

INFORMATION ON THE STUDY PROGRAMME MECHANICAL ENGINEERING - PROJECT ORIENTED APPLIED PROGRAMME

Basic information

Programme name	Mechanical Engineering - Project Oriented Applied Programme
Programme properties	
Type	higher professional
Cycle	1 st cycle
KLASIUS-SRV	Higher professional education (first Bologna level)/higher professional degree (first Bologna level) (16203)
ISCED	<ul style="list-style-type: none"> • Technique (52)
KLASIUS-P	<ul style="list-style-type: none"> • Mechanical Engineering (5211)
KLASIUS-P-16	<ul style="list-style-type: none"> • Metallurgy, Mechanical Engineering and Metallurgy (0715)
Frascati	<ul style="list-style-type: none"> • Technical sciences (2)
Level SQF	Level SQF 7
Level EQF	Level EQF 6
Level QF-EHEA	1 st cycle
Specified directions	<ul style="list-style-type: none"> • -- • Energy Engineering (field of study) • Process engineering (field of study) • Design of machines and devices (field of study) • Design of industrial systems (field of study) • Production technologies (field of study) • Production engineering (field of study) • Mechatronics (field of study) • Airline transport pilot (field of study) • Aircraft design and maintenance (field of study)
Members 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 per year	60
Mode of study	Full-time, part-time

Primary objectives of the programme

The first basic objective of the accredited study programme is to follow the needs and desires of the national economy, and thus the student's desire to acquire the competencies to ensure immediate employability after graduation, and: i.) to provide the graduate with basic engineering knowledge and necessary useful knowledge in the chosen specialisation of mechanical engineering and thus appropriate employability; ii.) to enable the graduate to understand the acquired knowledge in mechanical engineering; iii.) to equip the graduate with sufficient knowledge in the wider field of mechanical engineering to work in an interdisciplinary manner with specialists in other fields.

The second basic goal of the accredited study programme is follow the principles of Bologna Declaration, the European Association of the EUA universities, the European Association of the National Engineering Associations FEANI, and the German accreditation agency ASIIN, thus enabling European comparable knowledge and employment qualifications of graduates through a broad spectrum of subjects and mobility. : i.) The graduate receives an education comparable to similar study programmes in Central and Western Europe; ii.) the student is enabled to transfer to another related undergraduate study programme at home or abroad with a credit-rated statement of completed study obligations; iii.) the conditions for good student transfer are ensured with the conditions of transition between study programmes and the educational work that promotes continuous study and with the system of tutoring.

During the external evaluation of the first-cycle higher education study programme **MECHANICAL ENGINEERING - Project Application Program** by the accreditation agency ASIIN, we accepted the international accreditation as confirmation of the correctness of our guidelines in the design of study programmes and the methodological approach in the study process. Obtaining the EUR-ACE certificate of the European Association of National Engineering Associations FEANI for both study programmes is an unquestionable recognition of the adequacy of the engineering

skills developed by both UL FME study programmes in the wider European area.

To achieve the intended objectives of the program much, the emphasis is on:

- to enable students to first acquire the basic knowledge and to include all key professional knowledge, divided into fields of study, with the emphasis on the interdisciplinary subject of mechanical engineering, and to link and expand this knowledge toward project application. In this way, we want to encourage students to work in practice with quality or to continue their studies at the 2nd cycle. Students also acquire the skills of modern technical computer-aided communication and computational analysis.

That the student, adequately supported by appropriate methodological approaches, consciously develops scientific-critical thinking, which is the basis for later professional activity.

General competences (learning outcomes)

The general competencies of the graduate after completing the higher professional study programme of the 1st cycle MECHANICAL ENGINEERING - Project Oriented Applied Programme are:

- ability to apply the acquired knowledge into practice,
- ability to work independently within the knowledge of the chosen field of study,
- ability to manage time,
- ability to break down easier professional tasks into sub-tasks,
- developing the ability to think critically and self-critically,
- ability to work in a group and interdisciplinary networking with experts from other disciplines,
- ability to manage a technology unit or project,
- adaptability to changed situations in their work,
- compliance with safety, functional, economic and environmental principles in their work,
- ability to communicate professionally and in writing,
- ability to present professional problems and their solutions in their environment and beyond,
- ability to use information and communication technologies;
- ability to search for sources of knowledge, selection of found sources and use of knowledge thus acquired in their work,
- knowledge of important technical terms in English or German,
- developing professional responsibility and ethics,
- compliance with the engineering code.

