

University of Niš
Faculty of Mechanical Engineering in Niš



STANDARDS
FOR ACCREDITATION OF THE UNDERGRADUATE
ACADEMIC STUDY PROGRAMME
Mechanical Engineering

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Standard 1. Structure of the Study Programme

The study programme contains the elements prescribed by law (which are presented in detail in the corresponding standards).

The Faculty of Mechanical Engineering of the University of Niš is an independent state-owned educational and scientific institution which, in accordance with the Law on Higher Education, within the educational-scientific field of technical and technological sciences and the scientific areas of Mechanical Engineering and Industrial Engineering and Industrial Management, organises and delivers the following accredited academic studies in accordance with the 2020/21 accreditation:

- first-cycle studies – four-year undergraduate academic studies in the Mechanical Engineering and Engineering Management study programmes;
- second-cycle studies – one-year master academic studies in the following study programmes: Thermal Engineering, Thermoenergetics and Process Engineering; Production and Information Technologies; Machine Design, Development and Engineering; Mechatronics and Control; Transport Engineering, Transportation and Logistics; Hydropower Engineering, Hydraulics and Pneumatics; and Engineering Management;
- third-cycle studies – three-year doctoral academic studies in the Mechanical Engineering study programme.

The undergraduate academic study programme in Mechanical Engineering contains all elements prescribed by the Law on Higher Education of the Republic of Serbia and the Statute of the Faculty of Mechanical Engineering in Niš (Annex 1.2).

The undergraduate academic study programme belongs to the field of technical and technological sciences and is classified within the scientific and professional area of Mechanical Engineering. The study programme lasts 4 years, i.e. 8 semesters, and carries 240 ECTS credits. Each year of study carries 60 ECTS credits.

The undergraduate academic study programme in Mechanical Engineering consists of compulsory and elective courses, the completion of which provides the academic knowledge and skills required to obtain the professional title Graduate Mechanical Engineer (abbreviated: Grad. Mech. Eng.), corresponding to level 6.2 of the National Qualifications Framework of Serbia (NQFS). This professional title corresponds to the title Bachelor with Honours in Mechanical Engineering [B.M.Eng. (Hons)] awarded by higher education institutions abroad.

Unlike the undergraduate academic study programme in Mechanical Engineering accredited in 2020, in which students could specialise in one of the narrower fields of mechanical engineering by choosing a group of courses, the proposed undergraduate academic study programme in Mechanical Engineering in the new accreditation cycle contains five modules:

- Energy, Thermal and Hydraulics Engineering;
- Machine Design, Development and Engineering;
- Mechatronics and Control;
- Production and Information Technologies; and
- Transport Engineering, Transportation and Logistics.

The name of the module is stated in the Diploma Supplement together with the professional title.

The general structure of the Mechanical Engineering study programme with its modules is presented in the Block Table.

The undergraduate academic study programme in Mechanical Engineering, which enrolls a maximum of 240 students, contains 26 compulsory courses common to all modules and 3 elective blocks for all modules (common elective courses for all modules), compulsory Professional Practice B in all modules, and a compulsory Bachelor's Thesis consisting of two parts: research work on the theoretical foundations of the thesis, and preparation and defence of the thesis.

Students select a module after the fourth semester, i.e. when enrolling in the third year of study.

Each module contains 11 courses, of which 3 to 5 are compulsory module courses and 6 to 8 are elective module courses.

From each elective block of the study programme or module, the student selects one of at least two offered courses.

When enrolling in an academic year, students select the elective courses they wish to attend and take. The conditions for selecting courses are provided in the Undergraduate Academic Studies Course Catalogue ([Annex 1.3](#)).

The procedure for selecting courses from other study programmes and the conditions for transferring from other study programmes within the same or related fields of study are prescribed by Articles 89, 90 and 106 of the Faculty Statute (Annex 1.2).

The enrolment requirements for the study programme and the other most important elements of the study programme and study regime are prescribed by the Faculty Statute (Annex 1.2), the Rulebook on Student Enrolment in Study Programmes of the University of Niš (Annex 1.4), and the Rulebook on Undergraduate Academic Studies of the Faculty of Mechanical Engineering in Niš (Annex 1.5).

The total student workload for completing the undergraduate academic study programme consists of active teaching (lectures, exercises and other forms of active teaching), independent work, mid-term tests, examinations and professional practice.

A detailed description of the forms of activity during active teaching hours is provided in the Undergraduate Academic Studies Course Catalogue ([Annex 1.3](#)).

Professional practice, totalling 90 hours, is undertaken by students in the seventh semester.

In the eighth semester, the student independently prepares the Bachelor's Thesis as a form of final work. Mentoring is a form of active teaching in which the teacher-mentor is in direct contact with the student in connection with the preparation of research work on the theoretical foundations of the Bachelor's Thesis.

All forms of active teaching, mid-term tests, examinations, professional practice, as well as consultations with teachers and associates, are held in accordance with the annual Academic Calendar – the plan of teaching and examination activities for the academic year (Annex 1.6).

A schematic presentation of the structure of the study programme, including its basic characteristics, is provided in Table 1.1.

The publication provided in Annex 1.1A covers 65 years of the existence and work of the Faculty of Mechanical Engineering in Niš and contains detailed descriptions of all study programmes delivered at the Faculty. It is publicly available in electronic form at: <https://www.masfak.ni.ac.rs/index.php/sr/f-ul-u>.

Tables and Annexes for Standard 1

Block Table: UAS ME Study Programme with Five Modules

Table 1.1. Schematic Presentation of the Structure of the UAS ME Study Programme

Annex 1.1. Institution Publication (printed or electronic form, Faculty website)

Annex 1.2. Statute of the Faculty of Mechanical Engineering in Niš

[Annex 1.3. Undergraduate Academic Studies Course Catalogue](#)

Annex 1.4. Rulebook on Enrolment in Study Programmes of the University of Niš

Annex 1.5. Rulebook on Undergraduate Academic Studies of the Faculty of Mechanical Engineering in Niš

Annex 1.6. Plan of Teaching and Examination Activities for Undergraduate Academic Studies for the 2025/26 Academic Year

Standard 2. Purpose of the Study Programme

The study programme has a clearly defined purpose and role in the educational system, which are publicly available.

The purpose of the undergraduate academic study programme in Mechanical Engineering is to educate students for the profession of Graduate Mechanical Engineer in accordance with the needs of society.

This study programme is intended to enable students to develop their abilities and interests through an educational system based on continuous intellectual work. By acquiring fundamental knowledge, developing skills and forming attitudes in the field of mechanical engineering, students acquire the social competences required for their future professional work. The skills and knowledge acquired through completion of the undergraduate academic study programme can provide students with a basis for continuing their education and for pursuing research in the fields of technical and technological sciences, as well as interdisciplinary and multidisciplinary sciences.

Through its activities, the undergraduate academic study programme in Mechanical Engineering contributes to:

- responding more closely to the needs of a global society such as the European Union;
- obtaining diplomas and qualifications aligned with European standards;
- acquiring a broad academic education required for work in different professional fields;
- introducing new educational content;
- continuing the education of secondary-school graduates;
- preparing students to continue their education at master academic studies;
- enabling access to study programmes at other higher education institutions in Serbia, in accordance with the Bologna Declaration;
- enabling access to study programmes abroad, in accordance with the Bologna Declaration.

The purpose of the Energy, Thermal and Hydraulics Engineering module is to educate Graduate Mechanical Engineers qualified for the design, operation, maintenance and improvement of thermal engineering, power engineering and process systems, hydropower and hydraulic engineering systems, as well as hydraulic and pneumatic systems.

The purpose of the Machine Design, Development and Engineering module is to provide students with contemporary theoretical, methodological and practical knowledge for the design, analysis, optimisation and testing of machine structures, as well as for the development of products, assemblies, devices and systems.

The principal purpose of the Mechatronics and Control module is to provide interdisciplinary knowledge in mechanical engineering, electronics, control and computer science, with the aim of preparing students to perform operational, production and development tasks that extend beyond narrowly specialised engineering fields. A mechatronics engineer is expected to be a professional with the necessary knowledge of the basic engineering disciplines of mechanical engineering, electronics, automatic control, programming, and the application of modern

information technologies, robotics, automation and modern mechanisation.

