

 University of Belgrade	EACEA 586029-EPP-1-2017-1-RS-EPPKA2-CBHE-SP  Implementation of Dual Education in Higher Education of Serbia Kraljice Marije 16, 11120 Belgrade 35, Republic of Serbia email: nznric@mas.bg.ac.rs	 Faculty of Mechanical Engineering
 FH JOANNEUM University of Applied Sciences  Formasup  Universitat de Lleida  SPOLECZNA AKADEMIA NAUK  Your IT solution. PowMio GmbH  UNIVERZITET METROPOLITAN BEOGRAD  UNIVERSITAS STUDIORUM NOVOPALATENSE     Republic of Serbia Ministry of Education, Science and Technological Development  Republic of Serbia National council for higher education  NICAT		

Co-funded by the
Erasmus+ Programme
of the European Union



Д4.1 Опис и концепт специфичног дуалног модела студија на Универзитету у Београду

D4.1 Description and Concept of Specific DHEM at the University of Belgrade

contacts:

Prof. Dr.-Ing. Nenad Zrnić, tel: +381-63-287-193

Dr.-Ing. Žarko Mišković, +381-64-18-32-989

Project acronym:	DUALEDU
Project full title:	Implementation of Dual Education in Higher Education of Serbia
Project No:	586029-EPP-1-2017-1-RS-EPPKA2-CBHE-SP (2017-2962/001-001)
Funding scheme:	ERASMUS+
Project start date:	October 15, 2017
Project duration:	36 months

Abstract	This document represents the concept of specific DHEM developed at UB and represents a basis for the presentation of this DHEM to interested companies.
----------	---

Title of document:	Description and Concept of Specific DHEM at the University of Belgrade
Work package:	WP 4: Pilot testing of the flexible and generic DHEM
Activity:	4.1. Documents on description and concept of specific DHEMs of HEIs
Last version date:	16/03/2021
File name:	Specific DHEM developed at UB
Number of pages:	71
Dissemination level:	National

VERSIONING AND CONTRIBUTION HISTORY

Version	Date	Revision description	Partner responsible
1.0	21/03/2019	First draft	UB (Žarko Mišković, Živana Jakovljević, Nenad Zrnić, Radivoje Mitrović)
2.0	31/05/2019	Second draft	UB (Žarko Mišković, Živana Jakovljević, Nenad Zrnić, Radivoje Mitrović)
3.0	28/12/2020	Information about the Law on dual education is given in Chapter 2)	UB (Žarko Mišković, Živana Jakovljević)
3.1	16/03/2021	Document content is finally harmonised with the dual education law ; model of contract between student and faculty is added (based on the UNIKG material)	UB (Žarko Mišković, Živana Jakovljević)

DISCLAIMER

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Contents

1.	Reasons for the introduction of a new study program and the implementation of a specific model of dual studies - study program: Industry 4.0	5
2.	Legal framework for the development and application of a specific dual model of study at Faculty of Mechanical Engineering, University of Belgrade (UB)	7
3.	Example of a dual model of study at the University of Belgrade - Mechanical Engineering faculty: study program Industry 4.0	10
4.	Model of the Study for obtaining consent for the organization of the accredited study program according to the dual model	16
5.	Requirements of the Standard for accreditation of the study program/module by dual model	23
6.	Procedure for introducing a dual model of studies at the University of Belgrade	28

Annex 1 - RULEBOOK ON TEACHING IN MASTER ACADEMIC STUDIES

Annex 2 - RULEBOOK ON EXAMINATION AND EXAMINATION ASSESSMENT

Annex 3 - QUALITY ASSURANCE STRATEGY

Annex 4 - Model of the Dual Model Contract

1. Reasons for the introduction of a new study program and the implementation of a specific model of dual studies - study program: Industry 4.0

Industry 4.0 has become a global international project since 2011, when the Program of Scientific and Technological Development of German Industry called Industry 4.0 was presented for the first time at CeBIT in Hanover. So far, 37 countries in the world have brought their national programs for I4.0. (Europe - 18 + 3; America -5; Africa - 1; Asia and Oceania - 8 + 2). Serbia adopted its national Industry 4.0 Program on June 6, 2019, at the Fourth International Conference on Industry 4.0 - AMP I4.0 2019, entitled: Digital Platform for Industry 4.0 in Serbia.

In order to meet the needs of the economy of the Republic of Serbia for experts in the field of Industry 4.0, the Faculty of Mechanical Engineering, together with the Faculty of Mathematics, designed and accredited the appropriate study program - the official accreditation of the National Accreditation Body (NAT) was obtained. In the report of the review commission on accreditation, the new study program was rated with the highest grade - 10 for all standards. The first generation of students is enrolled in the study program in the school year 2020/2021.

Master academic studies Industry 4.0 represent the most modern concept of education of experts for the industry, which consists of the so-called "smart" factories and is the first of its kind in our area. In terms of its content, the Industry 4.0 program represents a "blend" of the latest scientific knowledge in the field of production engineering, industrial engineering and informatics, and it reflects its multidisciplinary nature. The essence of Industry 4.0 is in a new approach to the product process, which involves networking smart digital devices with products, machines, tools, robots and humans. What most vividly describes Industry 4.0 is the ability for the same product line to result in different products at the end of the process, according to customer requirements.

The Master study program Industry 4.0 lasts two years, ie four semesters, and is valued at 120 ECTS. The enrollment quota is 35 students per year. After completing the studies, the student obtains a diploma with the academic title of master mechanical engineer - computer scientist.

The specificity of the program is professional practice, which is performed during the second year of study in two parts. The first part of the internship is done throughout the semester one day a week for a total of 15 days, while the second part of the internship is done in the fourth semester for a total of 40 working days. After that, the Master thesis is done and defended. 37 teachers and associates work on the education of engineers for Industry 4.0, of which 6 are from abroad, as well as 12 lecturers from economy.

However, one of the key problems in the development and implementation of production systems based on the principles of Industry 4.0, both nationally and globally, is the lack of highly qualified staff with multidisciplinary and interdisciplinary competencies in the field of mechanical and computer sciences. The problem is that in traditional academic studies, students acquire primarily theoretical knowledge, so employers are forced to invest additional funds and time to train engineers who have just completed academic studies for real work in their companies or enterprises. This problem has been solved at the global level by introducing different models of dual academic studies.

Namely, the model of dual education in higher education is a type of learning, which includes three groups of participants: students, universities and companies. This environment combines traditional classroom learning methods with company work and innovative processes, where students are involved in regular company work and research projects. The teaching contents are harmonized in detail, and the study programs must meet the appropriate academic standards. In other words, even the professional practice covered by the study program I4.0 can be supplemented with skills that students acquire only through engagement in real jobs in domestic or foreign companies. Therefore, the development and application of specific models of dual studies to this and similar study programs is an inevitable next step in improving the educational system of the Republic of Serbia.

Cooperation with the economy is one of the key development priorities of the Faculty of Mechanical Engineering in Belgrade. In this regard, the introduction of a dual model of education would enable further improvement and expansion of this cooperation in the field of development of new products and technologies, as well as other areas of mechanical engineering. Also, the introduction of this study model in the study programs of the Faculty of Mechanical Engineering would certainly contribute to the greater attractiveness of studies.

2. Legal framework for the development and application of a specific dual model of studies at the Faculty of Mechanical Engineering, University of Belgrade (UB)

The basic legal act whose guidelines should be respected when introducing dual studies in the studies of higher education institutions of the Republic of Serbia is the Law on the Dual Model of Studies in Higher Education of the Republic of Serbia (finally adopted in September 2019). It defines the legal framework that defines the content and manner of implementation of the dual model of studies in higher education, financial security of students, mutual rights and obligations of students, higher education institutions and employers, material and other issues relevant to the implementation of studies according to the dual model. The legal framework determined by the Law is broad and flexible enough to take into account the specifics of a wide range of areas of the field in which higher education institutions deal. It also enables students who study according to the dual model of study to acquire appropriate knowledge, and to be adequately financially rewarded for their engagement - through a salary, scholarship, tuition, compensation for part of the tuition, etc.

The content and implementation of study programs formed according to the model of dual studies must also be harmonized with the guidelines of the Law on Higher Education of the Republic of Serbia, adopted in September 2017 ("Official Gazette of RS", no. 18/17, 27/18, 73 / 18) This law envisages the engagement of students through professional internships that are realized in appropriate economic entities - usually without compensation. This is in fact the basis for the transition from traditional academic studies to a dual model of study (short-term professional practice is replaced by longer work in companies, and the knowledge that students acquire in this way complements the basis acquired by traditional teaching in academic studies).

The Faculty of Mechanical Engineering of the University of Belgrade also has internal general acts regulating the obligations and rights of students (as users of faculty services) and faculties (as providers of education services at three levels of academic studies), including:

1. RULEBOOK ON TEACHING IN MASTER ACADEMIC STUDIES
(September 2016) - Annex 1;
2. RULEBOOK ON EXAMINATION AND EXAMINATION ASSESSMENT
(February 2017) - Annex 2;
3. QUALITY ASSURANCE STRATEGY (February 2017) - Annex 3.

Professional practice M lasts 45 hours and is an independent student work. When calculating the average grade after completing the Master of Academic Studies, grades from the Master (M. Sc.) Work and Professional Practice M are reduced to one grade (weighting according to the appropriate number of ECTS points), and then this grade is calculated in the total average grade of studies weighted at 25 o'clock. "The student is required to complete one professional practice at the Master of Academic Studies (Professional Practice M):

"The student is obliged to complete one professional internship at the Master academic studies (Professional internship M).

Professional practice M lasts 45 hours and is an independent student work. When calculating the average grade after completing the Master of Academic Studies, grades from the Master (M. Sc.) Paper and Professional Practice M are reduced to one grade (weighting according to the appropriate number of ECTS points), and then this grade is calculated in the total average grade of studies weighted at 25 classes.

Professional practice M is organized by module holders.

Professional practice M is performed outside the classes of active teaching. If out of the total planned 45 classes, about 5 classes are spent on tests of knowledge and skills acquired in practice, there are still 40 school classes (about 30 working hours) for working hours in practice, which is approximately 7 working days.

Professional practice M is organized and performed by the module holders in a way that they consider to be the most suitable for the student and at the same time technically feasible for the departments. For example: tour of one or more laboratories, work in the laboratory, tour and work in certain companies and factories, visits (excursions) to certain facilities, etc.

The time for the internship is also adaptable to the possibilities of the Department: either on a certain day, or every working day in hours when students do not have classes, or united in a block at the end of the semester, or during the semester if there is a period when there are no classes, etc.

Each holder of the module determines the teacher (and associate) who will lead and control the implementation of the Professional Practice M.

The teacher and the associate who lead and control the implementation of the Professional Practice M, keep the appropriate records and submit their prescribed report to the Student Affairs Office. "

The Rulebook on taking exams and grading on exams regulates in detail the conditions and manner of taking exams at the Faculty of Mechanical Engineering, organization and procedure of taking exams, manner of determining grades on exams, protection of students' rights, as well as other issues important for taking exams and grading on exams. It is envisaged that this Rulebook will be supplemented in the next period with a part that would define in which share the assessment of knowledge acquired through work participates in the overall grade, i.e. how the teacher from the faculty and the mentor from the company will form the final grade.

The introduction of a dual study model in the study programs of the Faculty of Mechanical Engineering, University of Belgrade is one of its key priorities, which is verified by the set goals of the Quality Assurance Strategy, in which the first four goals are defined:

- continuous and systematic improvement of the quality of higher education at the Faculty of Mechanical Engineering;
- improving the quality of study programs;
- increasing the efficiency of studies;
- improving the quality of teaching.

3. Example of a dual study model (DMS) at the University of Belgrade - Faculty of Mechanical Engineering: study program Industry 4.0

University of Belgrade - Faculty of Mechanical Engineering (MFB) has 5 accredited study programs at all three levels of academic studies, as follows:

1. Study program of Basic Academic Studies - Mechanical Engineering lasting six semesters (180 ECTS); upon completion of this study program, the professional title of Bachelor of Science in Mechanical Engineering is acquired.
2. Study program of Basic Academic Studies - Information Technologies in Mechanical Engineering lasting six semesters (180 ECTS); upon completion of this study program, the professional title of Bachelor of Science in Mechanical Engineering is acquired.
3. Study program Master of Academic Studies (MAS) - Mechanical Engineering lasting four semesters (120 ECTS); upon completion of this study program, the academic title of Master of Science in Mechanical Engineering is obtained.
4. Study program Master of Academic Studies (MAS) - Industry 4.0 lasting four semesters (120 ECTS); upon completion of this study program, the academic title of Master of Science in Mechanical Engineering and Informatics is acquired.
5. Study program of Doctoral academic studies - Mechanical Engineering lasting six semesters (180 ECTS); upon completion of this study program, the scientific title of Doctor of Philosophy in Mechanical Engineering is acquired.

Following modern trends in the field of industrial production, which primarily relate to the comprehensive digitalization of production and business processes and the expressed needs of the economy for the education of engineers with multidisciplinary knowledge in mechanical engineering and computer science, University of Belgrade - Faculty of Mechanical Engineering and University of Belgrade - Mathematics In 2019, the faculty jointly accredited the study program MAS Industry 4.0. MAS Industry 4.0 is a joint multidisciplinary study program, the successful completion of which leads to the academic title of Master of Mechanical Engineering - Computer Science. It is within this study program that the accreditation of modules for studying according to the dual model is planned for students who decide for this way of studying.

