UNIVERSITY OF MOSTAR

MEDICINE
INTEGRATED UNDERGRADUATE AND GRADUATE UNIVERSITY STUDY PROGRAMME CURRICULUM

Mostar, April, 2023

CONTENT

1. INTRODUCTION

The curriculum of the integrated university study programme Medicine is the result of the regular review process, which began with the Decision of the Senate at the session held on February 26, 2022 (No. 01-993-1 / 22). The regular revision procedure was carried out according to the *Rulebook on the Procedure of Adopting New and Revisions of Existing Study Programmes* (No. 01-993-1 / 22). It stipulates that the Committee coordinates a revised curriculum. The Committee also includes student representatives and external users, and the Scientific - Teaching Council of the organizational unit submits their proposal to the University Senate for adoption.

In order to involve all stakeholders in the process of improving the study programme, a public discussion was held on March 14, 2023 (No. 01-I-374/23). Stakeholders and the public were informed about the public discussion via the School's website and by e-mail. The materials for the public discussion were available in advance to heads of individual Chairs, heads of courses, teachers, students and external users. On the basis of the public discussion and the conclusions reached, the Minutes of the public discussion were drafted (No. 01-450/2).

On top of the conclusions of the public discussion, when deciding on the type of changes, the relevant data of the annual report at the level of the organizational unit of the School of Medicine and the study programme Medicine (No. 01-I-2216-c/21) of December 20, 2021, adopted at the session of the Scientific - Teaching Council on December 17, 2021.

Furthermore, when deciding on the type and extent of changes, suggestions for improvements on the basis of earlier evaluations were also analysed - the last institutional accreditation from 2020 (dated January 23, 2020; No. 05-03-40-92-8/19), and the accreditation of study programmes carried out by AZVO (Certificate of Reaccreditation of AZVO of the University of Mostar (No. 355-01-18-0028 dated May 9, 2018). The application of the provisions of legal and internal acts on the minimum share of pre-examination requirements in the final grade in all courses was also taken into account, as well as the application of modern teaching methods with the student in the centre of the teaching process. In relation to the above, different teaching methods are used that support interactive learning and research, problem solving, and creative and critical thinking. Improvement of the Syllabi encourages different ways of teaching in accordance with the planned learning outcomes, and is achieved on the basis of evidence on achieving the prescribed learning outcomes (e.g. student tests, seminar papers, presentations, etc.).

The School of Medicine of the University of Mostar is a member of the Dean's Conference of Schools of Medicine in the Republic of Croatia. The learning outcomes implemented in this programme hence were adopted in collaboration with Schools of Medicine in the Republic of Croatia and as such correspond to the level of CQF (Croatian Qualification Framework) and EQF (European Qualification Framework). The prescribed learning outcomes clearly define, that is, result in the competencies that students, future doctors of medicine, should acquire during their studies, and which are necessary for entering the labour market, continuing education or other needs of the individual/society. Recommendations of professional associations that monitor their licensing (for example, Medical Chambers) were also accepted, with the aim of educating experts who are competitive on the national and international labour market.

The revised curriculum has complied ECTS credits with the actual student workload based on feedback from participants in the teaching process. Accent lies on achieving clear and accessible criteria and

methods of evaluation and assessment of students, in order to make the examination process more transparent, and the students were familiar with expectations of them even before the start of a particular course.
Conclusions were reached through conversations with the students, that they were satisfied with the possibility of performing elective summer rotations in internal medicine and surgery, in different institutions and with the possibility of choosing the department in which they would perform the rotation. This especially applies to the fact that they can work in smaller groups.
In relation to the above, the new curriculum also made a major intervention in the sense of transferring all clinical rotations to the 6th, final year of studies and their organization in the form of student rotations, which is described in more detail below. By doing so, lesser workload for individual Clinics in a single rotation is achieved, and the students will be able to work in smaller groups, which significantly increases their engagement in exercises.

In addition, during the development of the curriculum, all strategic tasks in the strategic area of education from the *University Development Strategy 2018 – 2023*, which relate to the curriculum and teaching process, were carried out (more in the chapter "3.1. Link to the University Development Strategy").

Taking all of the above into account, several changes have been made in this revised curriculum in comparison to the existing one. The key changes (introduction of new courses and reorganization of internships or clinical rotations) are described in the text below, while minor changes in the form of changes in course names, corrections of time schedule and ECTS credits are presented in a table with a short explanation.

1. 1. New Courses

Back in the previous revision of the programme, numerous new courses were introduced, as follows:
- Personalized Medicine and Biotechnology
- Transfusion and Transplantology
- Medical Statistics
- Clinical Pharmacology

Introduction of these courses proved to be a good decision since the students were satisfied with the classes and the skills they acquired in these courses, which was also reflected in the excellent grades in student surveys.
Medicine is an extremely fast changing field. The literature and materials from which the people who developed this new programme studied when they were students are, in a practical sense, outdated. On top of this, pathology and incidence of certain diseases are changing, and the number of possible tests is increasing day by day. The incidence of serious diseases such as cancer is also increasing. Taking all of the above into consideration, and through comparisons with the programmes of referential Schools in the region (primarily those from the European Union), three new courses were included in the new programme. The mentioned courses are already in the programmes of reference Schools of Medicine in the EU, and some of them were taken by doctors of medicine in EU countries for the purpose of diploma acknowledgment. The introduction of these courses reduces the differences of our programme in comparison with the programmes of EU countries (primarily the Republic of Croatia), which will facilitate the evaluation process of our diplomas and the possibility of mobility of doctors of medicine after graduation.
a. Clinical Biochemistry

The goal of introducing the course Clinical biochemistry is to achieve students' understanding of the functioning of the organism at the molecular level, which is reflected in the normal functioning of organs, as well as in pathological biochemical processes in the organism, the role of natural biomolecules in the body, the dynamics of the synthesis and breakdown of natural biomolecules (hormones, tumor markers, vitamins, trace elements) and their influence on the functions of the main organ systems. Also, the goal is to train students for critical judgment of laboratory results in different diseases.

b. Palliative Medicine
The goal of introducing this course is to improve and advance students' knowledge of the concept and organization of palliative care, the role of palliative care for patient and family, and health care of the leading symptom of a palliative patient - pain, as well as other symptoms that may appear.
In addition, students will be enabled to communicate with terminally ill patients and their family members, while raising awareness of the need for responsible decision-making within ethical frameworks.

c. Health Care Organization and Health Economics
The goal of introducing this course is to expand students' knowledge about the structure of health systems and the organization of health care. The idea is to enable students understand the fundamentals of health economics and ways of funding the health systems, and to make students aware of the need for an active approach regarding the acquisition of such skills as management, teamwork and planning at different levels of the health system.

1.2. Reorganization of Clinical Rotations

Clinical rotations, i.e. student practice, will be organized in the form of student rotations at 4 Clinics - internal medicine, surgery, gynecology and pediatric practice. The expected total duration is 12 weeks, 3 weeks for each rotation respectively. The time schedule of exercises has been increased by 25%.

Students will be divided into 4 groups of approximately 12-15 people, which will rotate in the respective Clinics and Departments. In this way, the influx of students to individual Departments will be reduced and it will be possible to practice in smaller groups. While the exercises will be completely divided (4 rotations), the seminars will be conducted in such a way that related branches of medicine - internal medicine and surgery, or gynecology and pediatrics, are combined and conducted in parallel (2 rotations). In this way, half of the students from the year will listen to seminars in internal medicine and surgery, and during the exercises they will do 2 clinical rotations: 3 weeks of surgical practice and 3 weeks of internal medicine practice, or vice versa. The same applies to the clinical rotation in gynecology and pediatrics. After 6 weeks, these two groups will rotate and thus undergo a complete practice. Each clinical rotation will have a separate exam - so there will be 4 exams.