The purpose of the Production and Information Technologies module is to offer FME students a selection of educational content through which they acquire the knowledge and skills required for: 1) organising and managing production processes, including quality management; 2) designing and manufacturing production tools, machines and structures; and 3) modelling machining processes and programming CNC machines and systems. A special set of elective courses oriented towards biomedical engineering enables students to focus on 4) the design and manufacture of biomedical devices, implants, prostheses and medical aids.

The principal purpose of the Transport Engineering, Transportation and Logistics module at undergraduate academic studies is to educate students in the areas of transport technology, transport engineering and logistics systems. The module provides students with fundamental and applied knowledge required to understand the design, structural, operational and organisational aspects of transport machines, equipment, vehicles and systems through which flows of people, materials and information are realised.

The mission and vision of the Faculty of Mechanical Engineering in Niš define its principal tasks and objectives in educating highly competent professionals in the areas of Mechanical Engineering and Industrial Engineering and Industrial Management within the educational-scientific field of technical and technological sciences. The purpose of the undergraduate academic study programme in Mechanical Engineering is fully aligned with these principal tasks and objectives of the Faculty of Mechanical Engineering.

Implementation of a study programme designed in this manner educates Graduate Mechanical Engineers whose competences are aligned with European and international frameworks and with labour-market needs.

A detailed description of the purpose of the undergraduate academic study programme in Mechanical Engineering is provided in Annex 2.1A and is publicly available in electronic form at: <https://www.masfak.ni.ac.rs/index.php/sr/f-ul-u>.

Annex for Standard 2

Annex 2.1. Institution Publication (printed or electronic form, Faculty website)

Standard 3. Objectives of the Study Programme

The objectives of the study programme are clearly defined and aligned with labour-market needs, developments in the profession and the NQFS.

The principal objective of the undergraduate academic study programme in Mechanical Engineering is for students to acquire academic knowledge and skills corresponding to the professional title of Graduate Mechanical Engineer and to become qualified to apply the acquired knowledge and skills in the scientific and professional field of mechanical engineering. This also includes developing creative problem-solving abilities and critical-thinking skills, developing the ability to work in teams, and mastering specific practical skills required for professional practice.

One of the specific objectives, consistent with the objectives of educating professionals at the Faculty of Mechanical Engineering, is to develop Graduate Mechanical Engineers' awareness of the need for continuous personal education, education and professional development of human resources within companies, and training in the application of general international standards and standards in the field of mechanical engineering. Another objective of the study programme is to educate professionals capable of teamwork, as well as to develop their ability to communicate and transfer their knowledge and results to colleagues and to present them to professional and wider audiences.

Students acquire knowledge and skills through a modern teaching process based on interactive theoretical and practical instruction, laboratory and calculation exercises, and professional practice in leading companies in Serbia and abroad. Delivery of this study programme at the Faculty of Mechanical Engineering in Niš enables students to acquire the abilities and skills required to perform successfully in the field of mechanical engineering in accordance with university education standards in Europe.

The objective of the Energy, Thermal and Hydraulics Engineering module is for students to acquire theoretical and practical knowledge in heat and mass transfer, heating, air conditioning, refrigeration engineering, process engineering, power plants and industrial energy engineering, fluid flow, selection and design of turbomachinery, and various hydraulic engineering systems and their components (water-supply and fluid-transport systems), as well as oil-hydraulic and pneumatic systems. Particular emphasis is placed on energy efficiency, sustainable development, environmental protection, and the application of modern methods and software tools in the analysis, control and optimisation of energy and process systems.

The objective of the Machine Design, Development and Engineering module is to prepare students to solve real-world design and development problems, apply engineering calculation methods, select materials, and use CAD/CAE tools throughout all stages of product development.

The principal objective of the Mechatronics and Control module is to provide the knowledge required for industrial jobs that simultaneously require the application of mechanical engineering, electronics, computer science and robotics. This knowledge includes the integrated use of computers and modern software packages, sensors and actuators, analogue and digital control systems, and their implementation in mechanical systems. The acquired knowledge should prepare engineers to work in Industry 4.0 environments.

The objective of the Production and Information Technologies module is for students to become familiar with and understand contemporary manufacturing technologies and the physical processes on which those technologies are based, and then to independently design production tools, machines and processes using modern

computer applications, information technologies and artificial intelligence. Finally, the strategic objective of the module is to provide students and future engineers with the required level of competence and self-confidence to help them develop their talents, creativity and innovativeness and thereby contribute first to their own prosperity and subsequently to the prosperity of society as a whole.

The objective of the Transport Engineering, Transportation and Logistics module is to acquire fundamental and applied knowledge and skills for recognising, formulating and analysing engineering problems in the areas of transport technology, transport engineering and logistics systems. The module enables students to acquire knowledge of the principles of designing, selecting, applying, operating, maintaining and improving these systems, as well as methods for their analysis, planning, management and optimisation. Particular importance is attached to the application of information technologies and software tools, while observing the principles of sustainable development and engineering ethics.

The objectives of all courses in the undergraduate academic study programme in Mechanical Engineering are described in the Undergraduate Academic Studies Course Catalogue ([Annex 3.2](#)).

The objectives pursued by this study programme are:

- alignment with the principles of the Bologna Process;
- an appropriate degree of social relevance and engagement;
- reduction of unemployment by enabling the acquisition of new professional skills and knowledge adapted to the needs of society;
- strengthening the links between Serbia's higher education system and labour-market requirements;
- authentic educational content for mechanical engineers;
- generalisation of programme content for professional engineering practice;
- achieving educational mobility for students;
- an adequate scope of programme content (number of elective courses);
- a flexible model of undergraduate academic studies tailored to student needs (selection of course groups according to student interests and aptitudes);
- practical laboratory training incorporating all elements of creative work;
- studio work (joint project work by a small student group and a professor);
- getting to know each student, identifying their interests and aptitudes, and providing further guidance;
- acquiring knowledge that enables continuation of education at higher levels;
- acquiring the competences defined for individual courses in the Course Catalogue.

A detailed description of the objectives of the undergraduate academic study programme in Mechanical Engineering is provided in Annex 3.1A and is publicly available in electronic form at: <https://www.masfak.ni.ac.rs/index.php/sr/f-ul-u>.

Annexes for Standard 3

Annex 3.1. Institution Publication (printed or electronic form, Faculty website)

[Annex 3.2. Course Catalogue OAS MI 2026](#)

Standard 4. Competences of Graduates

By completing the study programme, students acquire general and subject-specific abilities that support the high-quality performance of professional, scientific and artistic activities.

A Graduate Mechanical Engineer is qualified to recognise, formulate and analyse problems in the field of mechanical engineering and to propose solutions to a given problem on the basis of acquired fundamental and applied knowledge and skills, while observing engineering ethics and using mechanical engineering standards, calculation, design and construction methods, and modern engineering tools.

The competences of Graduate Mechanical Engineers also include the development of critical-thinking skills, problem analysis, synthesis and solution design, and real-time decision-making.

Graduate Mechanical Engineers also possess the competences required to apply acquired knowledge and skills in practice and to continuously update that knowledge and those skills through the ability to access professional and scientific research information in their own field of work. They are prepared to cooperate with local and international social, public and professional environments.

By completing the compulsory common courses of the undergraduate academic study programme, students acquire fundamental knowledge in the following areas: Mathematics; Mechanics (Statics, Kinematics, Dynamics, Strength of Materials); Physics and Measurements in Mechanical Engineering; Electrical Engineering with Electronics; Computer Engineering (Information and Communication Technologies, Programming); Materials (Engineering Materials, Fuels and Lubricants); Engineering Graphics; Thermodynamics; Fluid Mechanics; Manufacturing Technologies; and Machine Elements. Students are trained to apply artificial intelligence in mechanical engineering. The Faculty has adopted General Guidelines and a Practical Guide for the Responsible Use of Artificial Intelligence.

By completing courses in the fields of social sciences and management in mechanical engineering, students also acquire knowledge of economics, engineering ethics and general ethics, improve their communication skills and enhance their foreign-language proficiency, since in their future workplace they will primarily work with people, not only with machines and devices.

By completing elective courses within the undergraduate academic study programme, students acquire fundamental and professional-applied knowledge and skills that they will use when designing or engineering appropriate devices, facilities or processes in mechanical engineering. At two elective-block positions within a module, students may select courses from other modules in order to broaden their knowledge in other areas of mechanical engineering.

