



AGH

AGH UNIVERSITY OF SCIENCE
AND TECHNOLOGY

Faculty of: Mechanical Engineering and Robotics

Field of study: Mechatronics with English as instruction language

Study level: First-cycle studies

Form and type of study: Full-time studies

Annual: 2013/2014

Lecture language: English

Code	Module name	Lectures	Auditorium classes	Laboratory classes	Project classes	Conversation seminar	Seminar classes	Practical classes	Others	Fieldwork classes	Workshops	E-learning	ECTS	E
Semester 1														
Engineering														
RMS-1-103-s	Basic of informatics	28	0	28	0	0	0	0	0	0	0	0	4	Yes
Mathematics														
RMS-1-101-s	Mathematics	90	90	0	0	0	0	0	0	0	0	0	18	Yes
Non-technical														
RMS-1-106-s	Sports 1	0	0	0	0	0	0	0	0	0	30	0	0	No
Other Basic														
RMS-1-102-s	Chemistry	30	0	30	0	0	0	0	0	0	0	0	6	Yes
Economy													2	
The rules for selecting groups/modules: Student selects one subject from the block														
RMS-1-104-s	Basics of marketing	30	0	0	0	0	0	0	0	0	0	0	2	No
RMS-1-105-s	Macroeconomy	30	0	0	0	0	0	0	0	0	0	0	2	No
Suma ECTS													30	
Semester 2														
Engineering														
RMS-1-202-s	Object oriented programming	14	0	28	0	0	0	0	0	0	0	0	3	Yes
RMS-1-205-s	Manufacturing processes	14	14	0	0	0	0	0	0	0	0	0	2	No
RMS-1-206-s	Engineering drawing	26	0	0	45	0	0	0	0	0	0	0	5	No

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Non-technical														
RMS-1-203-s	Sports 2	0	0	0	0	0	0	0	0	0	15	0	0	No
Other Basic														
RMS-1-204-s	Fundamentals of material science	36	0	24	0	0	0	0	0	0	0	0	4	Yes
Physics														
RMS-1-201-s	Physics	60	45	15	0	0	0	0	0	0	0	0	12	Yes
RMS-1-207-s	Mechanics 1	28	28	0	0	0	0	0	0	0	0	0	4	No
Suma ECTS													30	
Semester 3														
Engineering														
RMS-1-302-s	Control theory fundamentals	28	20	14	0	0	0	0	0	0	0	0	6	Yes
RMS-1-303-s	Electronic circuits	28	0	14	14	0	0	0	0	0	0	0	5	No
RMS-1-304-s	Strength of materials	28	20	14	0	0	0	0	0	0	0	0	6	Yes
Mathematics														
RMS-1-306-s	Numerical methods and statistics	28	14	14	0	0	0	0	0	0	0	0	5	No
Non-technical														
RMS-1-307-s	Sports 3	0	0	0	0	0	0	0	0	0	15	0	2	No
Physics														
RMS-1-301-s	Mechanics 2	28	28	0	0	0	4	0	0	0	0	0	6	Yes
Foreign language 1														
The rules for selecting groups/modules: Student selects one module from the block														
RMS-1-305-s	Język francuski B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 1/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-308-s	Język hiszpański B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 1/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-309-s	Język niemiecki B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 1/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-310-s	Język rosyjski B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 1/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-312-s	English B2 course - compulsory course of 150 hours for students of MECHATRONICS with ENGLISH as the instruction language at the Faculty of Mechanical Engineering and Robotics - semester 1/4	0	45	0	0	0	0	0	0	0	0	0	0	No
Suma ECTS													30	
Semester 4														
Engineering														
RMS-1-401-s	Fundamentals of design of mechanisms in mechatronic devices	48	0	14	39	0	0	0	0	0	0	0	9	Yes
RMS-1-402-s	Basics of mechatronics	14	0	30	15	0	0	0	0	0	0	0	5	Yes