1.3. Changes in Course Names, Time Schedule, ECTS Credits and Other

A detailed description of all changes is presented in table 2 of the Report of the Committee for the revision of the Medicine curriculum, which is attached to this Curriculum.

2. GENERAL INFORMATION ABOUT THE STUDY PROGRAMME

Study programme:	Medicine
Cycle:	Integrated study programme (1st and 2nd cycle)
Type:	University study programme
Scientific area:	Biomedicine and Health Care
Scientific field:	Basic Medical Sciences Clinical Medicine Public Health
Academic title:	Doctor of Medicine (MD)
EQF qualification level:	7
Duration of the study programme:	6 Years, 12 Semesters
ECTS:	360
Language:	Croatian
Mode of study:	Full-time
Awarding institution:	University of Mostar
Institution administering study programme:	University of Mostar, School of Medicine
Study programme objectives:	1. Achieve an adequate student knowledge on scientific foundations of medicine and train them to differentiate and apply various scientific methods, including principles of biological function measurements, validating scientifically proven facts, and analysing scientific data. 2. Achieve an adequate student knowledge on recognizing and connecting the structures, functions, and behaviours in healthy and sick individuals, as well as influence of socioeconomic environment on human health. 3. Prepare the students to critically evaluate and apply the procedures that enable doctors of medicine a comprehensive input on mental and physical disturbances, on preventive medicine, diagnostics and treatments, as well as human reproduction. 4. Prepare the students to critically judge, select and rationally apply preventive measures, as well as diagnostic and therapeutic algorithms according to relevant guidelines on disease prevention, health status improvement, or a complete resolution of the disease. 5. Train the students in appropriate communication skills with members of their medical teams, patients and their families, other healthcare and non-healthcare professionals, regulatory agencies and public, according to appropriate legislature and ethical principles. 6. Achieve an adequate student awareness on necessity of life-long learning in the field of medicine, and biomedicine and health in general.
Study programme competencies:	Upon completion of Medicine at the School of Medicine of the University of Mostar doctors of medicine acquire the following competencies: • fundamental theoretical knowledge and practical skills that are necessary for independent work in a doctor's office, correct determination of diagnosis and treatment,

	• broad knowledge and practical skills that qualify them for any type of postgraduate education and cooperation with other healthcare professionals, • professional and scientific education that enables a fundamental approach to the creation of scientific and professional thinking, • knowledge about the process of scientific research work and the ability to critically evaluate old and new scientific knowledge, • correct ethical and deontological attitudes, • knowledge of the correct use of medical information, respect for patient privacy, professional secrecy, empathy towards the patient and acceptable communication with the patient, • the ability to communicate with the patient in a way that is comprehensible to him while respecting the patient's right to participate in treatment decisions or to refuse treatment, • acquire knowledge for further improvement and development of medicine, systematic thinking and structural approach to medical problems, • acquire a systematic way of thinking and a structured approach to medical problems during their education, as well as knowledge about the diagnostic algorithms and making therapeutic decisions, • legal requirements for working in the medical profession while assuming the responsibility associated with the title of doctor of medicine, • knowledge about the functioning and organization, as well as the financing of health care, methods of keeping health records, and knowledge about legal standards in relation to permanent theoretical and practical training, • knowledge of how to approach a psychiatric patient, respecting all his particular needs, and are ready to dedicate themselves to the medical profession and take responsibility for the patient's physical, mental and social well-being, • knowledge of how to provide appropriate medical services to children, • knowledge of the concepts of health promotion and disease prevention, • acquire knowledge of how to cooperate with other health professionals, achieve successful teamwork, teach colleagues and develop personal teaching skills, • acquire knowledge about quality assurance measures and assess their own competence in the field of medicine and knowledge standards, • they are familiar with the harmful effects of ionizing radiation, and methods of protection, • acquire knowledge about anesthetizing pain in different anatomical regions, • acquire basic medical knowledge in order to be able to provide help in all cases of medical emergency and master the diagnostic algorithms, • acquire knowledge for intervention in the event of a medical emergency, and the implementation of preventive protection measures in medicine,

	• be prepared to take responsibility and make the necessary medical decisions, • be prepared and capable of establishing successful teamwork and skill management, • be prepared to consider changes in the socioeconomic context of treatment, • be aware of and ready for lifelong continuous learning and improvement in order to maintain a high level of medical competence. A detailed list of specific knowledge and skills, as well as recommended levels of competence for the performance of each skill, are presented for each course in the "Clinical Skills Booklet".
Study programme learning outcomes:	IU-MSE1. Explain and relate knowledge from the basic natural and medical sciences to apply a scientific approach to solving professional medical issues. IU-MSE2. Describe and relate knowledge about the normal structure and function of organs, organ systems and the body as a whole. IU-MSE3. Describe and relate knowledge about molecular, biochemical and cellular mechanisms important in maintaining homeostasis in the body. IU-MSE4. Explain the abnormal structure and function of organs, organ systems and the body to evaluate and argue the causal relationship between internal and external factors and the individual's behaviour. IU-MSE5. Describe the various causes of diseases (genetic, developmental, autoimmune, degenerative, toxic, metabolic, and neoplastic) and the disease mechanisms. IU-MSE6. Describe and relate knowledge about pathological and clinical manifestations of diseases and apply it in the diagnosis and treatment of diseases. IU-MSE7. Identify the importance of scientific methods in basic, translational and clinical research. IU-MSE8. Connect and apply knowledge about clinical, laboratory and imaging manifestations of the disease state and interpret and conclude in terms of differential diagnosis. IU-MSE9. Assess the functional forms and content of interdisciplinary cooperation and apply good practice of participating in multidisciplinary teams at all levels of health care, implementing and designing public health projects and campaigns, and in scientific research. IU-MSE10. Evaluate and apply the protocols and algorithms of preventive, diagnostic and therapeutic procedures according to current guidelines for the treatment of diseases and maintenance of health. IU-MSE11. Assess and review the rationality and safety of therapy based on knowledge and evidence that contribute to medical care, treatment outcomes, and health maintenance. IU-MSE12. Assess, evaluate, and develop the principles of good medical practice, medical ethics, and deontology.

	IU-MSE13. Assess and argue the importance of socioeconomic, psychological, environmental and other non-biological determinants that contribute to the maintenance of health and/or disease development. IU-MSE14. Conduct a medical interview, comprehensive history-taking and physical examination to obtain information relevant for working and differential diagnosis. IU-MSE15. Develop an appropriate plan for management, inclusion and rational selection of laboratory and instrumental examinations, interpretation of their results, and interventions for disease diagnosis and treatment. IU-MSE16. Practice effective communication with patients and their families when presenting and explaining medical information in accordance with the patient's and family members' level of health literacy and with the patient's consent. IU-MSE17. Explain the content of informed consent and argue for the reason informed consent should be obtained for the diagnostic and therapeutic methods necessary for patient treatment procedures. IU-MSE18. Formulate and explain health information on the disease/diagnosis to other healthcare and non-healthcare professionals, regulatory agencies, and the interested public in an appropriate manner and in compliance with applicable regulations. IU-MSE19. Apply specific forms of digital personal communication with the patient to identify the need for therapeutic interventions, report side effects and meet other medical needs. IU-MSE20. Apply and develop educational and information content and forms of telemedicine. IU-MSE21. Apply learning methods that enable postgraduate specialist training, lifelong learning and doctoral education in the field of biomedicine and health.
Opportunities after graduation:	Upon completion of Medicine, the following is possible: 1. Take the professional/state exam and, after passing it, perform the duties of a doctor of medicine. 2. Continue studying at the post-graduate doctoral study (3rd cycle) and/or post-graduate specialist study 3. After meeting the other criteria, apply for residency
Accreditation:	The University of Mostar received a Decision on Institutional Reaccreditation on January 14, 2020 (No. 05-03-40-92-8/19) from the competent Ministry of Education, Science, Culture and Sports of Herzegovina-Neretva Canton on the recommendation of the Agency for Development of Higher Education and Quality Assurance of Bosnia and Herzegovina, after which the University was registered in the State Register of Accredited Higher Education Institutions.

