



University of Rijeka
Faculty of Engineering



**CURRICULUM
UNDERGRADUATE UNIVERSITY STUDY OF MECHANICAL ENGINEERING**

Rijeka, May 2018

1. CURRICULUM DESCRIPTION

1.1. The list of compulsory and elective courses with the number of active classes required for their performance and ECTS credits

1. semester							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Mathematics I	3	3			6	7
	Statics	3	1		1	5	6
	Materials I	2	2			4	4
	Electrical Engineering	2	1			3	5
	Computer Applications in Engineering	1		2		3	4
	Engineering Graphics	2			2	4	4
TOTAL						25	30

L - lectures, aT – auditory tutorials, IT – laboratory tutorials, dT – design tutorials.

2. semester							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Mathematics II	3	3			6	7
	Kinematics	2	2		1	5	6
	Strength of Materials I	3	2	1		6	7
	Materials II	2		1		3	5
	Modelling by Computer	2			2	4	5
TOTAL						24	30

3. semester							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Dynamics	2	2			4	5
	Fluid Mechanics	3	2			5	5
	Thermodynamics I	4	2			6	7
	Measurements and Quality Control	2			1	3	5
	Computational Methods	2		2		4	5
	Foreign Language I ¹	1	1			2	3
TOTAL						24	30

¹ elective: English or German - free choice

4. semester							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Engineering Statistics	3		1		4	5
	Machine Elements Design I	3			2	5	7
	Hydraulic Machines	2	1	1		4	5
	Production Technologies	3			1	4	5
	Foreign Language II ¹	1	1			2	3
	Professional Practice I						5
TOTAL						19	30

5. semester							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Machine Elements Design II	3			3	6	7
	Heat Engines and Devices	2	2			4	5
	Production Machines, Tools, Jigs and Fixtures	2	1	1		4	5
	Technological Processes	2	2			4	4
	Elective Project ²				3	3	5
Subject from elective group Mechanical Engineering Design:							
	Designing and Product Shaping	2			2	4	4
Subject from elective group Computational Mechanics:							
	Computational Structural Analysis	2		2		4	4
Subject from elective group Technology and Operating Management:							
	Production Planning and Control	2	1			3	4
Subject from elective group Thermal Energy and Marine Engineering:							
	Heating Systems	2	2			4	4
TOTAL						25	30

² election from list of offered projects: Computational Structural Analysis, Computer Methods, Designing and Product Shaping, Dynamics, Engineering Statistics, Fluid Mechanics, Heat Engines and Devices, Heating Systems, Hydraulic Machines, Machine Elements Design I, Machine Elements Design II, Materials I, Materials II, Production Machines, Production Planning and Control, Strength of Materials I, Technological Processes, Tools, Jigs and Fixtures.

6. semester							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Energy Systems	2	2			4	4
	Automation	2	1			3	4
	Organization and Economics of Business Systems	2	1			3	4
	Free Elective Subject ³	2	1			3	4
	Final Work						10
Subject from elective group Mechanical Engineering Design:							
	Materials Characterization	2		1		3	4
Subject from elective group Computational Mechanics:							
	Computational Engineering	2			2	4	4
Subject from elective group Technology and Operating Management:							
	Quality Assurance	2	1			3	4
Subject from elective group Thermal Energy and Marine Engineering:							
	Marine Auxiliary Machinery	2	1	1		4	4
	TOTAL					17	30

³ election from list of offered subjects

Free Elective Subjects							
	Subject title	Hours / week					ECTS
		L	aT	IT	dT	L+T	
	Computer Simulations in Engineering	1			2	3	4
	Introduction into Finite Element Method	1		2		3	4
	Energy Sources	3				3	4
	Processes of Heat Treatment	2		1		3	4
	Small Craft Building and Maintenance UN	2	1			3	4
	Technology Processes of Shipbuilding	2	1			3	4
	Basic Ship Dynamics	2	1			3	4
	Introduction to Modern Physics	2	1			3	4
	Introduction to Guidance and Control of Marine Vehicles	2		1		3	4
	Environment Protection	3				3	4

UNDERGRADUATE UNIVERSITY STUDY OF MECHANICAL ENGINEERING TOTAL	Hours 134	ECTS 180
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