The outcomes, i.e. the subject-specific abilities acquired by students, are described in detail in the Course Catalogue of the undergraduate academic study programme in Mechanical Engineering ([Annex 4.2](#)).

By completing the undergraduate academic study programme, a Graduate Mechanical Engineer:

- has thorough knowledge and understanding of the disciplines within the profession;
- possesses the knowledge required to solve specific practical tasks;
- is qualified to use modern information and communication technologies and professional literature to deepen knowledge in the field;
- is able to integrate and apply acquired knowledge;

- is qualified to follow developments in the selected field;
- is qualified to apply standards in mechanical engineering.

Graduates of the Energy, Thermal and Hydraulics Engineering module possess the competences and are qualified to apply their acquired knowledge and skills in energy engineering, thermal engineering, the process industry, design and engineering companies, utility systems, and industrial thermal and hydropower plants, as well as to continue their education at master and doctoral studies.

Students in the Machine Design, Development and Engineering module acquire competences for the analysis, synthesis and evaluation of technical solutions according to the criteria of functionality, safety, reliability, cost-effectiveness and sustainability. Graduates are qualified for independent and team-based work in the design, development, improvement and maintenance of machine structures and products, as well as for continuing their education at master academic studies.

The key competences acquired by students in the Mechatronics and Control module include the ability to recognise, formulate and analyse problems in mechatronics as a multidisciplinary field, and to propose solutions to a given problem on the basis of acquired fundamental and applied knowledge and skills, while observing engineering ethics and using mechanical engineering standards, calculation, design and construction methods, system-control methods, and modern engineering tools.

The key competences of engineers who complete the Production and Information Technologies module are: 1) understanding plastic deformation technologies, machining, additive technologies and non-conventional machining methods; 2) the ability to select the optimal processing technology in accordance with the material, geometry, tolerances and production conditions; 3) knowledge of production resources, including tools, machine tools, CNC systems and robotic cells; 4) production-process design – defining the sequence of operations and selecting tools, cutting parameters, workpieces and control points; 5) understanding the influence of production-process parameters on quality, including surface roughness, geometric accuracy and structural changes in materials; and 6) knowledge of the processes of designing and manufacturing medical devices, implants and medical aids.

The key competences acquired by students in the Transport Engineering, Transportation and Logistics module include the ability to apply acquired knowledge in the analysis, selection, calculation, operation and maintenance of transport technology, vehicles, and transport and logistics systems, while considering their structural, operational, economic, safety and organisational interdependencies under real operating conditions.

The Diploma Supplement contains the list of courses attended and passed within the study programme, in Serbian (Annex 4.1A) and in English ([Annex 4.1B](#)).

Annexes for Standard 4

Annex 4.1A. Diploma Supplement in Serbian

[Annex 4.1B. Diploma Supplement in English](#)

[Annex 4.2. Undergraduate Academic Studies Course Catalogue](#)

Standard 5. Curriculum

The curriculum of the study programme contains the list and structure of compulsory and elective courses and modules, together with their descriptions.

The undergraduate academic study programme in Mechanical Engineering for which reaccreditation is requested is an upgrade of the Mechanical Engineering study programme accredited in 2020. It was developed as a result of a comprehensive analysis conducted after several years of implementation of the existing study programme, taking into account labour-market needs, the requirements of companies in the surrounding economic environment, the opinion of the Employers' Council and the results of surveys of employers and graduates, as well as innovative changes in society and the intensive development of artificial intelligence and its application in engineering.

The most significant change compared with the Mechanical Engineering study programme accredited in 2020 is the clear emphasis on educating professionals for specific professional areas of mechanical engineering. Consequently, the undergraduate academic study programme in Mechanical Engineering is delivered through five modules, which students select after the fourth semester, i.e. when enrolling in the third year of study:

- Production and Information Technologies
- Machine Design, Development and Engineering
- Mechatronics and Control
- Transport Engineering, Transportation and Logistics; and
- Energy, Thermal and Hydraulics Engineering.

The undergraduate academic study programme in Mechanical Engineering contains 26 compulsory courses common to all modules and 3 elective blocks for all modules (common elective courses for all modules), compulsory Professional Practice B in all modules, and a compulsory Bachelor's Thesis consisting of two parts: research work on the theoretical foundations of the thesis, and preparation and defence of the thesis, as shown in [Table 5.3A](#).

Each module contains 11 courses, of which 3 to 5 are compulsory module courses and 6 to 8 are elective module courses.

A schematic presentation of the structure of the study programme with modules, as well as the distribution of courses by semester and year of study, is provided in the Block Table, Table 5.1, Table 5.1A and [Report 1](#) generated by the NAT software.

Table 5.2 presents the list of all courses together with course specifications for the undergraduate academic study programme in Mechanical Engineering.

Professional Practice B (course code: 26.AA7330) is undertaken in the seventh semester and carries 6 ECTS credits. The professional-practice specification is presented in [Table 5.2A](#).

The final assessment in the undergraduate academic study programme in Mechanical Engineering consists of:

- Final Thesis – research work on the theoretical foundations of the Bachelor's Thesis (course code: 26.AA8420; workload: 5 hours of research work per week; number of credits: 6 ECTS);
- Final Thesis – preparation and defence of the Bachelor's Thesis (course code: 26.AA8430; workload: 5 other hours per week; number of credits: 6 ECTS).

The specification of the final assessment is presented in [Table 5.2B](#).

In the undergraduate academic study programme in Mechanical Engineering, students have: $52 \times 15 = 780$ hours of active teaching per year in the first year of study (an average of $780 / 30 = 26$ hours of active teaching per week); $50 \times 15 = 750$ hours of active teaching per year in the second year of study (an average of $750 / 30 = 25$ hours of active teaching per week); $50 \times 15 = 750$ hours of active teaching per year in the third year of study (an average of $750 / 30 = 25$ hours of active teaching per week); and $40 \times 15 = 600$ hours of active teaching per year in the fourth year of study (an average of $600 / 30 = 20$ hours of active teaching per week). Taking all four years of study into account, students have an average of 24 hours of active teaching per week, as also shown in Report 2 generated by the NAT software.

Lectures account for 53.1% of the total number of active teaching hours in the study programme (a total of 102 lecture hours out of a total of 192 active teaching hours).

Elective courses account for 35.83% of the total ECTS credits in the study programme (a total of 86 ECTS credits for elective courses in the study programme out of a total of 240 ECTS credits – elective credits include all elective positions and 50% of the credits allocated to the final-work and final-thesis course positions). Table 5.3B presents the list of elective courses in the study programme, while Report 3 generated by the NAT software presents the calculation of the programme's elective component.

The undergraduate academic study programme contains (Table 5.4, i.e. Report 4 generated by the NAT software):

- 12.50% academic-general education courses (8 courses carrying a total of 33 ECTS credits);
- 20.42% theoretical-methodological courses (7 courses carrying a total of 42 ECTS credits);
- 35.50% scientific-professional courses (15 courses carrying a total of 94 ECTS credits);
- 31.58% professional-applied courses (13 courses carrying a total of 71 ECTS credits).

The Undergraduate Academic Studies Course Catalogue ([Annex 5.1](#)) provides the specification of all courses, including: the name of the study programme, type and level of studies, course title, teacher's name, course code, semester and year in which the course is delivered, course status/type, number of ECTS credits, prerequisites for selecting/attending the course, course objective, learning outcomes and content, recommended literature, number of active teaching hours and other hours, teaching methods, methods of knowledge assessment and grading, and student obligations.

Complete data on the Mechanical Engineering study programme, as well as on the teachers and associates engaged in the study programme, obtained using the NAT software, are provided in the document [Consolidated Report: NAT Report – Undergraduate Academic Study Programme in Mechanical Engineering](#).

Annex 5.2A contains a copy of the decision of the Teaching and Scientific Council of the Faculty of Mechanical Engineering in Niš adopting the study programme, while Annex 5.2B contains the decision of the Senate of the University of Niš.

Annex 5.3 contains the Scientific Research Programme of the Faculty of Mechanical Engineering in Niš for the period 2025–2029.

Annex 5.4 contains the Decision on the Accreditation of the Faculty of Mechanical Engineering in Niš as a Scientific Research Organisation (No. 660-01-0008/25-01/7 dated 27 March 2025).

