

THE “MECHANICAL ENGINEERING – PROJECT-ORIENTED APPLIED PROGRAMME” INFORMATION

Basic information

Programme title	Mechanical Engineering – Project-Oriented Applied Programme
Programme features	
Type	Higher professional degree
Study level (cycle)	First cycle
KLASIUS-SRV	Professional higher education (first Bologna cycle)/professional higher education degree (first Bologna cycle) (16203)
ISCED	• Technics (52)
KLASIUS-P	• Mechanical engineering (5211)
M KLASIUS-P-16	• Metallurgy, mechanical engineering and metalwork (0715)
Frascati	• Technical sciences (2)
SOK level	SOK level 7
EOK level	EOK level 6
EOVK level	First cycle
Fields/modules/courses of study	<ul style="list-style-type: none"> • Energy engineering (course of study) • Process engineering (course of study) • Design of machines and devices (course of study) • Design of industrial systems (course of study) • Production technologies (course of study) • Process engineering (course of study) • Mechatronics (course of study) • Airline transport pilot (course of study) • Aircraft design and maintenance (course of study)
Member of the University of Ljubljana	• Faculty of Mechanical Engineering, Aškerčeva 6, 1000 Ljubljana, Slovenia
Duration (years)	3
Number of ECTS credits per year	60
Modes of study	Full-time study, part-time study

Key objectives of the programme

The first key objective of the accredited study programme is to address the needs and preferences of the national economy and, therefore, the students' needs to acquire the necessary competencies that will ensure immediate employability upon completion of the study programme. Accordingly, the programme aims to: i.) provide the graduate with suitable fundamental engineering knowledge and the necessary practical knowledge in the field of mechanical engineering, thus ensuring suitable employability; ii.) make it possible for the graduate to comprehend the gained knowledge in the field of mechanical engineering; iii.) ensure sufficient breadth of knowledge in the wider field of mechanical engineering to provide the graduate with the aptitude for multidisciplinary collaboration with experts from other fields.

The second key objective of the accredited study programme is to uphold the principles of the Bologna Declaration, the European University Association (EUA), the European Federation of National Engineering Associations (FEANI) and the German accreditation agency ASIIN. By providing a wide range of courses to choose from and mobility, the programme enables graduates to acquire skills and employment qualifications that are comparable across Europe. Accordingly: i.) the graduate can obtain an education that is comparable to similar study programmes in Central and Western Europe; ii.) the student is able to transfer to another similar undergraduate study programme at home or abroad using a transfer credit statement for completed study requirements; iii.) conditions are provided for good study mobility of students, including conditions for transitioning between study programmes and the use of a teaching method that encourages regular studies and a system of tutoring.

Undergoing an external evaluation and obtaining an international accreditation of our first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme” from the German accreditation agency ASIIN is an acknowledgement that we are on the right track with our study programmes as well as the methodological approach used in the study process. The acquisition of the EUR-ACE certificate from the European Federation of National Engineering Associations (FEANI) for both of our study programmes is a clear recognition of the comprehensive nature of the engineering knowledge advanced by both study programmes at the UL Faculty of Mechanical Engineering in the broader European context.

In order to achieve the desired objectives of the programme to the fullest possible extent, the focus is on the following:

- We want to enable our students to acquire the necessary basic skills and to include all essential technical expertise, divided according to the courses of study, while also emphasizing the interdisciplinarity of mechanical engineering and linking and upgrading these skills in a project-oriented course of study. This way, we want to encourage our students to excel in their practical work or to continue their studies in the second-cycle study programme. Students also acquire the necessary skills of modern technical computer-aided communication and computational analysis.
- We want our students to consciously develop (through appropriate methodological approaches) their scientific critical thinking, which represents the foundation for later professional work.

General competencies (learning outcomes)

The general competencies of a graduate upon completing our first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme” are:

- the ability to apply the acquired knowledge in practical use,
- the ability to work independently using the skills of the chosen field of study,
- the ability to manage time,
- the ability to break down simple professional tasks into subtasks,
- developing the capacity for critical and self-critical thinking,
- the ability to work in a group and participate in interdisciplinary networking with experts from other fields,
- proficiency in managing a technical unit or project,
- the adaptability to changed situations at work,
- adherence to safety, functional, economic and environmental protection principles at work,
- proficiency in professional communication and writing,
- the ability to present technical issues and their solutions within their own community and beyond,
- the ability to make use of information and communication technology,
- the ability to search for sources of knowledge, selecting these sources and applying the newly acquired knowledge in their work,
- the familiarity with relevant professional terminology in English or German,
- developing professional responsibility and ethics,
- compliance with the engineering code of ethics.