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RMS-1-403-s	Process engineering	14	0	26	0	0	0	0	0	0	0	0	3	No
RMS-1-404-s	Control theory	48	28	28	0	0	0	0	0	0	0	0	10	Yes
Foreign language 2														
The rules for selecting groups/modules: Student selects one module from the block														
RMS-1-405-s	Język francuski B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 2/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-408-s	Język hiszpański B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 2/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-409-s	Język niemiecki B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 2/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-410-s	Język rosyjski B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 2/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	45	0	0	0	0	0	0	0	0	0	0	No
RMS-1-412-s	English B2 course - compulsory course of 150 hours for students of MECHATRONICS with ENGLISH as the instruction language at the Faculty of Mechanical Engineering and Robotics - semester 2/4	0	45	0	0	0	0	0	0	0	0	0	0	No
Object oriented programming 1														
The rules for selecting groups/modules: Student selects one subject from the block													3	
RMS-1-406-s	Object oriented programming languages	14	0	28	0	0	0	0	0	0	0	0	3	No
RMS-1-407-s	Modeling of object oriented software	14	0	28	0	0	0	0	0	0	0	0	3	No
Suma ECTS													30	
Semester 5														
Engineering														
RMS-1-501-s	Actuating, sensing and control mechatronic systems	65	0	60	44	0	0	0	0	0	0	0	14	Yes
RMS-1-502-s	Virtual prototyping in design	14	0	42	0	0	0	0	0	0	0	0	4	No
Foreign language 3														
The rules for selecting groups/modules: Student selects one module from the block														
RMS-1-503-s	Język francuski B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 3/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	0	No
RMS-1-506-s	Język hiszpański B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 3/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	0	No
RMS-1-507-s	Język niemiecki B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 3/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	0	No
RMS-1-508-s	Język rosyjski B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 3/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	0	No

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RMS-1-510-s	English B2 course - compulsory course of 150 hours for students of MECHATRONICS with ENGLISH as the instruction language at the Faculty of Mechanical Engineering and Robotics - semester 3/4	0	30	0	0	0	0	0	0	0	0	0	0	No
Robotics														
The rules for selecting groups/modules: Student selects one subject from the block													12	
RMS-1-504-s	Industrial robots	52	0	39	30	0	0	0	0	0	0	0	12	Yes
RMS-1-505-s	Service robots	52	0	39	30	0	0	0	0	0	0	0	12	Yes
Suma ECTS													30	
Semester 6														
Engineering														
RMS-1-601-s	Mechatronic design	14	0	0	45	0	0	0	0	0	0	0	4	Yes
RMS-1-602-s	Identification and signals analysis	14	0	30	10	0	0	0	0	0	0	0	4	Yes
RMS-1-603-s	Software engineering	14	0	15	15	0	0	0	0	0	0	0	3	No
RMS-1-604-s	Computer aided manufacturing	14	0	28	10	0	0	0	0	0	0	0	3	No
Artificial intelligence in engineering														
The rules for selecting groups/modules: Student selects one module from the block													3	
RMS-1-608-s	Neural networks and fuzzy systems in engineering	14	0	28	0	0	0	0	0	0	0	0	3	No
RMS-1-609-s	Genetic and evolutionary algorithms in engineering	14	0	28	0	0	0	0	0	0	0	0	3	No
Foreign language 4														
The rules for selecting groups/modules: Student selects one module from the block													6	
RMS-1-605-s	Język francuski B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 4/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	6	Yes
RMS-1-612-s	Język hiszpański B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 4/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	6	Yes
RMS-1-613-s	Język niemiecki B-2 - kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 4/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	6	Yes
RMS-1-614-s	Język rosyjski B-2 – kurs obowiązkowy 150 godzin dla studiów inżynierskich - semestr 4/4 dla kierunku MECHATRONICS with ENGLISH as the instruction language (WIMiR)	0	30	0	0	0	0	0	0	0	0	0	6	Yes
RMS-1-616-s	English B2 course - compulsory course of 150 hours for students of MECHATRONICS with ENGLISH as the instruction language at the Faculty of Mechanical Engineering and Robotics - semester 4/4	0	30	0	0	0	0	0	0	0	0	0	6	Yes
Information techniques in mechatronics														
The rules for selecting groups/modules: Student selects one subject from the block													3	
RMS-1-610-s	Computer networks and databases	14	0	28	0	0	0	0	0	0	0	0	3	No
RMS-1-611-s	Information techniques in engineering practice	14	0	28	0	0	0	0	0	0	0	0	3	No
Vision systems and techniques														
The rules for selecting groups/modules: Student selects one subject from the block													4	
RMS-1-606-s	Vision systems	20	0	30	0	0	0	0	0	0	0	0	4	No