3. BASIC CHARACTERISTICS OF THE STUDY PROGRAMME

3.1. Connection with the Development strategy of the University of Mostar

In the *Development Strategy of the University of Mostar 2018 - 2023*, in the strategic area of education, several strategic goals are related to the curriculum and its elements. In objective 1, it is defined that the University, in cooperation with stakeholders, will create, approve, implement and continuously monitor and improve study programs at all levels, with clearly defined learning outcomes related to the needs of the labor market, and in accordance with the European Qualifications Framework (EQF), define the goals and expected learning outcomes of each study program and harmonize the content of the study program with them, in accordance with the appropriate level of the European Qualification Framework and the qualification standard, and to introduce a transparent and consistent process of revision and improvement of study programs with the participation of students and other stakeholders, ensure a realistic allocation of ECTS points, through the defined system of ECTS coordination at all levels of study, to improve the interdisciplinary nature of study programs by enabling the optionality of courses at the University level. Objective 3 refers to the development of a network of teaching bases, that is, organizations from different fields of activity, and to the establishment of cooperation that will enable the connection of practice, science and art, and higher education. In this sense, the goal is to increase the number of hours and the share of teaching practice in study programs and the share of ECTS points that are acquired through professional practice, and to increase the number of Diploma (graduation) theses that have a topic and content related to clinical practice.

3.2. Compliance with the Achievements of a Certain Scientific/Artistic Area and Labour Market and Connection with the Standards of Occupations/Qualifications

Objectives, competencies, and learning outcomes at the level of the study programme are defined in a way that is in line with the achievements of a particular scientific area and labour market and related to the standards of occupations/qualifications. The Employment Office regularly publishes a list of study programs in demand on the labour market for each individual calendar year. Medicine is often highly ranked on the scale of the so-called deficit professions, but the School of Medicine in Mostar is extremely careful in planning enrolment quotas and defining strategic development and management goals. Without harmonizing the fundamental principles of responsible and rational business, and the strategic support of the founder of the University of Mostar, the School of Medicine cannot respond to market challenges without satisfying the fundamental postulates of responsible management, which is the optimization of personnel, space and equipment, after which it would only be possible to comply with the request for an increase in enrolment quota at the School. In accordance with the aforementioned, enrolment quotas were not increased in the Medicine study program.

To harmonize with the achievements of the scientific/artistic area, the representatives of teachers in the Committee for the development of the revised curriculum and other teachers who participated in the development of syllabi for each course took into account current achievements and trends in scientific area of biomedicine and health, field of basic medicinal sciences, clinical medical sciences and public health, and related branches according to Frascati classification for each study programme).

Also, student representatives and external users were appointed to the Committee for the development of the revised curriculum to harmonize with the labour market. Public hearing was organized with the participation of experts from practice and economics (representatives of public health institutions, representatives of teaching bases, health centres, and general hospitals in FBiH)), and their suggestions were taken into account in the development of the curriculum.
Since no occupational standard or qualification standard has been defined at any level in BiH, the following documents have been taken into account:
- Decision on the standard classification of occupations in the FBiH (Official Gazette of the FBiH, Vol. XI, No. 40, No. 8, 2004), which lists occupations under the category "Class 2. Experts and Scientists" as medical doctors (code 2221.01) and its activities include health promotion, disease prevention, disease detection, patient treatment and medical rehabilitation.
In addition to the above document, the following documents were also considered:
- EU Directive 2005/36/EC in accordance with the framework of EU member states with which best practice examples are exchanged with the aim of realizing the ideas of lifelong learning and mobility, increasing the quality and efficiency of education and training, promoting fairness, social cohesion and active citizenship, and strengthening creativity, innovation and entrepreneurship.

Jobs/competencies/learning outcomes from all the above documents are implemented in the competencies and learning outcomes at the level of the study programme listed in chapter "2. General information about the study programme". They are realised in obligatory courses, in order to ensure that all students achieve them with the acquired qualification. The coverage of these learning outcomes at the level of the study programme with the learning outcomes at the level of obligatory courses is presented in the chapter “3.12. Matrix of learning outcomes” and all with a goal to accelerate the transformation of the open and inclusive higher education system in Europe.

3.3. Comparability with the Study Programmes in the Country and Abroad

The curriculum is comparable to: study programs in the countries of the European Union, especially with the neighbouring Republic of Croatia. The corresponding ECTS credits are based on the principle of well-balanced curricula and qualification standards, focusing on acquiring knowledge, practical work and mastering the basic, clinical and public health skills of medical doctors. The study program of medical studies is related to accredited programs in EU countries, for example, it is completely related to the study of medicine at the School of Medicine of the University of Split, Zagreb, Rijeka and Osijek. Compliance with similar study programs in Bosnia and Herzegovina overlaps in about 70% of the curriculum. Comparability is reflected exclusively in the competencies and learning outcomes at the level of study programmes and in the duration of studies, while the study programme retains its specifics mainly through the structure, course names, and ECTS credits.

3.4. Openness to Student Mobility

Student mobility is defined by the *Rulebook on international mobility*, which refers to administrative support for students, student mobility documents, insurance, method of application, the procedure for recognizing mobility and information package. The unique recognition methodology is defined at the university level by the Senate Decision on the

adoption of a single form for the *Decision on recognition of courses, ECTS credits, grades, and professional practice during student mobility*, which is recorded in the diploma supplement. Students can find information on mobility programmes and accompanying forms on the University's website and through vice-dean for international cooperation and coordinator at the organizational unit that forwards information from the International Relations Office to student representatives.
In the past period, special attention was paid to the outgoing mobility of students, through the signing of bilateral and multilateral agreements and mobility programs within the framework of the ERASMUS+ program. All available information about mobility is available to students on the respective websites of the School of Medicine and University, while any additional ambiguities can be resolved with the help of the coordinator for the ERASMUS+ program. The importance of mobility is also reflected in the fact that the University has established an Office for International Cooperation, which implements mobility programs for staff and students, and coordinates all activities related to international cooperation. Also, the mobility websites in Croatian and English have been updated. Furthermore, students and staff are regularly informed about all mobility opportunities, as well as newly signed agreements, and informal meetings were organized where exchange experiences were shared. Exchange experiences are regularly published on the social networks of the School of Medicine and the University.

3.5. Conditions for Enrolment in the Study Programme and Transfer from other Study Programmes

The *Rulebook on Study of the University of Mostar* defines the right to enrol in undergraduate, graduate, and integrated study programmes, which is done through a public competition. The Senate, at the proposal of the Scientific - Teaching Council of the organizational unit, and with the consent of the Governing Board of the University and the competent Ministry of Education, Science, Culture and Sports of Herzegovina Neretva Canton, announces a public tender. It is published on the website and bulletin board of the School of Medicine of the University of Mostar, which contains information on the conditions for enrolment, entrance examination, tuition fees, and criteria for selecting candidates, and other information.

Conditions for the admission to the University of Mostar School of Medicine:

Enrollment in the study program - Medicine is granted to persons who have completed a four-year secondary school, in which they attended classes in the subjects of biology, chemistry, physics, and Latin for at least two years, and who have the psychophysical abilities for Medicine. If the applicant did not study Latin in high school, the faculty will enable the applicant to take the entrance exam and enroll in Medicine, provided that he/she passes the appropriate Latin requirements by the end of the first year of study.

The admission procedure includes:
- Knowledge verification at the entrance exam through a written test in biology, chemistry, and physics according to the curriculum of 1st, 2nd, 3rd, and 4th grade of high school.
- Evaluation of success achieved in high school: general success in all classes and on the final exam, and success in the subjects of biology, chemistry, and physics in all high school classes
- Evaluation of special achievements in high school and success at the entrance exam of the previous year at the University of Mostar School of Medicine. Winning one of top three places

in national or international competitions in the subjects of biology, chemistry, or physics is considered a special success in high school.

