

I LEVEL REGULAR STUDIES MECHANICS and MACHINE BUILDING (W10-MBMP-000A-OSIW7) specjalność: MECHANICAL ENGINEERING DESIGN

etap

II-MBM-MEC	W	C	L	P	S	2I-MBM-MEC	W	C	L	P	S	3I-MBM-MEC	W	C	L	P	S	4I-MBM-MEC	W	C	L	P	S	5I-MBM-MEC	W	C	L	P	S	6I-MBM-MEC	W	C	L	P	S	7I-MBM-MEC	W	C	L	P	S																								
						Essential of Management (Podstawy zarządzania)																																																											
						1 W10MBM-SI3071	15																																																										
						Block of humanistic courses																																																											
						1 MBM-SI2W-MEC1	15																																																										
						Theory of Machines (Maszynoznawstwo)						Programming in MATLAB (Informatyka podst.program. Matlab)					2 W10MBM-SI3084	30					Fundamentals of Materials Strength (Podstawy wytrzymałości materiałów)					1 W10MBM-SI3094	15																																				
Ergonomy and Safety (Ergonomia i BHP)						Engineering Graphics: Engineering Drawing (Grafika inż.-zapis konstr.)					2 W10MBM-SI3077	15						Statistics for Engineers (Statystyka inżynierska)					1 W10MBM-SI3085	15			1 W10MBM-SI3085	15					Industrial Metrology (Metrologia przemysłowa)					1 W10MBM-SI3095	15				Computer Aided Machine Design I (Modelowanie komputerowe w projektowaniu)					1 W10MBM-SI3103	15																
1 W10MBM-SI3072	15					1 W10MBM-SI3078	15			2 30		1 W10MBM-SI3085	15			1 15		1 W10MBM-SI3095	15					1 W10MBM-SI3103	15																																								
Fundamentals of metrology (Podstawy metrologii)						Engineering Materials Technology (Technol.materiałów inż.)					2 W10MBM-SI3079	15		2 15		2 30	Engineering Graphics 3D (Grafika inżynierska 3D)					2 W10MBM-SI3086	30				Drive Systems (Układy napędowe pojazdów)					1 W10MBM-SI3096	15		1 15		Vehicle Engineering (Budowa pojazdów samochodowych)					3 W10MBM-SI3104	30			Computer Aided Machine Design II (Modelowanie komputerowe w projektowaniu)					3 W10MBM-SI3111	30			Legal aspects of engineering activities (Uwarunkowania prawne działalności inżyniera)					1 W10MBM-SI3120	15		1 15		
1 W10MBM-SI3073	15					2 W10MBM-SI3079	15			2 15		2 W10MBM-SI3086	30			2 30		1 W10MBM-SI3096	15		1 15			1 W10MBM-SI3104	30				3 W10MBM-SI3111	30				3 W10MBM-SI3111	30				1 W10MBM-SI3120	15		1 15																							
Engineering Graphics: Descriptive Geometry (Grafika inż.-geom.wykr.)						Thermodynamics (Termodynamika techniczna)					2 W10MBM-SI3080	30		2 15		2 30	Fluid Mechanics (Mechanika płynów)					2 W10MBM-SI3087	30		1 15		Fundamentals of Machine Design I E (Podstawy konstrukcji maszyn I)					3 W10MBM-SI3097	30		2 15	2 30	Trybology (Podstawy tribologii)					2 W10MBM-SI3105	15		2 15	Offroad Vehicles Engineering (Inżynieria pojazdów przemysłowych)					2 W10MBM-SI3112	30		2 30	1 15	Production System Organisation (Podstawy organizacji produkcji)					2 W10MBM-SI3121	30			
1 W10MBM-SI3074	15			2 30		2 W10MBM-SI3080	30			2 15		2 W10MBM-SI3087	30		1 15		3 W10MBM-SI3097	30		2 15	2 30		2 W10MBM-SI3105	15		2 15		2 W10MBM-SI3112	30		2 30	1 15	2 W10MBM-SI3121	30																															
Information Technologies (Technologie informacyjne)						Fundamentals of Materials Science (Podstawy materiałoznawstwa)					2 W10MBM-SI3081	30		2 15		2 30	Materials Science E (Materiałoznawstwo II)					3 W10MBM-SI3088	30		2 15		Theory of Mechanisms and Manipulators E (Teoria mech.i manip.)					2 W10MBM-SI3098	30		2 30		Hydraulic, Hydrotronic and Pneumatic Systems (Hydros. ukl.nap.)					1 W10MBM-SI3106	15		1 15	Hydraulic Drive Systems E (Napęd hydrauliczny)					2 W10MBM-SI3113	30		2 30	1 15	Polymers in Engineering (Tworzywa sztuczne konstrukcyjne)					3 W10MBM-SI3122	30			
2 W10MBM-SI3075	30					2 W10MBM-SI3081	30			2 15		3 W10MBM-SI3088	30		2 15		2 W10MBM-SI3098	30		2 30		1 W10MBM-SI3106	15		1 15		2 W10MBM-SI3113	30		2 30	1 15	3 W10MBM-SI3122	30																																
Chemistry (Chemia)						Mechanics I (Mechanika I)					2 W10MBM-SI3082	30		2 30		2 30	Mechanics II E (Mechanika II)					2 W10MBM-SI3089	30		2 30		Geometric Metrology (Metrologia wielkości geometrycznych)					1 W10MBM-SI3099	15		1 15		Finite Elements Method (Metoda elementów skończonych)					1 W10MBM-SI3107	15		2 30	Internal Combustion Engines (Silniki spalinowe)					1 W10MBM-SI3114	15		1 15	Vehicles Loading Modelling (Modelowanie obciążeń pojaz. samoch.)					2 W10MBM-SI3123	15		2 15		