Course-specific competencies (learning outcomes)

The graduate's course-specific competencies upon completing our first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme” are:

- understanding the physical laws and phenomena underpinning the functions of products and technologies,
- proficiency in the most important concepts of advanced mathematics and numerical mathematics,
- proficiency in basic technical expertise in the field of mechanical engineering and essential complementary sciences,
- familiarity with basic measuring instruments and the measurement chain for measuring basic quantities in the field of mechanical engineering,
- familiarity with the main environmental restrictions and issues,
- proficiency in independent project work,
- familiarity with certain necessary software tools for computer data processing,
- proficiency in the basic and necessary specific expertise in the chosen field of study,
- the capacity for independent development-oriented, engineering and skilled organizational work and solving

specific well-defined tasks in the field of mechanical engineering,

- specific competencies, which are listed in specific course syllabi.

The graduate of the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme” has mastered enough basic engineering skills and has acquired enough specific expertise in the chosen field of mechanical engineering to be able to further enhance and improve his knowledge and skills through subsequent practice and increase the range of eligible positions of responsibility.

Entry requirements

The prerequisite for enrolling in the first year of the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme” is completing one of the following secondary school-leaving exams:

- a) the general matura examination,
- b) the vocational matura examination as part of any available four-year secondary school programme (mechanical technician, car service technician, electrical technician, construction technician, chemical technician, marine mechanical technician, metallurgical technician, mechatronics technician, computer technician, woodworking technician, electronic communications technician),
- c) the final examination in any four-year secondary school programme.

Selection criteria in the case of admission quotas

In the case of admission quotas, candidates from point a) will be selected based on their:

- overall score in the matura examination, worth 30% of the total points awarded,
- overall academic record in the 3rd and 4th year, worth 30% of the total points awarded,
- maths academic record in the 3rd and 4th year, worth 20% of the total points awarded,
- physics academic record in the 3rd and 4th year, worth 20% of the total points awarded.

Candidates from point b) will be selected based on their:

- overall score in the vocational matura examination, worth 30% of the total points awarded,
- overall academic record in the 3rd and 4th year, worth 30% of the total points awarded,
- maths score in the vocational matura examination, worth 20% of the total points awarded,
- vocational matura score in one of the following subjects: mechanical engineering or automechatronics or electrical engineering or building construction or chemistry or marine machinery or metallurgy or mechatronics or computer science or woodworking or electronic communications, worth 20% of the total points awarded.

Candidates from point c) will be selected based on their:

- overall score in the final examination, worth 30% of the points awarded,
- overall academic record in the 3rd and 4th year, worth 30% of the total points awarded,
- maths score in the final exam or the maths academic record in the 4th year of secondary school if the candidate did not take maths in the final exam, worth 20% of the points awarded,
- physics, mechanics, or mechanical engineering score in the final exam or the academic record in these subjects in the 4th year of secondary school if the candidate did not take these subjects in the final exam, worth 20% of the points awarded.

Criteria for the recognition of knowledge and skills acquired before enrolment in the programme

Before enrolling in the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme”, the students’ previously acquired skills can be recognized as completed requirements if the content and scope of these skills correspond to the educational content of the subjects in this programme. The decision on whether or not to recognize the knowledge and skills acquired before enrolment is made by the Committee for Higher Professional Study at UL FME, based on the written application of the student, the attached written certificates and other documents proving the successfully acquired skills and the content of these skills, and in accordance with the Rules on the Procedure and Criteria for the Recognition of Informally Acquired Knowledge and Skills, adopted at the 15th meeting of the UL Senate on 29 May 2007. If the Committee for Higher Professional Study determines that the acquired knowledge can be recognized, it will be

evaluated with the same number of ECTS credits as the number of credit points for the given course and recognized as completed requirements for that course.

Methods of assessment

The methods of assessment are compliant with [the UL Statute](#) and are listed in the course syllabi.

Requirements for the progression through the programme

Conditions for progressing from first to second year of the first-cycle professional study programme

“MECHANICAL ENGINEERING – Project-Oriented Applied Programme: A student may enter the second year of study if, by the end of the academic year, he has completed the requirements of the first year as defined by the curricula in the minimum amount of 48 ECTS credits. Conditions for progressing from first to second year of the first-cycle professional study programme “MECHANICAL ENGINEERING – Project Applicative Programme are as follows: A student may enrol in the third year of study if, by the end of the academic year, he has completed the requirements for the second year in the minimum amount of 48 ECTS credits and all the requirements for the 1st year as defined by the curricula (60 ECTS credits).

Exceptionally, a student may enrol in a higher year of study even if he has not completed all the requirements stipulated in the study programme regarding enrolment in a higher year, when there are justifiable grounds for doing so, as per Article 153 of the UL Statute (maternity, prolonged illness, extenuating family and social circumstances, disability status, active participation in top professional, cultural and sporting events, active participation in the bodies of the university) or reasons pertaining to study commitments to do with parallel studies, transferring from one university to another, language difficulties (foreign students), additional commitments due to international exchange or increased workload to do with additional development and research work. The student must provide valid reasons for uncompleted requirements and submit the exam programme for the previous period when lodging his application.