Applications for taking the entrance exam are submitted in person to the Student Affairs Office at the School of Medicine. The documentation that the applicant must attach will be available on our website www.mef.sum.ba and on the notice board of the School of Medicine.
When transferring from other study programs, a request is submitted to the dean of the University of Mostar School of Medicine, on the basis of which the decision on possibilities and conditions for enrollment is proposed by the Teaching Committee, and the decision is made by the dean.

In addition to the matching of curricula, the conditions for transfer to Medicine are, among others:
- passed exams and other requirements met for regular enrollment in the higher year of study at the university from which the student is transferring,
- knowledge of one of the official languages in BiH,
- the justification for the transfer,
- average of all grades at least 3.5 (8.0).

The entire conditions for transfer are defined and regulated by the Rulebook on integrated studies, and a detailed description is also available on the school's website (www.mef.sum.ba).

Important notes:
A student who loses his student status at his home university cannot continue his studies at the University of Mostar School of Medicine. A student cannot exercise the right to transfer from a study program for which the entrance exam was not conducted or enrollment was not conducted based on the results of the state matriculation examination. Students who graduated from high school abroad must have their certificates notarized. A student cannot exercise the right to transfer to the first or sixth year of study at the University of Mostar School of Medicine.

3.6. Conditions for Enrolment in the Next Semester and Year of Study and Graduation

Conditions for enrolment in the next semester and higher year of study are defined by the *Rulebook on Study* of the University of Mostar and the Rulebook on the Integrated Studies at the School of Medicine of the University of Mostar, as well as by decisions on amendments to the Rulebook.
The conditions for enrolment in the next semester and year of study are complied with the requirements of the study programme, they are clear, published and consistently applied.
To enrol in a higher year of study, a student must attend and pass all courses from the current year. Certain deviations from this rule are possible when transferring from other Schools of Medicine.
The study programme ends with writing and defending a Diploma Thesis that carries 3 ECTS credits and is evaluated as described in the appropriate course syllabus.
The manner and procedure of defending the Diploma Thesis and the methodology of its preparation are defined in the *Rulebook on Writing and Defending a Diploma Thesis of the School of Medicine of the University of Mostar* and other appropriate materials available on

the School's website (roadmap, instructions for writing the thesis, outline of the thesis, instructions for ethical permission, etc.).
At the end of the study programme, students receive appropriate documents (diploma and diploma supplement). The diploma and the diploma supplement are issued in accordance with the relevant regulations. The School of Medicine issues a diploma supplement in Croatian and English.

3.7. Organization of Study Programme

The study programme is organized through two semesters in the academic year, and classes are conducted according to the schedule of classes through shifts.

The programme lasts 6 years (12 semesters) and includes basic and clinical medical courses, public health, as well as clinical rotations that integrate previously acquired knowledge and skills. The academic year lasts from the beginning of October to the beginning of July, so that the prescribed number of hours of the programme (5690) could be performed without breaching the recommendation that a student does not have more than 25-30 hours of direct teaching in a single week.

During the six years of study at the study programme Medicine, active teaching and independent student work (10,800 hours) are achieved. The independent student work (5110 hours) includes the time the student needs for independent study, preparation of seminars, preliminary examinations, final tests, notwithstanding contact hours with teachers (lectures, seminars and exercises). The number of hours of independent work is defined in the description of the content of each course. The method of checking the acquired learning outcomes, as well as the percentage value of individual forms of checking the knowledge, are specified in the description of each course (written, oral, practical check). Attendance of classes is obligatory, while absences and consequences thereof are regulated by the *Rulebook on the Integrated Studies at the School of Medicine of the University of Mostar*.

Examinations are organized in the form of a partial (preliminary) examination in a particular course and a final examination. Forms of checking the knowledge can be only oral, only written (tests), tests combined with an oral examination, tests combined with a practical knowledge test and an oral examination.

The pre-term or the post-class term is scheduled after the end of classes (tournament or block), after a few days off (including weekends and holidays). This interval is determined in proportion to the length of the block of the course to which it refers. Summer and autumn examination terms are scheduled in July and September respectively (usually two examination dates for each course in both summer and autumn). In the fourth and eighth examination term, students take their examinations before the Examination Panel.

On top of this, the curriculum of each course defines the possibility of online classes, although in accordance with the decisions of the University and the School of Medicine, traditional "live" teaching is preferred and encouraged. The maximum number of hours of online classes at the level of the study programme is 20%.

During the 6th year of studies, clinical rotations are held as a form of professional practice, and are described in more detail in the structure of the study programme (3.8.)

3.7.1. Student organizations, associations and sections at the School of Medicine, University of Mostar

In addition to the prescribed curriculum, tuition in a somewhat informal format is available to students through the activities of student organizational units. By fulfilling the assignments within the programs of individual unit, students may improve their skills of communication, organization, time and resource management, as well as social skills which are known to be crucial for successful work experience.

PULS

Journal of medical students at School of Medicine, University of Mostar – PULS, was founded in 2004. on students' initiative. PULS provides a platform that enables students to develop creativity, originality, ingenuity, and wit. By writing texts on a given topic, students learn to retrieve information from reliable sources, to discern important information and to compose them in a meaningful content. The subject matter is often diverse and includes scientific, medical, and non-medical issues, students' opinions, and attitudes as well as teaching staffs' and interviews with inspiring individuals. By collaborating with other students' magazines, PULS also enables the exchange of experiences and the creation of new student networks.

Association of Medical Students of Bosnia and Herzegovina - BoHeMSA

Bosnian and Herzegovinian Medical Students' Association - BoHeMSA is a non-governmental, non-profit, student organization whose membership consists of students from 4 medical faculties in Bosnia and Herzegovina: Mostar, Sarajevo, Tuzla and Zenica. It is a branch of the International Federation of Medical Student Associations (IFMSA) - a dynamic platform that, in addition to representing medical students and doctors worldwide, also provides opportunities for personal, professional, and social development of its members. The main activities of BoHeMSA are collaboration between students, representation of students and combining interests of medical students both at the national and international level. BoHeMSA carries out its activities through six active working sectors - Sector for Public Health (SCOPH), Sector for Medical Education (SCOME), Sector for Human Rights and Peace (SCORP), Sector for Sexual and Reproductive Health and Rights including HIV and AIDS (SCORA), the sector for scientific-research exchanges (SCORE), the sector for professional exchanges (SCOPE), which in turn operate through local organizational units.

Student section for pharmacology and immunology – PHARMiON

PHARMiON is the first scientific student section founded at the University Of Mostar School Of Medicine. Membership consists of medical students, pharmacy students and students of Faculty of Health Studies. Scope of the student section covers the areas of basic and clinical pharmacology with toxicology, basic and clinical immunology, rheumatology, and scientific work. The main goals of the student section are to provide additional education in the mentioned areas, to provide additional clinical practice, to encourage students to do scientific research as well as write and publish scientific publications, to organize scientific meetings and

to encourage students to participate in congresses. By collaborating with other students' sections and organizations, PHARMiON enables to create a unique network of biomedical students for exchanging knowledge and experience, and to create a friendly atmosphere between the future pillars of the health system.

Student Section for Emergency Medicine

The student section for emergency medicine is an informal group of students at School of Medicine, University of Mostar. Founded in 2019, the section successfully gathers medical students, pharmacy students and students of Faculty of Health Studies. Annual projects of the section include "Practical skills at EMC", "Save the heart - get moving", First aid education for students and teachers at Mostar high schools, Sanus Motus running school, and Sportikus sports association. The aim mentioned projects is to teach students the algorithm of actions in the event of an accident, to teach how to administrate first aid, to improve the administration of CPR and the Heimlich maneuver, as well as to take care of fractures, burns, and foreign bodies, all through education and demonstration exercises. Also, by carrying out public health actions in collaboration with the partners of the section, an additional goal is to raise awareness among the citizens of the city of Mostar about the importance of knowing how to properly administrate first aid and adopting healthy lifestyle habits.