2 W10MBM-SI3076	30					2 W10MBM-SI3082	30			2 30		2 W10MBM-SI3089	30		2 30		1 W10MBM-SI3099	15		1 15		1 W10MBM-SI3107	15		2 30		1 W10MBM-SI3114	15		1 15		2 W10MBM-SI3123	15		2 15																														
Linear Algebra with Analytic Geometry B E (Algebra liniowa z geometrią analityczną B)						Ecology (Ekologia)					1 W10MBM-SI3083	15				1 30	Polymers I (Tworzywa sztuczne)					2 W10MBM-SI3090	30		1 15		Chipless Processes -Plastic Forming (Techn. wytw.-przerób.plast.)					2 W10MBM-SI3100	15		1 15		Fundamentals of Machine Design II E (Podstawy konstrukcji maszyn II)					2 W10MBM-SI3108	30		3 30	Carrying Structures (Ustroje nośne)					1 W10MBM-SI3115	15		2 30	Selectable Courses					2 MBM-SI7W-MEC1	15				
2 W13MBM-SI3004	30			15		1 W10MBM-SI3083	15				1 30	2 W10MBM-SI3090	30		1 15		2 W10MBM-SI3100	15		1 15		2 W10MBM-SI3108	30		3 30		1 W10MBM-SI3115	15		2 30		2 MBM-SI7W-MEC1	15																																
Mathematical Analysis 1A E (Analiza matematyczna 1A)						Electrical Engineering (Elektrotechnika)					2 W05MBM-SI3003	30				2 15	Electrical Engineering (Elektrotechnika)					1 W05MBM-SI3004			1 15		Chipless Processes -Welding Metallurgy (Techniki wytw.-spaw.)					2 W10MBM-SI3101	15		1 15		Selectable Courses (Blok wybieralny)					1 MBM-SI5W-MEC1			1 15	Safety of machines and technological processes E (Bezpiecz.masz.i proc.technol.)					2 W10MBM-SI3116	15		1 15	Fundamentals of Exploitation and Repair (Podst.eksploat. i remon. masz.)					2 W10MBM-SI3124	30		1 15		
5 W13MBM-SI3005	30			3		2 W05MBM-SI3003	30				2 15	1 W05MBM-SI3004			1 15		2 W10MBM-SI3101	15		1 15		1 MBM-SI5W-MEC1			1 15		2 W10MBM-SI3116	15		1 15		2 W10MBM-SI3124	30		1 15																														
Physics 1A E (Fizyka 1A)						Elements of Mathematical Analysis E (Elementy analizy matematycznej 2)					2 W13MBM-SI3006	15		2 15		2 15	Chipless Processes -Casting (Techniki wytwarzania - odlewnictwo)					2 W10MBM-SI3091	15		2 15		Strength of Materials E (Wytrzymałość materiałów)					2 W10MBM-SI3102	30		2 15		Fundamentals of Automatic Control E (Podstawy automatyki)					2 W10MBM-SI3109	30		2 30	Manufacturing Systems CNC (Maszyny technologiczne CNC i roboty)					1 W10MBM-SI3117	15		1 15	1 15										
3 W11MBM-SI3002	30			2		2 W13MBM-SI3006	15			2 15	2 W10MBM-SI3091	15		2 15		2 W10MBM-SI3102	30		2 15		2 W10MBM-SI3109	30		2 30		1 W10MBM-SI3117	15		1 15	1 15	1 W10MBM-SI3125	15																																	
Basic physics laboratory (Laboratorium podstaw fizyki)						Electronics (Elektronika)					2 W12MBM-SI3002	30				2 30	Fundamentals of Materials Strength (Podstawy wytrzymałości materiałów)					2 W10MBM-SI3092	30		1 15		Sport (Zajęcia sportowe)					0 SWF-S00001			0 30	Manufacturing Processes - Machining E (Tech.wytw.-obr.ubyt.)					2 W10MBM-SI3110	45		2 30	Introduction to diploma dissertation (Wstęp do pracy dyplomowej)					2 W10MBM-SI3118			3 15	Thesis, Seminar (Seminarium dyplomowe)					1 W10MBM-SI3126			1 15			
2 W11MBM-SI3003				15		2 W12MBM-SI3002	30				2 30	2 W10MBM-SI3092	30		1 15		0 SWF-S00001			0 30	2 W10MBM-SI3110	45		2 30		2 W10MBM-SI3118			3 15	1 W10MBM-SI3126			1 15																																
Block of humanistic courses						Sport (Zajęcia sportowe)					0 SWF-S00001					0 30	Ordinary Differential Equations (Równania różniczkowe zwyczajne)					1 W10MBM-SI3093	15		1 15		Foreign Language A1/A2/B1/B2.1/C1.1 (Języki obce)					2 SJO-SI0001			2 60	Foreign Language B2.2/C1.2 (Języki obce)					3 SJO-SI0002			3 60	Professional Training (praktyka)					3 W10MBM-SI3119			3 12	Thesis: Final Engineering project (praca dyplomowa)					12 W10MBM-SI3127			12 15			
2 MBM-SI1W-MEC1	30					0 SWF-S00001					0 30	1 W10MBM-SI3093	15		1 15		2 SJO-SI0001			2 60	3 SJO-SI0002			3 60	3 W10MBM-SI3119			3 12	12 W10MBM-SI3127			12 15																																	
30	ECTS	19	9	2	0	0	0	0	0	30	ECTS	19	4	5	2	0	0	30	ECTS	13	4	8	5	0	0	30	ECTS	13	3	7	7	0	0	30	ECTS	9	0	6	8	1	6	30	ECTS	13	0	1	3	1	12																
330	L.godz.	225	90	15	0	0	0	405	L.godz.	255	45	45	30	0	405	L.godz.	195	75	60	75	0	420	L.godz.	150	75	105	60	0	420	L.godz.	180	60	90	90	0	345	L.godz.	120	0	90	105	15	225	L.godz.	150	0	15	30	15	15															