The MAS Industry 4.0 curriculum is shown in Table 1. The structure of the study program contains 9 compulsory and 6 elective courses, 2 professional internships and a Master thesis. Compulsory and elective courses carry 6 ECTS, Practice part 1 - 6 ECTS, Practice part 2 - 9 ECTS, and activities related to the Master thesis 15 ECTS.

During the four semesters of study, students who do not study according to the dual model have 1350 hours of active teaching, of which:

- 555 hours of lectures,
- 450-510 hours related to practice depending on elective subjects,
- 60-120 hours refers to other forms of teaching (DON) depending on the elective subjects,
- 225 hours related to study and applied research work (SIR/PIR).

In addition, 225 hours refer to other forms of teaching (Practice part 1 and part 2, Master thesis - defense).

Within the standard performance of this study program, according to accreditation, both internships and 435 hours of Master work are performed by the employer, with student activities monitored in close cooperation with the employer's mentor and Master thesis mentor, while DON is performed in an academic institution. The introduction of modules for studying according to the dual model within this study program implies the completion of additional accreditation, which will enable DON to be performed through the employer as part of learning through work. It is envisaged that students studying according to the dual model of study with the employer will realize the following obligations:

- 1.** DON with 75-120 classes (120-192 hours) where students are required to choose elective courses that ensure that DON are represented with a total of a minimum of 75 hours for all courses throughout their studies (in the standard study model DON are represented with minimum 60 hours),
- 2.** Practice part 1 and part 2 with a total of 210 classes (336 hours),
- 3.** SIR/PIR within the Master thesis with 225 classes (360 hours)

where 5 classes correspond to one working day lasting 8 hours, taking into account that the student's independent work is also performed by the employer.

Having in mind the above, the total workload of students studying according to the dual model during the two-year study program is 1005-1125 hours of active teaching at a higher education institution and 920-992 hours of learning through work depending on electives and other forms of teaching performed by the employer. is in accordance with the accreditation requirement (active teaching at a higher education institution must be represented by at least 450 hours, and learning through work with at least 450 hours per year on average at the level of the entire study program).

Table 1. MAS Industry 4.0 Curriculum

Ord. no.	Code	Name	Semester	Active teaching				Oth.	ECTS	Mandatory / Elective M/E
FIRST YEAR										
1.	9000	Introduction to production systems	First	45	30					6M
2.	9001	Modern management and network organiz. of the company	First	30	45					6M
3.	9002	Statistics for automatic data analysis	First	30	45					6M
4.	9003	Robotics and artificial intelligence	First	45	15	15				6M
5.	9004	Algorithms and data structures	First	45	30					6M
6.	9005	Designing business models in Industry 4.0	Second	45	30					6M
7.	9006	Machine learning of intelligent robotic systems	Second	30	15	30				6M
8.	9007	Cybernetic physical systems	Second	45	15	15				6M
Elective course group M1 (student chooses 1 course)				30	30-45	0-15				6
9.	9012	Distributed systems in mechanical engineering	Second	30	30	15				6E
10.	9013	Supply chain management	Second	30	45					6E
11.	9014	Digital measuring systems	Second	30	30	15				6E
Elective course group R1 (student chooses 1 course)				30	45					6
12.	9016	Computer intelligence	Second	30	45					6E
13.	9015	Machine learning	Second	30	45					6E
14.	9017	Introduction to bioinformatics	Second	30	45					6E
15.	9018	Data research	Second	30	45					6E
Total classes (lectures + practice, DON, other classes) and ECTS per year				375	300-315	60-75			60	
Total classes of active teaching per year				750						
SECOND YEAR (FINAL YEAR)										
16.	9008	System Interoperability Interfaces for Industry 4.0	Third	45	30					6M
Elective course group R1 (student chooses 1 course)				30	45					6
12.	9016	Computer intelligence	Third	30	45					6E
13.	9015	Machine learning	Third	30	45					6E
14.	9017	Introduction to bioinformatics	Third	30	45					6E

15. 9018	Data research	Third	30	45					6E
Elective course group M2 (student chooses 1 course)									
			45	15-30	0-15				6
17. 9020	Quality and risk management in industry 4.0	Third	45	30					6E
18. 9021	Industrial Internet of Things and Cyber Security	Third	45	15	15				6E
19. 9019	Virtual reality	Third	45	30					6E
Elective course group M3 (student chooses 1 course)									
20. 9024	Digital factory and intelligent maintenance	Third	30	30-45	0-15				6
21. 9022	Data exaquisition	Third	30	45					6E
22. 9023	Termination of technological systems and processes	Third	30	30	15				6E
23. 9009	Practice, Part 1	Third				75			6M
Elective course group M4 (student chooses 1 course)									
24. 9025	Business intelligence and business analytics	Forth	30	30-45	0-15				6
25. 9026	Flexible and reconfigurable technological systems	Forth	30	45					6E
26. 9028	Applications of game theory in engineering and management for Industry 4.0	Forth	30	45					6E
27. 9027	Entrepreneurship and organizational cultures	Forth	30	45					6E
28. 9010	Practice, part 2	Forth				135			9M
29. 9011	Master thesis - research and development	Forth				225			12M
30. 9029	Master thesis - defense	Forth				15			3M
Total hours (lectures + exercises, DON, SIR / PIR, other classes) and ECTS at year			180	150-195	225-270	225		60	
Total hours of active teaching per year			600						
Total hours of active teaching, other classes and points for all years of study			1350						

Table 2. Classes of active teaching at a higher education institution and learning through work with the employer by semesters

Semester	Form of teaching	First			Second			Third			Forth		
		DON	SIR/PIR	Practice	DON	SIR/PIR	Practice	DON	SIR/PIR	Practice	DON	SIR/PIR	Practice
Hours with the employer		24	-	-	72-96	-	-	0-48	-	120	0-24	360	216
Form of teaching		Lect.	Practice	Oth.	Lect.	Practice	Oth.	Lect.	Practice	Oth.	Lect.	Practice	Oth.
Classes at a higher education institution		195	165	-	180	105	-	150	120	-	30	30-45	15

Table 2 shows the workload of students by semesters expressed through hours of active teaching at the higher education institution and learning through work with the employer. Based on this table, it can be noticed that learning through work in the first semester is represented by 24 hours, in the second semester with 72-96 hours, in the third semester with 120-168 hours, and in the fourth with 576-600 hours, ie. to increase successively from semester to semester. In that way, the student gets the opportunity to use the theoretical knowledge acquired at the higher education institution during learning through work to the greatest possible extent with the synergetic effect of active teaching and work with the employer.

Other forms of teaching are performed in agreement with the subject teacher through work with the employer. The part 1 internship is performed with the employer in the following areas:

- distributed computing,
- data analysis,
- interactive computing,
- organization and management of processes and systems,
- design and / or implementation of equipment, systems and processes,
- system maintenance,

and the internship program is created individually for each student in agreement with the subject teacher and the mentor at the employers.

The practice part 2 and the preparation of the Master Thesis are closely related - The Master Thesis is performed by the employer under the supervision of the academic mentor of the Master Thesis and the mentor with the employer. The Master thesis is taken from the compulsory or elective subjects of the study program.

The goal is that within the Master thesis the student:

примени инжењерска знања, технике и вештине ради идентификовања, формулисања и решавања постављеног инжењерског задатка;

- apply engineering knowledge, techniques and skills in order to identify, formulate and solve the set engineering task;
- understand the principles of designing products and equipment and the environment necessary for their production;
- design systems, components or processes within realistic constraints such as economic, environmental, social, ethical, health and safety;
- application of computational and statistical methods, simulations and information technologies for analysis and synthesis of technological systems;
- apply standard tests and measurements and present the results.

The topic and content of the Master thesis are the result of practical research, ie project activity that is realized for the needs and in cooperation with the employer. Within the given topic,

if necessary, the student conducts tests and measurements, conducts, analyzes and interprets experiments and applies experimental results to improve the process, applies methods and tools for analysis, synthesis and design in the areas of distributed computing, data analysis, interactive computing, organization and management of processes and systems, design and / or implementation of equipment, systems and processes, system maintenance in the context of Industry 4.0.

4. Model of the Study for obtaining approval for the organization of an accredited study program according to the dual model

STUDY OF THE STUDY PROGRAM WHICH IS REALIZED BY DUAL STUDY MODEL IN HIGHER EDUCATION

In accordance with Article 4 of the Law on Dual Model Studies and Higher Education

FORM AND CONTENT OF THE STUDY

The study should provide the following information:

- 1 Name and head office of the higher education institution**
University of Belgrade - Faculty of Mechanical Engineering, Kraljice Marije 16,
11000 Belgrade

- 2 Data on the study program**

The study program Master of Academic Studies Industry 4.0 is accredited by the National Body for Accreditation and Quality Assurance in Higher Education - Certificate No. 612-00-00332/6/201-03 dated 04 October 2019.

Active teaching for students who study according to the dual model within this study program is performed jointly with students who do not study according to the dual model.

- The study program should be previously accredited in accordance with the standards for accreditation of study programs
- Information on whether the realization of the study program (active teaching) is unified for all students of that study program, or whether special classes are held only for students of the study program. The HEI can anticipate a number of different opportunities it offers to employers and students.

3 Obligations of the higher education institution regarding the realization of learning through work

Послодавци са којима се може склопити уговор о реализацији студијског програма морају имати делатност у једном од следећих сектора:

- Sector C - Manufacturing
- Sector D - Electricity, gas, steam and air conditioning supply
- Sector E - Water supply; wastewater management, control of waste disposal processes and similar activities
- Sector H - Transport and storage
- Sector J - Information and communication, namely area 62 - Computer programming, consulting and related activities and area 63 - Information service activities

An academic mentor is defined for each of the students according to the dual model during enrollment. In agreement with the academic mentor and the mentor with the employer, within one month from the day of enrollment, a study plan is defined for each student according to the dual model. This plan defines the employer with whom the studies will be realized, the mentor at the employer, the targeted narrow professional profile of the student and the list of elective courses. When choosing elective courses, it is necessary to conduct at least 75 hours of other forms of teaching with the employer with whom the student will sign a contract or with another employer (defined in the study plan) with which the University of Belgrade - Faculty of Mechanical Engineering has signed an agreement.

The academic mentor and the mentor with the employer have meetings at least once a month in order to harmonize the student's work tasks, and reporting on the student's work is done every semester.

The mentor must have completed at least the Master academic studies (or equivalent studies according to the previously valid laws) in the field of mechanical engineering or informatics with the employer. Checks of the mentor's competencies with the employer are performed on the basis of his work biography with professional achievements and on the basis of conversations with the academic mentor.

The academic mentor creates a list of necessary equipment based on the study plan for the given student and in consultation with the mentor at the employer. Also, depending on the specific business and production environment, the employer defines specific measures of safety and health at work, which are an integral part of the contract between the student and the employer.

Employers who meet the requirements for performing learning through work (Article 11 of the Law), are selected on the basis of a document containing the following information:

- List of activities of the employer who can participate in the implementation of content from the study program

- Specification of general obligations of the employer to be fulfilled in order to realize learning through work on the study program (eg harmonization of work tasks with the program and year of study of the student, occasional meetings of the employer's mentor and academic mentor, reporting - semester or annually - HEI on student work, etc. .), and specific obligations are defined by the contract with the employer.
- Competence of mentors regarding education (240 ECTS, etc.) and 3 years of work experience. The HEI should indicate the method of checking the competencies of the mentor with the employer (eg work biography with professional achievements, interview with the teacher). In order to receive and train mentors, the HEI can prepare instructions for the mentor at the employer, and for the implementation
- List of necessary equipment that the employer should have, space and equipment for student work
- Specific safety and health measures at work required for student work,

4 Plan and program for realization of learning through work;

The plan for the realization of learning through work is defined for each student, especially one month after enrollment in agreement with the academic mentor and the mentor with the employer.

Within the dual model, students courses Practice - part 1 lasting 120 working hours (one day a week for 15 weeks in the third semester), Practice - part 2 lasting 320 working hours (eight working weeks during the fourth semester) and Master thesis - research and development lasting 360 working hours during the fourth semester are performed by the employer. In addition, students studying according to the dual model must choose elective courses during their studies, which ensures that other forms of teaching are represented with a total of a minimum of 75 hours for all courses throughout their studies (the minimum number provided for a study program without a dual model is 60, and a maximum of 120 hours). Other forms of teaching are performed in agreement with the subject teacher at the employer in the ratio of 5 hours of other forms of teaching corresponds to one working day (8 working hours). In this way, students achieve a minimum of 120 and a maximum of 192 working hours.

The total workload of students during the two-year study program is 1005-1125 hours of active teaching and 920-992 hours of learning through work, depending on elective subjects and other forms of teaching that are performed by the employer.

The conditions for enrollment and the conditions for the transfer of students from dual to other models of study are defined by the general act of the HEI.

During the distribution of students by employers, the ranking of students during enrollment will be used (according to the success at previous levels of study), and in accordance with the wishes of students and the possibilities and wishes of employers.

Work-based learning is organized entirely by the employer or by several employers in accordance with the study plan of a particular student if necessary.

Career development of students in the dual model of studies is carried out in accordance with the Quality Assurance Strategy of the University of Belgrade - Faculty of Mechanical Engineering.