Student section for surgery - SSS

The student section for surgery was founded in 2019 on the initiative of medical students motivated to acquire new and expand and establish existing knowledge and skills in the field of surgery. Students of Medicine, Dental Medicine and Medical Studies in English are entitled to membership in the section. The section consists of mentors, leadership, and members of the section. Section is based on the volunteer work of medical doctors (mentors) who pass on their knowledge to the students who make up the leadership of the section, who in turn pass on the acquired knowledge and experience to members of the section. The section focuses on practical work in the form of surgical suturing and knotting, instructing on how to approach a patient, wound care and on providing lectures with specific surgical topics. The main goal of the section is to enable students to improve existing knowledge and acquire new knowledge and skills with the aim of facilitating the start of work after graduation and contributing to the competence and self-confidence of young doctors.

Student Section for Dental Medicine - SSDM

The Student Section of Dental Medicine was founded in 2020 with the aim of bringing the everyday clinical practice of a Doctor of Dental Medicine closer to students and enabling extracurricular training of certain clinical procedures. By organizing workshops such as "Instruments 101", "How to take impressions", "How to apply rubber dams, clamps and matrices", "Orthopantomography analysis", "Dentition type differentiation on study models" etc., students can practice and independently improve manual skills that come as part of the protocol of clinical procedures that they previously did not improve individually during the regular classes. In addition, the section strives to raise awareness of oral hygiene among fellow citizens by organizing visits to kindergartens and schools on Oral Health Day.

3.8. Structure of the Study Programme

The structure of the study programme is reflected in the number of hours of each type of teaching and teaching in total, the number of hours of practice, and the number of hours of independent student work in the total student workload of 360 ECTS credits, or 10800 hours of work (table 3.8.1 and 3.8.2).
In the first two years of study, the student is acquainted with the medical profession (introduction to medicine), fundamentals of scientific research, medical informatics and the way of studying medicine, as well as the physical, chemical and biological foundations of life, structure and function of the human body (anatomy, histology and embryology, physiology, biochemistry, etc.), with recent knowledge about the molecular mechanisms of diseases, along with a psychological approach to the patient and fundamentals of the English language.
In the third year, mechanisms of diseases, pathogens (pathology, pathophysiology, microbiology), types and manner of drugs effects (pharmacology), and approach and method of examining patients (clinical propaedeutics) are studied.
The fourth, fifth and sixth year of study incorporate clinical courses. Diseases, their prevention, diagnosis, suppression and treatment, as well as rehabilitation of damages that may remain after them, are studied.
Students spend most part of their sixth year on clinical rotations ("internships"). Clinical rotations are a new and modern form of training which basically replaces the former internship with the goal that students in their final year of study gain experience in independent work as a doctor. In frames of rotations, the student integrates acquired knowledge and skills, and applies them in daily work on concrete patients. The rotation assumes that the student follows the mentor in his/her work and responsibilities full time. In order to achieve this type of relation, students are allocated to different departments and "rotate" among them after completing their practice.

According to the *Rulebook on the Procedure for Adopting New and Revisions of Existing Study Programmes* (No. 01-993-1/22), only obligatory courses are listed in the curriculum, while electives are adopted in the annual study plan for each academic year. However, in our programme, the number of elective courses per semester/year and their structure are pre-defined and therefore the table shows the number of hours of each type of teaching and teaching in total, the number of hours of practice, and the number of hours of independent work including both obligatory and elective courses (table 3.8.3).
In relation to the total number of ECTS credits, a sum of ECTS credits acquired in elective courses is 17, and the student can choose a total of 12 elective courses. Besides obligatory and elective courses at the level of the study programme, in addition to 30 ECTS credits per semester, a student can choose university elective courses from the list adopted by the Senate each academic year, which are recorded in diploma supplement.

The decision to introduce elective courses emerged in terms of adapting the curriculum to European universities. Elective courses were introduced in order for students to have the opportunity to become acquainted with certain medical courses better and thus deepen their medical knowledge in the area of interest. The purpose of elective courses at the study programme level is a more detailed elaboration of learning outcomes already acquired in obligatory courses but following student preferences. The purpose of university elective courses is to acquire competencies not provided by the study programme, but that can help

students achieve competitiveness in the market and contribute to building one's personality through education.

In addition to the courses provided in the curriculum, students have the opportunity to complete two summer clinical rotations during their studies - Internal Medicine Summer Rotation and Surgical Summer Rotation. They include 120 hours each, or 3 working weeks. Many elements of these rotations are left to the student's discretion - the student chooses the time of the rotation, the mentor, and even the institution where to perform it, with a recommendation of the tasks listed in the summer rotation forms.
In frames of the Summer Internal Medicine Rotation, the student spends 80 hours (2 working weeks) in one of the departments of internal medicine, while the remaining 40 hours (1 working week) can be spent in one of the other internal medicine departments that he is acquainted with in the 4th year of study, at their own discretion (infectology, dermatology, neurology or anesthesiology). In frames of the Summer Surgical Rotation, the student spends 80 hours (2 working weeks) in one of the surgical departments, while the remaining 40 hours (1 working week) can be spent in one of the other surgical departments that he is acquainted with in the 5th year of study, at their own discretion (otolaryngology, maxillofacial surgery, ophthalmology or orthopedics). Both rotations can be performed outside the teaching bases of the School, and student mobilities are also recognized if their programmes are similar to the above mentioned rotations.

Table 3.8.1 Review of teaching load, hours of theory and practice and share in load

Type of instruction	I. year	II. year	III. year	IV. year	V. year	VI. year	In total	%
Lectures	265	251	270	275	308	150	**1519**	14.06%
Seminars	263	316	259	233	258	265	**1594**	14.76%
Exercises	272	213	296	482	444	870	**2577**	23.86%
Independent work	1000	1020	975	810	790	515	**5110**	47.31 %
In total	**1800**	**1800**	**1800**	**1800**	**1800**	**1800**	**10800**	**100 %**

Table 3.8.2 Share of workload in programme considering theoretical and practical teaching

Type of load	Number of hours	Share %
Theoretical teaching	3113	54.71 %
Exercises / practical work	2577	45.29 %
In total	**5690**	**100 %**

Table 3.8.3 Structure of the study programme including certain types of teaching, practice and independent work

Year of study: 1st									
Semester: I.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE101	Medical Physics and Biophysics	24	20	16	60	0	105	165	5.5
MFMSE102	Medical Biology	45	30	35	110	0	175	285	9.5
MFMSE103	Introduction to Medicine and History of Medicine	44	15	31	90	0	30	120	4
MFMSE104	Scientific Methodology	24	46	30	100	0	110	210	7
MFMSE105	Medical Ethics	20	0	25	45	0	15	60	2
MFMSE106	Medical English I	0	0	25	25	0	5	30	1
MFMSEI01	*Elective course*	/	/	/	/	/	/	/	/
In total		157	111	162	430	0	440	≈ 870	29
ECTS for obligatory courses									29
ECTS for elective courses									1
ECTS IN TOTAL									30

Year of study: 1st									
Semester: II.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE201	Medical Chemistry and Biochemistry I	32	26	22	80	0	140	220	7.5
MFMSE202	Physical Education I	0	25	0	25	0	0	25	0.5
MFMSE203	Anatomy	60	90	65	215	0	415	630	21
MFMSEI02	*Elective course*	/	/	/	/	/	/	/	/
In total		92	141	87	320	0	555	≈ 875	29
ECTS for obligatory courses									29
ECTS for elective courses									1
ECTS IN TOTAL									30

