

Stamp of Institute / Faculty

KAZIMIERZ WIELKI UNIVERSITY
STUDY PLAN No. NP-Mt/A-2026/2027

Faculty of Mechatronics
study programme: Mechatronics
leading discipline: mechanical engineering
educational profile: general academic
level of study: first-cycle
mode of study: part-time

Study plan effective from the academic year 2026/2027

Module name	Number of ECTS credits	Lecture (L) assessment form		Assessment form for ex., con., lab., proj., sem. (i)			Total hours	Class hours						Distribution of teaching hours									
		EXAM after year	GRADED CREDIT after year	EXAM after year	GRADED CREDIT after year	CREDIT after year		L	other					YEAR I		YEAR II		YEAR III		YEAR IV		YEAR V	
									ex.	con.	lab.,proj	sem.	internship	Number of teaching hours: per week (summer and winter semester of 15 weeks each) / per semester									
		L	i	L	i	L		i	L	i	L	i	L	i	L	i							
No.	TOTAL:	210					1654	675	234	72	504	9	160	189	198	180	216	153	207	313	198	0	0
CORE SUBJECT MODULES																							
1	Mathematics I	5	1		1		36	18	18					18	18								
2	Mathematics II	5		1		1	36	18	18					18	18								
3	Introduction to Mechatronics (e)	3		1		1	18	9		9				9	9								
4	Engineering Materials	6	2	1		1,2	54	27	18		9			18	18	9	9						
5	Engineering Drawing + CAD (e)	6	1			1	45	18	9		18			18	27								
6	Programming (e)	6		1,2		1,2	45	27			18			18	9	9	9						
7	Mechanics I	5	1			1	36	18	18					18	18								
8	Fundamentals of Robotics (e)	5	1			1	36	18			18			18	18								
9	Electrical Engineering and Electronics	5	2			2	36	18			18					18	18						
10	Artificial Intelligence in Mechatronics (e)	3		2		2	18	9			9					9	9						
11	Fundamentals of Automation	5	1			1	36	18			18			18	18								
12	Fundamentals of Enterprise Management in ERP Systems (e)	4		2		2	27	18			9					18	9						

13	Fundamentals of Numerical Methods and FEM (e)	2		2		2		18	9	0		9				9	9							
14	Mechanics II	5		2		2		36	18	18						18	18							
15	Strength of Materials (e)	5	2			2		36	18	9		9				18	18							
16	Control Theory	5	2			2		36	18	18						18	18							
17	Theory of Machines and Mechanisms	4		2		2		27	9	18						9	18							
18	Metrology and Computer-Aided Measurement (e)	4		3		3		36	18			18						18	18					
19	Manufacturing Processes and Additive Technologies (e)	3		2		2		27	18			9				18	9							
20	Fundamentals of Machine Design	6	3			3		45	18	18		9						18	27					
21	Fluid Mechanics (e)	3	3			3		27	18	9								18	9					
22	Hydraulics and Pneumatics (e)	4		3		3		36	18			18						18	18					
23	Microprocessor Systems	4	3			3		27	9			18						9	18					
24	Computer Networks and IoT Technologies (e)	4	4			4		36	18			18								18	18			
25	Embedded Systems and IoT (e)	4	4			4		36	18			18								18	18			
26	Programmable Logic Controllers	4	3			3		27	9			18						9	18					
27	Technological Process Design (e)	3		4		4		18	9	0		9								9	9			
28	Design and Control of Robotic Systems (e)	4		4		4		36	18	9		9								18	18			
29	CNC Machines and CAM (e)	3		4		4		36	9	9		18								9	27			
30	Operation of Mechatronic Systems (e)	2		4		4		27	9			18								9	18			
31	Diploma Seminar	2					4	9					9								9			
32	Foreign Language	8			2	1		72			72				36		36							
33	Physical Education	0					2,3	36		36							18		18					
Total:		137						1107	477	225	72	324	9	0	153	189	153	198	90	126	81	117	0	0
ELECTIVE MODULES Block I: Unmanned Systems Engineering																								
1	Mobile Platform Programming	4		3		3		18	9			9						9	9					
2	Computer-Aided Design CAD (e)	4		2		2		18	9			9				9	9							
3	Monographic Lecture. Characteristics and Operation of Unmanned Systems (e)	4		2,3,4				27	27							9		9		9				
4	Aerodynamics and Flight Mechanics (e)	4		2		2		18	9			9				9	9							
5	Fundamentals of Digital Signal and Image Processing (e)	5	4			4		36	18			18								18	18			
6	Drives and Control of Unmanned Systems (e)	5		4		4		36	18			18								18	18			
7	3D Printing in Prototyping (e)	4		3		3		36	18			18								18	18			
8	Design of Unmanned Platforms	4	3			3		27	9			18								9	18			
9	Mechatronic Team Project I	5		3		3		36	18			18								18	18			