Reports, Tables and Annexes for Standard 5

[Report 1. Report on the Structure of the Study Programme](#)

Report 2. Overview of Teaching Hours and ECTS Credits

Report 3. Elective Component of the Study Programme

Report 4. Distribution of Courses by Type

Consolidated Report: NAT Report – UAS ME Study Programme 2026

Table 5.1. Distribution of Courses by Semester and Year of Study

Table 5.1A. Distribution of Courses by Semester and Year of Study for OAS

[Table 5.2. Course Specifications](#)

[Table 5.2A. Professional Practice Specification](#)

[Table 5.2B. Final Thesis Specification](#)

Table 5.3A. Common Teaching within the Study Programme

Table 5.3B. Elective Teaching within the Study Programme

Table 5.4. List of Courses in the Study Programme by Course Type

[Annex 5.1. Course Catalogue \(in the accreditation documentation and on the institution's website\)](#)

Annex 5.2 Decision on the Approval of the Study Programme by the Competent Bodies of the Higher Education Institution

Annex 5.2A. Decision on the Approval of the Study Programme by the Teaching and Scientific Council of the Faculty of Mechanical Engineering in Niš

Annex 5.2B. Decision on the Approval of the Study Programme by the Senate of the University of Niš

Annex 5.3. Scientific Research Programme of the Faculty of Mechanical Engineering in Niš

Annex 5.4. Decision on the Accreditation of the Faculty of Mechanical Engineering in Niš as a Scientific Research Organisation

Standard 6. Quality, Contemporary Relevance and International Compatibility of the Study Programme

The study programme is aligned with contemporary global trends and the state of the profession, science and art in the corresponding educational-scientific or artistic-educational field and is comparable with similar programmes at foreign higher education institutions, particularly within the European Higher Education Area, except in the case of an innovative study programme or a study programme based on a qualification standard.

The undergraduate academic study programme in Mechanical Engineering at the Faculty of Mechanical Engineering in Niš is aligned with contemporary European and global educational and scientific trends and with the current state of the profession, and is comparable with corresponding study programmes at foreign higher education institutions.

The curriculum and programme of the undergraduate academic study programme in Mechanical Engineering at the Faculty of Mechanical Engineering of the University of Niš are substantively and formally aligned with the Bologna and Lisbon Declarations. The study programme is fully aligned with the Law on Higher Education of the Republic of Serbia, which incorporates all European standards in higher education.

The undergraduate academic study programme in Mechanical Engineering is aligned with the standards adopted by the National Council for Higher Education of the Republic of Serbia.

The Rulebook on Undergraduate Academic Studies defines all structural elements of undergraduate academic studies at the Faculty of Mechanical Engineering of the University of Niš.

The following Mechanical Engineering study programmes were used for comparison:

- [1]. the Faculty of Mechanical Engineering of Technische Universität Ilmenau (Germany), which lasts three and a half years, i.e. 7 semesters, and carries 210 credits;

Information on this study programme is available on the website <http://www.tu-ilmenau.de/mb/>;

A comparison of the courses in the two study programmes is presented in Annex 6.1;

Detailed information on this study programme and the list of courses with curricula (Annex 6.1B) are provided in the document Annex FME TU Ilmenau.

- [2]. the Faculty of Mechanical Engineering at RWTH Aachen University (Germany), which lasts three and a half years, i.e. 7 semesters, and carries 210 credits;

Information on this study programme is available on the website <http://www.maschinenbau.rwth-aachen.de/>;

A comparison of the courses in the two study programmes is presented in Annex 6.2;

Detailed information on this study programme and the list of courses with curricula (Annex 6.2A) are provided in the document Annex FME RWTH Aachen.

- [3]. the School of Engineering, University of Birmingham (United Kingdom), which lasts four years, i.e. 8 semesters, and carries 240 credits;

Information on this study programme, as well as the list of courses with curricula, is available on the following websites:

<https://www.birmingham.ac.uk/schools/engineering/index.aspx>;

<https://www.birmingham.ac.uk/study/undergraduate/subjects/engineering-courses/engineering-beng>

A comparison of the courses in the two study programmes is presented in Annex 6.3;

Detailed information on this study programme is provided in the document Annex FME Birmingham.

- [4]. the School of Mechanical Engineering of the National Technical University of Athens (Greece), which lasts four and a half years, i.e. 9 semesters, and carries 270 credits;

Information on this study programme is available on the website <http://www.mech.ntua.gr/en/>;

A comparison of the courses in the two study programmes is presented in Annex 6.4;

Detailed information on this study programme is provided in the document Annex FME NTU Athens.

- [5]. the Department of Civil and Industrial Engineering of the University of Pisa (Italy), which lasts three years, i.e. 6 semesters, and carries 180 credits;

Information on this study programme is available on the website <https://unipi.coursecatalogue.cineca.it/>;

A comparison of the courses in the two study programmes is presented in Annex 6.5;

Detailed information on this study programme is provided in the document Annex FME Pisa.

- [6]. the Department of Mechanical Engineering of Technische Universität Darmstadt (Germany), which lasts three years, i.e. 6 semesters, and carries 180 credits;

Information on this study programme is available on the website

<https://www.maschinenbau.tu-darmstadt.de/fachbereich/index.de.jsp>;

A comparison of the courses in the two study programmes is presented in Annex 6.6.

Detailed information on this study programme is provided in the document Annex FME TU Darmstadt.

A high degree of correspondence of the Mechanical Engineering study programme has also been achieved with the study programmes available at the following web addresses:

- [7]. [Mechanical Engineering at Universidad Politécnica de Madrid](#);

A more detailed comparison of the courses in the two study programmes is presented in Annex 6.7.

- [8]. [Mechanical Engineering at the University of Zaragoza](#);

A more detailed comparison of the courses in the two study programmes is presented in Annex 6.8.

The comparison was carried out by comparing the course content of the study programmes at the above-mentioned foreign higher education institutions with the

course content of the Mechanical Engineering study programme. The corresponding comparison tables are provided in Annexes 6.1 to 6.8.

Comparison of the curriculum and course syllabi of the undergraduate academic study programme in Mechanical Engineering at the Faculty of Mechanical Engineering of the University of Niš with the curricula of accredited foreign study programmes shows a significant degree of compatibility.

This is also confirmed by the fact that several students of the Faculty of Mechanical Engineering in Niš have studied at partner universities throughout Europe with which the University of Niš has signed Erasmus+ agreements, particularly in Spain, and that several graduates have enrolled in master studies without having to take additional examinations, particularly in Italy.

On the basis of all the foregoing, it may be concluded that the undergraduate academic study programme in Mechanical Engineering at the Faculty of Mechanical Engineering in Niš is fully compatible with corresponding study programmes at foreign higher education institutions.

Annexes for Standard 6

Annex 6.1. Compatibility of the UAS ME 2026 Programme – Studiengang Maschinenbau, Fakultät für Maschinenbau, Technische Universität Ilmenau

Annex 6.2. Compatibility of the UAS ME 2026 Programme – Bachelorstudiengang Maschinenbau an der RWTH Aachen University

Annex 6.3. Compatibility of the UAS ME 2026 Programme – Mechanical Engineering BEng, School of Engineering, University of Birmingham

Annex 6.4. Compatibility of the UAS ME 2026 Programme – Undergraduate Studies in Mechanical Engineering, School of Mechanical Engineering, National Technical University of Athens

Annex 6.5. Compatibility of the UAS ME 2026 Programme – Undergraduate Studies in Mechanical Engineering, Department of Civil and Industrial Engineering, University of Pisa

Annex 6.6. Compatibility of the UAS ME 2026 Programme – Bachelorstudiengang Maschinenbau, Fakultät für Maschinenbau, Technische Universität Darmstadt

Annex 6.7. Compatibility of the UAS ME 2026 Programme – Universidad Politécnica de Madrid

Annex 6.8. Compatibility of the UAS ME 2026 Programme – Grado en Ingeniería Mecánica

Escuela de Ingeniería y Arquitectura Universidad de Zaragoza

Annex 6.9. Curricula of foreign programmes

Standard 7. Student Enrolment

In accordance with social needs and its available resources, a higher education institution enrolls students in the relevant study programme on the basis of their achievement in previous education and an assessment of their knowledge and/or aptitudes and abilities.