- contains a description and scope of learning through work expressed in hours and ECTS credits;
- active teaching must be represented by at least 450 hours per year, on average at the level of the entire study program;
- part-time learning with at least 450 hours per year on average at the level of the entire study program;
- place and time schedule of realization of learning through work (state only general possibilities, and details are defined by the contract with the employer in accordance with the specifics of the employer). The HEI can anticipate a number of different opportunities it offers to employers and students.
- information that work-based learning is organized in its entirety by the employer or, in part, in a higher education institution (in that case, state the reasons and fulfillment of the conditions for the realization of learning through work in higher education).
- Specific conditions for enrolling students in the study program according to the dual model
- Conditions for the transition of students from dual to other levels of study, ie the transition to a dual model of study
- The method of allocating students of the study program by employers
- The way in which the HEI supports the career development of students in the dual model of study by:
 - monitors the satisfaction and motivation of students and employers during the work-based learning program,
 - empowers and supports students to plan and set career development goals,
 - cooperates with secondary schools in order to establish continuity in the provision of career guidance and counseling services,
 - assists students in choosing an employer when learning through work is realized with several employers in order to guide students towards individual needs and in their best interest.

5 Place and time schedule of realization of learning through work

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
--------	---------	-----------	----------	--------

FIRST SEMESTER

The semester lasts 15 calendar weeks and three days. Monday in the fifth, Tuesday in the tenth and Wednesday in the fifteenth calendar week are for students according to the dual model at the employer where they perform other forms of teaching, and students according to the classical model are free; Monday, Tuesday and Wednesday in the 16th calendar week are at the University. Students according to the dual model are free during DON at the HEI.

02 – 08 pm (teaching at HEI) At the employer 8 hours by appointment	Introduction to production systems	Modern management and network organization of the company	Statistics for automatic data analysis	Robotics and artificial intelligence 0 or 24 working hours	Algorithms and data structures
---	--	---	--	---	-----------------------------------

SECOND SEMESTER

The semester lasts 17 calendar weeks and two days. Monday at 4, 9 and 14, Tuesday at 5, 10 and 15, Wednesday at 6 and 11, Thursday at 7 and 12 and Friday at 8 and 13 calendar week are for students according to the dual model with the employer where they perform other forms of teaching, and students according to the classical model are free. Students according to the dual model are free during DON at HEI.

02 – 08 pm (teaching at HEI) At the employer 8 hours by appointment	Machine learning of intelligent robotic systems 0 or 48 working hours	Cyber physical systems 0 or 24 working hours	Elective course group M1 0 or 24 working hours	Elective course group R1	Designing business models in Industry 4.0
---	--	--	--	-----------------------------	---

THIRD SEMESTER

The semester lasts 16 calendar weeks and one day. Monday at 3 and 15, Tuesday at 5, Wednesday at 8, Thursday at 10 and Friday in the 13th calendar week are for students according to the dual model at the employer where they perform other forms of teaching, and students according to the classical model are free. Students according to the dual model are free during DON at the HEI.

02 – 08 pm (teaching at HEI) At the employer 8 hours by appointment	System Interoperability Interfaces for Industry 4.0	Elective course group M2 0 or 24 working hours	Elective course group M3 0 or 24 working hours	Elective course group R1	Practice - part 1 120 working hours
---	--	---	---	-----------------------------	---

FOURTH SEMESTER

The semester lasts 15 calendar weeks and three days. Monday in the fifth, Tuesday in the tenth and Wednesday in the fifteenth calendar week are for students according to the dual model at the employer where they perform other forms of teaching, and students according to the classical model are free; Monday, Tuesday and Wednesday in the 16th calendar week are at the University. Students according to the dual model are free during DON at the HEI. Students according to the dual model have five additional weeks with the employer.

02-08 pm (настава на ВШУ) Код послодавца 8 сати по договору	Elective course group M4 0 or 24 working hours	Internship - part of 2,320 working hours Master thesis - research and production of 360 working hours
---	--	--

- A graphic presentation and textual description of the student's time schedule is given spent on part-time learning (with the employer) and on teaching at the university.
- Data on the number of hours are given, by semesters of study that the student achieves in learning through work and teaching at the HEI

6 The maximum number of students that a higher education institution can send to an employer to learn through work

The maximum number of students that can be referred to an employer is defined for each employer individually and ranges from one to five students depending on the size and activity of the company.

7 Attachment to the study: Decision of the professional body of the independent higher education institution on the adoption of the study.

Rationale

The purpose of the study is to provide the information needed by the Accreditation Commission for the purpose of issuing *consent for the realization of the study program according to the dual model*, in accordance with Article 5 of the Law:

Article 5

The basis for the implementation of the dual model of study is the study program accredited in accordance with the accreditation standards established in accordance with the law governing higher education and this law and the qualification standard established in accordance with the law governing the national qualifications framework.

The dual model of study can be accredited as an independent study program or as one of the modules within the study program and in addition to the elements prescribed by law governing higher education and accreditation standards, contains a description and scope of learning through work expressed in hours and ECTS credits.

Employers also participate in the development of study programs, ie modules referred to in paragraph 2 of this Article, in accordance with the law governing higher education.

The higher education institution may submit a request for approval for the organization of the module within the accredited study program for

realization of the study program according to the dual model, without increasing the number of students from accreditation.

The request referred to in paragraph 4 of this Article with the study shall be submitted to the National Body for Accreditation and Quality Assurance in Higher Education (hereinafter: the National Accreditation Body).

The study referred to in paragraph 5 of this Article shall be adopted by the professional body of the independent higher education institution.

The form and content of the study referred to in paragraph 5 of this Article shall be determined by the National Council for Higher Education on the proposal of the National Accreditation Body.

Upon receipt of the request referred to in paragraph 4 of this Article, the Commission for Accreditation and Quality Assurance (hereinafter: the Commission for Accreditation) within 15 days from the date of submission of the request shall form a special commission of reviewers.

Other information provided by the study is in line with other provisions of the Law on the Dual Model of Studies in Higher Education.

5. Requirements of the Standard for accreditation of the study program / module according to the dual model

General comment: According to the Draft Law on Dual Study Model (Article 5), "the form and content of the study referred to in paragraph 5 of this Article shall be determined by the National Council for Higher Education on the proposal of the National Accreditation Body." this document..

Standard 13: Dual study model

The study program according to the dual model, in addition to the elements prescribed by the law governing higher education and accreditation standards, contains a description and scope of learning through work expressed in hours and ECTS credits (Article 5 of the Law on Dual Model Studies in HE). The proportion of points acquired through learning through work and on the exam must correspond to the workload of students in learning through work and teaching.

Active teaching (lectures, exercises and other forms of active teaching) must be represented by at least 450 hours per year on average at the level of the entire study program, and learning through work with at least 450 hours per year on average at the level of the entire study program. (Article 6 of the Law on Dual Model Studies in HE).

The institution encloses the contracts on dual education that it has concluded with employers, which list all the essential elements related to dual education in accordance with the law. The contract must not be shorter than the number of years of the study program. (Articles 13 and 14 of the Law on Dual Model Studies in HE)

The place and time of the schedule of realization of learning through work must correspond to the submitted schedule of classes for performing the study program. Since the institution can conclude contracts with several employers, when the maximum number of students that the HEI can send to study through work from contracts with all employers is added up, it must be greater than or equal to the planned number of students in the study program. (Article 14 of the Law on Dual Model Studies in HE).

Standard 13: Dual education

Description of the concept of dual education in the study program. State how the employer meets the conditions for performing learning through work according to the law. (1000 words)

Description

Within the study program Master of Academic Studies (MAS) Industry 4.0, a dual model of study is introduced for interested students. Within the dual model, students courses Practice - part 1 lasting 120 working hours (one day a week for 15 weeks in the third semester), Practice - part 2 lasting 320 working hours (eight working weeks during the fourth semester) and Master thesis - research and development lasting 360 working hours during the fourth semester are performed by the employer. In addition, students studying according to the dual model must choose elective courses during their studies, which ensures that other forms of teaching are represented with a total of a minimum of 75 hours for all courses throughout their studies (the minimum number provided for a study program without a dual model is 60 , and a maximum of 120 hours). Other forms of teaching are performed in agreement with the subject teacher at the employer in the ratio of 5 hours of other forms of teaching corresponds to one working day (8 working hours). In this way, students achieve a minimum of 120 and a maximum of 192 working hours.

The total workload of students during the two-year study program is 1005-1125 hours of active teaching and 920-992 hours of learning through work, depending on elective subjects and other forms of teaching that are performed by the employer.

The employer will be provided with instructions for dealing with students on the basis of which students will be assigned an industrial mentor who will jointly with the mentor from the University of Belgrade - Faculty of Mechanical Engineering or University of Belgrade - Faculty of Mathematics jointly form a student development plan and quantitative indicators of his progress. get a grade.

Annexes 13.2, 13.6 and 13.9 will be submitted when the National Accreditation Body enables the accreditation of study programs according to the dual model of studies.

Annex 13.4 will be created for each employer individually in accordance with the dynamics of employers' involvement in the study program.

Табела 13.1 Table with basic elements related to dual education

Table 13.2 Table with the list of employers where the HEI directs students to learning through work

Record:

Annex 13.1 Елаборат о реализацији дуалног модела студија, са планом и програмом реализације учења кроз рад

Annex 13.1 Study on the implementation of a dual model of study, with a plan and program for the implementation of learning through work

Annex 13.2 Decision of the professional body of the independent higher education institution on the adoption of the study

Annex 13.3.a Copies of the dual education contract concluded by the HEI with the employers Annex 13.3.6 Copies of the statement of intent of the employers

Annex 13.4 Evidence that the employer meets the requirements for conducting learning through work, which are in accordance with the law. (Article 11 of the Law on Dual Model Studies in HE)

Annex 13.5 Schedule of classes of active teaching and learning through work by weeks, for the whole school year and for each year of study individually

Annex 13.6 General act which determines the manner of checking the competencies of the mentor with the employer

Annex 13.7 General act which determines the specific conditions for enrollment of students in study programs according to the dual model, as well as the conditions for the transition of students from dual to other study models, ie the transition to a dual study model

Annex 13.8 General act in which the assessment of students according to the dual model is regulated

Annex 13.9 Copies of the institution's letter stating that it informed the Ministry and the Chamber of Commerce about the concluded contracts with employers

Annex 13.10 Internet link to the page that contains basic information about the study program and other information relevant to the implementation of learning through work

Annex 13.11 In case part of the learning through work is realized through work at the HEI or with a THIRD PARTY, proof that they have the material, technical and personnel conditions (Article 6, paragraph 3, of the Law on Dual Model Studies in HE)

Annex 13.12. Course book MAS Industry 4.025

Table 13.1 Table with basic elements related to dual education

Scope of learning through work expressed in working hours and ECTS (in all years of study)	920-1040 operating hours 27 ECTS
Scope of theoretical teaching expressed in classes and ECTS (in all years of study)	1005-1125 hours of active teaching 93 ECTS
Total hours and ECTS (in all years of study)	
Number of employers with whom the HEI directs students to work-based learning	18
The maximum number of students that the HEI refers to learning through work according to the concluded contracts	5
Planned number of students in the study program	35
The date when the HE informed the competent ministry about the concluded contracts with the employers	
The date when the HE informed the Chamber of Commerce about the concluded contracts with the employers	

Table 13.2 Table with the list of employers where the HEI directs students to learning through work

Name of employer	Address	Number of places for students studying through contract work	Number of industrial instructors (tutors)
SAP West Balkans d.o.o.	Omladinskih brigada 88b	2	1
Siemens Mobility doo Cerovac	Sobovica bb	2	1
NPS d.o.o.	Bulevar marsala Tolbuhina 44	1	1
Metalac ad	Kneza Aleksandra 212	5	3
"NIS" a.d. Novi Sad	Narodnog Fronta 12	5	3
Milinic Industries Group Ltd.	Beogradska bb	2	1
Kompanija Sloboda	Ratka Mitrovica bb	3	2
Nelt Co. d.o.o	Marsala Tita 206	2	1
Star Import d.o.o. Belgrade	Omladinskih brigada 33	1	1
Inmold plast doo	Jurija Gagarina 231/322	3	2
Iva 28 d.o.o Belgrade	Antifasisticke borbe 47/4	2	1
Key IT d.o.o	Ugrinovicka 163	1	1
Servoteh d.o.o. Dobanovci	Igora Vasiljevica 49	3	2
Composite Technology Team doo.	Omladinskih brigada 90v	1	1
Festo Gesellschaft m.b.H. Belgrade branch	Konjevica bb	1	1
Stell Product and Project	Save Cobanovica 26	1	1
Bratel - Kron Ltd.	7. nova 7	1	1
ZF Serbia d.o.o.	Omladinskih brigada 88b	5	3

6. Procedure for introducing a dual model of studies at the University of Belgrade

The accredited study program of the Faculty of Mechanical Engineering, University of Belgrade 'Industry 4.0' was selected as representative for the introduction of a dual study model. Before the conditions for additional accreditation of the study program are met, it is necessary to supplement the relevant general acts of the faculty:

1. RULEBOOK ON TEACHING IN MASTER ACADEMIC STUDIES (September 2016) - Annex 1;
2. RULEBOOK ON EXAMINATION AND EXAMINATION ASSESSMENT (February 2017) - Annex 2;
3. QUALITY ASSURANCE STRATEGY (February 2017) - Annex 3

Industry 4.0 study program is already accredited in accordance with the accreditation standards established in accordance with the law governing higher education, and the dual study model can be re-accredited as a stand-alone study program or as one of the modules within the study program. regulates higher education and accreditation standards, it is necessary to contain a description and scope of learning through the work expressed in hours and ECTS credits. Without increasing the number of students from accreditation, a higher education institution may submit a request for giving consent for the organization of a module or study program within an already accredited study program for the realization of a study program according to the dual model. The request for giving consent, with the study, is submitted to the National Accreditation Body. Before submitting the Request, the study is adopted by the Senate of the University of Belgrade, at the proposal of the higher education institution and the Commission for Quality Assurance of the University of Belgrade.