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RMS-1-607-s	Vision techniques	20	0	30	0	0	0	0	0	0	0	0	4	No
Suma ECTS													30	
Semester 7														
Engineering														
RMS-1-701-s	Apprenticeship	0	0	0	0	0	0	0	0	0	0	0	4	No
Thesis														
RMS-1-702-s	Diploma seminar	0	0	0	0	0	14	0	0	0	0	0	1	No
RMS-1-703-s	Bachelor engineering thesis preparation	0	0	0	0	0	0	0	0	0	6	0	15	No
Block of elective foreign language modules													4	
The rules for selecting groups/modules: Student selects one subject from the block.														
RMS-1-713-s	CAD/CAE Systems	14	0	14	0	0	0	0	0	0	0	0	4	Yes
RMS-1-714-s	Surface engineering	28	0	10	4	0	0	0	0	0	0	0	5	Yes
RMS-1-715-s	Transport engineering	28	0	14	0	0	0	0	0	0	0	0	5	Yes
RMS-1-716-s	Materials news	14	0	0	0	0	14	0	0	0	0	0	4	Yes
RMS-1-717-s	Materials for energy systems and aeronautics	28	0	14	0	0	0	0	0	0	0	0	5	Yes
RMS-1-718-s	Energy and environment	20	0	22	0	0	0	0	0	0	0	0	5	Yes
RMS-1-719-s	Compilation theory	14	0	14	0	0	0	0	0	0	0	0	4	Yes
RMS-1-720-s	Computer vision	14	0	14	0	0	0	0	0	0	0	0	4	Yes
RMS-1-721-s	Modern computer architectures	28	0	0	0	0	0	0	0	0	0	0	4	No
RMS-1-722-s	UNIX administration	14	0	14	0	0	0	0	0	0	0	0	4	Yes
Block of specialty elective modules													4	
The rules for selecting groups/modules: Student may not choose both Operation of mechatronic devices and Systems of mechatronic devices monitoring. May not also choose both Experimental methods in testing of mechatronics systems and Composite structures and their applications														
RMS-1-704-s	Experimental methods in testing of mechatronics systems	10	0	20	0	0	0	0	0	0	0	0	2	No
RMS-1-705-s	Operation of mechatronic devices	10	0	0	10	0	10	0	0	0	0	0	2	No
RMS-1-706-s	Systems of mechatronic devices monitoring	10	0	0	10	0	10	0	0	0	0	0	2	No
RMS-1-711-s	Composite structures and their applications	10	0	20	0	0	0	0	0	0	0	0	2	No
RMS-1-712-s	Foreign industrial internship	0	0	0	0	0	0	0	0	0	0	0	4	No
Enterprise and management													1	
The rules for selecting groups/modules: Student selects one subject from the block														
RMS-1-708-s	Management engineering	10	0	0	0	0	10	0	0	0	0	0	1	No
RMS-1-710-s	Enterprise	10	0	0	0	0	10	0	0	0	0	0	1	No
Law and intellectual property in technology													1	
The rules for selecting groups/modules: Student selects one subject from the block														
RMS-1-707-s	Law in technology	10	0	0	0	0	10	0	0	0	0	0	1	No
RMS-1-709-s	Intellectual property in technology	10	0	0	0	0	10	0	0	0	0	0	1	No
Suma ECTS													30	