Student enrolment is carried out in accordance with Article 99 of the Statute of the Faculty of Mechanical Engineering in Niš (Annex 7.3A), the Rulebook on Student Enrolment in Study Programmes of the University of Niš (Annex 7.3B), and the Rulebook on Undergraduate Academic Studies of the Faculty of Mechanical Engineering in Niš (Annex 7.3C).

The Faculty prints and provides interested secondary-school students with the Faculty of Mechanical Engineering Information Guide (Annex 7.4), which gives prospective students detailed information on the study plan.

A person who has completed four-year secondary education may enrol in the first year of undergraduate academic studies, subject to evaluation of the appropriate matura examination.

Until the relevant state institutions adopt appropriate regulations governing the evaluation of the matura examination, candidates applying for enrolment in the first year of study will take an entrance examination in Mathematics. In order to help candidates achieve better results on the entrance examination, the Faculty of Mechanical Engineering organises free preparatory classes in mathematics.

Candidates for enrolment in the first year of undergraduate academic studies are selected on the basis of the results achieved on the entrance examination and their overall success in secondary school, using a ranking list formed according to the total number of points achieved by each candidate under the established criteria. A candidate may achieve a maximum of 100 points. Overall secondary-school success is calculated as the sum of the average grades in all subjects across all four years, multiplied by two, whereby a candidate may obtain a minimum of 16 and a maximum of 40 points. Overall secondary-school success is calculated to two decimal places. The result achieved by a candidate on the entrance examination is assessed on a scale from 0 (zero) to 60 points.

The Faculty establishes a single ranking list of all candidates, showing the total number of points obtained under all criteria, regardless of the mode of financing. A candidate's position on the single ranking list and the total number of points achieved determine whether the candidate may enrol in the first year of undergraduate academic studies. A candidate may enrol as a state-funded student if they are ranked within the number of places approved for enrolment and have achieved at least 50 points. A candidate may enrol as a self-financing student if they are ranked within the number of places approved for self-financing students and have achieved at least 30 points. A candidate is deemed to have passed the entrance examination and thereby acquired the right to be ranked for enrolment if they achieve at least 14 points on the entrance examination.

If the relevant state institutions adopt appropriate regulations governing the evaluation of the matura examination, then, in accordance with Article 99 of the Statute of the Faculty of Mechanical Engineering in Niš (Annex 7.3A), a candidate who has passed the general matura examination will, as a rule, not take an entrance examination. Instead of the entrance examination, the candidate's general matura results will be evaluated in accordance with a rulebook to be adopted by the Senate of the University of Niš. For candidates enrolling in the first year of undergraduate academic studies, a

general act adopted by the University Senate upon the Faculty's proposal will specify which general matura examinations are to be evaluated for enrolment and will define the criteria used for the classification and selection of candidates for enrolment in undergraduate academic studies.

A maximum of 240 students will be enrolled in the undergraduate academic study programme in Mechanical Engineering, which the staffing, spatial and technical-technological capacities of the Faculty of Mechanical Engineering of the University of Niš permit without any restrictions, taking into account the other study programmes delivered at the Faculty at undergraduate, master and doctoral academic levels.

Table 7.1 provides an overview of the number of students enrolled in the undergraduate academic study programme in Mechanical Engineering at the Faculty of Mechanical Engineering in Niš in the 2025/26, 2024/25 and 2023/24 academic years.

Table 7.2 provides an overview of the number of students enrolled in the undergraduate academic study programme in Mechanical Engineering at the Faculty of Mechanical Engineering in Niš by year of study in the 2025/26, 2024/25 and 2023/24 academic years.

Annex 7.1 contains the calls for enrolment in the undergraduate academic study programme in Mechanical Engineering for the 2025/26 academic year.

Annex 7.2 contains the decision appointing the commission for enrolment in the undergraduate academic study programme in Mechanical Engineering for the 2025/26 academic year.

Tables and Annexes for Standard 7

Table 7.1. Overview of the Number of Students Enrolled in Study Programmes at the Faculty of Mechanical Engineering in Niš in the 2023/24, 2024/25 and 2025/26 Academic Years

Table 7.2. Overview of the Number of Students Enrolled in Study Programmes by Year of Study in the 2023/24, 2024/25 and 2025/26 Academic Years

Annex 7.1. Call for Enrolment in the Undergraduate Academic Study Programme in Mechanical Engineering for the 2025/26 Academic Year

Annex 7.2. Decision Appointing the Commission for Enrolment in the First Year of Undergraduate Academic Studies for the 2025/26 Academic Year

Annex 7.3A. Enrolment Requirements for Study Programmes – Extract from the Statute of the Faculty of Mechanical Engineering in Niš

Annex 7.3B. Rulebook on Enrolment in Study Programmes of the University of Niš

Annex 7.3C. Rulebook on Undergraduate Academic Studies of the Faculty of Mechanical Engineering in Niš

Annex 7.4. Faculty of Mechanical Engineering Information Guide

Standard 8. Student Assessment and Progression

Student assessment is conducted through continuous monitoring of student work and on the basis of points earned by fulfilling pre-examination obligations and taking examinations.

A student's success in mastering an individual course is continuously monitored during teaching and expressed in points. By fulfilling pre-examination obligations and taking the final examination in a course, a student may earn a maximum of 100 points.

The study programme specifies the proportion of points earned through pre-examination obligations and the final examination: of the total number of points, a minimum of 30 and a maximum of 70 points are allocated to activities and knowledge assessments during the semester (pre-examination obligations), while a minimum of 30 and a maximum of 70 points are allocated to the final examination.

The student is required to take the final examination.

Pre-examination obligations include all student activities undertaken and assessed (awarded points) before the final examination: tests; mid-term examinations; seminar papers; graphic assignments; project assignments; and homework.

Student activity during active teaching hours (lectures, exercises and other forms of active teaching) and regular class attendance are, as a rule, assessed with a maximum of 10 points. Students are required to attend active teaching sessions, and attendance records are maintained.

Table 8.1 presents a consolidated list of the points students earn in each course through class participation and fulfilment of pre-examination obligations, as well as on the examination.

For each course, the Undergraduate Academic Studies Course Catalogue ([Annex 8.1](#)) defines: pre-examination obligations (activities) and the number of points assigned to them; the method of taking the final examination and the number of points assigned to it; student obligations during course delivery; the conditions a student must meet in order to take, or pass, the final examination; and the number of ECTS credits awarded upon successful completion of the course. The number of ECTS credits is determined on the basis of the student workload required to master a particular course, applying a uniform methodology to all study programmes delivered at the Faculty.

At the first lecture, students are informed of the detailed teaching plan by class session, as well as all obligations and activities during the delivery of the course.

The method of taking examinations and examination grading are regulated in greater detail by the Statute of the Faculty of Mechanical Engineering in Niš ([Annex 8.2A](#)), the Rulebook on Undergraduate Academic Studies of the Faculty of Mechanical Engineering in Niš ([Annex 8.2B](#)), and the Rulebook on Taking Examinations and Examination Grading of the University of Niš ([Annex 8.2C](#)).

A student's examination performance is expressed by the following grade:

- 10 – excellent (91–100 points);
- 9 – exceptionally good (81–90 points);
- 8 – very good (71–80 points);
- 7 – good (61–70 points);
- 6 – sufficient/pass (51–60 points);
- 5 – fail (up to 50 points).

The grade is based on the total number of points earned by the student through

fulfilment of pre-examination obligations and the final examination, in accordance with the quality of the acquired knowledge and skills.

Table 8.2 presents statistical data on student progression in the undergraduate academic study programme in Mechanical Engineering delivered at the Faculty of Mechanical Engineering in Niš for the 2024/25 academic year. In addition, a detailed analysis is provided of student progression in this study programme from the 2021/22 academic year onwards (2021 accreditation, as well as the 2014 accreditation).

Tables and Annexes for Standard 8

Table 8.1. Consolidated List of Points Earned by Students in Each Course through Class Work and Fulfilment of Pre-Examination Obligations, as well as on the Examination

Table 8.2. Statistical Data on Student Progression in the Mechanical Engineering Study Programme

[Annex 8.1.](#) Course Catalogue (in the accreditation documentation and on the institution's website)

Annex 8.2A. Assessment – Extract from the Statute of the Faculty of Mechanical Engineering in Niš

Annex 8.2B. Rulebook on Undergraduate Academic Studies of the Faculty of Mechanical Engineering in Niš

Annex 8.2C. Rulebook on Taking Examinations and Examination Grading of the University of Niš

Standard 9. Teaching Staff

Teaching staff with the necessary scientific, artistic and professional qualifications are provided for the delivery of the study programme.