The form and content of the study is determined by the National Council for Higher Education.

Annex 1

RULES ON TEACHING AT THE MASTER ACADEMIC STUDIES

University of Belgrade
Faculty of Mechanical Engineering

**TEACHING RULES
AT MASTER ACADEMIC STUDIES**

September 2016

Pursuant to Article 63 of the Statute of the Faculty of Mechanical Engineering, University of Belgrade, the Teaching-Scientific Council, at its session held on September 15, 2016, adopted

RULEBOOK ON TEACHING IN MASTER ACADEMIC STUDIES

Faculty of Mechanical Engineering in Belgrade
(consolidated text)

The consolidated text of the Rulebook on teaching at the Master academic studies of the Faculty of Mechanical Engineering contains: -Main text - adopted at the NNV session on July 29, 2007. years - Amendments - no. 1655/5 dated 14 July 2016

Belgrade, 15 September 2016

RULEBOOK ON TEACHING IN MASTER ACADEMIC STUDIES
Faculty of Mechanical Engineering in Belgrade
(consolidated text)

Content	page
1. Basic articles of the rulebook	4
1.1. Introductory Articles	4
1.2. On work in teaching and extracurricular activities	4
2. Curriculum	5
3. Procedure for the adoption of a new curriculum	5
4. About studies	6
4.1. General provisions on teaching	6
4.2 Enrollment in the first year of Master of Academic Studies	6
4.3 Elective modules	8
4.4 Organization of teaching	9
4.5 Rules of the Master of Academic Studies	11
4.6 Exams	12
4.7 Completion of the Master of Academic Studies	13
4.8 Student evaluation of pedagogical work of teachers	13
5. Student disciplinary responsibility	14
6. Transitional and final provisions	14

1. Basic articles of the rulebook

1.1. Introductory articles

Article 1.1.1.

The Rulebook on teaching at the Master of Academic Studies is one of the general acts of the Faculty. It is brought by the Teaching-Scientific Council of the Faculty.

The Rulebook on teaching at the Master Academic Studies is delivered to all teachers and associates, the Secretariat, the Accounting and Finance Service, the Departments, the Archives, the Head of the Student Affairs Service, as well as the Student Parliament of the Faculty of Mechanical Engineering.

Teachers and associates, non-teaching staff and students of the Faculty of Mechanical Engineering are obliged to comply with this *Rulebook*.

Article 1.1.2.

As part of its main educational activity, the Faculty also conducts Master academic studies.

The content and structure of the study program, the manner and procedure of its adoption, as well as other issues of importance for the study program, are regulated by the *Rulebook on the adoption of the study program of the University of Belgrade*.

Article 1.1.3.

The guide through undergraduate and master studies at the Faculty of Mechanical Engineering is the basic information document on all teaching activities at the Faculty.

Important notices about classes are published, both in writing and on the Faculty's website www.mas.bg.ac.rs. This work is performed by the heads and secretaries of the departments and the vice dean for teaching, in cooperation with the administrator of the Faculty's website.

1.2. About work in teaching and extracurricular activities

Article 1.2.1.

In order to successfully implement the curriculum, teachers and associates who are employed at the Faculty of Mechanical Engineering in Belgrade, within the forty-hour working week have the following work obligations:

- to hold regularly classes, in accordance with the established schedule of classes;
- to spend a minimum of 4 hours at the Faculty every working day in the period from 8 am to 4 pm, working on training and innovation of teaching, their own training and the training of their associates;
- to indicate the time of admission of students on notice boards in front of the cabinet - laboratory in the form of notices and to strictly adhere to these terms;
- to respect the time set for the beginning and end of the lecture or exercise, where they are obliged to hold a class lasting 45 minutes;
- not to hold classes in principle during breaks between classes;
- to keep records of attendance at classes (based on these records, the teacher certifies class attendance by signing the index);
- that the home department gives consent and approval for replacement of teachers and associates if the absence from classes (lectures and exercises) is shorter than 7 days, and for absence longer than 7 days approval for replacement of teachers or associates in lectures and exercises, can be approved by the dean and vice dean for teaching, with the proposal of the home department;
- in case of sudden inability to hold classes (due to illness, accident, or some other justified reason), the teacher or associate is obliged to personally notify the secretary of the home department at least one hour before the scheduled start of the class, who is then obliged to personally inform students and vice dean for teaching about the situation.
- For non-fulfillment of obligations, teaching employees are responsible to the head of the department, vice dean for teaching and dean.

Article 1.2.2.

Within the extracurricular activities at the Faculty, teachers and associates are obliged to:

- regularly attend the sessions of professional bodies and governing bodies of which they are members (Teaching-Scientific Council with the Electoral Council, Research-Professional Council, Faculty Council, Council of Departments, Collegium or Commission);

- in case they are unable to attend the scheduled session-meeting due to illness or other justified reason, they are obliged to inform the chairperson or secretary in person or through another person, at least one hour before the scheduled start of the session;

Article 1.2.3.

Teaching and non-teaching staff is not allowed to perform extracurricular activities in the Faculty premises, in their own name and for their own account, as well as in the name and for the account of another legal or natural person, without the knowledge and approval of the Faculty management.

2. Curriculum

Article 2.1.

Studies are realized on the basis of the curriculum.

The origin of the Faculty for the implementation of the curriculum is determined by the Statute of the Faculty.

The decision on organizing studies and courses is made by the Teaching-Scientific Council of the Faculty on the basis of a documented proposal of the home department.

Article 2.2.

The curriculum determines: the duration of studies, subjects and their schedule by years of study and semesters, as well as the number of hours of lectures and exercises.

The curriculum of the course determines: goal, content and status (compulsory-elective) of the course, teaching methods, number of classes, number of ECTS credits, basic and supplementary literature, pre-examination and examination obligations of students (graphic works, tasks, projects, laboratory exercises, colloquia, oral and written exams, etc.).

Article 2.3.

The Faculty may change and supplement the curriculum according to the procedure for adopting a new curriculum prescribed by this Rulebook.

3. Procedure for the adoption of a new curriculum

Article 3.1.

By changes or additions, or harmonization, the existing curriculum becomes a new curriculum.

The decision on the adoption of a new curriculum is made by the Teaching-Scientific Council of the Faculty.

Article 3.2.

Changes and additions to the study curriculum and subject curricula are interpreted as their significant change and are performed with the consent of the University.

Article 3.3.

The harmonization of the curriculum and the harmonization of the curricula of individual subjects, with the organization of work at the Faculty and the achievements of science, are not considered their significant changes, and the Teaching-Scientific Council performs them without the consent of the University.

Article 3.4.

The procedure for change and amendment, as well as the procedure for harmonization of the curriculum, can be initiated on the basis of a precisely documented proposal: the main department, a group of departments, a group of teachers, the Teaching-Scientific Council and the Dean.

Article 3.5.

The precisely documented proposal from the previous article should be:

- in accordance with the interests of the Faculty,
- harmonized with economic development plans, and
- relied on a realistic assessment of the state's capabilities.

Article 3.6.

The proposal for initiating the procedure for the adoption of a new curriculum is submitted:

- vice dean for teaching (considers curriculum issues, and gives an opinion),

- to the secretary of the faculty (considers issues of legality and registration, and gives an opinion), and
- the dean (decides whether the proposal is submitted to the Teaching-Scientific Council or not).

Article 3.7.

If the adopted curriculum, or harmonization, changes the existing curriculum into a new curriculum, that new curriculum shall enter into force in the next school year.

The new curriculum for special forms of study enters into force on a date determined by the Teaching-Scientific Council.

4. About studies

4.1. General provisions on teaching

Article 4.1.1.

The goal of the Master of Academic Studies at the Faculty of Mechanical Engineering is to educate higher education experts in the field of mechanical engineering with the academic title of Master of Mechanical Engineering.

Article 4.1.2.

Master academic studies at the Faculty of Mechanical Engineering last 2 school years (four semesters), are valued at 120 ECTS credits and on the basis of them a Diploma with the academic title of Master of Mechanical Engineering (Master of Mechanical Engineering) is obtained.

Article 4.1.3.

The school year begins on October 1 and ends on September 30 of the following year.

In the school year, classes take place during two semesters (winter and summer).

The semester lasts 15 working weeks.

A student who successfully completes all his semester obligations determined by the curriculum, acquires 30 ECTS points, or 60 ECTS points for one school year.

The decision on the number of shifts and the number of students in shifts is made by the Teaching-Scientific Council, adhering to the appropriate Standards.

Article 4.1.4.

The Vice-Dean for Teaching proposes the Teaching Calendar, which is determined by the Teaching-Scientific Council before the beginning of the school year, and the Commission for class schedule, which is also determined by the Council on the proposal of the Vice-Dean for Teaching, makes the class schedule.

All schedules (classes, internships, exams, consultations) are available to students in a timely manner (on the appropriate bulletin boards and the Faculty website) and are consistently implemented. At the beginning of the semester, teachers for each subject inform students about the following:

- basic data on the subject (with ECTS credits and conditions),
- objectives and contents of the course,
- curriculum and schedule,
- date for student admission,
- method of assessment on the subject,
- literature (compulsory and supplementary).

The implementation of curricula is systematically monitored, and teachers who do not adhere to the work plan on their subject will be warned about it, and if necessary, further measures will be taken.

4.2 Enrollment in the first year of Master of Academic Studies

Article 4.2.1.

In the first year of the Master of Academic Studies, student enrollment is performed in accordance with the Rulebook on the conditions, manner and procedure of enrollment in the second and third degree of academic studies at the University of Belgrade.

The right to direct enrollment in the first year of Master of Academic Studies has students who have completed basic academic studies at one of the faculties of mechanical engineering, with at least 180 ECTS credits.

The right to enroll in the first year of Master of Academic Studies have students who have completed basic academic studies at one of the faculties of the group of technical and technological sciences, Faculty of Physics, as well as students who have graduated from the Faculty of Science (department / module of physics), with at least 180 ECTS points.

The right to enroll in the first year of the Master of Academic Studies of the study program - module Mechanics have students who have completed basic academic studies at the Faculty of Mathematics, as well as students who have

Faculty of Science (department / module of mathematics), with at least 180 ECTS credits.

The right to enroll in the first year of the Master of Academic Studies study programs - modules Weapons Systems and Motor Vehicles have students with completed basic academic studies at the Military Academy (module Military Mechanical Engineering), with at least 180 ECTS credits.

Students with completed basic academic studies at the Criminal Police Academy, with at least 180 ECTS points, also have the right to enroll in the first year of the Master of Academic Studies of the study program - module Weapon Systems.

Students who have completed the Basic Vocational Studies enroll in the Basic Academic Studies at the Faculty (they do not have the right to directly enroll in the Master of Academic Studies).

The Teaching-Scientific Council of the Faculty regulates in more detail the manner of scoring and criteria for determining the order for enrollment of candidates by the Decision on enrollment of students, within the joint competition announced by the Senate of the University of Belgrade.

Article 4.2.2.

The Vice Dean for Teaching is obliged to: organize the issuance of the Information Booklet on the conditions of admission of students to the Master of Academic Studies, propose to the Dean the composition of the Enrollment Commission, coordinate the work of all departments of the Faculty as an Article while enrollment lasts, the only one communicates with the media on the topic of enrollment.

The criterion for determining the order of enrollment of candidates for the Master of Academic Studies of the Faculty is the average grade in the Basic Academic Studies, and in case two candidates have the same average grade, the advantage will be given to the candidate who completed the previous level of studies.

Candidates are ranked within each of the selected modules of the study program for which they applied.

Candidates from the category of Article 4.2.1, paragraphs 3, 4 and 5, are ranked in the category of self-financing students.

Candidates from the category of Article 4.2.1, paragraph 6, can enroll if they pass the qualification exam in the subject of the Module:

Candidates referred to in paragraph 5 of this Article shall be ranked in the category of self-financing students.

Candidates take the qualifying exam before a committee consisting of a vice dean for teaching, a module leader, a teacher who teaches a module and the president of the MAS Commission.

In the event that, after the ranking of students with a degree in Mechanical Engineering, there are vacancies, the students from the previous paragraph are allowed to move from the status of self-financing to the status of budget students.

The Head of the Student Affairs Service coordinates the work of the Enrollment Commission with the work of the Student Affairs Service and bears all responsibility for that issue.

The work in the Enrollment Commission was awarded according to the Rulebook on Acquisition and Distribution of Revenues of the Faculty of Mechanical Engineering, University of Belgrade.

Article 4.2.3.

A special condition for enrollment in the first year of Master academic studies, which are conducted in a foreign language, is knowledge of the language in which the classes are conducted.

