



UNIVERSITY OF SARAJEVO
FACULTY OF MEDICINE

INTEGRATED UNDERGRADUATE/GRADUATE DEGREE PROGRAM

MEDICAL STUDIES IN ENGLISH

Sarajevo, 2015

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DEGREE PROGRAM
MEDICAL STUDIES IN ENGLISH**

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I INTRODUCTION

Faculty of Medicine Sarajevo is one of the most prestigious institutions of the University of Sarajevo with significant educational and research potential that provides the highest standards in the education of medical doctors. It is established in 1946 and during that period more than 9000 medical doctors graduated in Sarajevo.

The new Study Program Medicine in English was drafted in October 2014 with the aim of aligning the Program with the Provisions of Directive 2005/36/EC and 2013/55EC of the European Parliament and the European Council on recognition of professional qualifications. The program was drafted by the teaching staff from the Faculty of Medicine University of Sarajevo, and the fine tuning was handled by a core group of experts from the five regulated professional fields in the health sector in Bosnia and Herzegovina with the task of forming the new English program of Medical Education. This program is supposed to be launched in academic year 2015/16.

This proposed Program is the result of the efforts teaching staff of the Faculty of Medicine, to conform Faculty curriculum with the provisions of the Law on Higher Education-consolidated text of the Sarajevo Canton ("Official Gazette of the Sarajevo Canton" No: 43/13), Rules of study for the integrated cycle at higher education institutions of the University of Sarajevo for students studying in accordance with the Bologna process (University of Sarajevo, the Senate, December, 2010), the Regulations on the examinations in higher education institutions of the University of Sarajevo for students studying in accordance with the Bologna process (University of Sarajevo, the Senate, September, 2006) and the Decision on amendments to the Ordinance on the examinations in higher education institutions for students studying in accordance with the Bologna process (University of Sarajevo, the Senate, July, 2009), as well as with Directive 2005/36/EC and 2013/55EC of the European Parliament and the European Council on recognition of professional qualifications.

NOTE:

- this Program is, therefore, the European-level program which makes School's diploma European;
- Graduates from this Program (which lasts 6 years) will not be obliged to do the (hitherto obligatory) internship.

II BASIC FEATURES OF THE PROGRAM

Program title

Medical Studies in English

Type of Study Program

Integrated Undergraduate/Graduate Degree Program

Holder (institution-proposer) and implementer of the program

Faculty of Medicine, University of Sarajevo

Duration of the program

6 years (12 semesters)

The medical profession is a so called 'regulated profession' at the EU level and therefore it is determined by the recommended educational processes of undergraduate and graduate programs.

Duration of the program is six years and contains 5595 contact hours fulfilling the criteria of the minimum 5500 hours according to the Directive 2005/36/EC and 2013/55EC of the European Parliament and the European Council on recognition of professional qualifications.

The academic year consists of two semesters. Fall semester starts at first Monday in October, and lasts 15 weeks and summer semester starts at third Monday in February and it lasts 15 weeks.

Admission requirements

Evaluation of the secondary school grades (overall average over the continuum of all 4 years of the secondary school education comprising all the grades) and with the specific evaluation of grades in Biology, Chemistry and Physics. No entrance exam will be performed.

Candidates who are neither native speakers of English, nor have graduated from an English-speaking secondary school or college are required to take an internationally recognized English language proficiency test (**TOEFL** - paper based test 500, internet based test 60 etc.), certificates issued by official language schools (C1 level) are also accepted, as well as certificates of English language proficiency issued by a secondary school a candidate attended.

Other admission criteria could be determined by the Senate of the Sarajevo University and published in the Call for applications.

The maximum number of admitted students will be 50.

Tuition fee

Tuition fee in amount of 12.000 BAM per year is payable at once or in two installments (2x6000 BAM), prior to the beginning of each semester.

