

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	<ul style="list-style-type: none"> • Technics (52)
KLASIUS-P	<ul style="list-style-type: none"> • Mechanical engineering (5211)
M KLASIUS-P-16	<ul style="list-style-type: none"> • Metallurgy, mechanical engineering and metalwork (0715)
Frascati	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 of 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)

- BSc in Mechanical Engineering (higher education)

Professional or scientific or artistic title (female)

- BSc in Mechanical Engineering (higher education)

Professional or scientific or artistic title (abbreviation)

- BSc, Mech. Eng. (higher education)

Professional or scientific or artistic title in English including abbreviation

- Bachelor of Applied Science (BSc, Mech. Eng.)

CURRICULUM OF THE STUDY PROGRAMME WITH THE DESIGNATED LECTURERS AND HEADS OF SUBJECTS

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Year 1

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562656	Analysis - PAP	Aljoša Peperko, Boštjan Gabrovšek, Janez Žerovnik	60		60			80	200	8	Winter	no
2.	0562657	Technical physics	Rok Petkovšek	45		45			35	125	5	Winter	no
3.	0562658	Electrical engineering and electronics	Marjan Jenko	30		30			40	100	4	Winter	no
4.	0562659	Metals - PAP	Roman Šturm	30		30			40	100	4	Winter	no
5.	0562660	Statics and strength of materials	Miroslav Halilovič	45		45			35	125	5	Winter	no
6.	0562661	Technical drawing	Andrej Žerovnik, Robert Kunc	30		30			40	100	4	Winter	no
7.	0562662	Ordinary differential equations and linear algebra - PAP	Aljoša Peperko, Boštjan Gabrovšek, Janez Žerovnik	45		45			35	125	5	Summer	no
8.	0562663	Technologies in production 1	Franci Pušavec, Joško Valentinčič	45		45			35	125	5	Summer	no
9.	0562664	Computer aided modelling of geometry	Leon Kos, Nikola Vukašinić	30		30			40	100	4	Summer	no
10.	0562665	Thermofluidics	Andrej Bombač, Božidar Šarler	45		45			35	125	5	Summer	no
11.	0562666	Non-metallic materials - PAP	Lidija Slemenik Perše	30		30			40	100	4	Summer	no
12.	0562667	General elective subject 1 1		15		15			45	75	3	Summer	yes
13.	0562709	Dynamics	Janko Slavič, Martin Česnik	30		30			40	100	4	Summer	no

	Total	480	0	480	0	0	540	1500	60	
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Year 1, General elective subject 1

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562710	Engineering reporting - PAP	Miha Brojan / Franc Majdič / Rok Vrabič / Nikola Vukašinić	15		15			45	75	3	Summer	yes
		Total		15	0	15	0	0	45	75	3		

General elective subject 1 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Poročanje v strojništvu - PAP.

Energy Engineering (field of study)

Year 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - pap	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole / Bojan Starman	30		30			40	100	4	Winter	no
8.	0562718	Energy machines and appliances - pap	Mihael Sekavčnik	30		30			65	125	5	Summer	no

9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0562720	Introduction to acoustics	Jurij Prezelj	30		30			40	100	4	Summer	no
11.	0562721	Thermal and nuclear power systems	Andrej Senegačnik	30		30			40	100	4	Summer	no
12.	0562722	Experimental methods in energy engineering	Jože Kutin, Marko Hočevar	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
		Total		450	0	450	0	0	600	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Energy Engineering.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Energy Engineering or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562725	Hydro and wind energy systems	Marko Hočevar	30		30			40	100	4	Winter	no
2.	0562726	Internal combustion engines and electromobility	Tomaž Kutrašnik	30		30			40	100	4	Winter	no
3.	0562727	Sustainable energy technologies	Mihael Sekavčnik, Mitja Mori	30		30			40	100	4	Winter	no
4.	0562728	Systems for compressed gases and vacuum	Jurij Prezelj	30		30			40	100	4	Winter	no

5.	0562729	General elective subject 2		15		15		45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15		45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30		40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30		40	100	4	Winter	yes
9.	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, Iztok Golobič, Janez Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevar, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Katrašnik, Tomaž Pepelnjak, Uroš Stritih	90		90		120	300	12	Summer	no
10.	0562734	Practical training	All heads in the programme	5				195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35		70	145	250	10	Summer	no
		Total		305	35	300	0	70	790	1500	60	

Professional elective subjects S02 and S03 for 8 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Energy Engineering.