The language proficiency test referred to in paragraph 1 of this Article shall be performed by a special commission appointed by the Teaching-Scientific Council of the Faculty.

A student enrolled in the studies referred to in paragraph 1 of this Article during the studies may not transfer to the curriculum of studies conducted in the Serbian language.

4.3 Elective modules

Article 4.3.1.

At the Master of Academic Studies, the student must choose an elective module when enrolling.

The elective module is a set of compulsory and elective courses that define a professional orientation in the field of mechanical engineering.

The elective module has 9 compulsory courses, of which one is the Professional Practice of the chosen module, four elective courses and two conducted elective courses (*Mechanics M or Fluid Mechanics; and Thermodynamics M or Mechatronics*), as well as *Master thesis (M.Sc. thesis)*.

- rules on *Professional Practice*.

Article 4.3.2.

The student is required to complete one professional internship at the Master of Academic Studies (*Professional Internship M*).

Professional practice M lasts 45 classes and is an independent student work. When calculating the average grade after completing the Master of Academic Studies, grades from the *Master (M.Sc.)* and *Professional Practice M* are reduced to one grade (by weighting according to the appropriate number of ECTS points), and then this grade is calculated in the total average grade of studies weighted at 25 classes.

Professional practice M is organized by module holders.

Professional practice M is performed outside the classes of active teaching. If out of the total planned 45 hours, about 5 hours are spent on tests of knowledge and skills acquired in practice, there are still 40 school hours (about 30 working hours) for working hours in practice, which is approximately 7 working days.

Professional practice M is organized and performed by the module holders in a way that they consider to be the most suitable for the student and at the same time technically feasible for the departments. For example: tour of one or more laboratories, work in the laboratory, tour and work in certain companies and factories, visits (excursions) to certain facilities, etc.

The time for the internship is also adaptable to the possibilities of the Department: either on a certain day, or every working day in classes when students do not have classes, or united in a block at the end of the semester, or during the semester if there is a period when there are no classes, etc.

Each holder of the module determines the teacher (and associate) who will lead and control the implementation of the *Professional Practice M*.

The teacher and the associate who lead and control the implementation of the *Professional Practice M*, keep the appropriate records and submit their prescribed report to the Student Affairs Office.

- rules on *Master thesis (M.Sc. thesis)*

Article 4.3.3.

The Master thesis (M.Sc. thesis) is the final exam of the Master of Academic Studies.

The Master thesis (M.Sc. thesis) is taken either from the compulsory subjects of the module, or from the elective subjects, which the student passed during the Master academic studies and must be a subject in the field of mechanical engineering.

Holders of the module determine from which subjects from paragraph 2 of this Article the student can do *Master thesis (M.Sc. thesis)*, and the topic of work is determined by the teacher in agreement with the student.

The Master thesis (M.Sc. thesis) must contain at least two of the following areas: material on the studied and processed topic, own numerical calculation, own experimental work and / or own design.

Master thesis (M.Sc. thesis) is an independent student work made in writing, with instructions and consultations with the teacher.

The form for issuing a *Master thesis (M.Sc. thesis)* (posted on the Faculty's website www.mas.bg.ac.rs) is also the title page of the *Master thesis (M.Sc. thesis)* and must contain:

- *Master thesis* topic (*M.Sc. thesis*)
- date of publication of the topic of the paper
- signature of the teacher who issued the topic of the paper
- signature of the head of the department, ie the holder of the module in which the student is studying

•signature of the Vice Dean for Teaching.

The defense of the *Master thesis (M.Sc. thesis)* cannot be done until all other exams have been passed.

For the defense of the *Master thesis (M.Sc. thesis)* the student submits to the Student Affairs Service the Application of the *Master thesis (M.Sc. thesis)*, which is featured on the website of the Faculty (www.mas.bg.ac.rs). The Student Affairs Service confirms on the Application that the student has the right to defend the *Master thesis (M.Sc. thesis)*.

At the end of the text *Master thesis (M.Sc. thesis)*, the student confirms with his/her own signature that the work was done independently.

At least three bound copies of the completed *Master thesis (M.Sc. thesis)* are certified by the student in the Student Affairs Office and submitted to the subject teacher upon certification. One copy of the completed *Master thesis (M.Sc. thesis)* in electronic form is submitted by the student to the Faculty Library.

The form and manner of archiving the *Master thesis (M.Sc. thesis)* are determined by the Rulebook on the form and manner of archiving doctoral, Master and Master theses in the Library of the Faculty of Mechanical Engineering.

The public defense of the *Master thesis (M.Sc. thesis)* is performed before the Commission of three Articles, of which, in addition to the subject teacher, at least one more Article should be in the title of teacher.

The commission for the defense of the *Master thesis (M.Sc. thesis)* is formed by the subject teacher with whom the student did the *Master thesis (M.Sc. thesis)*, and with the consent of the head of the department, ie the holder of the module where the student is studying.

The date and time of the defense of the *Master thesis (M.Sc. thesis)* is scheduled by the Commission and the defense of the paper must be held within a maximum of 15 days from the day of receipt of the paper.

The date and time of the defense of the *Master thesis (M.Sc. thesis)* are published on the notice board of the Faculty at least two working days before the scheduled date of the defense, and this work is performed by the Student Affairs Service.

The grade on the success of the candidate in the *Master thesis (M.Sc. thesis)* is communicated to the candidate immediately after the completion of the defense, with an appropriate explanation.

Upon completion of the defense of the *Master thesis (M.Sc. thesis)*, the Commission submits a completed Application to the Student Affairs Service.

A student who has not submitted a *Master thesis (M.Sc. thesis)* within the prescribed period, or a student whose *Master thesis (M.Sc. thesis)* has not been accepted by the Commission, or who has not defended it, may re-apply for a new *Master thesis (M.Sc. thesis)*.

Once given, the topic of the *Master thesis (M.Sc. thesis)* must not be repeated for the same candidate.

4.4 Organization of teaching

Article 4.4.1.

Departments conduct semester classes adhering precisely to the existing curricula and the official schedule of classes.

The secretaries of the department submit to the vice dean for teaching ppan semester teaching, done precisely on the basis of existing curricula, the official schedule and the agreement of all members of the department at a meeting with the head of the department.

Responsibility for the correct and consistent implementation of teaching belongs to:

1. subject teacher,
2. associate and
3. the head of the department.

In case of irregularities and inconsistencies in the implementation of teaching, each member of the department is obliged to inform the head of the appropriate department, who after checking informs the vice dean for teaching.

Teachers and associates of the Faculty of Mechanical Engineering are obliged to keep personal records of teaching activities according to the program of a certain subject (for example, "lecture number ..., lesson with the title ...") and to submit a report based on it, at the end of each semester on completed semester classes.

The individual report is written by all teachers and associates personally on the form *Report on completed classes*,

they sign it in person, and then, within the overall form of the Department's Report on Teaching, which is controlled and signed by the Head of the Department, they submit it through the Secretary of the Department to the Vice Dean for Teaching, who forwards this report to the Security and Verification Commission quality.

The Vice Dean for Teaching monitors the efficiency of the teaching process and harmonizes it with the objective possibilities of the students and proposes appropriate measures to the Dean.

Article 4.4.2.

The Vice Dean for Teaching coordinates the teaching process within the Faculty and takes care of the correct and consistent implementation of curricula.

Article 4.4.3.

In the event that teaching in one of the subjects is conducted incorrectly and inconsistently, the dean initiates appropriate procedures.

Article 4.4.4.

Subject teachers and associates are required to consult with students about the subject at least once a week in their classrooms.

Subject teachers and associates are obliged to announce the dates for admission of students on the doors of their cabinets.

The head of the department takes care of whether all teachers and associates of the department conscientiously adhere to these obligations.

Except for justified circumstances, in the event that an Article of the Department does not comply with this obligation, the Vice-Dean for Teaching raises the issue of violation of the work discipline of the Head of the Department and that Article of the Department.

Article 4.4.5.

The Commission for the schedule of classes makes a precise schedule of classes in cooperation with the holders of the module and the secretaries of the departments. The Commission is directly responsible for its work to the Vice Dean for Teaching.

The commission for the schedule of classes was awarded for its work according to the Rulebook on the acquisition and distribution of income of the Faculty of Mechanical Engineering, University of Belgrade.

The schedule of classes is made according to the years of study and groups, with the indicated place and time of teaching. At the request of the holder of the module, or the head of the department, to make a change in the schedule of classes during the semester that lasts, the consent is given by the President of the Commission for the schedule of classes and the Vice Dean for Teaching.

If, due to circumstances, there is an unforeseen change in the schedule of classes, teachers and associates are obliged to inform the head of the department and the vice dean for teaching in writing.

Article 4.4.6.

The department, together with the holder of the module, makes a precise decision on the uniform criteria of all its teachers and associates, according to which, by signatures in the student index, the verification of his completed work tasks is performed.

The fulfillment of all obligations for one subject is finally certified by the subject teacher for that school year, with his signature in the student index.

The conditions for verification of the semester and year of study are:

- fulfilled pre-examination obligations of all subjects in that semester, as well as
- tuition payment (for students who pay tuition) or
- payment of the appropriate fee determined by the Price List of studies and services when studying at the Faculty of Mechanical Engineering.

To certify the semester, the student needs to fulfill all the obligations provided by the curriculum for that semester.

A student who does not fulfill all the obligations stipulated in the curriculum for that semester during the winter semester, upon personal request, can attend classes in the summer semester, as well as to reimburse the pre-examination obligations, with the reimbursement of appropriate costs.

Article 4.4.7.

The amount of tuition fees and all other costs that are determined by the Price List of studies and services when studying at the Faculty of Mechanical Engineering, is determined by the Faculty Council. The proposal of the price list is given by the collegium of the dean.

The price list of studies and services when studying at the Faculty of Mechanical Engineering determines the monetary amounts and payment codes, and their content consists of the following items:

- tuition fee
- tuition fee of the repeated year determined by the price and the number of missing ECTS points
- subsequent enrollment of the year
- subsequent certification of the semester
- application for transfer from another faculty
- issuance of non-standard certificates
- issuing documents on the reverse
- certificate of passed exams (with curriculum)
- certificate of passed exams
- printout from the Faculty
- duplicate index
- issuance of graduation certificates
- issuance of diplomas and diploma supplements
- issuing duplicates of graduation certificates
- issuing duplicate diplomas and diploma supplements
- costs for delays in registering for the exam
- costs for harmonization with the new curriculum
- total costs for issuing the diploma and diploma supplement.

4.5 Master of Academic Studies Rules

- rights and obligations of students.

Article 4.5.1.

A student of the Faculty of Mechanical Engineering in Belgrade has the rights and obligations determined by Article 86 of the Law on Higher Education.

- enrollment in the second year of Master's study

Article 4.5.2.

A student may enroll in the second year of study if he meets the conditions set out in Article 87 of the Law on Higher Education.

- student status

Article 4.5.3.

The status of a student of the Faculty of Mechanical Engineering is determined on the basis of Article 88 of the Law on Higher Education.

- transfer from similar faculties

Article 4.5.4.

A student of another Faculty of Mechanical Engineering or another faculty in the field of technical and technological sciences, in the country or abroad, can apply for transfer to this Faculty only at the beginning of the second year of study provided that he has acquired the appropriate number of ECTS credits. and the program, on the basis of which the number of possibly required additional exams, ie the number of ECTS points, is determined.

Along with the request, the student submits a certificate of passed exams and a certificate of the acquired number of ECTS points.

The Dean of the Faculty, based on the obtained opinions of the departments, module holders and the Commission for Master of Academic Studies on the compliance of the subject program that the student passed with the program of this faculty, makes a decision on enrolling such a student. The dean's decision is final.

Article 4.5.5.

Recognition of exams passed at another Faculty of Mechanical Engineering or at another faculty in the field of technical and technological sciences in the country or abroad is done on the basis of comparing the certificates of passed exams with the curricula of the faculty and the appropriate number of ECTS credits.

The exam can be recognized in full or with an appropriate supplement. The scope and type of supplement, as well as the manner of taking the exam, is determined by the competent Department and it submits its opinion to the dean.

Article 4.5.6.

A student who has paid the tuition fee at the faculty since he / she can transfer the right to continue his / her studies within the budget quota under the same conditions under which the students of the Faculty of Mechanical Engineering in Belgrade exercise that right.

- suspension of student rights and obligations

Article 4.5.7.

At the request of the student, the rights and obligations are suspended in the cases specified in Article 92 of the Law on Higher Education, as well as in other cases, when the justification of the request is assessed by the Commission for Master of Academic Studies.

Suspension of rights and obligations referred to in paragraph 1 of this Article, the student realizes at his personal request, which in a timely manner, together with the necessary documentation, submits to the Student Affairs Service.

Article 4.5.8.

In case the student thinks that his right has been violated, he can file a complaint to the Dean of the Faculty of Mechanical Engineering. The dean's decision is final.

- termination of student status.

Article 4.5.9.

Student status terminates in cases determined by Article 94 of the Law on Higher Education.

At the personal request of the student, the deadline for completion of studies may be extended in cases when the justification of the request is assessed by the Commission for Master of Academic Studies.

Article 4.5.10.

A student who does not enroll in the second year of Master's studies, or is expelled from the Faculty, may continue his / her studies after the interruption for which he / she had justified reasons, as assessed by the Commission for Master's Academic Studies.