Professional or academic title or degree awarded upon completion of studies

Medical Doctor (MD)

General description

Type of program	Integrated Undergraduate/Graduate Degree Program	
Program title	Medical Studies in English	
Institutions	Proposed by	University of Sarajevo
	Participating institution	University of Sarajevo, Faculty of Medicine
Duration	6 years (12 semesters)	
ECTS	360	
Admission requirements	Based on the total score from high school and specific evaluation of grades in Biology, Chemistry and Physics. No entrance exam	

The key determinants of the new Program are the total number of 5595 contact hours and 360 ECTS credits and a relative abundance of elective courses.

New Program introduces “verticalization” of Courses.

Fundamentals of Clinical Practice/Skills (30 hours) in first year of study; Clinical Propedeutics (65 hours) in third year; classical Clinical courses in fourth, fifth and sixth year (2080 hours); Internships after third, fourth and fifth year (360 hours) and Clinical Rotation (390 hours) in sixth year are positioned in a meter that provide gradually, sufficient acquisition of knowledge and practical clinical skills in medicine from first year.

Former PhysicBasisandClinical Aspects ofMedical Diagnostics Course with its area (60 hours) become three separated Courses: Immunology on second year (50 hours), Physics of Medical Diagnostic on third year (20 hours), and Clinical Biochemistry in sixth year (30 hours) Altogether with Course Molecular Medicine on third year (30 hours) Program achieved “verticalization” assuring gradually improved knowledge about medical diagnostic from basic natural to clinical science.

Purposefulness of the Program with respect to the needs of the labor market in public and private sector in Bosnia and Herzegovina

This program refers to the already existing Medical studies program which has existed since 1946, initially as a Faculty of Medicine established by Law of Faculty of Medicine in Sarajevo in Republic of Bosnia and Herzegovina. Its purpose, with respect to the labor market needs in public and private sector, has been verified and confirmed many times. Current number of students who annually enroll in an integrated graduated program Medicine (150) is in accordance with the actual social needs. According to the latest data from the Employment Service, number of unemployed physicians with the state exam is negligible and there is acknowledged deficit in medical teams, especially in rural areas and areas of special state concern.

Program connection with Bologna process, World Federation of Medical Education (WFME), Directive 2005/36/EC and 2013/55 EC

In accordance with the Provisions of the European Parliament and the European Council on recognition of professional qualifications, WFME and Bologna process this Program redefines the competencies of a medical doctor by taking into account our original experiences with teaching and modern trends in medical education.

Training for medical doctors guarantees that the student will acquire following knowledges and skills:

- Adequate knowledge of science and scientific methods in which the medicine is incorporated;
- Sufficient understanding and distinguishing normal and altered structure and function of the organ systems, interaction of human health and its physical and social environment and its application to the practice of clinical medicine;
- Demonstrate adequate knowledge of established and emerging biomedical scientific principles and mechanisms and demonstrate critical thinking skills necessary for effective problem-solving and clinical reasoning;
- Adequate clinical experience in health care facilities under appropriate supervision.

Program insists on strict compliance with the Bologna rules, guidelines and principles in accordance with the Regulations on the study and studying at the University of Sarajevo and Faculty of Medicine in Sarajevo. Faculty of Medicine recognizes the need for increasing the level of clinical skills of medical doctors and this is incorporated into the Program.

Basic elements of former Internship are upgraded and incorporated in the six year curriculum as “Clinical rotations”. Those forms of teaching were recognized due to a significant level of knowledge, skills and attitudes which encompass into medical care of patients. Clinical rotations are new form of education which improves former internship with new approach, providing student to be prepared to independent medical work. Through this forms student can integrate acquired knowledge and skills and apply them in work with patients. Clinical rotations refer to five medical branches: Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatric, and Family Medicine.

Within the clinical rotation, students are given choice of sub-profession in Internal Medicine, Surgery, Obstetrics and Gynecology and Pediatrics.