razem	W	C	L	P	S	inne	ECTS	210
	1275	345	420	390	30	90		
	2550							

program obowiązuje od roku akad. 2023/2024

Block of humanistic courses	Block of humanistic courses
-----------------------------	-----------------------------

Selectable Courses

MBM-SI1W-MEC1		MBM-SI2W-MEC1	
Introduction to Philosophy (Wstęp do filozofii)		Intellectual Property Law (Ochrona własności intelektualnej)	
	2		1
W08MBM-SI3002	30	W10MBM-SI3129	15
Military technology in armed conflicts		Patent and copyright	
	2		1
W10MBM-SI3128	30	W08MBM-SI3003	15

MBM-SI7W-MEC1	
Biomedical Engineering	
	2
W10MBM-SI3149	15
Technique in Medicine	
	2
W10MBM-SI3150	15

Selectable Courses
MBM-SI5W-MEC1

W10MBM-SI3130	FEM analysis of strongly nonlinear applications in the MSC.MARC package
W10MBM-SI3131	3D Engineering Graphics - SolidWorks
W10MBM-SI3132	Dimensional and shape inspection with GOM Inspect and Solidw
W10MBM-SI3133	Computer-aided manufacturing in the CAD-CAM
W10MBM-SI3134	Solid and surface modeling in CATIA
W10MBM-SI3135	Numerical modelling
W10MBM-SI3136	Engineering calculations with usage of spreadsheet
W10MBM-SI3137	Geometry modelling and drawing creation with PTC Creo Parametric (formerly Pro/Engineer)
W10MBM-SI3138	Planning high speed machining with Inventor HSM
W10MBM-SI3139	Designing injection moulding and die casting tools in Solidworks
W10MBM-SI3140	Computer Aided Design of heavy machinery assemblies (Inventor, AutoCAD)
W10MBM-SI3141	Solving mechanics problems using Abaqus
W10MBM-SI3142	Design techniques in solidworks
W10MBM-SI3143	Creating technical drawings in Solidworks
W10MBM-SI3144	Advanced functions and programming in Microsoft Excel
W10MBM-SI3145	Advanced methods of modeling and analysis in CAD / FEM systems
W10MBM-SI3146	Managing configurations and building parameterized libraries with Solidworks and Microsoft Excel
W10MBM-SI3147	Advanced Computer Aided Engineering in the Catia system
W10MBM-SI3148	Computer analysis of measurements data