Year 3, General elective subject 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of 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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu - PAP

Process engineering (field of study)

Year 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective

1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0562718	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0563382	Process systems	Iztok Golobič	30		30			40	100	4	Summer	no
11.	0563383	Refrigeration and heat pumps - PAP	Andrej Kitanovski	30		30			40	100	4	Summer	no
12.	0563384	Building physics and indoor environment quality	Sašo Medved, Uroš Stritih	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
		Total		450	0	450	0	0	600	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Process Mechanical Engineering.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Process Mechanical Engineering or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563387	Community-integrated energy systems	Andrej Kitanovski, Sašo Medved	30		30			40	100	4	Winter	no
2.	0563388	Water environmental process engineering	Iztok Golobič, Uroš Stritih	30		30			40	100	4	Winter	no
3.	0563389	Heating, refrigeration, ventilation, air-conditioning - PAP	Uroš Stritih	30		30			40	100	4	Winter	no
4.	0577731	Solar energy engineering	Andrej Kitanovski, Sašo Medved	30		30			40	100	4	Winter	no
5.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15			45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30			40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30			40	100	4	Winter	yes
9.	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, Iztok Golobič, Janez	90		90			120	300	12	Summer	no

			Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevnar, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Katrašnik, Tomaž Pepelnjak, Urož Stritih										
10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
Total				305	35	300	0	70	790	1500	60		

Professional elective subjects S02 and S03 for 8 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Process Mechanical Engineering.

Year 3, General elective subject 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes

	Total	15	0	15	0	0	45	75	3	
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General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu - PAP

Design of machines and devices (field of study)

Year 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no

8.	0562718	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0563423	Machine elements 2 - PAP	Jernej Klemenc, Marko Nagode	30		30			40	100	4	Summer	no
11.	0563424	Lubricants and lubrication	Mitjan Kalin	30		30			40	100	4	Summer	no
12.	0563425	Fundamentals of FEM analysis	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
Total				450	0	450	0	0	600	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Design of machines and devices.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Design of machines and devices or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563428	Dimensioning and norms	Boris Jerman, Jernej Klemenc	30		30			40	100	4	Winter	no
2.	0563429	Fatigue design	Domen Šeruga, Jernej Klemenc, Marko Nagode	30		30			40	100	4	Winter	no
3.	0563430	Hydraulics and pneumatics - PAP	Franc Majdič	30		30			40	100	4	Winter	no
4.	0563431	Mechanisms analysis and synthesis	Robert Kunc, Samo Zupan	30		30			40	100	4	Winter	no

5.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15			45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30			40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30			40	100	4	Winter	yes
9.	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, Iztok Golobič, Janez Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočever, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Kutrašnik, Tomaž Pepelnjak, Uroš Stritih	90		90			120	300	12	Summer	no
10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
		Total		305	35	300	0	70	790	1500	60		

Professional elective subjects S02 and S03 for 8 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Design of machines and devices.

Year 3, General elective subject 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu – PAP

Design of industrial systems (field of study)

Year 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0562718	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0577805	Documentation and document management system	Robert Kunc, Samo Zupan	30		30			40	100	4	Summer	no
11.	0563465	Material handling equipment and systems	Boris Jerman	30		30			40	100	4	Summer	no
12.	0563466	System design in the industry	Jernej Klemenc, Marko Nagode	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes

	Total	450	0	450	0	0	600	1500	60	
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The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Design of industrial systems.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Design of industrial systems or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563469	Industry hydraulic systems	Franc Majdič	30		30			40	100	4	Winter	no
2.	0563470	Machine and surface damages	Mitjan Kalin	30		30			40	100	4	Winter	no
3.	0563471	Industrial power-trains	Jernej Klemenc, Simon Oman	30		30			40	100	4	Winter	no
4.	0563472	Safety of Machinery and Equipment	Boris Jerman	30		30			40	100	4	Winter	no
5.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15			45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30			40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30			40	100	4	Winter	yes
9.	0562733	Development processes in	Aljoša Peperko, Andrej Bombač, Andrej Kitanovski, Andrej Senegačnik, Boris	90		90			120	300	12	Summer	no

		Mechanical Engineering	Jerman, Božidar Šarler, Damjan Klobčar, Davorin Kramar, Drago Bračun, Edvard Govekar, Franc Majdič, Franci Pušavec, Iztok Golobič, Janez Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevar, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Katrašnik, Tomaž Pepelnjak, Uroš Stritih										
10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
		Total		305	35	300	0	70	790	1500	60		

Professional elective subjects S02 and S03 for 8 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Design of industrial systems.