During the interruption of studies, the student has no right to take exams or perform any teaching obligations.

The student from the previous paragraph can continue his studies only with:

1. the obligation to pay tuition fees, which is decided by the Commission for Master of Academic Studies, and
2. harmonization with valid curricula.

4.6 Exams

Article 4.6.1.

Exam deadlines are determined by Article 90 of the Law on Higher Education, and taking the exam is defined by the *Rulebook on taking the exam and grading at the exam of the University of Belgrade*.

Article 4.6.2.

The schedule of exams is determined by a permanent schedule, which is made by the Commission for exam schedules.

The dates for all exams are set for the entire school year in advance and are announced at the beginning of the school year.

In case of postponement of the exam for justified reasons, the subsequent term is determined by the agreement of the teacher and the student with the consent of the vice dean for teaching.

Article 4.6.3.

The student is obliged to bring his index to the written or oral exam for identification, and if he does not have the index with him, he does not have the right to take the exam.

The student is obliged to bring the prescribed Workbook for assignments for the written or oral exam. The workbook is purchased at the Faculty Script Room.

The teacher decides whether, and which aids (books, tables, diagrams, computers, etc.) can be used in the exam.

Article 4.6.4.

According to the scheduled schedule of exam shifts, exam shifts before the exam start registering for duty to the subject teacher or his associate in their office, at least 10 minutes before the exam.

Unjustified absence from duty at the exam entails disciplinary liability.

During the exam, there must be several people on duty in each hall, as follows:

- at least 2 in classrooms,
- at least 3 in amphitheatres.

The people on duty at the exam in the hall check the identity of the student, using the index and ID card as needed.

The exam attendants make a scheme of sitting on the exam in the hall where they are on duty, certify with their signature the prescribed workbook for written assignments, and immediately after the exam they are obliged to hand over the scheme and counted assignments to the subject teacher.

The subject teacher or the duty officer is obliged to remove from the exam the student who in any way interferes with the normal holding of the exam, or uses illicit means when preparing the task.

For violation of obligations and discipline in class or exam, the discretion of teachers and associates is that the student can be removed from classes or exams and submit a disciplinary report in accordance with the *Rulebook on disciplinary responsibility of students of the University of Belgrade*.

Article 4.6.5.

The grade is determined by the teacher, ie the Examination Commission.

The grade is entered in the index, in the application at the bottom of the cover page of the student's workbook and in the minutes of the exam.

After the exam, the teacher submits the minutes of the exam to the Student Affairs Service. The record of the exam is also submitted in electronic form.

4.7 Completion of the Master of Academic Studies

Article 4.7.1.

Upon completion of the Master of Academic Studies at the Faculty of Mechanical Engineering, a Diploma with the academic title of Master of Mechanical Engineering (Master of Mechanical Engineering) is obtained.

The commission for awarding diplomas consists of the vice dean for teaching (president of the commission), the secretary of the Faculty and the head of the Student Affairs Service.

The commission for awarding diplomas is obliged to organize the processing of data for diplomas and diploma supplements, checking their accuracy, preparation and awarding of diplomas and diploma supplements.

The awarding of diplomas is done periodically and publicly.

4.8 Student evaluation of pedagogical work of teachers

Article 4.8.1.

Students evaluate the pedagogical work of each teacher and associate for each subject separately. The procedure of student evaluation of pedagogical work of teachers and associates at the Faculty of Mechanical Engineering is performed according to the *Rulebook on student evaluation of pedagogical work of teachers*.

5. Student disciplinary responsibility

Article 5.1.

Disciplinary responsibility of students, measures and procedure for determining responsibility, are determined by the *Rulebook on disciplinary responsibility of students of the University of Belgrade*, which (in accordance with *the Law on Higher Education*) is applied in full.

6. Transitional and final provisions

Article 6.1.

All provisions of this Rulebook are in accordance with the Law on Higher Education ("Official Gazette of RS" No. 76/05) and apply to the curriculum of the Master of Academic Studies.

For generations of students enrolled in studies according to the curricula adopted before the entry into force of the Law on Higher Education, the provisions of the Rulebook on Teaching Activities (743/1 of 19 May 2003) will apply and will be applied until further notice.).

Article 6.2.

This Rulebook enters into force on the day of its adoption at the session of the Teaching-Scientific Council of the Faculty.

DEAN OF THE
FACULTY OF MECHANICAL ENGINEERING

Prof. Radivoje Mitrovic, PhD

Annex 2

RULEBOOK ON EXAMINATION AND EXAMINATION ASSESSMENT

Pursuant to Articles 89 and 90 of the Law on Higher Education ("Official Gazette of RS" No. 76/2005, 100/2007 - authentic interpretation, 97/08, 44/10, 93/12, 89/13, 99/14, 45/15 - authentic interpretation, 68/15 and 87/16), Articles 99, 100, 101 and 102 of the Statute of the University of Belgrade and Articles 94, 96, 97 and 98 of the Statute of the Faculty of Mechanical Engineering, Teaching-Scientific Council at the

RULEBOOK ON EXAMINATION AND EXAMINATION ASSESSMENT

Article 1

This Rulebook regulates in more detail the conditions and manner of taking the exam at the University of Belgrade-Faculty of Mechanical Engineering (hereinafter: the Faculty), the organization and procedure of taking the exam, the manner of determining the exam grade, protection of students' rights and other issues relevant to taking the exam. and grading on the exam.

Article 2

The approximate schedule for taking the exam for all exam deadlines is defined by the Calendar of Teaching and Examination adopted by the Teaching-Scientific Council before the beginning of the school year. The schedule of examinations for each subject is determined by the Commission for the schedule of examinations and is published at least one month before the beginning of the examination period.

The Vice Dean for Teaching coordinates the work of the Examination Schedule Commission.

Exceptionally, in justified cases, the term of taking the exam may be replaced by another term in the same exam period with the consent of the vice dean for teaching.

Exam dates for each subject are published on the Faculty's website and in the central bulletin board.

Article 3

At the beginning of the class, the subject teacher is obliged to acquaint students with the course program, class schedule by weeks, ie days, planned forms of active teaching (pre-exam obligations) and the way of their evaluation, character and content of exams, list of areas and / or exam questions, structure the total number of points and the manner of forming the grade.

The subject teacher is obliged to inform the student at the end of the realization of active teaching about the total number of points that the student has achieved by the realization of pre-examination obligations.

The teacher is obliged to keep the documentation on the pre-examination obligations of the students and to keep it until the end of the validity period with the defined organization of the subject.

At the end of the realization of active teaching, the subject teacher has the obligation to enter in the electronic database data on students who have acquired the condition for taking the final exam in that school year.

Article 4

The student's success in mastering the subject is continuously monitored during classes and is expressed in points.

By fulfilling the pre-examination obligations and passing the final exam, the student can achieve a maximum of 100 points, whereby the pre-examination obligations participate with a minimum of 30 and a maximum of 70 points.

The study program shall determine the proportion of points referred to in paragraph 2 of this Article.

Pre-examination obligations referred to in paragraph 2 of this Article are determined by the study program, course program and acts of the Faculty.

The student takes the exam immediately after the end of classes in that subject within the deadlines set by the Law and the Statute of the Faculty.

A student is considered to have taken the exam if he / she has taken the exam.

Article 5

The faculty keeps statistics on taking exams in undergraduate, master's and doctoral academic studies (by subjects and by exam deadlines).

The Dean of the Faculty is obliged to submit to the Senate by March 15 of the current year

University Report on passing the exams by subjects in the previous school year, which was adopted by the Teaching-Scientific Council of the Faculty.

The Teaching-Scientific Council of the Faculty considers the causes and consequences of poor success in the course, if the success of taking the course on an annual level is less than 30% and proposes appropriate measures.

The Teaching-Scientific Council of the Faculty considers data on subjects in which the pass rate in the first exam period is higher than 90%. The council analyzes the impact of high pass rates on the quality of learning outcomes and those adopted, as well as on the implementation of teaching in interconnected subjects and proposes appropriate measures.

Article 6

The faculty is obliged to keep records of the passing and study success of each enrolled generation of students.

The Dean of the Faculty is obliged to submit to the University Senate by March 15 of the current year a Report on the passing of students per generation, ie the number of students per generation who achieved less than 48 ECTS, from 48 to 59 ECTS, 60 or more ECTS points in the previous school year .

Article 7

A student can take the exam if he has passed all conditional courses defined by the study plan and program and won a sufficient number of pre-exam points, clearly defined by the rules of the given course.

Only a student who has registered for the exam can take the exam.

The application for taking the exam is submitted electronically, in the terms defined by the Calendar of classes and exams.

After three exam registrations, the student pays the exam registration according to the Price List of studies and services while studying at the Faculty ^

The Student Affairs Service publishes the lists of registered students on the Faculty's website, no later than five working days after the end of the exam registration.

The Student Affairs Service is responsible for this work.

The head or secretary of the Department takes over the lists of registered students through the teacher service (employee service) no later than three days before the start of the exam period.

Article 8

The student can subsequently register for the exam after the deadline for registration defined by the Calendar of classes and exams.

The student referred to in paragraph 1 of this Article, registers the exam in person at the Student Affairs Service, with the payment of the financial fee prescribed by the Price List of studies and services while studying at the Faculty.

A student with a certified application is obliged to contact the subject teacher who will enable him to take the exam.

Article 9

If the exam room is not available to students with disabilities, the Faculty is obliged to provide another suitable room at the request of the student with a disability.

Article 10

The final exam is unique, it is taken orally, in writing, ie in writing and orally, and it is determined by the study program, course program and acts of the Faculty.

When taking the exam, the student's identity is determined on the basis of an index.

The student is obliged to bring a workbook for assignments to the exam.

The teacher decides whether and which aids (books, tables, diagrams, computers, etc.) can be used in the exam.

When the exam is taken in writing, the exam begins with the division of tasks into forms which, in the appropriate number, are prepared by the subject teacher, and dictation of tasks is not allowed.

Written assignments from the exam are kept until the end of the deadline defined by the organization of the course.

When taking the exam orally, the Faculty is obliged to ensure the publicity of taking the exam.

The publicity of the exam is ensured by announcing the time and place of the exam and the possibility of the presence of other persons at the exam.

Article 11

During the exam, the student is obliged to behave in accordance with the established rules of conduct that prohibit:

- leaving the room and returning to the room where the exam is held, getting up and moving around the room;
- any communication, unless the duty officer is asked a question in order to clarify ambiguities in the task formulation;
- any other activities and behavior that disrupt the course of the exam;
- use of any illicit device.

In case the student does not behave in accordance with the established rules of conduct, teachers and associates act in accordance with the provisions of the Rulebook on disciplinary responsibility of students at the University of Belgrade.

Article 12

Duty on the written/oral exam is the work obligation of teaching staff, teaching associates and doctoral students who are engaged in the implementation of teaching in the current school year.

The persons on duty at the exam make a scheme of the seating schedule in the hall where they are on duty, certify the signed workbook with their signature, and immediately after the exam they are obliged to hand over the scheme and the counted tasks to the subject teacher.

If the Department cannot provide a sufficient number of teachers / associates on duty, the head of the department informs the vice dean for teaching about the required number of people on duty at the exam.

The commission for the schedule of exam shifts submits the list of duty persons by departments / subjects.

The head of the department submits to the vice dean for teaching a report on the engagement of persons from other departments, or persons employed in the Innovation Center of the Faculty of Mechanical Engineering on duty at the exam.

Article 13

The oral exam is conducted by the subject teacher, ie the examination commission, and when the exam is taken in writing, the subject teacher appoints a person on duty, professional for the subject from which the exam is taken, who takes care of the regularity of the exam.

The teacher, ie the person on duty, is obliged to be in the room where the exam is held at the latest at the beginning of the exam.

During the written exam, only subject teachers and duty officers may enter the room, and exceptionally other persons employed at the Faculty, with the approval of the duty officer.

In the event that a person who is not employed at the Faculty enters the room where the written exam is held, the duty officer is obliged to immediately remove that person and make a note about it.

Article 14

The results of the written part of the exam must be published no later than half of the time period between the written and oral part of the exam, if the exam is taken in writing and orally.

Article 15

Students of doctoral academic studies acquire the right to apply and take exams after attending the classes provided by the plan and program for a given subject. In special cases, the student registers for the exam with the appropriate department or subject teacher.

Article 16

When taking the oral exam, the student has the right to:

- to prepare an oral answer (drafting a concept) of at least 15 minutes for all questions, when taking the exam orally;

- to look at his / her written assignment from the exam in the terms provided for that, and before the oral part of the exam if the exam is taken in writing and orally.

Article 17

The student's success in the exam is expressed by a grade from 5 (did not pass) to 10 (excellent-exceptional).

The final grade on the exam is based on the total number of points that the student gained by fulfilling pre-exam obligations and taking the exam, and according to the quality of acquired knowledge and skills, and contains a maximum of 100 points, and is determined according to the following scale:

- up to 50 points - grade 5 (failed)

- from 51 to 60 points - grade 6 (sufficient)

од 61 до from 61 to 70 points - grade 7 (good) from 71 to 80 points - grade 8 (very good) from 81 to 90 points - grade 9 (extremely good) from 91 to 100 points - grade 10 (excellent).

Article 18

The grade on the exam is entered in the Minutes of the exam and in the software program for entering grades of the Faculty of Mechanical Engineering, in the application at the bottom of the title page of the student's workbook and entered in the index.