Present Internship is designed in a way to gradually introduce students to clinical work and medical routine in Health Care Institutions. Students are guided by their supervisor-Medical expert, one mentor per student. First Internship-Family Medicine is taken after finishing all required courses of third year of study. Students work in Public Institution of primary health care, guided by the Family physician or General physician. Students have a day work (120 hours) in Institution of primary care and they are obliged to accept the basic attitudes, knowledge and skill as a physician in Family medicine branch. Second internship-Internal medicine is taken after all required obligation of fourth year of study. Students work in Public health institutions with secondary health care guided by the specialist of Internal medicine where they can choose to work within different branches of Internal medicine (cardiology, gastroenterology, nephrology, etc.). Students have a day work (120 hours) at Institution of Secondary care and they are obliged to accept the basic attitudes, knowledge and skills of physicians from Internal medicine branch. Third Internship-Surgery medicine branch is taken after all required obligation of fifth year of study. Students work in public Surgery Clinics/Health Care Institutions, tutored by the specialist in Surgery, where they can choose to

work with different branches of Surgery (general, vascular surgery, urology etc.). Students have a day work (120 hours) in public Surgery Clinics Health Care Institutions and they are obliged to accept the basic attitudes, knowledge and skills as physicians from surgery branch. The total work hours that students work/spent in the all three Internships are counted in total hours of Program, but since they are not examined, ECTS credits have not been assigned to Internship programs. ECTS credits will be uncounted in Clinical rotation in sixth year of study, as follows - Internal Medicine, Surgery and Family Medicine. For every Internship completed, student has to deliver the proof of completed internship to the Student Service Office, before the start of the following school year. Student cannot progress to the following school year without proof of internship which is signed by the Director of the Public Health Care Institution in which the student realized the internship, with proper specified acquired knowledge and skills during the Internship.

Knowledge and skills gained gradually during the Program are finally integrated in clinical rotations and allows the student to work independently under professional supervision. Knowledge is acquired through natural science followed by basic medical sciences to clinical sciences. Skills are acquired by learning clinical skills, propaedeutic and by practicing clinical medicine.

A Course Cell Biology and Human Genetics increased the number of hours (expanded with 15 hours, total - 90 hours) due to expand knowledge and modernize toward genomic and proteomic.

Learning outcomes and competences

Upon graduation from the Faculty of Medicine University of Sarajevo the graduates will obtain the following qualifications:

- to provide health care services to patients, families and communities aimed at preventing health problems and/or maintaining health
- to perform patient-centered care effective for treating health care problem
- to perform all medical diagnostic and surgical procedures, and to interpret laboratory data, imaging studies, and other tests required for the area of practice
- to be willing to teach colleagues and to improve on their teaching skills; and to develop interpersonal and communications skills
- to apply knowledge of evolving biomedical, clinical, epidemiological and social science to patient care, to demonstrate the knowledge of appropriate diagnostic algorithms and therapeutic decisions
- to be committed to life-long learning in order to maintain the highest level of professional competence;
- to respect their patients' rights to fully participate in the decision-making process during treatment, including the right to reject treatment or participation in the process of teaching and/or research;
- to treat the patients with equal respect, disregard of sex, age, race, social and economic status, education, culture, religion or ideology;
- to demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles

A detailed list of specific knowledge and skills as well as the level of competence needed to perform certain skills, has been given for each course subject separately.

III ECTS SCORING

Every class is assigned with a number of ECTS credits. Number of ECTS credits is determined by the previously estimated total student workload and the percentage of total activity in the grading system.

The student earn ECTS credits only after he/she has successfully passed all syllabus-content defined work, including passing all planned forms of assessment.

IV METHODS OF ASSESSMENT OF STUDENTS

The process of organizing and structuring the exam, poses educational and applicative role. Knowledge assessment should stimulate students to improve their education and move on learning. The examination should not be seen as a method of individual assessment, but it is an integral part of the program that includes educational part.

The selected test methods must be acceptable to examiners, and students, in order to provide relevant results of the assessment. Selected methods of knowledge evaluation must be adequate in terms of its impact on the overall education.