Whether or not the conditions for justified grounds have been met shall be decided by a special committee, consisting of the Vice-Dean of Pedagogical Work for the first-cycle professional study programme “Mechanical Engineering – Project-Oriented Applied Programme”, the mentor of the year in which the student is enrolled and the mentor of the year in which the student wishes to enrol.

A student with above-average academic performance in his studies is allowed to progress faster. The decision on this is made by the UL FME Senate based on the candidate's application and the opinion of the UL FME Committee for Higher Professional Study. The method of faster progression shall be determined by the decision of the Senate.

A student who has not fulfilled all the requirements set by the study programme for enrolment into a higher year may repeat a year if he has earned at least 24 ECTS credits. A year can only be repeated once during the course of the studies. A student may also be able to repeat a year even if he does not fulfil the requirements referred to in the preceding paragraph if there are justified grounds for doing so (prolonged illness, extenuating family and social circumstances, study commitments to do with parallel studies, transferring from one university to another, language difficulties (foreign students), additional commitments due to international exchange or increased workload to do with additional development and research work). The student must provide valid reasons for uncompleted requirements and submit the exam programme for the previous period when lodging his application. Whether or not the conditions for justified grounds have been met shall be decided by a special committee, consisting of the Vice-Dean of pedagogical work for the first-cycle professional study programme “MECHANICAL ENGINEERING”, the mentor of the year in which the student is currently enrolled and the student's tutor.

Conditions for transferring between programmes

The transfer between programmes shall mean the termination of the student's education in the study programme in which he initially enrolled and the continuation of education in the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme”, whereby part of the requirements or all the requirements that the student has already passed as part of the initial study programme shall be deemed to have been completed. It should be noted, however, that transferring is only possible between study programmes that provide comparable competencies upon completion. Applications for a transfer to the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme” and the scope of recognized requirements within the study programme will be reviewed by the

Undergraduate Studies Committee as per Articles 181 to 189 of the UL Statute and UL FME Rules on the Conditions for Transfers Between Study Programmes.

In accordance with the Criteria for Transfers Between Study Programmes, the candidate can enrol in the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme”, provided that he is entitled to at least half of the ECTS credits from the initial study programme, pertaining to the compulsory subjects of the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme. If, during the recognition procedure, the candidate is found to be entitled to at least as many (and specifically those) credit points that are the prerequisite for enrolment in a higher year of the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme”, the candidate shall be allowed to enrol in a higher year of the first-cycle professional study programme “MECHANICAL ENGINEERING – Project-Oriented Applied Programme”.

Requirements for the completion of studies

A student is deemed to have completed his studies when he completes all the requirements prescribed by the study programme in the amount of 180 ECTS credits.

Requirements for completing individual parts of the programme, if any exist:

There are no options to complete individual parts of the study programme. The programme is implemented and treated as a whole.

Professional or scientific or artistic title (male)

- Diplomirani inženir strojništva (VS) / BSc in Mechanical Engineering (higher education)

Professional or scientific or artistic title (female)

- Diplomirana inženirka strojništva (VS) / BSc in Mechanical Engineering (higher education)

Professional or scientific or artistic title (abbreviation)

- dipl. inž. str. (VS) / BSc, Mech. Eng. (higher education)

Professional or scientific or artistic title in English including abbreviation

- Diplomirani inženir strojništva (dipl. inž. str.) / Bachelor of Applied Science (BSc, Mech. Eng.)

STUDY PROGRAMME CURRICULUM

MECHANICAL ENGINEERING - PROJECT ORIENTED APPLIED PROGRAMME

2024/2025

Name of study programme	Mechanical engineering - project oriented applied programme
Programme characteristics	
Type	higher professional
Cycle	bachelor
University of Ljubljana members	<ul style="list-style-type: none"> Faculty of Mechanical Engineering, Aškerčeva 6, 1000 Ljubljana, Slovenija

Year 1

	University Course Code	Course title	Lecturers	Contact hours					Individual student work	Total hours	ECTS	Semesters	Elective
				Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study					
1.	0562656	Analysis - PAP	Aljoša Peperko, Boštjan Gabrovšek, Janez Žerovnik	60		60			80	200	8	1st semester	no
2.	0562657	Technical physics	Rok Petkovšek	45		45			35	125	5	1st semester	no
3.	0562658	ELECTRICAL ENGINEERING AND ELECTRONICS	Marjan Jenko	30		30			40	100	4	1st semester	no
4.	0562659	METALS - PAP	Roman Šturm, Zoran Bergant	30		30			40	100	4	1st semester	no
5.	0562660	Statics and strength of materials	Miroslav Halilović	45		45			35	125	5	1st semester	no
6.	0562661	Technical drawing	Andrej Žerovnik, Robert Kunc	30		30			40	100	4	1st semester	no

