

PLAN OF STUDIES

FACULTY OF MECHANICAL AND POWER ENGINEERING

MAIN FIELD OF STUDY: Mechanical Engineering and Machine Building

EDUCATION LEVEL: 2nd level, magister inżynier

FORM OF STUDIES: part-time

PROFILE: general academic

SPECIALIZATION: Engineering of Aviation

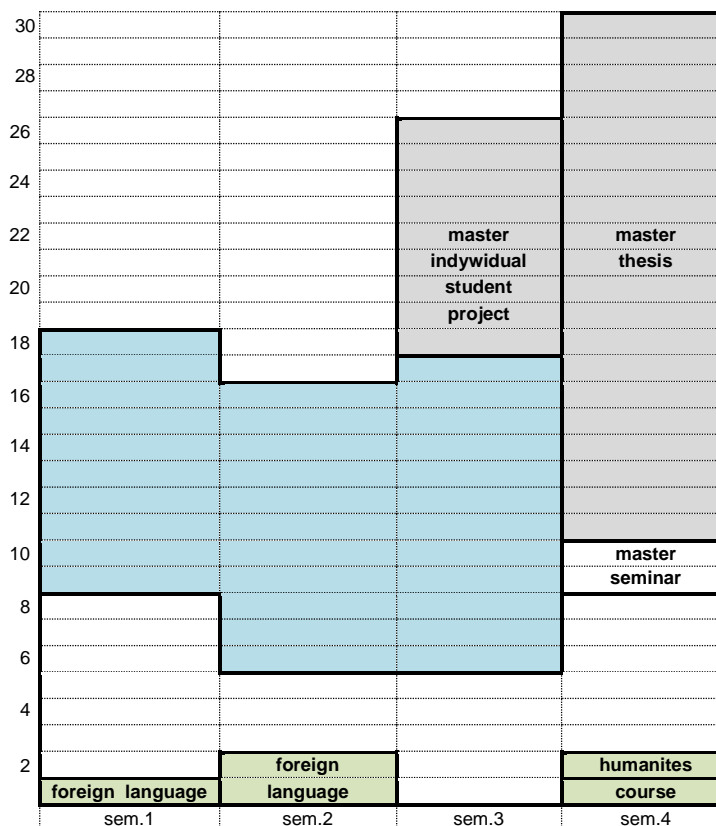
LANGUAGE OF STUDY: polish

Faculty Council Resolution of 29.09.2012

In effect since 1.10.2012

Edited adjustment_April 2014

Plan of studies structure in point layout



General education optional courses
Directional obligatory courses
Directional optional courses
Specialization optional courses

¹BK – number of ECTS points assigned to hours of classes requiring direct contact of teachers with students

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1. Set of obligatory and optional courses and groups of courses in semestral arrangement

Semester 1

Obligatory courses number of ECTS points 7

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	MNN0590	Mechatronics and Control Systems	1,07					K2MBM_W01	16	90	3	1,5	T	E			K	Ob
2	MNN0590	Mechatronics and Control Systems			1,07			K2MBM_U01 K2MBM_K02 K2MBM_K03 K2MBM_K04	16	60	2	1,5	T	Z		P	K	Ob
3	MNN0532	Mechanics analytical	1,6					K2MBM_W03	24	60	2	1	T	Z			K	Ob
Total			2,67		1,07				56	210	7	4						

Optional courses (minimum 104 hours in semester, 11 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	JZL100655BK	Foreign language (continuation), level B2+		0,53				K2MBM_U08	8	30	1	0,75	T	Z	O	P	KO	W
2	MNN0951	Design of propulsion units	1,07					S2ILO_W01	16	60	2	1	T	E			S	W
3	MNN0951	Design of propulsion units		1,07				S2ILO_U01	16	30	1	0,75	T	Z		P	S	W

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4	MNN0951	Design of propulsion units				0,53		S2ILO_U02	8	30	1	0,75	T	Z		P	S	W
5	MNN0060	Structure of aircrafts	1,07					S2ILO_W02	16	60	2	1	T	Z			S	W
6	MNN0060	Structure of aircrafts		0,53				S2ILO_U03	8	30	1	0,75	T	Z		P	S	W
7	MNN0841	Bases of the theory of oscillation	1,07					S2ILO_W03	16	60	2	1	T	E			S	W
8	MNN0841	Bases of the theory of oscillation		1,07				S2ILO_U05	16	30	1	0,75	T	Z		P	S	W
Total			3,21	3,20		0,53			104	330	11	6,75						

Altogether in semester

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes ¹
lec	cl	lab	pr	sem				
5,88	3,20	1,07	0,53		160	540	18	10,75

Semester 2

Obligatory courses number of ECTS points 3

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	MNN1382	Modern engineering materials	1,07					K2MBM_W02	16	30	1	0,5	T	Z			K	Ob

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2	MNN1382	Modern engineering materials			1,07			K2MBM_U02	16	30	1	0,75	T	Z		P	K	Ob
3	MNN1363	Modern engineering materials					0,53	K2MBM_U06	8	30	1	0,75	T	Z		P	K	Ob
Total			1,07		1,07		0,53		40	90	3	2						

