

Programme structure valid from the academic year 2024/2025

programme of study: mechanical engineering
level of qualification: first-cycle
type of education: academic

Course code		Course title	l	c	lab	p/s	No. of hours	exam	ECTS credits
Semester 1									
M#2-S1-ME-101	1	Linear Algebra	15	30			45	1	4
M#2-S1-ME-102	2	Calculus	30	30			60	1	5
M#2-S1-ME-103	3	Ergonomics and OHS	15				15		1
M#2-S1-ME-104	4	Technical Drawing	15			30	45		3
M#2-S1-ME-105	5	History of Technology and Inventions	15				15		1
M#2-S1-ME-106	6	Technical Physics	15	15	15		45	1	4
M#2-S1-ME-107	7	Technical Chemistry	15		15		30		2
M#2-S1-ME-108	8	Information Technology			30		30		2
M#2-S1-ME-109	9	Fundamentals of Electrical Engineering	30	15			45		3
M#2-S1-ME-110	10	Theory of Machines	15				15		1
M#2-S1-ME-111	11	Applications of Computer Science	15		15		30		2
M#2-S1-ME-112	12	Intellectual Property Protection	15				15		1
M#2-S1-ME-113	13	Plastics and Composites	15				15		1
		Total number of hours and ECTS credits	210	90	75	30	405	3	30
Semester 2									
M#2-S1-ME-201	1	Engineering Mathematics	15	30			45	1	4
M#2-S1-ME-202	2	Foreign Language			30		30		2
M#2-S1-ME-203	3	Engineering Mechanics I	15	30	15		60	1	5
M#2-S1-ME-204	4	Plastics and Composites			30		30		2
M#2-S1-ME-205	5	3D Printing and 3D Scanning	15		30		45		3
M#2-S1-ME-206	6	Fundamentals of Metrology	15				15		1
M#2-S1-ME-208	8	Fundamentals of Electronics	15		15		30		2
M#2-S1-ME-209	9	Material Science I	15		15		30		2
M#2-S1-ME-210	10	Engineering Drawing	15			30	45		3
M#2-S1-ME-211	11	Fundamentals of Control Engineering	15	15	15		45	1	4
		Total number of hours and ECTS credits	120	75	150	30	375	3	28

Semester 3									
M#2-S1-ME-301	1	Automotive Engineering	15		15		30		2
M#2-S1-ME-302	2	Foreign Language			30		30		2
M#2-S1-ME-303	3	Fundamentals of Machining	15		15		30	1	3
M#2-S1-ME-304	4	Fundamentals of Welding	15		15		30		2
M#2-S1-ME-305	5	Engineering Mechanics II	15	30			45	1	4
M#2-S1-ME-306	6	Computer-Aided Engineering Drawing			30		30		2
M#2-S1-ME-307	7	Material Science II	30		30		60	1	5
M#2-S1-ME-309	9	Fundamentals of Metrology			15		15		1
M#2-S1-ME-310	10	Laser Technology	15		15		30		2
M#2-S1-ME-311	11	Hydraulic and Pneumatic Power and Control	15	15	15		45	1	4
M#2-S1-ME-312	12	Fundamentals of Metal Forming	15				15		1
M#2-S1-ME-313	13	Physical Education		30			30		0
		Total number of hours and ECTS credits	135	75	180	0	390	4	28
Semester 4									
M#2-S1-ME-401	1	Foreign Language			30		30		2
M#2-S1-ME-402	2	Machine Design I	30				30		2
M#2-S1-ME-403	3	Strength of Materials	15	30	15		60	1	5
M#2-S1-ME-404	4	Metrology	15	15	15		45	1	4
M#2-S1-ME-406	6	Fluid Mechanics	15	15	15		45	1	4
M#2-S1-ME-407	7	Machine Design I			30		30		2
M#2-S1-ME-408	8	Fundamentals of Casting	15		15		30		2
M#2-S1-ME-409	9	Fundamentals of Metal Forming			15		15		1
M#2-S1-ME-410	10	Physical Education		30			30		0
M#2-S1-ME-KWW-411	11	CNC Machine Tools: Design and Operation	15		15		30		2
M#2-S1-ME-KWW-412	12	Machining	15		30		45		3
		Total number of hours and ECTS credits	90	90	135	0	315	3	22
		Total number of hours and ECTS credits for KWW	30	0	45	0	75	0	5

Semester 5									
M#1-S1-ME-501	1	Foreign Language			30		30	1	3
M#1-S1-ME-502	2	Hydraulic and Pneumatic Power and Control	30	15	15		60	1	4
M#1-S1-ME-503	3	Computer-Aided Manufacturing	15		30		45		3
M#1-S1-ME-504	4	Fundamentals of Machine Design II	15	15	15	15	60	1	5
M#1-S1-ME-505	5	Computer-Aided Design I			30		30		2
M#1-S1-ME-KWW-506	6	Machining	30		30		60	1	5
M#1-S1-ME-KWW-507	7	CNC Machine Tools: Design and Operation	30		15		45		3
M#1-S1-ME-KWW-508	8	Metal Forming	15		15		30		2
M#1-S1-ME-KWW-509	9	Fundamentals of Metal Forming Design	15		30		45		3
		Total number of hours and ECTS credits	60	30	120	15	225	3	17
		Total number of hours and ECTS credits for KWW	90	0	90	0	180	1	13
Semester 6									
M#1-S1-ME-601	1	Fundamentals of Machine Design III	15			30	45	1	4
M#1-S1-ME-602	2	Thermodynamics I	15	15	5		35		2
M#1-S1-ME-603	3	Internship					0		4
M#1-S1-ME-604	4	Pre-Final Project				15	15		1
M#1-S1-ME-KWW-605	5	Metrology for Manufacturing	15	15			30		2
M#1-S1-ME-KWW-606	6	Fundamentals of CAD and CAM	15		15	30	60		4
M#1-S1-ME-KWW-607	7	Cutting Tools	15		15	30	60	1	5
M#1-S1-ME-KWW-608	8	Advanced Manufacturing	15			15	30		2
M#1-S1-ME-KWW-609	9	Metal Forming Machinery	30		30		60		4
M#1-S1-ME-KWW-610	10	Computer-Aided Design for Metal Forming	15			15	30		2
		Total number of hours and ECTS credits	30	15	5	45	95	1	11
		Total number of hours and ECTS credits for KWW	105	15	60	90	270	1	19
Semester 7									
M#1-S1-ME-701	1	Quality Engineering	15			15	30	1	3
M#1-S1-ME-704	4	Fundamentals of Mechatronics	15		15		30		2
M#1-S1-ME-705	5	Environmental Management and Ecology	15				15		1
M#1-S1-ME-706	6	Thermodynamics II	15		15		30	1	3
M#1-S1-ME-709	9	Heat Transfer and Fluid Flow Systems	15	15			30		2
		Total number of hours and ECTS credits	75	15	30	15	135	2	11

ME - Mechanical Engineering
KWW - Computer-Aided Manufacturing

l - lecture
c - class
lab - laboratory class
p/s - project/seminar