7.	0562662	Ordinary differential equations and linear algebra - PAP	Aljoša Peperko, Boštjan Gabrovšek, Janez Žerovnik	45		45			35	125	5	2nd semester	no
8.	0562663	Technologies in production 1	Franci Pušavec, Joško Valentinčič	45		45			35	125	5	2nd semester	no
9.	0562664	Computer aided modelling of geometry	Leon Kos, Nikola Vukašinović	30		30			40	100	4	2nd semester	no
10.	0562665	Thermofluidics	Andrej Bombač, Božidar Šarler	45		45			35	125	5	2nd semester	no
11.	0562666	Non-metallic materials - PAP	Alen Oseli, Lidija Slemenik Perše	30		30			40	100	4	2nd semester	no
12.	0562667	General elective course 1		15		15			45	75	3	2nd semester	yes
13.	0562709	Dynamics	Gregor Čepon, Janko Slavič, Martin Česnik	30		30			40	100	4	2nd semester	no
Total				480	0	480	0	0	540	1500	60		

Year 1, General elective course 1

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562710	Engineering reporting - PAP	Franc Majdič, Miha Brojan, Nikola Vukašinović, Rok Vrabič	15		15			45	75	3	2nd semester	yes

	Total	15	0	15	0	0	45	75	3	
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The General elective course 1, valued at 3 ECTS, is chosen by the student of his/her own choice at any programme, faculty or university. The elective course offered by FS: Engineering Reporting - PAP.

Year 3, Elective courses of the general module

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562733	Development processes in Mechanical Engineering	Aljoša Peperko, Andrej Bombač, Andrej Kitanovski, Andrej Senegačnik, Boris Jerman, Božidar Šarler, Damjan Klobčar, Davorin Kramar, Drago Bračun, Edvard Govekar, Franc Majdič, Franci Pušavec, Igor Petrovič, Iztok Golobič, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevvar, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilović, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič,	90		90			170	350	14	2nd semester	yes

			Roman Šturm, Sašo Medved, Tomaž Berlec, Tomaž Kutrašnik, Tomaž Pepelnjak, Uroš Stritih										
2.	0562734	PRACTICAL TRAINING	All course holders in the programme	5					195	200	8	2nd semester	yes
Total				95	0	90	0	0	365	550	22		

Year 3, Elective courses of the general PPL/H module

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0564005	AIR NAVIGATION 2	Andrej Grebenšek	35		30			60	125	5	2nd semester	yes
2.	0564006	AVIATION MEDICINE AND PSYCHOLOGY	Žarko Finderle	70					55	125	5	2nd semester	yes
3.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
4.	0642933	General elective course 2		15		15			45	75	3	2nd semester	yes
5.	0563991	Professional elective course S01		30		30			65	125	5	2nd semester	yes
Total				180	0	105	0	0	265	550	22		

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the course Aircraft/Helicopter Traffic Pilot or by his/her own choice on any programme, any faculty or university.

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. The elective course offered by UL FS: *Interdisciplinary Project - PPLH*.

The professional elective course S01 in the amount of 5 ECTS is chosen by the student from the set of subjects: *Energy Machines and Devices - PAP or Measuring Practice*.

Year 3, Elective courses of the general SVL module

	Contact hours	
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	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0564088	Development and maintenance processes in aeronautics	Franc Majdič, Igor Petrovič, Miha Brojan, Mitjan Kalin, Roman Šturm, Tomaž Kutrašnik	30		30			90	150	6	2nd semester	yes
2.	0562734	PRACTICAL TRAINING	All course holders in the programme	5					195	200	8	2nd semester	yes
3.	0564086	Professional elective course		30		30			40	100	4	2nd semester	yes
4.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
Total				95	0	90	0	0	365	550	22		

Professional elective course in the amount of 4 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. Elective course offered by UL FS: *Aviation Documentation*.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the course Aircraft Design and Maintenance or by his/her own choice on any programme, any faculty or university.

Year 3, Elective courses of the Military module

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0642885	Military operations	Andrej Androjna	80	50	40			100	270	9	2nd semester	yes
2.	0642886	Military management, leadership and military ethics	Andrej Androjna	60	40	40			100	240	8	2nd semester	yes
3.	0642887	Military defense systems	Andrej Androjna	40	30				80	150	5	2nd semester	yes

	Total	180	120	80	0	0	280	660	22	
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Energy engineering (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0562715	MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no
8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	no

9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	no
10.	0562720	INTRODUCTION TO ACOUSTICS	Jurij Prezelj	30		30			40	100	4	2nd semester	no
11.	0562721	THERMAL AND NUCLEAR POWER SYSTEMS	Andrej Senegačnik	30		30			40	100	4	2nd semester	no
12.	0562722	EXPERIMENTAL METHODS IN ENERGY ENGINEERING	Jože Kutin, Marko Hočevár	30		30			40	100	4	2nd semester	no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester	yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
		Total		450	0	450	0	0	600	1500	60		