Year of study: 2nd									
Semester: III.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE301	Medical Chemistry and Biochemistry II	42	34	34	110	0	130	240	8
MFMSE302	Medical Genetics	20	5	20	45	0	45	90	3
MFMSE303	Histology and Embryology	50	41	44	135	0	165	300	10
MFMSE304	Basic Neuroscience	20	24	56	100	0	140	240	8
MFMSE305	Medical English II	0	0	25	25	0	5	30	1
In total		132	119	164	415	0	485	≈ 900	30
ECTS for obligatory courses									30
ECTS for elective courses									0
ECTS IN TOTAL									30

Year of study: 2nd									
Semester: IV.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE401	Medical Physiology	53	40	87	180	0	390	570	19
MFMSE402	Medical Psychology	20	20	20	60	0	45	105	3.5
MFMSE403	Immunology	30	4	16	50	0	70	120	4
MFMSE404	Physical Education II	0	25	0	25	0	0	25	0.5
MFMSEI03	*Elective course*	/	/	/	/	/	/	/	/
MFMSEI04	*Elective course*	/	/	/	/	/	/	/	/
In total		100	89	126	315	0	505	≈ 820	27
ECTS for obligatory courses									27
ECTS for elective courses									3
ECTS IN TOTAL									30

Year of study: 3rd									
Semester: V.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE501	Pathology	70	70	70	210	0	270	480	16
MFMSE502	Pathophysiology	45	30	60	135	0	195	330	11
MFMSEI05	*Elective course*	/	/	/	/	/	/	/	/
MFMSEI06	*Elective course*	/	/	/	/	/	/	/	/
In total		115	100	130	345	0	465	≈ 810	27
ECTS for obligatory courses									27
ECTS for elective courses									3
ECTS IN TOTAL									30

Year of study: 3rd									
Semester: VI.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE601	Medical Microbiology and Parasitology	21	44	30	95	0	145	240	8
MFMSE602	Pharmacology	50	35	50	135	0	195	330	11
MFMSE603	Clinical Propedeutics	30	70	10	110	0	70	180	6
MFMSE604	Personalized Medicine and Biotechnology	10	10	10	30	0	15	45	1.5
MFMSE605	Social Medicine	20	7	8	35	0	25	60	2
MFMSEI07	*Elective course*	/	/	/	/	/	/	/	/
In total		131	166	108	405	0	450	≈ 855	28.5
ECTS for obligatory courses									28.5
ECTS for elective courses									1.5
ECTS IN TOTAL									30

Year of study: 4th									
Semester: VII.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE701	Nuclear Medicine	15	10	5	30	0	15	45	1.5
MFMSE702	Radiology	35	49	16	100	0	80	180	6
MFMSE703	Internal Medicine	65	195	80	340	0	245	585	19.5
MFMSEI08	*Elective course*	/	/	/	/	/	/	/	/
MFMSEI09	*Elective course*	/	/	/	/	/	/	/	/
In total		115	254	101	470	0	340	≈ 810	27
ECTS for obligatory courses									27
ECTS for elective courses									3
ECTS IN TOTAL									30

Year of study: 4th									
Semester: VIII.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE801	Neurology	24	43	23	90	0	90	180	6
MFMSE802	Dermatovenerology	30	25	15	70	0	80	150	5
MFMSE803	Anesthesiology and Intensive Medicine	20	40	0	60	0	75	135	4.5
MFMSE804	Infectology with Clinical Microbiology	20	65	35	120	0	120	240	8
MFMSE805	Clinical Biochemistry	10	5	15	30	0	15	45	1.5
MFMSE806	Psychiatry	40	30	30	100	0	50	150	5
In total		144	208	118	470	0	430	≈ 900	30
ECTS for obligatory courses									30
ECTS for elective courses									0
ECTS IN TOTAL									30

Year of study: 5th									
Semester: IX.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE901	Surgery	50	100	50	200	0	160	360	12
MFMSE902	Neurosurgery	7	6	7	20	0	10	30	1
MFMSE903	Transfusiology and Transplantology	7	8	5	20	0	10	30	1
MFMSE904	Urology	10	10	10	30	0	15	45	1.5
MFMSE905	Pediatric Surgery	20	5	5	30	0	15	45	1.5
MFMSE906	Clinical Oncology	5	35	10	50	0	10	60	2
MFMSE907	Gynecology and Obstetrics	70	70	60	200	0	130	330	11
In total		169	234	147	550	0	350	≈ 900	30
ECTS for obligatory courses									30
ECTS for elective courses									0
ECTS IN TOTAL									30

Year of study: 5th									
Semester: X.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE1001	Otorhinolaryngology - Head and Neck Surgery	25	40	10	75	0	105	180	6
MFMSE1002	Maxillofacial Surgery	8	10	7	25	0	20	45	1.5
MFMSE1003	Ophthalmology	20	30	15	65	0	100	165	5.5
MFMSE1004	Orthopaedics and Traumatology	20	40	15	75	0	105	180	6
MFMSE1005	Physical and Rehabilitation Medicine	10	20	10	40	0	20	60	2
MFMSE1006	Environmental and Occupational Health	20	20	20	60	0	30	90	3
MFMSE1007	Epidemiology with Clinical Rotation	20	30	20	70	0	20	90	3
MFMSEI10	*Elective course*	/	/	/	/	/	/	/	/
MFMSEI11	*Elective course*	/	/	/	/	/	/	/	/
In total		123	190	97	410	0	400	≈ 810	27
ECTS for obligatory courses									27
ECTS for elective courses									3
ECTS IN TOTAL									30

Year of study: 6th									
Semester: XI.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE1101	Medical Statistics	5	20	5	30	0	15	45	1.5
MFMSE1102	Pediatrics	50	90	60	200	0	160	360	12
MFMSE1103	Family Medicine with Clinical Rotation	22	114	44	180	0	90	270	9
MFMSE1104	Forensic Medicine	17	16	17	50	0	40	90	3
MFMSE1105	Palliative Medicine	8	10	7	25	0	5	30	1
MFMSE1106	Health care organization and health economics	30	5	10	45	0	15	60	2
MFMSEI12	*Elective course*	/	/	/	/	/	/	/	/
In total		132	255	143	530	0	325	≈ 855	28.5
ECTS for obligatory courses									28.5
ECTS for elective courses									1.5
ECTS IN TOTAL									30

Year of study: 6th									
Semester: XII.									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		L	E	S					
MFMSE1201	Clinical Pharmacology	10	15	15	40	0	20	60	2
MFMSE1202	Clinical Rotation: Internal Medicine	0	100	20	120	0	30	150	5
MFMSE1203	Clinical Rotation: Surgery	0	100	20	120	0	30	150	5
MFMSE1204	Clinical Rotation: Pediatrics	0	100	20	120	0	30	150	5
MFMSE1205	Clinical Rotation: Gynecology	0	100	20	120	0	30	150	5
MFMSE1206	Emergency Medicine with Clinical Rotation	0	100	20	120	0	30	150	5
MFMSE1207	Diploma Thesis	0	90	0	90	0	0	90	3
In total		10	605	115	730	0	170	≈ 900	30
ECTS for obligatory courses									30
ECTS for elective courses									0
ECTS IN TOTAL									30

3.9. The Optimal Number of enrolled students concerning space, Equipment, and Number of Teachers

Enrolment quotas are adopted before the beginning of each academic year by the Governing Council of the University on the proposal of the Senate and with the consent of the responsible ministry. According to the existing resources, the School of Medicine can enrol about 60 students in the Study of Medicine.

Students can only study as a full-time student. Full-time students are those who study according to the curriculum with full teaching hours. This category of students consists of full-time students who study with the support of the ministry and full-time students who pay for their studies themselves.