Subject-specific competences (learning outcomes)

The subject-specific competencies of the graduate after completing the higher professional study programme of the 1st cycle MECHANICAL ENGINEERING - Project Oriented Applied Programme are:

- understands the physical laws and phenomena on which the function of products and technologies is based,
- masters the most important concepts of higher mathematics and numerical mathematics,
- masters basic expertise in mechanical engineering and essential complementary sciences,
- knows the basic measuring instruments and measuring chains for measuring basic quantities in mechanical engineering,
- knows the main environmental constraints and problems,
- masters independent project work,
- knows some of the software tools for computer data processing,
- masters the basic and necessary specific knowledge in the chosen field of study,
- the graduate can independently perform developmentally applied, engineering and professional organisational work and solve individual outlined tasks in mechanical engineering,
- specific competencies are listed in the curricula of individual subjects.

Graduates of the 1st cycle higher professional studies MECHANICAL ENGINEERING - Project Oriented Applied Programme master sufficient basic engineering knowledge and specific knowledge of the chosen field of mechanical engineering to further develop and deepen their knowledge and skills and to increase responsible activities.

Conditions for enrolment

Students who have met these requirements may be enrolled in the 1st year of Higher Professional Study Programme in MECHANICAL ENGINEERING of the 1st Cycle - Project Application Program:

- a) general matura,
- b) vocational matura in one of the four-year high school programmes (mechanical engineer technician, automotive service technician, electrical engineer, civil engineer technician, chemical engineer technician, marine engineering technician, metallurgy technician, mechatronics technician, computer technician, wood technician, communication electronics technician),
- c) a final examination in any four-year secondary school programme.

Selection criteria with restricted enrolment

If admission restriction occurs, the applicants referred to in point (a) will be selected based on these criteria:

- overall achievement in the general matura 30% of points,
- overall achievement in the 3rd and 4th years of secondary school 30% of points,
- success in Mathematics at the general matura 20% of points,
- success in Physics or Mechanics at the general matura 20% of points.

for the candidates referred to in point b):

- overall achievement in the vocational matura 30% of points,
- overall achievement in the 3rd and 4th years of secondary school 30% of points,
- success in the Mathematics at the vocational matura 20% points,
- success in mechanical engineering or automotive mechatronics or electrical engineering or plant engineering or chemistry or marine engineering or metallurgy or mechatronics or information technology or woodworking or electronic communications at the vocational matura 20% of points.

for the candidates referred to in point c):

- overall achievement in the final examination 30% of points,
- overall achievement in the 3rd and 4th years of secondary school 30% of points,
- success in Mathematics in the final examination or in the 4th year of secondary school if the candidate did not take Mathematics in the final examination 20% of points,
- success in Physics, Mechanics or Mechanical Engineering in the final examination or in the 4th year of secondary school if the candidate did not take the subjects in the final examination 20% of points.

Criteria to recognise knowledge and skills acquired before enrolment in the programme

Before enrolment in the programme, a student may acquire the acquired knowledge corresponding in content and scope to the learning content of the subjects of the higher professional program of the 1st cycle MECHANICAL ENGINEERING - Project Oriented Applied Programme as completed study obligations. The UL FME Higher Education Studies Committee decides on the recognition of knowledge and skills acquired before enrolment based on the student's written request, the attached written certificates and other documents proving the knowledge successfully acquired and the content of this knowledge, and under the Regulations on the Procedure and Criteria for the Recognition of Informally Acquired Knowledge and Skills, adopted at the 15th meeting of the UL Senate on 29.5.2007. If the Higher Studies Committee determines that the knowledge acquired can be recognised, this can be assessed with the same number of ECTS as the number of credits in the course and recognised as fulfilled study obligations in the course.

Assessment methods

Assessment methods are under [UL Statute](#) and are specified in the syllabi.