The Faculty of Mechanical Engineering in Niš employs teachers, researchers and associates who, through educational and scientific research activities, as well as through cooperation with industry within the Institute for Mechanical Engineering, enable the Faculty to fulfil its mission and vision.

The [Report on Institution Parameters](#) provides aggregate data on the teaching staff of the Faculty of Mechanical Engineering in Niš. Table 9.0A presents the teaching workload of teachers at institution level, while Table 9.0B presents the teaching workload of associates at institution level (extract from the NAT 2019 software). Taking into account all study programmes at the Faculty of Mechanical Engineering in Niš that are already accredited or are undergoing accreditation, the overall average workload of teachers employed at the Faculty is 7.79, while the overall average workload of associates employed at the Faculty is 9.80. The great majority (97.92%) of active teaching hours delivered by teachers are delivered by full-time teachers (employed by the Faculty at 100% of full working time).

The following staff are engaged in delivering the undergraduate academic study programme in Mechanical Engineering:

- 67 full-time teachers, comprising 36 full professors, 20 associate professors and 11 assistant professors (Table 9.2, Annex 9.2);
- 1 teacher from another higher education institution, engaged under an additional-work contract, namely 1 full professor (Table 9.4, Annex 9.4);
- 27 full-time associates, comprising 17 assistants, 4 teaching associates, 1 scholarship holder and 5 junior research assistants (Table 9.5, Annex 9.5);

According to the Report on Study Programme Parameters:

- delivery of the undergraduate academic study programme in Mechanical Engineering requires a minimum of 31.28 teachers and 27.01 associates;
- the average workload of teachers in this study programme is 3.58;
- the average workload of associates in this study programme is 6.07;
- the percentage of lecture hours delivered by teachers employed at 100% of full working time is 99.68%.

On the basis of the number of engaged teachers and associates and the Report on Study Programme Parameters, it may be concluded that all requirements of Standard 9 relating to the required number of teachers and associates and their active-teaching workload have been met.

Table 9.1 presents the scientific and professional qualifications and teaching assignments of teachers engaged in undergraduate and master academic study programmes delivered at the Faculty of Mechanical Engineering in Niš.

[Table 9.1A](#) contains the Teacher Catalogue for teachers engaged in the undergraduate academic study programme in Mechanical Engineering.

Table 9.6 provides a consolidated overview of the number of teachers engaged in the undergraduate academic study programme in Mechanical Engineering by narrower scientific field.

Annex 9.8 contains the regulations governing the selection of teaching staff at the Faculty of Mechanical Engineering in Niš, namely: the Rulebook on the Procedure for

Appointment to Academic Titles and Establishment of Employment of Teachers at the University of Niš (Annex 9.8A), the Detailed Criteria for Appointment to Academic Titles at the University of Niš (Annex 9.8B), and the Rulebook on the Procedure for Appointment to Titles and Establishment of Employment of Associates and External Associates and on the Conditions for Appointment to Associate Titles at the Faculty of Mechanical Engineering in Niš (Annex 9.8C).

The criteria for appointment to academic titles defined in these rulebooks are aligned with the recommendation of the National Council for Higher Education.

Annex 9.1 contains signed and stamped extracts from the electronic database (EDB) of the Tax Administration of the Republic of Serbia (TARS).

Annex 9.2 contains employment contracts, decisions on academic appointments, diplomas, MA and M1/M2 records for full-time teachers engaged in the undergraduate academic study programme in Mechanical Engineering.

Annex 9.4 contains engagement contracts, decisions on academic appointments, diplomas, approvals and statements of teachers from other higher education institutions who are engaged under teaching contracts in Annex 9.2 contains employment contracts, decisions on academic appointments, diplomas, MA and M1/M2 records for full-time teachers engaged in the undergraduate academic study programme in Mechanical Engineering.

Annex 9.5 contains employment contracts, decisions on appointments, diplomas, MA and M1/M2 records for full-time associates engaged in the undergraduate academic study programme in Mechanical Engineering. For the scholarship holder, an agreement between the Faculty of Mechanical Engineering in Niš and the Ministry of Education, Science and Technological Development concerning participation in Ministry projects at scientific research organisations is also provided.

Reports, Tables and Annexes for Standard 9

Report on Institution Parameters

[Report on Study Programme Parameters](#)

Table 9.0. Aggregate Data on Teaching Staff at the Institution (the list is generated when data are entered into the electronic form; the institution is required to enter in this table all requested data).

Table 9.0A. Teaching Workload of Teachers at Institution Level

Table 9.0B. Teaching Workload of Associates at Institution Level

Table 9.1. Scientific, Artistic and Professional Qualifications and Teaching Assignments of Teachers Engaged in All Undergraduate and Master Academic Study Programmes

[Table 9.1A. Teacher Catalogue of the Faculty of Mechanical Engineering in Niš for Teachers Engaged in the Undergraduate Academic Study Programme in Mechanical Engineering](#)

Table 9.2. List of Full-Time Teachers Engaged in the Undergraduate Academic Study Programme in Mechanical Engineering

Table 9.4. List of Other Engaged Teachers – Additional Work in the Undergraduate Academic Study Programme in Mechanical Engineering

Table 9.5. List of Full-Time Associates Engaged in the Undergraduate Academic Study Programme in Mechanical Engineering

Table 9.6. Consolidated Overview of the Number of All Teachers by Fields and

Narrower Scientific or Artistic Fields Engaged in the Undergraduate Academic Study Programme in Mechanical Engineering

Annex 9.1. Signed and Stamped Extracts from the Electronic Database (EDB) of the Tax Administration of the Republic of Serbia (TARS)

Annex 9.2. Employment Contracts, Academic Appointments, Diplomas, MA and M1/M2 Records of Full-Time Teachers engaged in the undergraduate academic study programme in Mechanical Engineering

Annex 9.4. Engagement Contracts, Academic Appointments, Diplomas, Approvals and Statements of Teachers from Other Higher Education Institutions – Additional Work – engaged in the undergraduate academic study programme in Mechanical Engineering

Annex 9.5. Employment Contracts, Appointments, Diplomas, MA and M1/M2 Records of Full-Time Associates engaged in the undergraduate academic study programme in Mechanical Engineering

Annex 9.8. Rulebook on the Selection of Teaching Staff at the Institution (contained in Annexes 9.8A, 9.8B and 9.8C)

Annex 9.8A. Rulebook on the Procedure for Appointment to Academic Titles and Establishment of Employment of Teachers at the University of Niš

Annex 9.8B. Detailed Criteria for Appointment to Academic Titles at the University of Niš

Annex 9.8C. Rulebook on the Procedure for Appointment to Titles and Establishment of Employment of Associates and External Associates and on the Conditions for Appointment to Associate Titles at the Faculty of Mechanical Engineering in Niš

Note: A separate folder contains the tables and annexes from the accreditation documentation of the Faculty of Mechanical Engineering in Niš as a higher education institution, namely: **Standard 6.** Teaching Staff (Tables 6.1–6.7 and Annexes 6.3–6.8).

Standard 10. Organisational and Material Resources

Appropriate human, spatial, technical-technological, library and other resources are provided for delivery of the study programme, commensurate with the nature of the study programme and the planned number of students.

The entire premises of the Faculty of Mechanical Engineering in Niš recorded in Possession Sheet No. 2708 and shown in the Copy of Plan No. 953-1/2007-1530 comprise part of the building housing the Faculty of Mechanical Engineering and the Faculty of Civil Engineering and Architecture on cadastral parcel 156/2, as well as the multipurpose laboratory facility (MFP) on cadastral parcels 1927 and 1926/1. All facilities are located at 14 Aleksandra Medvedeva Street, 18000 Niš (Annex 10.1). Annex 10.1A presents the organisational-structure chart of the Faculty of Mechanical Engineering in Niš.