Year 3, General elective subject 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
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	Winter	yes

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

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
		Total		15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu - PAP

Production technologies (field of study)

Year 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no

6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0562718	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0563505	Non-traditional manufacturing processes	Andrej Lebar, Joško Valentinčič	30		30			40	100	4	Summer	no
11.	0563506	Testing methods in production	Roman Šturm, Tomaž Kek	30		30			40	100	4	Summer	no
12.	0563507	Assembly technology	Niko Herakovič	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
Total				450	0	450	0	0	600	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Production technologies.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Production technologies or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563510	Design on forming technologies	Tomaž Pepelnjak	30		30			40	100	4	Winter	no
2.	0563511	Quality assurance	Davorin Kramar	30		30			40	100	4	Winter	no
3.	0563512	Planning of machining and CAM	Franci Pušavec	30		30			40	100	4	Winter	no

4.	0563513	Heat treatment planning	Roman Šturm	30		30			40	100	4	Winter	no
5.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15			45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30			40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30			40	100	4	Winter	yes
9.	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, Iztok Golobič, Janez Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevan, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Katrašnik, Tomaž Pepelnjak, Uroš Stritih	90		90			120	300	12	Summer	no

10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
Total				305	35	300	0	70	790	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for PProduction technologies.

Year 3, General elective subject 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of 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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu - PAP

Production engineering (field of study)

Year 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0562718	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0563546	Control and statistical supervision in manufacturing	Drago Bračun, Edvard Govekar	30		30			40	100	4	Summer	no
11.	0563547	Energy and material flows in industry	Iztok Golobič, Janez Kušar	30		30			40	100	4	Summer	no
12.	0563548	Production planning	Janez Kušar, Tomaž Berlec	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
		Total		450	0	450	0	0	600	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Industrial engineering.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Industrial engineering or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563551	Production leading	Janez Kušar, Tomaž Berlec	30		30			40	100	4	Winter	no
2.	0563552	Robotized production	Marko Šimic, Niko Herakovič	30		30			40	100	4	Winter	no
3.	0563553	Logistics of material and resources	Marko Šimic, Niko Herakovič	30		30			40	100	4	Winter	no
4.	0563554	Investment engineering	Janez Kušar, Tomaž Berlec	30		30			40	100	4	Winter	no
5.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15			45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30			40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30			40	100	4	Winter	yes
9.	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	90		90			120	300	12	Summer	no

			Majdič, Franci Pušavec, Iztok Golobič, Janez Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevar, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Katrašnik, Tomaž Pepelnjak, Uroš Stritih										
10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
		Total		305	35	300	0	70	790	1500	60		

Professional elective subjects S02 and S03 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Industrial engineering.

Year 3, General elective subject 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
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, Robert Kunc, Rok Petkovšek, Roman	15		15			45	75	3	Winter	yes

		Šturm, Roman Žavbi, Sašo Medved											
		Total	15	0	15	0	0	45	75	3			

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
		Total		15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu - PAP

Mechatronics (field of study)

Year 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0562715	Maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no

7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0562718	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	no
9.	0562719	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	no
10.	0563951	Programmable logic controllers	Janez Diaci, Rok Vrabič	30		30			40	100	4	Summer	no
11.	0563952	Mechatronic actuators	Primož Podržaj	30		30			40	100	4	Summer	no
12.	0563953	Programming for mechatronics	Marjan Jenko	30		30			40	100	4	Summer	no
13.	0562723	Professional elective subject S01		30		30			40	100	4	Summer	yes
14.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
Total				450	0	450	0	0	600	1500	60		

The professional elective subject S01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Mechatronics.