Grade 5 (failed) is not entered in the index.

In the case when the final exam is taken only in writing, after passing the written exam, the student is obliged to submit the index in order to enter the grade, in the terms determined for that purpose by the subject teacher.

Article 19

Subject teachers are obliged to submit the Examination Record, certified by their signature, sections from the exam notebook and electronic record, to the head of the department, who submits them together, in the form of a study, in person or through the secretary of the department to the Student Affairs Service immediately after the exam.

Individual exam applications are filled in by the subject teacher and submitted in person or through the Secretary of the Department to the Student Affairs Service.

Article 20

A student has the right to object to the grade obtained at the exam if he considers that the exam was not conducted in accordance with the Law, the Statute of the Faculty and this Rulebook.

The complaint is submitted to the dean within 36 hours of receiving the grade.

The Dean considers the student's complaint and makes an appropriate decision within 24 hours of receiving the complaint.

If the student's objection is accepted, the student takes the exam again before the commission, within three days from the day of receiving the decision from the previous paragraph.

The 3-member commission is appointed by the Dean from among the teachers. The Commission shall take a decision by a majority of votes. The evaluation of the commission is final.

The grade in the index and the exam application is signed by the president of the commission, who is also the subject teacher.

Article 21

A student who is not satisfied with the passing grade on the exam has the right to submit a request to retake the exam.

The student submits the Request to the Student Affairs Service by the end of the school year in which he/she took the exam.

The Vice Dean for Teaching makes the decision to retake the exam.

A student who retakes the exam pays a special fee in accordance with the Price List of services when studying at the Faculty of Mechanical Engineering.

It is considered that the student has thus exercised the right of one attempt to take the exam. The student takes the exam again, and may receive a lower grade than the previously obtained grade, including a negative one.

Annex 3

QUALITY ASSURANCE STRATEGY

UNIVERSITY OF BELGRADE
FACULTY OF MECHANICAL ENGINEERING

QUALITY ASSURANCE STRATEGY

BELGRADE, 2017

Pursuant to Article 33, paragraph 1, item 3 of the Statute of the Faculty of Mechanical Engineering in Belgrade (November 2015, supplement to the Statute - October 2015) and the Rulebook on Standards for Self-Evaluation and Quality Assessment of Higher Education Institutions (Official Gazette PC No. 106/06), the Council Faculty of Mechanical Engineering, at the proposal of the Teaching-Scientific Council, reviewing the basic document from 2007 and harmonizing it with the Quality Assurance Strategy of the University of Belgrade ("Glasnik Univerziteta u Beogradu" No. 175/2013), at a session held on February 23, 2017, adopts

QUALITY ASSURANCE STRATEGY

1. INTRODUCTION

The Quality Assurance Strategy (hereinafter: the Strategy) is a strategic development document for the establishment, monitoring, improvement and quality assurance of higher education at the Faculty of Mechanical Engineering in Belgrade.

The strategy defines the basic priorities of higher education at the Faculty of Mechanical Engineering in the field of quality assurance, as well as the ways of their realization.

This document is a permanent document of the Faculty of Mechanical Engineering, which, in order to improve it, will be periodically reviewed and changed, ie supplemented and serves as a basis for drafting action plans in the field of quality assurance (short-term, medium-term and long-term).

2. MISSION

Assuming that higher education, based on the knowledge-based development of society and its further economic and cultural progress, is the basis for the promotion of human rights and fundamental freedoms, the mission of the Faculty of Mechanical Engineering in Belgrade is to enable the highest academic standards and ensure acquisition of knowledge and skills. the needs of society and projected national development, in the Strategy for the Development of Education in Serbia.

In order to achieve its mission, the Faculty of Mechanical Engineering is permanently committed to striving to improve the quality of higher education and inclusion in the single European Higher Education Area.

3. OBJECTIVES

The goal of drafting and adopting the Strategy is to achieve the goals of higher education set by the Law and the vision of further development of higher education at the Faculty of Mechanical Engineering, as a true way of implementing the Education Development Strategy of Serbia.

For its long-term goals, the Faculty of Mechanical Engineering sets:

- o continuous and systematic improvement of the quality of higher education at the Faculty of Mechanical Engineering;
- o improving the quality of study programs; o increase the efficiency of studies; o improving the quality of teaching;
- o improving the process of student evaluation of teachers' pedagogical work; o improving the quality of student work evaluation;
- o improving the quality and intensification of scientific research work of teaching staff;
- o increasing the volume of technology transfer, application and commercialization of the results of scientific and research work;
- o Improving the quality of non-teaching support to the basic activities of the Faculty of Mechanical Engineering;
- o improving the quality of the management process; o improving working conditions;
- o establishing and developing the concept of lifelong learning (lifelong learning);
- o increasing the scope of international cooperation;
- o increase the contribution to the academic life of the University, local and national community

Long-term goals defined in this way can be achieved by planned management of the quality system.

Long-term goals can be achieved on the basis of properly set short-term and medium-term goals, realistically planned and consistently implemented activities arising from the Strategy and which will ensure the improvement of the quality of the faculty and all organizational units within it. The strategy is the basis for planning and defining specific goals that should be measurable, feasible, relevant and time-bound.

4. STARTING POINTS

The starting point of the Quality Assurance Strategy are the following documents:

1. Analysis of the current state of higher education at the Faculty of Mechanical Engineering (analysis of weaknesses, dangers, opportunities and strengths - the so-called SWOT [Strengths, Weaknesses, Opportunities, Threats] analysis);
2. Lisbon Convention on the Recognition of Qualifications / Diplomas in Higher Education (April 11, 1997), ratified by our country in 2003;
3. Bologna Declaration (June 19, 1999) signed by our country in 2003;
4. Law on Higher Education [Official Gazette of the PC ", No. 76 / 2005,100 / 2007, 97/2008, 44/2010, 93/2012, 89/2013];

5. Strategy for the Development of Education in Serbia until 2020 ("Official Gazette of the PC" No. 107/2012);
6. Law on Scientific Research Activity ("Official Gazette of the PC" No. 110/2005; 50/2006; 18/2010);
7. Rulebook on standards for self-evaluation and quality assessment of higher education institutions ("Official Gazette of the PC" No. 106/2006);
8. Rulebook on standards and procedure for external quality control of higher education institutions ("Official Gazette of the PC" No. 106/06; 73/2011);
9. Rulebook on standards and procedure for accreditation of higher education institutions and study programs ("Official Gazette of the PC" No. 106/2006; 112/2008; 70/2011);
10. Statute of the University of Belgrade ("Gazette of the University of Belgrade" No. 162/11 - consolidated text, 167/12 and 172/13);
11. Quality Assurance Strategy of the University of Belgrade ("Gazette of the University of Belgrade" No. 175/2013) and
12. Statute of the Faculty of Mechanical Engineering (November 2013, supplement to the Statute - October 2015).

The Faculty of Mechanical Engineering in Belgrade is strategically determined to take care of the development of higher education in accordance with the mentioned documents.

5. MEASURES FOR QUALITY ASSURANCE

Measures for the realization of the goals set by the Strategy at the Faculty are:

Review of the agreed quality policy:

- o Mandatory self-evaluation and quality assessment of study programs and institutions in accordance with the standards of the National Council for Higher Education at intervals of not more than 3 years, or if necessary at shorter intervals, and in accordance with general acts of the University and Faculty of Mechanical Engineering.
- o External quality control in accordance with the standards of the National Council for Higher Education conducted by the Commission for Accreditation and Quality Control or other institution hired by the Faculty of Mechanical Engineering.
- o Accreditation of the Faculty of Mechanical Engineering in accordance with the standards of the National Council for Higher Education within the period prescribed by law, as well as at the special request of the Faculty of Mechanical Engineering in shorter terms.
- o Accreditation by a foreign accreditation agency.
- o The obligation to achieve the unity of educational, professional and scientific-research work in the performance of higher education activities, the contents and results of which, ie knowledge, are used in the teaching process.
- o Improvement and harmonization of study programs in scope and content with modern scientific and professional achievements.
- o Development of international cooperation through the implementation of joint study programs, exchange of teachers and students, implementation of joint projects within the teaching and scientific research activities.наставе.
- o Improving the quality of the teaching process, the efficiency of the learning process and the applicability of learning outcomes, through the application of modern techniques and technologies of teaching and an innovative approach to teaching.

- o Professional development of teaching and non-teaching staff in the areas of their work.
- o Establishment of permanent cooperation with employers and graduates, in order to obtain feedback on the quality of the study program and competencies acquired by graduates upon completion of studies (application of acquired knowledge in practice).
- o Improving the working conditions for student representatives in the process of evaluating the teaching process.
- o Establishment of a permanent body for monitoring and quality control at the Faculty of Mechanical Engineering, Center for Teaching Quality and Accreditation, which has the task of constantly monitoring and controlling quality and proposing measures to improve quality.
- o Providing staff and infrastructure for data collection and processing of importance for the analysis and assessment of quality and degree of success in achieving the set goals and objectives.
- o Obligation to publicly publish the results of quality evaluation on the Internet portal of the Faculty of Mechanical Engineering and in periodicals.
- o Obligation to constantly promote and build a culture of quality at the Faculty of Mechanical Engineering, as well as professional development of staff who actively participate in these processes (seminars, workshops, contacts and exchange of experiences and information in the field of quality control).
- o Development and implementation of lifelong learning programs (lifelong learning).

By applying quality assurance measures and constant control, with the necessary financial support, the Faculty of Mechanical Engineering provides the conditions for continuous improvement of all areas of its activities.

6. SUBJECTS OF QUALITY ASSURANCE

The subjects of quality assurance are all employees at the Faculty of Mechanical Engineering and students. They exercise their rights and obligations through participation in the work of bodies and professional bodies of the Faculty.

Bodies and expert bodies that are the administrative structure of quality assurance are:

- o Council;
- o Teaching-scientific council;
- o Center for teaching quality and accreditation;
- o Commissions in charge of quality assurance and improvement;
- o Student Parliament.

Organizational quality policy must be directed by the top management of the Faculty, and its implementation implies the active participation of all employees.

The implementation of the agreed policy, through concrete measures and activities, takes place, for the most part, through the Center for Teaching Quality and Accreditation.

The rights and obligations of all subjects of quality assurance are regulated by the Statute and other general acts of the Faculty.

Факултет, The Faculty, ie the bodies and professional bodies responsible for quality assurance, should encourage the development of the quality system through constant activities, because in that way the permanent quality of the Faculty and better efficiency in all activities it performs are ensured.

7. BASIC AREAS OF QUALITY ASSURANCE

Ensuring the quality of work at the Faculty of Mechanical Engineering is done in the following areas:

- o study programs,
- o teaching process,
- o teachers and associates,
- about students,
- o teaching literature,
- o scientific research work,
- o student and teacher mobility,
- o cooperation,
- o international cooperation,
- o non-teaching support,
- o resources (space, equipment),
- o financing,
- o management.

The Faculty of Mechanical Engineering provides quality in each of the above areas, according to the planned activities and procedures of the quality system for the respective areas.

8. ACTION PLAN

The Center for Teaching Quality and Accreditation is responsible for the implementation of the Strategy in accordance with the Rules of Procedure of the Center for Teaching Quality and Accreditation. The Teaching-Scientific Council will, at the proposal of the Center for Teaching and Accreditation Quality, adopt Standards and Procedures for Quality Assurance, which will further determine the areas of quality assurance, Action Plan for Implementation of Quality Assurance Strategy and Quality Assurance Measures, which will take to achieve goals defined by this Strategy.

9. FINAL PART

Publish the quality assurance strategy on the Faculty's internet portal.

The text of the Quality Assurance Strategy was adopted at the session of the Council of the University of Belgrade - Faculty of Mechanical Engineering on February 23, 2017.

**PRESIDENT OF THE COUNCIL OF THE
FACULTY OF MECHANICAL ENGINEERING**

Aleksandar Jovović, PhD, full professor

UNIVERSITY OF BELGRADE -
FACULTY OF MECHANICAL
ENGINEERING

Number: 390/6

Date: 24/02/2017

Belgrade, Kraljice Marija 16

Based on the determined proposal of the Teaching-Scientific Council number 303/6 from the session of 09.02.2017. year, in accordance with the Rulebook on standards for self-evaluation and quality assessment of higher education institutions ("Official Gazette of RS" No. 106/06), based on Article 33 paragraph 1 item 3 and in accordance with Article 139 of the Statute of the Faculty of Mechanical Engineering, University of Belgrade no. 1876/1 dated 4 October 2013; year, the Council of the Faculty of Mechanical Engineering at a session held on 23.02.2017. year, brought the next

D E C I S I O N

The Quality Assurance Strategy of the University of Belgrade - Faculty of Mechanical Engineering is adopted.

The decision should be submitted to the Center for Teaching Quality and Accreditation, the Vice Dean for Teaching, the Vice Dean for NID and the Faculty Archives for records.