The Faculty currently has approximately 8129 m² of premises (Table 10.1) (excluding corridor space exceeding 1200 m² and the area of the part of the MFP that is under construction – LTTL–MFP – and other rooms in the MFP with an area of approximately 583 m²). The usable working space comprises: classrooms and lecture rooms (2458 m²), teaching laboratories (1528 m²), the library with reading room (192 m²), offices for teachers and associates (1079 m²), Student Parliament rooms, common areas, rooms for non-teaching staff, storage rooms and sanitary facilities.

The total available area of classroom and laboratory space used for teaching at all levels of study is 4178 m². The total seating capacity of this space is 1814.

The total gross area of all premises of the Faculty of Mechanical Engineering in Niš is approximately 8129 m², and the Faculty has accredited or submitted for accreditation a total of twelve study programmes with a maximum enrolment of 1867 students. The Faculty of Mechanical Engineering fully meets the requirements regarding the necessary space ($8129 \text{ m}^2 / 1867 = 4.35 \text{ m}^2$ per student), as stated in Annex 10.4. It should be noted that this calculation includes the one-year master study programme Hydropower Engineering, Hydraulics and Pneumatics, accredited in 2020, which will not be reaccredited in the new cycle; consequently, the number of students will be lower by 32.

The Faculty premises used for teaching and administrative purposes meet the relevant urban-planning, technical-technological and hygiene requirements.

The Faculty premises have been partially adapted for persons with disabilities. The ground floor of the Faculty is readily accessible to persons with disabilities: stairways at ground-floor level are secured and equipped with appropriate ramps, enabling persons with reduced mobility to access amphitheatres and teaching laboratories. Classrooms on upper floors are accessed by stairs and a large lift. Unfortunately, not all classrooms on upper floors are accessible to persons with reduced mobility. The Faculty continuously improves access to upper-floor classrooms in order to make them accessible to persons with reduced mobility.

A list of higher-value equipment, comprising 206 items used for educational activities and scientific research, is provided in Table 10.2. The complete list of laboratory and computer equipment is included in the Faculty's fixed-assets inventory – Annex 10.2A.

In its day-to-day activities, the Faculty relies extensively on IT infrastructure (Annex 10.3) and has approximately 480 desktop and laptop computers, 49 projectors, and more than 120 printers, scanners and multifunction devices. The Faculty has eleven computer classrooms in which a total of 142 computers are available to students. All computers are connected to a network whose main connections use fibre-optic cables,

while access to the network and the Internet is also provided through multiple wireless access points.

The Library of the Faculty of Mechanical Engineering in Niš has 192 m² of space for work, collection storage, office purposes and a reading room. Library services are provided to users by two senior professional-technical associates for library work. The principal users of the Library are students at all levels of study and Faculty staff, while access to library resources is also possible through interlibrary loan. The Library meets the needs of the Faculty's study programmes by ensuring that courses are covered by textbooks and other literature. The library collection is available in electronic form and can be searched through the Faculty's web portal.

The Library holds 24,403 library items (Table 10.3B), comprising:

- 17,655 books (12,713 books in Serbian and 4,942 books in foreign languages), including: 10,709 textbooks (9,091 textbooks in Serbian and 1,618 textbooks in foreign languages) and 393 monographs (363 monographs in Serbian and 30 monographs in foreign languages);
- 200 journals (70 journals in Serbian and 130 journals in foreign languages);
- 6,548 other library items (doctoral dissertations, master's theses, specialist papers, graduation theses, master theses, conference proceedings and standards).

Annex 10.2B contains an extract from the Inventory Book of the Library of the Faculty of Mechanical Engineering in Niš: a list of 2,270 titles from a total of 24,403 library items.

Table 10.5 presents the list of literature for compulsory courses in the study programme, i.e. the coverage of compulsory courses by different types of literature (a book by the course teacher, a book by another author, a practical handbook, a problem collection, a book in a foreign language, or another type of literature).

Table 10.3A provides a list of library items relevant to the study programme: a total of 613 library items relevant to the undergraduate academic study programme in Mechanical Engineering. The table identifies more than 100 publications authored by members of staff employed at the Faculty.

Table 10.4 provides a list of textbooks used as literature in individual courses. The great majority of these textbooks are held in the Faculty Library and are therefore available free of charge to students enrolled in the study programme.

Tables and Annexes for Standard 10

Table 10.1. List of Rooms and Their Areas at the Higher Education Institution Where Teaching for the Study Programme Is Delivered

Table 10.2. List of Equipment for Delivery of the Study Programme

Table 10.3A. List of Library Items Relevant to the Study Programme

Table 10.3B. Consolidated Overview of Library Items

Table 10.4. List of Textbooks Available to Students in the Study Programme

Table 10.5. Coverage of Compulsory Courses by Literature (books, collections, practical handbooks, etc., available in the library or commercially available)

Annex 10.1. Proof of Ownership, Agreements on Use or Lease Agreements

Annex 10.1A. Organisational-Structure Chart of the Faculty

Annex 10.2. Extract from the Inventory Book

Annex 10.2A. Extract from the Inventory Book – List of Laboratory and Computer Equipment within the Fixed-Assets Inventory

Annex 10.2B. Extract from the Inventory Book of the Library of the Faculty of Mechanical Engineering in Niš

Annex 10.3. Evidence of Information-Technology Resources, Number of Internet Connections, etc. (these annexes are identical to those submitted in the institution-accreditation documentation and are attached to the programme only in electronic form)

Annex 10.4. Ratio of Total Space to the Number of Students in All Accredited Study Programmes

Note: A separate folder contains the tables and annexes from the accreditation documentation of the Faculty of Mechanical Engineering in Niš as a higher education institution, namely Standard 9. Premises and Equipment (Tables 9.1–9.3 and Annexes 9.1–9.2).

Standard 11. Quality Control

Quality control of the study programme is carried out regularly and systematically through self-evaluation and external quality review.

One of the strategic commitments of the Faculty of Mechanical Engineering in Niš is the continuous improvement of the quality of teaching and study programmes by offering a more diverse range of study programmes and continuously aligning its study programmes and teaching with the programmes and teaching of comparable higher education institutions worldwide.

The self-evaluation of study programs at all levels of study is carried out as part of the self-evaluation of the Faculty of Mechanical Engineering in Niš as an accredited institution. The Self-Evaluation Report of the Faculty of Mechanical Engineering in Niš includes all quality elements defined by the Quality Assurance Strategy. Students actively participate in self-evaluation and quality assessment. Annex 11.1 contains the 2026 Self-Evaluation Reports of the Faculty of Mechanical Engineering in Niš as a higher education institution and of the Mechanical Engineering academic bachelor's degree program, which covers the 2023/24 and 2024/25 academic years.

On the basis of the Self-Evaluation Report prepared for the three-year period 2020/21, 2021/22 and 2022/23, an external quality review of the Faculty of Mechanical Engineering in Niš was conducted on 21 October 2025. All elements of the Faculty's quality policy received exceptionally high evaluations, as stated in the External Quality Review Report with the NAT Decision on Compliance with the Quality Standards for Higher Education Institutions, Report No. 612-00-00281/4/2024-03 and Decision No. 612-00-00281/5/2024-03, dated 28 April 2026. In order to maintain and improve its quality policy, the Faculty implemented the proposals and recommendations of the Self-Evaluation Commission.

The Faculty provides the conditions and infrastructure for the regular and systematic collection and processing of data required for quality assessment in all areas subject to self-evaluation. Student evaluation of teaching quality in courses across all study programmes is conducted systematically through surveys, and the results are used by the Faculty's teachers and associates to improve teaching quality. Annex 11.1A contains reports on the consolidated results of student evaluation of study programmes, teaching and working conditions, and student evaluation of the pedagogical work of teachers and associates for the 2024/25 and 2023/24 academic years, adopted by the Faculty's Teaching and Scientific Council upon the proposal of the Commission for Conducting Student Evaluation of Study Quality (Table 11.1).

Three groups of questionnaires have been defined:

- a questionnaire for evaluating the quality of the teaching process for a course (for students at all levels of study) (Annex 11.1A1);
- a questionnaire for evaluating the quality of a study programme at a higher education institution (for final-year students of undergraduate and master academic studies) (Annex 11.1A2);
- a questionnaire for evaluating the quality of a study programme at a higher education institution (for doctoral academic students, Annex 11.1A3).