3.10. Resources Required to Conduct the Study Programme

To carry out the study program, teachers from the University and teachers from appropriate higher education institutions participate in scientific-teaching activities in the appropriate scientific fields and branches for which there is a lack of domestic staff: Forensic Medicine, Environmental and Occupational Medicine, Emergency Medicine and History of Medicine. Data on the structure of the teaching staff according to title and professional training, gender and age structure, scientific research productivity, mobility and project activities of the teaching staff are regularly monitored through the bodies from the quality assurance system. The aforementioned data are processed at the level of study program, organizational unit and are published in annual reports.

Physical resources for the execution of study programs require:
- lecture halls
- computer equipment
- basic research and teaching laboratories (anatomy and histology, biophysics, physiology, pharmacology, neuroscience, molecular genetics laboratory, sleep medicine laboratory, molecular diagnostics laboratory)
- rooms for clinical exercises (Clinics, Departments and Institutes of the Mostar University Clinical Hospital, Ambulances of the Mostar Health Center).

On the basis of the signed cooperation agreements, the resources of other institutions are also used in the implementation of the study program / professional practice:
- University Clinical Hospital Mostar
- Health Center Mostar
- Institute of Public Health of HNŽ and Institute of Public Health of FBiH

3.11. Study Programme Quality Assurance System

The purpose, goal, structure, operation and areas of evaluation of the quality assurance system of the University of Mostar are defined by the *Rulebook on the Structure and Operation of the Quality Assurance System of the University of Mostar*.
According to the *Rulebook*, the quality assurance system at the University of Mostar consists of permanent bodies of the quality assurance system at the University level: the Quality Assurance and Improvement Committee and the Quality Assurance and Improvement Office. The School of Medicine is operated by the Quality Assurance and Improvement Committee,

which consists of the Vice-Dean for Academic Affairs, the Quality Coordinator, the representative of the teaching staff, the student representative, and the representative of the administrative and technical staff. The Quality Coordinator at the School of Medicine is also a member of the Quality Assurance and Improvement Committee.
The *Rulebook* defines the competencies and activities of each body from the quality assurance system. Bodies from the quality assurance system carry out regular activities defined by the *University Quality Assurance Manual at the University of Mostar*, which relate to conducting surveys and monitoring and data processing. Based on the implemented activities, annual reports are prepared at the level of the study programme, organizational unit, and the University. The annual reports include and evaluate the entire activity and all activities of the School of Medicine, which is reflected in the following:

MONITORING OF DATA ON STUDENTS - freshmen - fulfilment of quotas, structure of freshmen by status and gender, structure of freshmen by type of high school, structure of freshmen by performance in high school; students - structure of students by status and gender, passing the examinations, structure of graduated students, performance in studies and mobility of students.

MONITORING OF DATA ON TEACHING AND NON-TEACHING STAFF - structure of teaching staff by title and status, structure of teaching staff by gender and age, teaching load, scientific and research papers, mobility of teaching staff, project activities of teaching staff; structure of non-teaching staff by status, education and gender, structure of non-teaching staff by gender and age, project activities of non-teaching staff.

MONITORING DATA ON STUDY PROGRAMMES - structure of study programmes, representation of certain forms of teaching, representation of certain forms of knowledge assessment, coverage of literature in the library, structure of literature prescribed by the curriculum, infrastructure and resources.

The above mentioned annual reports are used as a source of results, analyses and conclusions which are implemented in the regular revision process for the purpose of improving the study programme.

3.12. Matrix of learning outcomes

Course title	IU-sp / Course code	IU-M1	IU-M2	IU-M3	IU-M4	IU-M5	IU-M6	IU-M7	IU-M8	IU-M9	IU-M10	IU-M11	IU-M12	IU-M13	IU-M14	IU-M15	IU-M16	IU-M17	IU-M18	IU-M19	IU-M20	IU-M21
Medical Physics and Biophysics	MFM101	x	x	x																		
Medical Biology	MFM102	x		x		X		x		x			x								x	x
Introduction to Medicine and History of Medicine	MFM103							x		x	x	x	x				x					x
Scientific Methodology	MFM104	x						x		x										x	x	x
Medical Ethics	MFM105												x						x			
Medical English I	MFM106	x													x					x		
Medical Chemistry and Biochemistry I	MFM201	x																				
Physical Education I	MFM202													x								x
Anatomy	MFM203	x	x						x													x
Medical Chemistry and Biochemistry II	MFM301	x	x	x																		
Medical Genetics	MFM302	x		x			x	x	x	x												
Histology and Embryology	MFM303	x	x	x	x	X																
Basic Neuroscience	MFM304	x	x	x	x	X	x															x
Medical English II	MFM305	x													x					x		
Medical Physiology	MFM401	x	x	x	x				x													x
Medical Psychology	MFM402	x	x	x	x	X	x	x						x								
Immunology	MFM403		x	x		X	x		x							x						
Physical Education II	MFM404													x								x
Pathology	MFM501		x	x	x	X	x		x													
Pathophysiology	MFM502			x	x	X		x	x													
Medical Microbiology and Parasitology	MFM601	x				X					x	x				x						
Pharmacology	MFM602		x	x								x										x
Clinical Propedeutics	MFM603	x					x	x	x	x					x	x	x	x				
Personalized Medicine and Biotechnology	MFM604	x	x	x		X	x	x					x									

Social Medicine	MFM605				x	X				x		x	x	x			x	x	x	x		x
Nuclear Medicine	MFM701	x							x		x	x										
Radiology	MFM702	x							x		x							x			x	
Internal Medicine	MFM703						x		x		x	x			x	x		x				
Neurology	MFM801		x		x	X			x		x				x	x						
Dermatovenerology	MFM802	x	x		x	X	x		x						x	x					x	
Anesthesiology and Intensive Medicine	MFM803	x	x	x	x	X	x		x		x	x				x						
Infectology with Clinical Microbiology	MFM804				x	X	x		x		x	x										
Clinical Biochemistry	MFM805					X			x							x						
Psychiatry	MFM806		x						x		x	x	x	x			x	x	x			
Surgery	MFM901	x			x						x	x			x			x				
Neurosurgery	MFM902				x		x		x		x	x				x					x	
Transfusiology and Transplantology	MFM903	x	x	x	x		x		x	x	x	x				x	x					
Urology	MFM904		x	x	x	X	x	x	x	x	x	x	x		x	x	x	x		x		
Pediatric Surgery	MFM905	x			x				x		x	x			x			x				
Clinical Oncology	MFM906	x			x	X	x			x	x			x	x							
Gynecology and Obstetrics	MFM907		x	x	x	X					x											
Otorhinolaryngology - Head and Neck Surgery	MFM1001	x				X	x		x		x				x	x			x		x	
Maxillofacial Surgery	MFM1002	x	x				x				x	x										
Ophthalmology	MFM1003		x		x	X			x						x							
Orthopaedics and Traumatology	MFM1004		x						x		x											
Physical and Rehabilitation Medicine	MFM1005	x	x				x			x	x	x			x							
Environmental and Occupational Health	MFM1006					X			x	x		x		x	x	x			x			
Epidemiology with Clinical Rotation	MFM1007	x				X			x		x								x			
Medical Statistics	MFM1101	x						x		x	x	x				x						x
Pediatrics	MFM1102	x	x	x		X	x		x	x	x	x			x							
Family Medicine with Clinical Rotation	MFM1103										x	x			x	x	x		x			
Forensic Medicine	MFM1104	x	x		x	X			x		x		x		x				x			
Palliative Medicine	MFM1105	x								x	x	x				x	x	x				

Health Care Organization and Health Economics	MFM1106									x		x		x								
Clinical Pharmacology	MFM1201	x				X	x	x		x	x	x	x	x								x
Clinical Rotation: Internal Medicine	MFM1202					X	x				x				x	x	x					
Clinical Rotation: Surgery	MFM1203					X	x	x		x	x	x	x		x							
Clinical Rotation: Pediatrics	MFM1204					X					x	x			x	x						
Clinical Rotation: Gynecology	MFM1205		x		x		x		x		x				x							
Emergency Medicine with Clinical Rotation	MFM1206					X	x	x	x	x	x	x	x		x	x	x		x	x		x
Diploma Thesis	MFM1207							x					x								x	x