**PRESIDENT OF THE COUNCIL OF THE
FACULTY OF MECHANICAL ENGINEERING**

Aleksandar Jovović, PhD, full professor

Annex 4

Model Dual Model Agreement

The dual learning model agreement is planned as an annex to the usual form of agreement on cooperation in higher education institutions with a company from the economy

AGREEMENT ON BUSINESS AND TECHNICAL COOPERATION

CONCLUDED BETWEEN::

_____, (hereinafter: _____), St.
_____, 11000 Belgrade, represented by the director _____, B.Sc. _____
and

UNIVERSITY OF BELGRADE, FACULTY OF MECHANICAL ENGINEERING (hereinafter **Faculty**),
Kraljice Marije 16, 11 120 Belgrade, represented by the Dean, _____,

I General Provisions

Article 1

Expressing their needs and interests, the contracting parties conclude this agreement (hereinafter AGREEMENT) in order to establish mutual business and technical cooperation and determine the conditions, framework and types of cooperation.

Article 2

The co-operation referred to in the preceding Article shall reflect the needs and interests of the Contracting Parties on the principles of voluntariness, equality, independence and publicity of mutually established obligations and rights.

The holder of the coordination of the realization of the agreed obligations of the FACULTY is prof. dr, dipl. mash. eng.

Article 3

In order to provide the conditions for the realization of cooperation determined by this Agreement _____ and
the FACULTY undertakes to comply with the applicable legal and other regulations and the obligations and responsibilities assumed by this Agreement when implementing this Agreement.

II Subject of cooperation

Article 4

The subject of cooperation _____ and the FACULTY, in accordance with this Agreement, is joint work

on solving production, professional and other problems, especially:

- organizing and conducting teaching activities, courses and other forms of education in the field _____ and the FACULTY,
- training of associates _____ and the FACULTY,
- leading and participating in product development, monitoring and adjusting the technological parameters of the plant,
- conducting various types of laboratory and industrial research
- development of studies and projects in the field of activities _____ and the FACULTY
- participation in the preparation of joint applications for international and national scientific, educational and professional projects
- participation in the organization of joint professional meetings, announcements, papers and other publications.

In addition to the cooperation from the previous paragraph _____ and the FACULTY also agree to cooperate in solving other problems, jobs and work tasks that they mutually determine are of common interest.

Specific tasks, deadlines and executions and prices of services will be determined by the relevant annexes to the Agreement.

Article 5

In the realization of cooperation determined by this Agreement _____ and the FACULTY will regulate mutual relations on the basis of agreed income relations or on market principles. When regulating mutual relations, the FACULTY will adhere to the principles:

- mutual trust, solidarity and business;
- good business relations and mutual provision of the most favorable benefits under equal conditions;
- respecting each other's needs and desires and keeping business secrets.

Article 6

For the purpose of execution of this Agreement on cooperation _____ and the FACULTY will, depending on the need to form one or more groups of experts, working teams, who will solve problems and perform the tasks that are the subject of this Agreement.

III Obligations, responsibilities and rights in legal transactions

Article 7

_____ and the FACULTY undertake the obligation to successfully solve the problems and perform the tasks that are the subject of this Agreement, to provide timely capacities, as well as to give priority to their realization.

Article 8

За сваки конкретан посао или радни задатак, у оквиру предмета сарадње утврђене овим Уговором, који је потребно реализовати закључиће се посебан уговор којим ће се регулисати:

- work and work program;
- price or other grounds and criteria by which costs will be assessed;
- responsibilities regarding the execution and realization of the established work program;
- deadlines for execution of contracted jobs, ie tasks;
- joint work on further development of the program;
- other issues of common interest within the agreed work.

Depending on the need for the job, ie the tasks from the previous paragraph, the FACULTY can hire other specialized institutions or individuals..

In the event that the FACULTY engages a specialized institution or natural person in accordance with paragraph 2 of this Article _____ it shall not conclude an agreement or contract with those legal or natural persons for the purpose of performing tasks or tasks to be performed under the contract referred to in paragraph 1 of this Article.

Article 9

_____ and the FACULTY agree to individually or jointly establish forms of cooperation with third parties, if such cooperation is not in conflict with this Agreement on Cooperation or does not interfere with its implementation.

IV Transitional and final provisions

Article 10

This Agreement is concluded for an indefinite period of time.

This Agreement may be terminated if:

- the common interest ceases due to when it was concluded, and the termination of that interest is jointly determined by the FACULTY;
- one of the contracting parties does not realize its interest;
- one of the contracting parties does not fulfill the undertaken obligations.

Termination of the Agreement is done in writing. The deadline for termination of the Agreement is 6 (six) months from the date of submission of the reasoned initiative of one of the contracting parties.

Article 11

The contracting parties agree to resolve all disputes that may arise during the implementation of contractual obligations amicably. In the event that a possible dispute is not resolved in the manner prescribed in the previous paragraph, the contracting parties agree to resolve it by the competent court in Belgrade.

Article 12

Amendments to this Agreement shall be made by agreement in accordance with the procedure according to which the Agreement is adopted.

Article 13

The contract enters into force on the day of signing by the authorized persons of each of the contracting parties.

This Agreement is made in 6 (six) identical copies, of which each of the contracting parties keeps 3 (three) copies.

UNIVERSITY OF BELGRADE
FACULTY OF MECHANICAL ENGINEERING

Director

Dean

Annex 5

Learning Agreement Model

(NAME OF EMPLOYER)

Contract model

Number:

Date:

Place:

Based on Art. 12. Law on Dual Model of Studies in Higher Education ("Official Gazette of RS" No. 66/2019) and the Agreement on Dual Model (No. _____), concluded between _____ (name of the Employer) and _____ (name of the Faculty), in _____ (city) on _____.

1. Business company / entrepreneur _____ (name of the Employer), with headquarters in _____ st. _____ no. _____ TIN _____, Registration number _____, represented by the director (hereinafter: the Employer)

and

2. _____ (name and surname of the student), with residence in _____, St. _____ No. _____, (hereinafter: Student) conclude

CONTRACT OF LEARNING THROUGH WORK

Article 1

The Contracting Parties agree:

- that between _____ (name of the Faculty) and the Employer a Dual Model Agreement no. _____ on _____;
- that the Employer in the form of his activity performs work, for the performance of which he is registered with the Business Registers Agency of the Republic of Serbia, which enables the realization of content from the study program of Basic/Master academic studies _____ (study program);

- that the Student is enrolled at the University of Belgrade, _____
(name of the faculty) in _____, with headquarters at the address
_____ no. _____, TIN _____, ID number
_____, represented by the Dean
_____ (hereinafter: the Faculty);
- that the Student is enrolled in the year of the study program of Basic/Master academic studies
_____ (name of the study program) according to the
dual model of studies which is realized according to the work permit of the Ministry of
Education, Science and Technological Development of the Republic of Serbia no. _____ of
_____ which is attended by a student who is sent to study with the Employer (hereinafter: the
Study Program) for a period of _____ years.

Article 3

Learning through work at the Employer is an integral part of the study program it carries ECTS points in accordance with the Plan for the realization of learning through work, so the Student is obliged to learn through work with the Employer in the manner prescribed by this Agreement..

Article 4

The Employer and the Student conclude a Contract on learning through work for the realization of the content of learning through work prescribed by the Plan for the realization of learning through work starting from the _____.

The student can conclude a contract on learning through work with several employers with whom the Faculty has concluded a contract on a dual model, if it is necessary for the realization of the Study Program and the Plan for learning through work.

Article 5

Learning through work will be realized in the business premises of the Employer at the address the seat of the Employer in the period of time _____ that the Employer and the Student will determine in accordance with the business obligations of the Employer in accordance with the schedule of classes at the Faculty that the student attends

Article 6

Learning through work will be performed in accordance with the Plan for realization of learning through work which contains a description of activities, place and dynamics of learning through work with which the Student, after signing this Agreement, will be acquainted by the Employer, in cooperation with the Faculty. The student attends in order for the contracting parties to timely harmonize the time frame for the realization of learning through work with business obligations and the obligatory attendance of classes at the faculty.

Article 7

If the study program is conducted in the language of a national minority, the Employer is obliged to organize and implement learning through work in the language of students belonging to a national minority only for educational profiles for which learning through work in the language of a national minority is approved.

Article 8

The employer undertakes to:

- organizes and realizes learning through work in accordance with the Plan and program of realization of learning through work;
- enable the Student to acquire and develop competencies in accordance with the Study Program and the qualification standard;
- acquaints the Student with the provisions of all general acts that apply to the Employer, and which the Student is obliged to adhere to during the learning through work, as well as with the consequences of possible non-compliance or violation thereof;
- applies measures in the field of safety and health at work, in accordance with the law;
- provide training of students in the field of safety and health at work, both in theoretical and practical part, before starting learning through work;
- provide the Student with a mentor at the Employer, who directly takes care that during the learning through work the contents determined by the Study Program are realized and is responsible for acquiring the Student's competencies prescribed by the Study Program and the qualification standard;

- provide and acquaint the Student with the protection of personal data;
- protects the intellectual property rights of the Student;
 - means and equipment for personal protection at work;
 - reimbursement of the actual costs of transport to the place of learning through work and back, at most in the amount of the price of a transport ticket in public transport, if the Employer has not provided its own transport;
 - reimbursement of food costs in accordance with the general act of the Employer;
 - insurance in case of injury during learning through work with the Employer, if such insurance is provided for employees of the Employer;
 - tuition fee for each hour spent learning through work in the net amount of at least 50% of the basic salary of an employee working on the same or similar jobs, which is paid once a month no later than the end of the current month for the previous month. Compensation for learning through work in undergraduate studies can be paid in different amounts by years of study according to the level of knowledge of students, for each hour spent on learning through work in the range of 30-70% of the basic salary of an employee working on the same or similar jobs, provided that the total remuneration for learning through work paid at the level of the study program must be at least 50% of the basic salary of the employee paid for the same period. If the employer bears the costs of tuition fees at the same time, he may reduce the tuition fee through work to the amount of tuition fees;
 - related contributions in accordance with applicable regulations;
 - payment of the amount of the tuition fee through work with the Employer to the current account of the Student number with the bank;
 - written notice of the prohibition of harassment, the rights, obligations and responsibilities of the parties in relation to the prohibition of harassment at work and learning through work.

Article 9

The student undertakes to:

- submit a certificate from a health institution to meet the health requirements for work with the Employer if such a certificate is necessary, in accordance with the provisions on youth protection prescribed by the law governing employment and is an integral part of this contract;
- comes regularly, on time and spends the planned time on learning through work with

the Employer in accordance with the Plan for the realization of learning through work;

- inform the mentor with the Employer if there is an urgent need to leave learning through work;
- during the performance of learning through work, respects the discipline and rules of conduct that apply to the Employer, and to adhere to the general acts of the Employer.
- respects all instructions, and performs every task that the mentor entrusts to the Employer conscientiously;
- adheres to the measures of safety and health at work and fire protection, and to use protective equipment, if it is intended for work at a specific workplace after training for the application of safety and health at work and fire protection performed before the start of training through work, in accordance with the law, bylaws, act on risk assessment and other acts of the employer in the field of safety and health at work;
- if he intentionally or through gross negligence causes material damage to the Employer, he shall compensate it in full;
- to submit proof of incurred actual transport costs to the place of learning through work and back, in the form of a transport ticket in public transport, if the Employer has not provided its own transport;
- respects the regulations regarding the protection of personal data;
- respects the regulations regarding the protection of intellectual property rights of the Employer.

Article 10

Supervision over the realization of learning through the work of the Student is performed by _____ (name and surname of the mentor at the Employer) in cooperation with the academic mentor employed at the Faculty.

In the procedure of performing the supervision referred to in paragraph 1 of this Article, the mentor at the Employer, appointed to supervise the realization of learning through work, submits monthly reports to the Employer on the success and work of the Student.

Article 11

The Employer reserves the right to provide the Student with a special reward for performing work performed by learning through work, as well as an increased amount of compensation in relation to the basic compensation of the Student to which he is entitled by this Agreement, according to the economic possibility of the Employer.

Article 12

The Contracting Parties may terminate the Agreement by mutual consent.

Unilateral termination of the Agreement by the Student is possible in case of non-fulfillment of obligations by the Employer provided by Article 8 of this Agreement, as well as the reasons provided by Article 24 of the Law on Dual Model of Studies in Higher Education.

Unilateral termination of the Agreement by the Employer is possible due to violation of obligations by the Student under Article 9 of this Agreement, reasons provided by Article 23 of the Law on Dual Dual Model of Studies in Higher Education, as well as general acts of the Employer.

The employer shall notify the Serbian Chamber of Commerce of the termination of the contract in accordance with Article 25 of the Law on the Dual Model of Studies in Higher Education.

Article 13

The Contracting Parties shall act in all respects in accordance with the principle of conscientiousness and honesty and shall not abuse their rights.

Article 14

The relevant provisions of the Law on the Dual Model of Studies in Higher Education and the Law on Obligations will apply accordingly to everything that is not regulated by this Agreement.

Article 15

The Contracting Parties shall settle all possible disputes amicably.

If the contracting parties are unable to resolve any disputes amicably, the resolution of the same will be entrusted to the competent court.

Article 16

This Agreement is made in three identical copies, of which each contracting party keeps one copy, and the third is submitted to the Faculty.

The term of this Agreement is 2 years from the date of its signing.

The Agreement in question is an expression of the free will of the contracting parties, made without fraud, coercion and delusion, and as such the contracting parties sign it in agreement as a sign of consent..

FOR THE EMPLOYER

STUDENT

Director

Name and surname

Delivered:

1. To the Student _____ (date and signature of the student);
2. To the Employer;
3. To the Faculty.