Examination planning must be based on defined goals of the educational process and must ensure the credibility of the content that is being evaluated. Test questions are determined according to previously, in the syllabi of subjects, precisely defined learning outcomes. Outcomes should reflect the objectives of education, and must be clear and brief, achievable and measurable. Learning outcomes must be supported by consultations and required reading, and should not be to examined by unsupported teaching process.

The forms of assessment can be written, oral and practical.

Examination will be made in the form of continuous assessment during the semester (midterm exam(s)) and a final exam which determines the final score.

CONTINUOUS ASSESMENT

Students' overall work and knowledge will be monitored and evaluated continuously during one semester (year). Evaluation is done by assigning a score for each type of activity and knowledge assessment during the semester, which are kept by the forms of student portfolios.

At least 50% of the points must be provided for activities and assessment during the semester. The final exam is in the structure of the assessment can be evaluated with a maximum of 50% points. The tasks planned for individual student work (seminars, projects, tasks, etc.) must be evenly distributed during the semester. The total amount of these tasks must be harmonized with the load provided to the course, in accordance with ECTS.

Method of assessment is defined in the syllabus items. The Professors are obligated to, during the teaching process, execution of individual assignments by students, and their preparation for learning and assessment, help students by organizing and holding regular, and if necessary, additional consultations. Consultations may be organized using e-mail and other forms of electronic communication, or in person with professors.

In order to record the continuous assessment of the students, special files (portfolios) are made in which points are being entered based on performance of students in the acquisition of knowledge and practical skills.

Recommended methods of continuous assessment are colloquium, midterm exams and other forms of assessment, such as essays, written tests (MCQ tests, checklists, etc.).

EXAMINATION

The finalexam is the final test of knowledge acquired during the teaching process, from one or more content-related teaching branches. The final exam must be designed in a way to enable student to take exam of those parts he/she has previously failed to pass or the ones student missed during that semester. If students gain enough points through continuous knowledge and skill assessment for filling the criteria according to the syllabus, they are not obligated to take the final exam. Exception is made in cases where taking the final exam is also the last individual assessment, as previously stated in the syllabus items. The exams are taken from the obligatory and elective subjects.

Regular fall and summer semester final exams are taking place in the sixteenth week of the semester.

Repeated exam allows to students to take exam of all parts of the previously failed to pass or the ones student missed of that semester. Repeated exams are three weeks after the end of the semester in which the subject is listening. The time between final and repeated examination periods is two weeks.

Besides the final and repeated exam, there is additional exam that can be taken in first two weeks of September. Students are able to take correctional exam of all parts of the previously failed to pass exams from courses of both semesters. The final exam may be in form of writing, oral or practical exam. All forms of assessment are public.

Student Services will organize and establish the dates of taking the examinations for full-time students so that the students are not taking more than one exam per day. Student Services has no obligation for organizing dates of examinations described for students who are re-enrolled to that subject.

Results of the written exam must be published within five days from the date of examination with (mandatory for Professors) providing term in which the student may have insight in his/her exam. Student's examination papers are kept until the end of that school year.

Professor may not hold exams at the final examination in the presence of only one student. In the case of oral examination, where there is more than one examiner, students are evenly distributed by drawing cards publicly, so that each student individually draws the card with the name of the examiner.

The grades of students in tests and different forms of examinations are valued in a manner comparable to the ECTS system. If the student can gain a total of 100 points (during continuous assessment and final exam) the final grade is as follows:

- 10 (A) - (outstanding results without errors or with minor errors), 95-100 points,
- 9 (B) - (above average, with some mistakes), 85-94 points,
- 8 (C) - (average, with noticeable mistakes), 75-84 points,
- 7 (D) - (generally good, but with significant mistakes), 65-74 points,
- 6 (E) - (meets the minimum criteria), 55-64 points,
- 5 (F, FX) - (does not meet the minimum criteria) below 50 points.