Professional elective course S01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other branches of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Energy Engineering field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st cycle Higher Education Professional Study Programme Mechanical Engineering - Project Application Programme with the exception of the Energy Engineering field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562725	HYDRO AND WIND ENERGY SYSTEMS	Benjamin Bizjan, Marko Hočevár	30		30			40	100	4	1st semester	no
2.	0562726	INTERNAL COMBUSTION ENGINES AND ELECTROMOBILITY	Tomaž Kutrašnik	30		30			40	100	4	1st semester	no

3.	0562727	SUSTAINABLE ENERGY TECHNOLOGIES	Mihael Sekavčnik, Mitja Mori	30		30			40	100	4	1st semester	no
4.	0562728	SYSTEMS FOR COMPRESSED GASES AND VACUUM	Jurij Prezelj	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes
8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and Professional elective course S03 in the amount of 8 ECTS are selected by the student of his/her own choice from the set of all compulsory courses of other branches of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Energy Engineering field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan	15		15			45	75	3	1st semester	yes

			Kalin, Niko Herakovič, Nikola Vukašinić, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved										
		Total		15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes
		Total		15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. Elective course offered by the FS: *Innovation in Mechanical Engineering - PAP*.

Process engineering (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič,	30		30			40	100	4	1st semester	no

			Nikola Vukašinović									
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester no
5.	0562715	MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester no
8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester no
10.	0563382	PROCESS SYSTEMS	Iztok Golobič	30		30			40	100	4	2nd semester no
11.	0563383	REFRIGERATION AND HEAT PUMPS - PAP	Andrej Kitanovski	30		30			40	100	4	2nd semester no
12.	0563384	BUILDING PHYSICS AND INDOOR ENVIRONMENT QUALITY	Ciril Arkar, Uroš Stritih	30		30			40	100	4	2nd semester no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester yes
		Total		450	0	450	0	0	600	1500	60	

The *Professional elective course S01* in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other fields of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the *Process Engineering* field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Process Engineering field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563387	COMMUNITY-INTEGRATED ENERGY SYSTEMS	Andrej Kitanovski, Ciril Arkar	30		30			40	100	4	1st semester	no
2.	0563388	WATER ENVIRONMENTAL PROCESS ENGINEERING	Iztok Golobič, Uroš Stritih	30		30			40	100	4	1st semester	no
3.	0563389	HEATING, REFRIGERATION, VENTILATION, AIR-CONDITIONING - PAP	Uroš Stritih	30		30			40	100	4	1st semester	no
4.	0577731	SOLAR ENERGY ENGINEERING	Andrej Kitanovski, Ciril Arkar	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes
8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and *Professional elective course S03* in the amount of 8 ECTS are selected by the student of his/her own choice from the set of all compulsory courses of other fields of study of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Process Engineering field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved	15		15			45	75	3	1st semester	yes
Total				15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes
Total				15	0	15	0	0	45	75	3		

General elective course 3 in the amount of 3 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. Elective course offered by the FS: *Innovation in Mechanical Engineering - PAP*.

Design of machines and devices (field of study)

Year 2

	University Course Code	Course title	Lecturers	Contact hours					Individual student work	Total hours	ECTS	Semesters	Elective
				Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study					
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0562715	MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no
8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	no

9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	no
10.	0563423	MACHINE ELEMENTS 2 - PAP	Jernej Klemenc, Marko Nagode	30		30			40	100	4	2nd semester	no
11.	0563424	Lubricants and lubrication	Mitjan Kalin	30		30			40	100	4	2nd semester	no
12.	0563425	Fundamentals of FEM analysis	Bojan Starman, Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	2nd semester	no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester	yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
Total				450	0	450	0	0	600	1500	60		

Professional elective course S01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Design of Machines and Devices field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Design of Machines and Devices field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563428	DIMENSIONING AND NORMS	Boris Jerman, Jernej Klemenc	30		30			40	100	4	1st semester	no
2.	0563429	FATIGUE DESIGN	Domen Šeruga, Jernej Klemenc, Marko Nagode	30		30			40	100	4	1st semester	no

3.	0563430	HYDRAULICS AND PNEUMATICS - PAP	Franc Majdič	30		30			40	100	4	1st semester	no
4.	0563431	Mechanisms analysis and synthesis	Robert Kunc, Simon Krašna	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes
8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and Professional elective course S03 in the amount of 8 ECTS are selected by the student of his/her own choice from the set of all compulsory courses of other fields of study of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Design of Machines and Devices field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha	15		15			45	75	3	1st semester	yes

			Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved										
		Total		15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS:
Interdisciplinary Project - PAP.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes
		Total		15	0	15	0	0	45	75	3		

General elective course 3 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS:
Innovation in Mechanical Engineering - PAP.