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Mechatronics or at his/her own choice in any programme, faculty or university.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563956	Robotic systems - PAP	Rok Vrabič	30		30			40	100	4	Winter	no
2.	0563957	Laser technique	Matija Jezeršek	30		30			40	100	4	Winter	no
3.	0563958	Mechatronic system control	Janez Diaci, Primož Podržaj	30		30			40	100	4	Winter	no
4.	0577649	Machine vision	Drago Bračun	30		30			40	100	4	Winter	no

5.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
6.	0562730	General elective subject 3		15		15			45	75	3	Winter	yes
7.	0562731	Professional elective subject S02		30		30			40	100	4	Winter	yes
8.	0562732	Professional elective subject S03		30		30			40	100	4	Winter	yes
9.	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, Iztok Golobič, Janez Diaci, Janez Kušar, Janez Žerovnik, Janko Slavič, Jernej Klemenc, Joško Valentinčič, Jože Kutin, Jurij Prezelj, Lidija Slemenik Perše, Marko Hočevnar, Marko Nagode, Matija Jezeršek, Miha Boltežar, Miha Brojan, Mihael Sekavčnik, Miroslav Halilovič, Mitjan Kalin, Niko Herakovič, Nikolaj Mole, Primož Podržaj, Robert Kunc, Rok Petkovšek, Rok Vrabič, Roman Šturm, Roman Žavbi, Sašo Medved, Tadej Kosel, Tomaž Katrašnik, Tomaž Pepelnjak, Uroš Stritih	90		90			120	300	12	Summer	no
10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
		Total		305	35	300	0	70	790	1500	60		

Professional elective subjects S02 and S03 for 8 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Mechatronics.

Year 3, General elective subject 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, General elective subject 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562737	Innovation in Mechanical Engineering - PAP	Janez Kušar	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 3 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Inoviranje v strojništvu – PAP

Airline transport pilot (field of study)

Year 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0563988	Aircraft maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0563991	Professional elective subject S01		30		30			65	125	5	Summer	yes
9.	0579419	Elective professional subject 1		45		15			40	100	4	Summer	yes
10.	0563993	Aircraft engines 1	Tomaž Kutrašnik	45		15			40	100	4	Summer	no
11.	0563994	Aeromechanics and airframes	Andrej Grebenšek, Tadej Kosel	70		35			45	150	6	Summer	no
12.	0563995	Mechanics of flight	Miha Brojan	30		30			40	100	4	Summer	no
13.	0563996	Aeronautical meteorology	Gregor Skok	50		30			95	175	7	Summer	no
Total				510	0	395	0	0	595	1500	60		

Year 2, Professional elective subject S01

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0563997	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	yes
2.	0563998	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	yes
Total				60	0	60	0	0	130	250	10		

The student of the direction Airline Transport Pilot selects the Professional elective course S01 for 5 ECTS from the set of courses: Energetski stroji in naprave - PAP or Merilni praktikum.

Year 2, Elective professional subject 1

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0579418	Aircraft instrumentation	Andrej Grebenšek	45		15			40	100	4	Summer	yes
Total				45	0	15	0	0	40	100	4		

Elective professional subject 1 amounting to 4 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Letalski instrumenti.

Year 3

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0563999	Aircraft systems	Andrej Grebenšek, Tadej Kosel	30		15			55	100	4	Winter	no
2.	0564000	Performance of aircraft	Tomaž Mrlak	60		60			30	150	6	Winter	no
3.	0564001	Aircraft engines 2	Tomaž Katrašnik	30		30			65	125	5	Winter	no

4.	0564002	Air navigaton 1	Andrej Grebenšek, Tadej Kosel	75		60			65	200	8	Winter	no
5.	0564003	Aeronautical phraseology	Karmen Štumberger	30		30			40	100	4	Winter	no
6.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
7.	0564005	Air navigation 2	Andrej Grebenšek	35		30			35	100	4	Summer	no
8.	0564006	Aviation medicine and psychology	Vito Starc	70					30	100	4	Summer	no
9.	0564007	Air law	Patrick Vlačič	45		15			65	125	5	Summer	no
10.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
11.	0564009	Operational procedures of aircraft	Tomaž Mrlak	30					45	75	3	Summer	no
12.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
Total				450	35	285	0	70	660	1500	60		

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Ailine transport pilot or at his/her own choice in any programme, faculty or university.