In the event that any student does not reach 95 points, which represents a minimum for assessment 10, the scale of the preceding paragraph may be corrected in accordance to the best mark achieved in the first examination period.

A student may transfer a course (to the next year of study) of a maximum of six ECTS study credits, or at most one course and only in case that the failing course is not a prerequisite for another course in the following academic year, as defined in the syllabus-content.

Students who did not pass the exam in the final, repeated and additional terms, are enrolling the course again, if the one is from the group of obligatory subjects, or from a group of electives, he/she can take the same courses or select another elective course to achieve the required ECTS study points.

At every re-registration of subject (which the student repeats) the student is required to pay the appropriate fee, amount determined by the decision of the University Senate and the Cantonal Government.

V ORGANIZATION OF TEACHING PROCESS

Academic year is organized in two semesters: fall and summer. Courses in the fall semester last for 16 weeks (15 weeks of teaching + 1 week for the final exam). After final exam, students have two weeks to prepare for the repeated exam. Verification of the fall and summer semesters enrollment lasts up to two weeks.

Medical faculty organizes additional examination period in the first two weeks of September. Students who have earned the right to take final exams during the fall and summer semesters are enabled to participate in the correctional examination.

The classes in the summer semester start on the third Monday in February and last for 16 weeks (15 weeks of continuous activities, plus one week for the final exam). Preparation for the repeated examination in the summer semester last for two weeks. Summer vacation lasts for 8 weeks.

The exact academic calendar of the study program is determined and published by the University Senate, at least 60 days before the beginning of classes. Classes are organized and conducted according to the hours schedule. Faculty publishes the timetable no later than 10 days before the beginning of classes. Practical work and professional practice can be organized and run as part of regular classes or as a separate unit.

Student applies for electives that he/she wants to attend in the upcoming academic year three weeks before the beginning of classes of fall semester. Exception is the first academic year, where electives are chosen after enrollment. Professor who is responsible for teaching elective course defines the minimum and maximum number of students who can attend the course. Upon expiry of the registration date provided for the elective course, the final list with names is published on the website and bulletin board for each course.

For each course the Professor sets the work plan and timetable at least 15 days before the start of classes. Professor is obliged to offer help to students during course, individual work and preparation for assessment through consultations. Dates for consultation should be aligned with other classes so that they are accessible to students.

Changing the timetable and plan of work during classes is not allowed. If necessary to change the timetable and plan of work the Professor is required to, no later than 24 hours before, notify students using public and transparent way.

The course Professor is, in accordance with the obligations set by the curriculum, responsible to accomplish all forms of teaching - lectures, exercises, seminars, practical work, as well as to monitor the activities of students and check their knowledge.

VI COMPLETION OF THE PROGRAM

The program ends when student:

- Passes all required exams by courses
- Writes and defends the diploma thesis.

VII ACCESS TO FURTHER STUDIES

After completion six years of integrated graduate degree study of Faculty of Medicine (obtained 360 ECTS) it is possible to apply to 3-year postgraduate doctoral studies "Biomedicine and Health" (180 ECTS). It is also possible to pursue postgraduate degree programs in other related fields, according to the admission requirements of other educational institutions.

DEAN
Prof. DrAlmiraHadžović-Džuvo

**LIST OF OBLIGATORY AND ELECTIVE COURSES PER YEAR
WITH ECTS CREDITS**

YEAR	TOTAL HOURS	ECTS
	Total contact hours	
Year I	785	60
Year II	745	60
Year III	895	60
Year IV	890	60
Year V	900	60
Year VI	900	60
Diploma thesis*	120	*counted VI year
INTERNSHIP (Family medicine, Internal medicine, Surgery)*	360	*counted VI year
TOTAL	5595	360

*Students activities accomplished out of weekly total contact hours, limited by the Cantonal and University regulations, necessary to achieve 5 500 hours prescribed by the EC regulations.