In student evaluations of the pedagogical work of teachers and associates, the average survey grade shows stability for both teachers and associates.

Annex 11.1B contains graduates' opinions on the quality of the study programme and the learning outcomes achieved, collected through a survey of students who graduated

during the 2023/24 and 2024/25 academic years. The questions answered by graduates are provided in Annex 11.1B1.

Through the Quality Assurance Strategy (Annex 11.2A) and the Standards and Procedures for Quality Assurance and Improvement (Annex 11.2B), the Faculty of Mechanical Engineering identifies quality assurance as one of the fundamental elements of higher-education reform in Serbia and of its integration into the unified European Higher Education Area. The Quality Assurance Strategy establishes the Faculty's commitment to continuously and systematically improve the quality of its programmes, clearly defining quality-assurance measures and identifying the entities responsible for quality assurance, as well as their rights and obligations in that process. The Strategy defines the areas of quality assurance while recognising the interconnection of educational, scientific research and professional activities. This document contains all elements required by this standard and is publicly available on the Faculty of Mechanical Engineering website.

The Rulebook on Textbooks and Other Teaching Literature of the Faculty of Mechanical Engineering of the University of Niš is provided as Annex 11.3A. This Rulebook comprehensively regulates the preparation, approval, publication and use of textbooks and other teaching literature, their monitoring and evaluation during use in teaching, and other matters relevant to this area. The Rulebook is aligned with the Rulebook on Textbooks of the University of Niš (Annex 11.3B).

In order to encourage the publication of works at the Faculty, the Dean adopted a special decision (Annex 11.3C) approving the payment of financial support for the financing of scientific and professional works (books, textbooks, practical handbooks, monographs, etc.) authored by Faculty teachers and associates, in the amount of 30% of the printing cost of the specific publication, provided that the Faculty retains 20% of the total print run.

Article 74 of the Statute of the Faculty of Mechanical Engineering (Section 6.3.4) defines the Quality Committee as one of the permanent working bodies of the Teaching and Scientific Council (Annex 11.4). The Rulebook on the Work of the Quality Committee of the Faculty of Mechanical Engineering in Niš (Annex 11.4A) regulates the scope of work, competences, composition, rights, obligations and responsibilities of the Committee for the purpose of preparing, proposing, monitoring and reporting on the Faculty's Quality Assurance Strategy and the Standards and Procedures for Quality Assurance of Teaching and Study Programmes, and for ensuring alignment with the rulebooks on standards for self-evaluation and quality assessment of higher education institutions and on accreditation of higher education institutions and study programmes adopted by the National Council for Higher Education. This Rulebook regulates the Committee's work, including its scope of work, organisational structure and management, working documentation, confidentiality of work (business secret), and other matters relevant to the performance of the Committee's activities.

The Quality Committee is established by the Teaching and Scientific Council of the Faculty of Mechanical Engineering as a permanent working body of the Council and comprises representatives of teachers, associates, non-teaching staff and students. In addition to the members appointed by the Faculty's Teaching and Scientific Council (Table 11.2), the permanent members of the Quality Committee are:

- the Vice-Deans of the Faculty, with the Vice-Dean for Teaching serving as the management representative for quality;
- the Head of the Institute for Mechanical Engineering;

- the independent professional-technical associate for quality management at the Institute for Mechanical Engineering, who also serves as the technical secretary of the Committee.

Tables and Annexes for Standard 11

Table 11.1. List of Members of the Commission for Conducting Student Evaluation of Study Quality

Table 11.2. List of Members of the Quality Committee

Annex 11.1. Report on the Results of Self-Evaluation of the Study Programme

Annex 11.1A. Surveys Conducted – Report on the Consolidated Results of Student Evaluation of Study Programmes, Teaching and Working Conditions, and Student Evaluation of the Pedagogical Work of Teachers and Associates for the 2023/24 and 2024/25 Academic Years

Annex 11.1A1. Questionnaire for Evaluating the Quality of the Teaching Process for a Course (for students at all levels of study)

Annex 11.1A2. Questionnaire for Evaluating the Quality of a Study Programme at a Higher Education Institution (for final-year students of undergraduate and master academic studies)

Annex 11.1A3. Questionnaire for Evaluating the Quality of a Study Programme at a Higher Education Institution (for doctoral academic students)

Annex 11.1B. Graduates' Opinions on the Quality of the Study Programme and the Learning Outcomes Achieved

Annex 11.1B1. Survey for Graduates of the Faculty of Mechanical Engineering in Niš

Annex 11.2. Quality Assurance (contained in Annexes 11.2A and 11.2B)

Annex 11.2A. Quality Assurance Strategy

Annex 11.2B. Standards and Procedures for Quality Assurance and Improvement

Annex 11.3. Rulebook on Textbooks (contained in Annexes 11.3A, 11.3B and 11.3C)

Annex 11.3A. Rulebook on Textbooks and Other Teaching Literature of the Faculty of Mechanical Engineering of the University of Niš

Annex 11.3B. Rulebook on Textbooks of the University of Niš

Annex 11.3C. Decision on Co-Financing the Printing Costs of Scientific and Professional Works

Annex 11.4. Extract from the Institution's Statute Regulating the Establishment and Scope of Work of Organisational Units Responsible for Quality

Annex 11.4A. Rulebook on the Work of the Quality Committee of the Faculty of Mechanical Engineering in Niš

External Quality Review Report with the NAT Decision on Compliance with the Quality Standards for Higher Education Institutions

Standard 12. Studies in a World Language

A higher education institution may organise a study programme in a world language in any field and any educational-scientific or educational-artistic area if it has the human and material resources necessary to deliver the teaching content in accordance with the standards.

The undergraduate academic study programme in Mechanical Engineering is accredited for delivery in both Serbian and English.

Faculty teachers have the competences required to deliver this study programme in English as well. [Annex 12.4](#) contains certificates confirming the language competences of teachers and associates in accordance with the requirements of this Standard.

[Annex 12.3A](#) contains a list of library items in English relevant to the study programme (120 library items have been selected). The Faculty Library holds more than 4,900 library items in foreign languages. The Course Catalogue lists English-language references for several courses. Online literature in English is available for all courses.

Undergraduate academic students may use the Faculty (University) network, or remote access from home, to access electronic books, electronic journals and databases in English available on the KoBSON website <http://kobson.nb.rs/kobson.82.html>.

[The Faculty website in English](#) provides the information required by international students. The [website of the Faculty of Mechanical Engineering in Niš](#) provides both the Teacher Catalogue and the Course Catalogue in Serbian and English.

Staff of the Faculty's Student Affairs Office are qualified to provide services in English ([Annex 12.3C](#)). Public documents ([Annex 12.3B](#)), certificates and the Diploma Supplement are issued in both Serbian and English.

Annex 12.1 contains the relevant documentation in English, namely: descriptions of all standards in English (this Document), the Diploma Supplement in English ([Annex 12.2B1](#)), the Course Catalogue in English ([Annex 12.2C1](#)), and the Teacher Catalogue in English ([Annex 12.2D1](#)).

The undergraduate academic study programme in Mechanical Engineering will be delivered simultaneously in Serbian and English. The Accreditation Application and [Introductory Table](#) specifies the number of students who will study in English: a maximum of 20 students within the total of 240 students for which accreditation is requested. Students who will study in [English](#) must possess satisfactory language competences in accordance with Standard 12.

Teaching will be delivered using technical devices/software solutions for simultaneous interpretation, or another appropriate simultaneous-interpretation technique.

Annexes for Standard 12

Annex 12.0. Introductory Table

Annex 12.2. Documentation in English

Annex 12.2A1. Descriptions of All Standards in English (this Document)

Annex 12.2B1. Diploma Supplement in English

Annex 12.2C1. Course Catalogue in English

[Annex 12.2D1. Staff Directory OAS MI 2026](#)

Annex 12.3. Evidence of Compliance with the Requirements of the Guidelines for Application of Standard 12

[Annex 12.3A. List of Library Items Relevant to the Study Programme in English](#)

[Annex 12.3B. Sample Examination Record in English](#)

[Annex 12.3C. Administrative and Professional Support for Delivery of the Study Programme in English](#)

[Annex 12.4. Certificates OAS MI 2026 English](#)

[Annex 12.5. Evidence of Students' Competencies in the World Language in Which the Study Programme Is Delivered](#)