Design of industrial systems (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no

3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0562715	MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no
8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	no
10.	0577805	Documentation and document management system	Miha Ambrož, Robert Kunc, Samo Zupan	30		30			40	100	4	2nd semester	no
11.	0563465	Material handling equipment and systems	Boris Jerman	30		30			40	100	4	2nd semester	no
12.	0563466	SYSTEM DESIGN IN THE INDUSTRY	Jernej Klemenc, Marko Nagode	30		30			40	100	4	2nd semester	no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester	yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
Total				450	0	450	0	0	600	1500	60		

Professional elective course S01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Design of Industrial Systems field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Design of Industrial Systems field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563469	INDUSTRY HYDRAULIC SYSTEMS	Franč Majdič	30		30			40	100	4	1st semester	no
2.	0563470	MACHINE AND SURFACE DAMAGES	Mitjan Kalin	30		30			40	100	4	1st semester	no
3.	0563471	INDUSTRIAL POWER-TRAINS	Jernej Klemenc, Simon Oman	30		30			40	100	4	1st semester	no
4.	0563472	Safety of Machinery and Equipment	Boris Jerman	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes
8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	Vsi nosilci v programu		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and Professional elective course S03 in the amount of 4 ECTS are chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Design of Industrial Systems field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidiya Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved	15		15			45	75	3	1st semester	yes
Total				15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes

	Total	15	0	15	0	0	45	75	3	
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General elective course 3 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Innovation in Mechanical Engineering - PAP*.

Production technologies (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0562715	MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no

8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	no
10.	0563505	Non-traditional manufacturing processes	Andrej Lebar, Joško Valentinčič	30		30			40	100	4	2nd semester	no
11.	0563506	TESTING METHODS IN PRODUCTION	Roman Šturm, Tomaž Kek	30		30			40	100	4	2nd semester	no
12.	0563507	Assembly technology	Marko Šimic, Miha Pipan, Niko Herakovič	30		30			40	100	4	2nd semester	no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester	yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
Total				450	0	450	0	0	600	1500	60		

Professional elective course S01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Production technologies field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Production technologies field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563510	Design on forming technologies	Tomaž Pepelnjak	30		30			40	100	4	1st semester	no
2.	0563511	QUALITY ASSURANCE	Davorin Kramar	30		30			40	100	4	1st semester	no

3.	0563512	PLANNING OF MACHINING AND CAM	Davorin Kramar, Franci Pušavec	30		30			40	100	4	1st semester	no
4.	0563513	HEAT TREATMENT PLANNING	Roman Šturm	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes
8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and *Professional elective course S03* in the amount of 8 ECTS are chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Production technologies field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the General module or elective subjects of the Military module.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci,	15		15			45	75	3	1st semester	yes

			Lidija Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved										
		Total		15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes
		Total		15	0	15	0	0	45	75	3		

General elective course 3 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Innovation in Mechanical Engineering - PAP*.

Production engineering (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no

2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0562715	MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no
8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	no
10.	0563546	CONTROL AND STATISTICAL SUPERVISION IN MANUFACTURING	Drago Bračun, Edvard Govekar	30		30			40	100	4	2nd semester	no
11.	0563547	ENERGY AND MATERIAL FLOWS IN INDUSTRY	Iztok Golobič, Lidija Rihar, Tomaž Berlec	30		30			40	100	4	2nd semester	no

12.	0563548	PRODUCTION PLANNING	Tomaž Berlec	30		30			40	100	4	2nd semester	no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester	yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
		Total		450	0	450	0	0	600	1500	60		

Professional elective course S01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Production engineering field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Production engineering field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563551	PRODUCTION LEADING	Tomaž Berlec	30		30			40	100	4	1st semester	no
2.	0563552	Robotized production	Marko Šimic, Miha Pipan, Niko Herakovič	30		30			40	100	4	1st semester	no
3.	0563553	Logistics of material and resources	Marko Šimic, Mihael Debevec, Niko Herakovič	30		30			40	100	4	1st semester	no
4.	0563554	INVESTMENT ENGINEERING	Tomaž Berlec	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes

8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and *Professional elective course S03* in the amount of 8 ECTS are chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Production engineering field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved	15		15			45	75	3	1st semester	yes
Total				15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes
Total				15	0	15	0	0	45	75	3		

General elective course 3 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Innovation in Mechanical Engineering - PAP*.