Year 3, General elective subject 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes

	Total	15	0	15	0	0	45	75	3	
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General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Aircraft design and maintenance (field of study)

Year 2

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0562711	Mechatronics and control technology	Janez Diaci	30		30			40	100	4	Winter	no
2.	0562712	Machine elements 1 - PAP	Jernej Klemenc, Marko Nagode	45		45			35	125	5	Winter	no
3.	0562713	Engineering Design Methodology - PAP	Janez Benedičič, Roman Žavbi	30		30			40	100	4	Winter	no
4.	0562714	Production technologies 2	Damjan Klobčar, Tomaž Pepelnjak	45		45			35	125	5	Winter	no
5.	0563988	Aircraft maintenance	Franc Majdič, Marko Polajnar, Mitjan Kalin	30		30			40	100	4	Winter	no
6.	0562716	Heat and mass transfer	Andrej Kitanovski	30		30			40	100	4	Winter	no
7.	0562717	Programming basics	Miroslav Halilovič, Nikolaj Mole	30		30			40	100	4	Winter	no
8.	0563991	Professional elective subject S01		30		30			65	125	5	Summer	yes
9.	0563992	Aircraft instrumentation	Andrej Grebenšek	45		15			40	100	4	Summer	no
10.	0563993	Aircraft engines 1	Tomaž Kutrašnik	45		15			40	100	4	Summer	no
11.	0563994	Aeromechanics and airframes	Andrej Grebenšek, Tadej Kosel	70		35			45	150	6	Summer	no
12.	0563995	Mechanics of flight	Miha Brojan	30		30			40	100	4	Summer	no
13.	0564076	Non-destructive testing in aviation	Roman Šturm, Tomaž Kek	30		30			15	75	3	Summer	no
14.	0564077	Aircraft design 1	Radivoj Kikelj	30		30			40	100	4	Summer	no
		Total		520	0	425	0	0	555	1500	60		

Year 2, Professional elective subject S01

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563997	Energy machines and appliances - PAP	Mihael Sekavčnik	30		30			65	125	5	Summer	yes
2.	0563998	Measurement practicum	Jože Kutin	30		30			65	125	5	Summer	yes
Total				60	0	60	0	0	130	250	10		

The student of the direction Aircraft design and maintenance selects the Professional elective course S01 for 5 ECTS from the set of courses: Energetski stroji in naprave - PAP or Merilni praktikum.

Year 3

	Code	Title	Heads of subject	Contact hours					Independent work	Total No. of hours	ECTS	Semesters	Elective
				Lectures	Seminars	Practical work	Clinical work	Other forms of study					
1.	0563999	Aircraft systems	Andrej Grebenšek, Tadej Kosel	30		15			55	100	4	Winter	no
2.	0564000	Performance of aircraft	Tomaž Mrlak	60		60			30	150	6	Winter	no
3.	0564001	Aircraft engines 2	Tomaž Kutrašnik	30		30			65	125	5	Winter	no
4.	0563430	Hydraulics and pneumatics - PAP	Franc Majdič	30		30			40	100	4	Winter	no
5.	0564084	Aircraft design 2	Radivoj Kikelj	45		30			125	200	8	Winter	no
6.	0562729	General elective subject 2		15		15			45	75	3	Winter	yes
7.	0564086	Elective professional subject		30		30			40	100	4	Summer	yes
8.	0562724	Elective subject 01		30		30			40	100	4	Summer	yes
9.	0564088	Development and maintenance processes in aeronautics	Franc Majdič, Miha Brojan, Mitjan Kalin, Roman Šturm, Tadej Kosel, Tomaž Kutrašnik	30		30			40	100	4	Summer	no

10.	0562734	Practical training	All heads in the programme	5					195	200	8	Summer	no
11.	0562735	Diploma thesis	All heads in the programme		35			70	145	250	10	Summer	no
Total				305	35	270	0	70	820	1500	60		

The elective subject 01 for 4 ECTS is chosen by the student at his/her own choice from the set of all compulsory subjects of other subjects of the Higher Professional Study Program Mechanical Engineering - Project Oriented Applied Programme of 1st cycle except for Aircraft design and maintenance or at his/her own choice in any programme, faculty or university.

Year 3, General elective subject 2

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of 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, Robert Kunc, Rok Petkovšek, Roman Šturm, Roman Žavbi, Sašo Medved	15		15			45	75	3	Winter	yes
Total				15	0	15	0	0	45	75	3		

General elective subject 2 amounting to 3 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Interdisciplinary project - PAP.

Year 3, Elective professional subject

				Contact hours									
	Code	Title	Heads of subject	Lectures	Seminars	Practical work	Clinical work	Other forms of study	Independent work	Total No. of hours	ECTS	Semesters	Elective
1.	0577989	Aviation documentation	Miha Brojan	30		30			40	100	4	Summer	yes
Total				30	0	30	0	0	40	100	4		

Elective professional subject amounting to 4 ECTS is chosen by the student at his/her own choice in any programme, faculty or university. Elective course offered by FME: Dokumentacija v letalstvu.