Conditions for advancement through the programme

Students who have met these requirements may be enrolled in the 2nd year of Higher Professional Study Programme in MECHANICAL ENGINEERING of the 1st Cycle - Project Application Programme: A student may enrol in the 2nd year if he/she fulfils the 1st year curricular obligations with at least 48 ECTS by the end of the academic year. Students who have met these requirements may be enrolled in the 3rd year of Higher Professional Study Programme in MECHANICAL ENGINEERING of the 1st Cycle - Project Application Programme: A student may enrol in the 3rd year if he/she fulfils the prescribed 2nd year obligations of at least 48 ECTS and all 1st year obligations (60 ECTS) prescribed in the curricula by the end of the academic year.

Exceptionally, a student may enrol in a higher year even if he/she has not fulfilled all the obligations prescribed in the study program for enrolment in a higher year, if he/she has legitimate reasons determined by Article 153 of the UL Statute (maternity, long illness, exceptional family and social circumstances, recognised status of a person with special needs, active participation in high-profile professional, cultural and sporting events, active participation in university committees) or reasons resulting from obligations arising from parallel studies, transition from one university to another, language problems), additional burdens due to international exchanges or increased workload in additional research and development work. The student must explain failure to perform and, upon request, provide a programme for taking examinations for the preceding period.

The fulfilment of the justified reasons is decided by a special commission consisting of the Vice Dean for Pedagogical Work of the higher professional study programme of the first level 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 who demonstrates above average academic results may advance faster. The UL FME Senate will decide based on the candidate's application and the opinion of the UL FME Higher Education Studies Committee. The decision determines the method of faster progress.

A student who has not fulfilled all the obligations set out in the study programme for enrolment in a final year shall repeat the year if he/she has obtained at least 24 ECTS credits. During study, a student may repeat a year only once. A student may repeat a year even if he/she does not fulfil the obligations of the previous paragraph if he/she has justified reasons (long illness, exceptional family and social circumstances, obligations arising from parallel studies, transfer from one university to another, language problems, burdens arising from international exchanges or increased workload due to additional Research and Development work). The student must explain failure to perform and, upon request, provide a program for taking examinations for the preceding period. The existence of justified reasons is decided by a special committee consisting of the Vice Dean for Pedagogical Work of the Higher Education Professional study programme of the 1st level MECHANICAL ENGINEERING, the mentor of the year in which the student is enrolled and the student's tutor.

Conditions for switching between programmes

Transition between programmes of study is considered the completion of the student's education in the programme of study in which the student enrolled and the continuation of education in the 1st cycle of higher professional study programme of study of MECHANICAL ENGINEERING - Research and Development in which some or the course obligations in the first programme of study are recognised as completed. It should be borne in mind that transitions are only possible between study programmes, which ensure the acquisition of comparable competences at the end. Applications of candidates for transfer to the higher professional study program of the first level MECHANICAL ENGINEERING - Project Oriented Applied Programme and scope of recognised study obligations in the study programme are considered individually by the Undergraduate Study Committee, under Articles 181 to 189 of the UL Statute and the UL FME Rules on the conditions of transition between study programmes.

Under the criteria for transition between programmes, the candidate may enrol in the higher education professional study programme MECHANICAL ENGINEERING - Project Oriented Applied Programme if he/she is awarded credit for at least half of the ECTS obligations from the first study programme relating to compulsory higher education study of the 1st cycle of Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme. If in recognition due to transition the candidate has recognised at least as many and those credits that are a condition of enrolment in the senior year of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme, the candidate is eligible to enrol in the senior year of the Higher Professional Study Programme Mechanical Engineering - Project Oriented Applied Programme.

Conditions for completion of studies

The student completes his/her studies after having fulfilled all the obligations prescribed in the study programme for 180 ECTS credits.

Conditions for completion of individual parts of the study programme, if the programme includes them

There is no possibility to complete individual parts of the study programme. The programme is implemented and considered as a whole.

Professional or scientific or artistic title (male)

- Bachelor of Applied Science in Mechanical Engineering

Professional or scientific or artistic title (female)

- Bachelor of Applied Science in Mechanical Engineering

Professional or scientific or artistic title (abbreviation)

- dipl.inž.str.

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 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		

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.