Mechatronics (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0562715	MAINTENANCE	Franc Majdič,	30		30			40	100	4	1st semester	no

			Marko Polajnar, Mitjan Kalin										
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no
8.	0562718	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	no
10.	0563951	PROGRAMMABLE LOGIC CONTROLLERS	Drago Bračun	30		30			40	100	4	2nd semester	no
11.	0563952	MECHATRONIC ACTUATORS	Primož Podržaj	30		30			40	100	4	2nd semester	no
12.	0563953	PROGRAMMING FOR MECHATRONICS	Marjan Jenko	30		30			40	100	4	2nd semester	no
13.	0562723	Professional elective course S01		30		30			40	100	4	2nd semester	yes
14.	0562724	Elective course 01		30		30			40	100	4	2nd semester	yes
		Total		450	0	450	0	0	600	1500	60		

Professional elective course S01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Mechatronics field of study.

Elective course 01 in the amount of 4 ECTS is chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Mechatronics field of study or by his/her own choice at any programme, any faculty or university.

Year 3

				Contact hours									
University Course Code	Course title	Lecturers		Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective

1.	0563956	ROBOTIC SYSTEMS - PAP	Rok Vrabič	30		30			40	100	4	1st semester	no
2.	0563957	Laser technique	Matija Jezeršek	30		30			40	100	4	1st semester	no
3.	0563958	MECHATRONIC SYSTEM CONTROL	Primož Podržaj	30		30			40	100	4	1st semester	no
4.	0577649	MACHINE VISION	Drago Bračun	30		30			40	100	4	1st semester	no
5.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
6.	0562730	General elective course 3		15		15			45	75	3	1st semester	yes
7.	0562731	Professional elective course S02		30		30			40	100	4	1st semester	yes
8.	0562732	Professional elective course S03		30		30			40	100	4	1st semester	yes
9.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
10.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	300	0	70	790	1500	60		

Professional elective course S02 and *Professional elective course S03* in the amount of 8 ECTS are chosen by the student of his/her own choice from the set of all compulsory courses of other courses of the 1st Cycle Higher Education Professional Study Programme Mechanical Engineering - Project Applied Programme with the exception of the Mechatronics field of study.

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the General module or elective subjects of the Military module.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok	15		15			45	75	3	1st semester	yes

			Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved										
		Total		15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, General elective course 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering -PAP	Borut Likar	15		15			45	75	3	1st semester	yes
		Total		15	0	15	0	0	45	75	3		

General elective course 3 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Innovation in Mechanical Engineering - PAP*.

Airline transport pilot (field of study)

Year 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no

2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0563988	AIRCRAFT MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc, Nikolaj Mole	30		30			40	100	4	1st semester	no
8.	0564007	AIR LAW	Patrick Vlačič	45		15			65	125	5	2nd semester	yes
9.	0563993	Aircraft engines 1	Tomaž Katrašnik	45		15			40	100	4	2nd semester	no
10.	0563994	AEROMECHANICS AND AIRFRAMES	Andrej Greibenšek, Igor Petrović	70		35			45	150	6	2nd semester	no
11.	0563995	MECHANICS OF FLIGHT	Miha Brojan	30		30			40	100	4	2nd semester	no
12.	0563996	AERONAUTICAL METEOROLOGY	Gregor Skok	50		30			95	175	7	2nd semester	no
13.	0579419	Professional elective course 1		45		15			40	100	4	2nd semester	yes
Total				525	0	380	0	0	595	1500	60		

Year 2, Izbirni strokovni predmet 1

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0579418	AIRCRAFT INSTRUMENTATION	Andrej Grebenšek	45		15			40	100	4	2nd semester	yes
Total				45	0	15	0	0	40	100	4		

Professional elective course 1 in the amount of 4 ECTS is chosen by the student of his/her own choice on any programme, any faculty or university. Elective course offered by FS: *Aircraft instrumentation*.

Year 3

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563999	Aircraft Systems	Andrej Grebenšek	30		15			55	100	4	1st semester	no
2.	0564000	PERFORMANCE OF AIRCRAFT	Igor Petrović, Tomaž Mrlak	60		60			30	150	6	1st semester	no
3.	0564001	Aircraft engines 2	Tomaž Kutrašnik	30		30			65	125	5	1st semester	no
4.	0564002	AIR NAVIGATION 1	Andrej Grebenšek	75		60			65	200	8	1st semester	no
5.	0564003	AERONAUTICAL PHRASEOLOGY	Andrej Grebenšek	30		30			40	100	4	1st semester	no
6.	0564009	OPERATIONAL PROCEDURES OF AIRCRAFT	Tomaž Mrlak	30					45	75	3	2nd semester	no
7.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
8.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no

	Total	350	35	285	0	70	760	1500	60	
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The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module PPL/H* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0642934	Interdisciplinary project - PPLH	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved	15		15			45	75	3	2nd semester	yes
Total				15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by UL FS: *Interdisciplinary Project - PPLH*.