Optional courses (minimum 120 hours in semester, 13 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	JZL10065BK	Foreign language (second), any level		2,13				K2MBM_U09	32	60	2	1,5	T	Z	O	P	KO	W
2	MNN1391	Selected problems on fluid mechanics	0,53					S2ILO_W04	8	30	1	0,5	T	Z			S	W
3	MNN1391	Selected problems on fluid mechanics		0,53				S2ILO_U06	8	30	1	0,75	T	Z		P	S	W
4	MNN1391	Selected problems on fluid mechanics			0,53			S2ILO_U07	8	30	1	0,75	T	Z		P	S	W
5	MNN0181	Flight dynamics and aeroelasticity of aircrafts	1,07					S2ILO_W05	16	60	2	1	T	E			S	W
6	MNN0181	Flight dynamics and aeroelasticity of aircrafts				1,07		S2ILO_U08	16	60	2	1,5	T	Z		P	S	W
7	MNN0601	Numerical methods in design of constructions				2,13		S2ILO_U09	32	120	4	3	T	Z		P	S	W
Total			1,6	2,66	0,53	3,2			120	390	13	9						

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Altogether in semester

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes ¹
lec	cl	lab	pr	sem				
2,67	2,66	1,6	3,2	0,53	160	480	16	11

Semester 3

Obligatory courses number of ECTS points 5

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	MNN0672	Modelling and Optimization	1,07					K2MBM_W04	16	60	2	1	T	E			K	Ob
2	MNN0672	Modelling and Optimization			1,6			K2MBM_U03	24	90	3	2,25	T	Z		P	K	Ob
Total			1,07		1,6				40	90	5	3,25						

Optional courses (minimum 194 hours in semester, 21 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	MNN1490	Master individual student project					6,00	K2MBM_U07 K2MBM_K01 K2MBM_K04 K2MBM_K05	90	270	9	1	T	Z		P	K	W

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⁴University-wide course / group of courses – enter O

⁵Practical course / group of courses – enter P. For the group of courses – in brackets enter the number of ECTS points assigned to practical courses

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2	MNN0911	Aviation law	0,53					S2ILO_W06	8	30	1	0,5	T	Z			S	W
3	MNN0911	Aviation law					0,53	S2ILO_U10	8	30	1	0,75	T	Z		P	S	W
4	MNN1301	Durability and reliability of aircraft	1,07					S2ILO_W07	16	60	2	1	T	Z			S	W
5	MNN1660	Aircraft power systems	0,53					S2ILO_W08	8	30	1	0,5	T	Z			S	W
6	MNN1660	Aircraft power systems				0,53		S2ILO_U04	8	30	1	0,75	T	Z		P	S	W
7	MNN0551	Helicopter flight mechanics	1,07					S2ILO_W09	16	60	2	1	T	Z			S	W
8	MNN0551	Helicopter flight mechanics		1,07				S2ILO_U11	16	30	1	0,75	T	Z		P	S	W
9	MNN0551	Helicopter flight mechanics				0,53		S2ILO_U12	8	30	1	0,75	T	Z		P	S	W
10	MNN1461	Safety management in aviation	1,07					S2ILO_W10	16	60	2	1	T	Z			S	W
Total			4,27	1,07		7,06	0,53		194	630	21	8						

Altogether in semester

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes ¹
lec	cl	lab	pr	sem				
5,34	1,07	1,6	7,06	0,53	234	720	26	11,25

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Semester 4

Obligatory courses number of ECTS points 8

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	MNN1520	Master Seminar					1,07	K2MBM_U07 K2MBM_K01 K2MBM_K03 K2MBM_K04 K2MBM_K05	16	60	2	1,5	T	Z		P	K	Ob
2	MNN0032	Analysis of turbomachinery damages	1,07					K2MBM_W05 K2MBM_K05	16	60	2	1	T	Z			K	Ob
3	MNN0032	Analysis of turbomachinery damages			0,53			K2MBM_U04	8	30	1	0,75	T	Z		P	K	Ob
4	MNN1437	Integrated Production Systems	1,6					K2MBM_W06	16	60	2	1	T	Z			K	Ob
5	MNN1437	Integrated Production Systems			1,07			K2MBM_U05	16	30	1	0,75	T	Z		P	K	Ob
Total			2,67		1,6		1,07		72	240	8	5						

Optional courses (minimum 16 hours in semester, 22 ECTS points)

No.	Course/group of courses code	Name of course/group of courses (denote group of courses with symbol GK)	Weekly number of hours					Field-of-study educational effect symbol	Number of hours		Number of ECTS points		Form ² of course/group of courses	Way ³ of crediting	Course/group of courses			
			lec	cl	lab	pr	sem		ZZU	CNPS	total	BK classes ¹			university-wide ⁴	practical ⁵	kind ⁶	type ⁷
1	MNN1550	Master Thesis						K2MBM_U07 K2MBM_K01 K2MBM_K04 K2MBM_K05	600	20	4		T	Z		P	K	W

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2	ZNN100200BK	Management Course	0,53					K2MBM_W08	8	30	1	0,5	T	Z	O		KO	W
3	HNN100200BK	Humanities course	0,53					K2MBM_W07 K2MBM_K02	8	30	1	0,5	T	Z	O		KO	W
Total			1,06						16	630	22	5						

Altogether in semester

Total number of hours					Total number of ZZU hours	Total number of CNPS hours	Total number of ECTS points	Number of ECTS points for BK classes ¹
lec	cl	lab	pr	sem				
3,73		1,6		1,07	96	870	30	10

2. Set of examinations in semestral arrangement

Course code	Names of courses ending with examination	Semester
MNN0590	1. Mechatronics and Control Systems	1
MNN0841	2. Bases of the theory of oscillation	
MNN0951	3. Design of propulsion units	
MNN0181	1. Flight dynamics and aeroelasticity of aircrafts	2
MNN0672	1. Modelling and Optimization	3

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3. Numbers of allowable deficit of ECTS points after particular semesters

Semester	Allowable deficit of ECTS points after semester
1	8
2	13
3	0

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