Lauš, lecturer	0	30		0	0
Semester: 2nd						
COURSE	COURSE INSTRUCTOR	L	PS	S	ECTS	STATUS compulsory 0 elective 1
Mathematics 2	Vlado Halusek, PhD, College Professor	30	45		5	0
MATLAB	Zoran Vrhovski, senior lecturer Alan Mutka, PhD, lecturer		30		2	0
Mechanics 2	Vlado Tropša, PhD, Assistant Professor	30	30		5	0
Fundamentals of Electrical Engineering 2	Igor Petrović, PhD, senior lecturer	30	30		5	0
Electronic Components and Assemblies	Ivan Šumiga, MSc, senior lecturer.	30	30		5	0
Fundamentals of Programming	Alan Mutka, PhD, lecturer	20	30		3	0

Technical Documentation	Tomislav Pavlic, v. pred. Božidar Hršak, senior lecturer	15	30		3	0
Technical English 2 Technical German 2	Ivana Jurković, lecturer Snježana Krznarić, lecturer	15	30		2	1
Physical Education 2	Damir Lauš, lecturer	0	30		0	0

Year: 2nd						
Semester: 3rd						
COURSE	COURSE INSTRUCTOR	L	PS	S	ECTS	STATUS compulsory 0 elective 1
Sensors	Alan Mutka, PhD, lecturer	30	30		6	0
Digital Technique	Alan Mutka, PhD, lecturer Zoran Vrhovski, senior lecturer	30	30		6	0
Elements of Precise Mechanics	Stjepan Golubić, MSc, senior lecturer	30	45		6	0
Signals and Systems	Zoran Vrhovski, senior lecturer	30	30		5	0
Technical English 3 Technical German 3	Ivana Jurković, lecturer Snježana Krznarić, lecturer	15	30		2	1
Fundamentals of Mechanical Operations	Ante Čikić, PhD, Associate Professor, College Professor	30	15		5	0
Semester: 4th						
COURSE	COURSE INSTRUCTOR	L	PS	S	ECTS	STATUS compulsory 0 elective 1
Microcomputers	Zoran Vrhovski, senior lecturer	15	30		4	0
Mechanisms	Dražan Kozak, PhD, Full Professor	15	30		4	0
Automatic Control	Zoran Vrhovski, senior lecturer	30	30		6	0
Thermodynamics and Fluid Dynamics	Ante Čikić, PhD, Associate Professor, College Professor	30	30		5	0
Electromechanical and Electronic Converters	Igor Petrović, PhD, senior lecturer	30	15		4	0

Manufacturing Technologies	Ivan Samardžić, PhD, Full Professor Antun Stojić, PhD, Full Professor	30	30		5	0
Tehnički English 4 Technical German 4	Ivana Jurković, lecturer Snježana Krznarić, lecturer	15	30		2	1

Year: 3rd						
Semester: 5th						
COURSE	COURSE INSTRUCTOR	L	PS	S	ECTS	STATUS compulsory 0 elective 1
Computer Control and Process Control	Zoran Vrhovski, senior lecturer	30	30		5	0
Pneumatics and Hydraulics	Tomislav Pavlic, senior lecturer	30	30		5	0
Applied Robotics	Tomislav Pavlic, senior lecturer	30	30		5	0
Quality Management	Stjepan Golubić, MSc, senior lecturer	15	15		3	0
Labview Graphical Programming	Zoran Vrhovski, senior lecturer Alan Mutka, PhD, lecturer	30	30		5	0
Professional practice 1	Stjepan Golubić, MSc, senior lecturer		80		3	0
Elective: Automation of Machines and Devices 1	Igor Petrović, PhD, senior lecturer	15	30		4	1
Elective: Virtual Design of Mechatronic Systems	Tomislav Pavlic, senior lecturer	15	30		4	1
Semester: 6th						
COURSE	COURSE INSTRUCTOR	L	PS	S	ECTS	STATUS compulsory 0 elective 1
Mechatronic System Maintenance	Ivan Samardžić, PhD, Full Professor	30	15		4	0
Elective: Automation of Machines and	Igor Petrović, PhD, senior	15	30		4	1

Devices 2	lecturer					
Elective: Computer-Assisted Manufacturing	Tomislav Pavlic, senior lecturer	15	30		4	1
Elective: Construction by 3D Design	Božidar Hršak, senior lecturer Tomislav Pavlic, senior lecturer	15	30		4	1
Elective: Contemporary Manufacturing Procedures	Ivan Samardžić, PhD, Full Professor	15	30		4	1
Elective: Renewable energy sources	Stjepan Golubić, MSc, senior lecturer	15	30		4	1
Professional practice 2	Stjepan Golubić, MSc, senior lecturer		140		5	0
Thesis				120	9	0