10	Mechatronic Sensor Systems (e)	4		4		4		18	9			9							9	9								
11	Mechatronic Team Project II	3		4		4		18	9			9							9	9								
12	Specialisation Diploma Laboratory	17				3,4		45				45						18		27								
Total:		63						333	153	0	0	180	0	0	0	0	0	27	18	63	81	63	81	0	0			
ELECTIVE MODULES Block II: Mechatronics in Production Systems																												
1	Computer-Aided Engineering (e)	7		2,3		2,3		36	18			18						9	9	9	9							
2	Monographic Lecture. Modern Production Systems (e)	4		2,3,4				27	27									9		9		9						
3	Production Process Automation	4		2		2		18	9			9						9	9									
4	Mechatronic System Design	6	3			3		36	18			18								18	18							
5	Control of Automated Production Systems (e)	5		4		4		36	18			18										18	18					
6	Sales, Distribution and Production in ERP Systems (e)	5		4		4		36	18			18										18	18					
7	Digital Signal and Image Processing in Production Engineering	4	3			3		27	9			18								9	18							
8	Mechatronic Team Project I	4		3		3		36	18			18								18	18							
9	Sensor and Measurement Systems in Mechatronics (e)	4		4		4		18	9			9										9	9					
10	Mechatronic Team Project II	3		4		4		18	9			9										9	9					
11	Specialisation Diploma Laboratory	17				3,4		45				45										18		27				
Total:		63						333	153	0	0	180	0	0	0	0	0	27	18	63	81	63	81	0	0			
HUMANITIES AND SOCIAL SCIENCES MODULES																												
1	Fundamentals of Entrepreneurship (e)	2		1		1		27	18	9					18	9												
2	Humanities Subjects (e)	2		1				18	18						18													
3	Law and Intellectual Property Protection (e)	1		4				9	9													9						
Total:		5						54	45	9	0	0	0	0	36	9	0	0	0	0	0	9	0	0	0			
INTERNSHIP / PLACEMENT																												
1	Professional Internship	5					4	160							160										160			
Total:		5						160				0		160	0	0	0	0	0	0	0	0	0	0	160	0	0	0
Number of exams per semester:															5	5	3											

introductory classes – 15 hours in semester I comprising:
 introductory classes – health and safety training: 4 hours
 introductory classes – library training: 1 hour
 introductory classes – career planning: 5 hours

introductory classes – student rights training: 2 hours
introductory classes – anti-discrimination training: 1 hour
introductory classes – university organisation and academic etiquette: 2 hours

classes conducted via e-learning – (e)

Total number of ECTS credits obtained:

in classes requiring direct participation of academic teachers and students: 106 ECTS credits
in elective classes: 63 ECTS
in classes conducted using distance learning techniques and methods: 99 ECTS credits
for humanities and social sciences classes: 5 ECTS credits
for internship: 5 ECTS, to be completed by the end of the 4th year
in modules related to practical professional preparation ECTS (for the practical profile)
in modules related to scientific research in the field of science/art related to the study programme: 159 ECTS credits (for the general academic profile)

Percentage share of ECTS credits for each discipline (applies to programmes assigned to more than one discipline):

discipline mechanical engineering – 90% of total ECTS credits
discipline information and communication technology – 10% of total ECTS credits

Study plan in accordance with the Resolution of the Senate of Kazimierz Wielki University No 58/2025/2026 of 26 may 2026

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Student Government

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Vice-Rector for Education

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Dean / Institute Director

* delete as appropriate