4. STUDY PLAN

Year of study: 1st							
Semester: I.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE101	Medical Physics and Biophysics	obligatory	24	20	16	0	5.5
MFMSE102	Medical Biology	obligatory	45	30	35	0	9.5
MFMSE103	Introduction to Medicine and History of Medicine	obligatory	44	15	31	0	4
MFMSE104	Scientific Methodology	obligatory	24	46	30	0	7
MFMSE105	Medical Ethics	obligatory	20	0	25	0	2
MFMSE106	Medical English I	obligatory	0	0	25	0	1
MFMSEI01	*Elective course*	elective	/	/	/	/	1
ECTS for obligatory courses							29
ECTS for elective courses							1
ECTS TOTAL							30

Year of study: 1st							
Semester: II.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE201	Medical Chemistry and Biochemistry I	obligatory	32	26	22	0	7.5
MFMSE202	Physical Education I	obligatory	0	25	0	0	0.5
MFMSE203	Anatomy	obligatory	60	90	65	0	21
MFMSEI02	*Elective course*	elective	/	/	/	/	1
ECTS for obligatory courses							29
ECTS for elective courses							1
ECTS TOTAL							30

Year of study: 2nd							
Semester: III.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE301	Medical Chemistry and Biochemistry II	obligatory	42	34	34	0	8
MFMSE302	Medical Genetics	obligatory	20	5	20	0	3
MFMSE303	Histology and Embryology	obligatory	50	41	44	0	10
MFMSE304	Basic Neuroscience	obligatory	20	24	56	0	8
MFMSE305	Medical English II	obligatory	0	0	25	0	1
ECTS for obligatory courses							30
ECTS for elective courses							0
ECTS TOTAL							30

Year of study: 2nd							
Semester: IV.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE401	Medical Physiology	obligatory	53	40	87	0	19
MFMSE402	Medical Psychology	obligatory	20	20	20	0	3.5
MFMSE403	Immunology	obligatory	30	4	16	0	4
MFMSE404	Physical Education II	obligatory	0	25	0	0	0.5
MFMSEI03	*Elective course*	elective	/	/	/	/	1.5
MFMSEI04	*Elective course*	elective	/	/	/	/	1.5
ECTS for obligatory courses							27
ECTS for elective courses							3
ECTS TOTAL							30

Year of study: 3rd							
Semester: V							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE501	Pathology	obligatory	70	70	70	0	16
MFMSE502	Pathophysiology	obligatory	45	30	60	0	11
MFMSEI05	*Elective course*	elective	/	/	/	/	1.5
MFMSEI06	*Elective course*	elective	/	/	/	/	1.5
ECTS for obligatory courses							27
ECTS for elective courses							3
ECTS TOTAL							30

Year of study: 3rd							
Semester: VI.							
Code of the course	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE601	Medical Microbiology and Parasitology	obligatory	21	44	30	0	8
MFMSE602	Pharmacology	obligatory	50	35	50	0	11
MFMSE603	Clinical Propedeutics	obligatory	30	70	10	0	6
MFMSE604	Personalized Medicine and Biotechnology	obligatory	10	10	10	0	1.5
MFMSE605	Social Medicine	obligatory	20	7	8	0	2
MFMSEI07	*Elective course*	elective	/	/	/	/	1.5
ECTS for obligatory courses							28.5
ECTS for elective courses							1.5
ECTS TOTAL							30

Year of study: 4th							
Semester: VII.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE701	Nuclear Medicine	obligatory	15	10	5	0	1.5
MFMSE702	Radiology	obligatory	35	49	16	0	6
MFMSE703	Internal Medicine	obligatory	65	195	80	0	19.5
MFMSEI08	*Elective course*	elective	/	/	/	/	1.5
MFMSEI09	*Elective course*	elective	/	/	/	/	1.5
ECTS for obligatory courses							27
ECTS for elective courses							3
ECTS TOTAL							30

Year of study: 4th							
Semester: VIII.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE801	Neurology	obligatory	24	43	23	0	6
MFMSE802	Dermatovenerology	obligatory	30	25	15	0	5
MFMSE803	Anesthesiology and Intensive Medicine	obligatory	20	40	0	0	4.5
MFMSE804	Infectology with Clinical Microbiology	obligatory	20	65	35	0	8
MFMSE805	Clinical Biochemistry	obligatory	10	5	15	0	1.5
MFMSE806	Psychiatry	obligatory	40	30	30	0	5
ECTS for obligatory courses							30
ECTS for elective courses							0
ECTS TOTAL							30

Year of study: 5th							
Semester: IX.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE901	Surgery	obligatory	50	100	50	0	12
MFMSE902	Neurosurgery	obligatory	7	6	7	0	1
MFMSE903	Transfusiology and Transplantology	obligatory	7	8	5	0	1
MFMSE904	Urology	obligatory	10	10	10	0	1.5
MFMSE905	Pediatric Surgery	obligatory	20	5	5	0	1.5
MFMSE906	Clinical Oncology	obligatory	5	35	10	0	2
MFMSE907	Gynecology and Obstetrics	obligatory	70	70	60	0	11
ECTS for obligatory courses							30
ECTS for elective courses							0
ECTS TOTAL							30

Year of study: 5th							
Semester: X.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE1001	Otorhinolaryngology - Head and Neck Surgery	obligatory	25	40	10	0	6
MFMSE1002	Maxillofacial Surgery	obligatory	8	10	7	0	1.5
MFMSE1003	Ophthalmology	obligatory	20	30	15	0	5.5
MFMSE1004	Orthopaedics and Traumatology	obligatory	20	40	15	0	6
MFMSE1005	Physical and Rehabilitation Medicine	obligatory	10	20	10	0	2
MFMSE1006	Environmental and Occupational Health	obligatory	20	20	20	0	3
MFMSE1007	Epidemiology with Clinical Rotation	obligatory	20	30	20	0	3
MFMSEI10	*Elective course*	elective	/	/	/	/	1.5
MFMSEI11	*Elective course*	elective	/	/	/	/	1.5
ECTS for obligatory courses							27
ECTS for elective courses							3
ECTS TOTAL							30

Year of study: 6th							
Semester: XI.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE1101	Medical Statistics	obligatory	5	20	5	0	1.5
MFMSE1102	Pediatrics	obligatory	50	90	60	0	12
MFMSE1103	Family Medicine with Clinical Rotation	obligatory	22	114	44	0	9
MFMSE1104	Forensic Medicine	obligatory	17	16	17	0	3
MFMSE1105	Palliative Medicine	obligatory	8	10	7	0	1
MFMSE1106	Health Care Organization and Health Economics	obligatory	30	5	10	0	2
MFMSEI12	*Elective course*	elective	/	/	/	/	1.5
ECTS for obligatory courses							28.5
ECTS for elective courses							1.5
ECTS TOTAL							30

Year of study: 6th							
Semester: XII.							
Course code	Course title	Course status	Teaching hours			Hours of practice	ECTS
			L	E	S		
MFMSE1201	Clinical Pharmacology	obligatory	10	15	15	0	2
MFMSE1202	Clinical Rotation: Internal Medicine	obligatory	0	100	20	0	5
MFMSE1203	Clinical Rotation: Surgery	obligatory	0	100	20	0	5
MFMSE1204	Clinical Rotation: Pediatrics	obligatory	0	100	20	0	5
MFMSE1205	Clinical Rotation: Gynecology	obligatory	0	100	20	0	5
MFMSE1206	Emergency Medicine with Clinical Rotation	obligatory	0	100	20	0	5
MFMSE1207	Diploma Thesis	obligatory	0	90	0	0	3
ECTS for obligatory courses							30
ECTS for elective courses							0
ECTS TOTAL							30