Year 3, Professional elective course S01

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563997	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	yes

2.	0563998	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	yes
		Total		60	0	60	0	0	130	250	10		

Professional elective course S01 in the amount of 5 ECTS the student chooses from a set of courses: *Energy Machines and Appliances - PAP* or *Measurment Practicum*.

Aircraft design and maintenance (field of study)

Year 2

	University Course Code	Course title	Lecturers	Contact hours					Individual student work	Total hours	ECTS	Semesters	Elective
				Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study					
1.	0562711	MECHATRONICS AND CONTROL TECHNOLOGY	Drago Bračun	30		30			40	100	4	1st semester	no
2.	0562712	MACHINE ELEMENTS 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	1st semester	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Nikola Vukašinović	30		30			40	100	4	1st semester	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	1st semester	no
5.	0563988	AIRCRAFT MAINTENANCE	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	1st semester	no
6.	0562716	HEAT AND MASS TRANSFER	Andrej Kitanovski	30		30			40	100	4	1st semester	no
7.	0562717	Programming basics	Bojan Starman, Janez Urevc,	30		30			40	100	4	1st semester	no

			Nikolaj Mole										
8.	0563991	Professional elective course S01		30		30			65	125	5	2nd semester	yes
9.	0563992	AIRCRAFT INSTRUMENTATION	Andrej Grebenšek	45		15			40	100	4	2nd semester	no
10.	0563993	Aircraft engines 1	Tomaž Kutrašnik	45		15			40	100	4	2nd semester	no
11.	0563994	AEROMECHANICS AND AIRFRAMES	Andrej Grebenšek, Igor Petrovič	70		35			45	150	6	2nd semester	no
12.	0563995	MECHANICS OF FLIGHT	Miha Brojan	30		30			40	100	4	2nd semester	no
13.	0564076	NON-DESTRUCTIVE TESTING IN AVIATION	Roman Šturm, Tomaž Kek	30		30			15	75	3	2nd semester	no
14.	0564077	AIRCRAFT DESIGN 1	Radivoj Kikelj	30		30			40	100	4	2nd semester	no
Total				520	0	425	0	0	555	1500	60		

Year 2, Professional elective course S01

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563997	ENERGY MACHINES AND APPLIANCES - PAP	Mihael Sekavčnik	30		30			65	125	5	2nd semester	yes
2.	0563998	Measurement practicum	Jože Kutin	30		30			65	125	5	2nd semester	yes
Total				60	0	60	0	0	130	250	10		

Professional elective course S01 in the amount of 5 ECTS the student chooses from a set of courses: *Energy Machines and Appliances - PAP* or *Measurement Practicum*.

Year 3

	Contact hours	
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	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0563999	Aircraft Systems	Andrej Grebenšek	30		15			55	100	4	1st semester	no
2.	0564000	PERFORMANCE OF AIRCRAFT	Igor Petrović, Tomaž Mrlak	60		60			30	150	6	1st semester	no
3.	0564001	Aircraft engines 2	Tomaž Kutrašnik	30		30			65	125	5	1st semester	no
4.	0563430	HYDRAULICS AND PNEUMATICS - PAP	Franc Majdič	30		30			40	100	4	1st semester	no
5.	0564084	AIRCRAFT DESIGN 2	Radivoj Kikelj	45		30			125	200	8	1st semester	no
6.	0562729	General elective course 2		15		15			45	75	3	1st semester	yes
7.	0643218	Optional contents		95		90			365	550	22	2nd semester	yes
8.	0562735	DIPLOMA THESIS	All course holders in the programme		35			70	95	200	8	2nd semester	no
Total				305	35	270	0	70	820	1500	60		

The student chooses one elective subject module in the amount of 22 ECTS, namely elective subjects of the *General module SVL* or elective subjects of the *Military module*.

Year 3, General elective course 2

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0588827	Interdisciplinary project -PAP	Božidar Šarler, Edvard Govekar, Franci Pušavec, Iztok Golobič, Janez Diaci, Lidija Slemenik Perše, Marko Nagode, Miha	15		15			45	75	3	1st semester	yes

			Boltežar, Mihael Sekavčnik, Mitjan Kalin, Niko Herakovič, Nikola Vukašinović, Robert Kunc, Rok Petkovšek, Roman Šturm, Sašo Medved										
		Total		15	0	15	0	0	45	75	3		

General elective course 2 in the amount of 3 ECTS is chosen by the student of his/her choice at any programme, any faculty or university. Elective course offered by the FS: *Interdisciplinary Project - PAP*.

Year 3, Izbirni strokovni predmet

				Contact hours									
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Semesters	Elective
1.	0577989	AVIATION DOCUMENTATION	Miha Brojan	30		30			40	100	4	2nd semester	yes
		Total		30	0	30	0	0	40	100	4		

Professional elective subject in the amount of 4 ECTS is chosen by the student of his/her own choice at any programme, any faculty or university. Optional course offered by FS: *Aviation Documentation*.