Discussed at the Faculty Board meeting:

Protocol №ძ4-19 18.07.2019

Approved by the decision of the Governing Board:

Resolution №12, 27.07.2019

Last Changes Discussed at the Faculty Board meeting:

Protocol №ძ3-24, 28.02.2024

Approved by the decision of the Governing Board:

Resolution №4, 7.03.2024

Medical Doctor (MD) Programme

Higher education level: One-cycle educational program

Language of instruction: English

Type of educational program: Academic

Detailed field description and code: 0912 Medicine

Qualification awarded: Medical Doctor (MD)

Duration of study: 6 years (12 semesters)

Program Scope: 360 ECTS

Head of Program:

Prof. Dr. Zaza Avaliani, E-mail: avaliani.zaza@eu.edu.ge

Prof. Dr. Tinatin Gognadze, E-mail: tinatin.gognadze@eu.edu.ge

Prerequisite for admission to the program

Admission to the programme is allowed to:

A person with a certificate of complete general education or a document equivalent to it, who obtains the right to study at European University on the basis of ranking the scores obtained on the Unified National Examinations.

To enroll in the program, the entrant is required to pass the following subjects:

a) Georgian language and literature, English language (minimum threshold 80%), biology.

b) One of the following subjects: Chemistry / Mathematics / Physics. The number of seats for subjects should not be less than 30% of the seats announced on the program. The exact percentage distribution will be determined by the program head before the announcement of seats.

Eligibility to study at the program without passing the Unified National Exams:

Persons who, on the basis of the order of the Minister of Education and Science of Georgia № 224/б of December 29, 2011 "On Approval of the Procedure for Submitting and Discussing Documents by Applicants / Master's Candidates / Students eligible to study at the Higher Education Institution without passing the Unified National Examinations / Common Master's Examinations" have the right to enroll in the University without passing the unified national exams. The mentioned persons are obliged to prove their English language proficiency at minimum B1 level in accordance with the "Language Competence Rule" of the European University.

The program will also allow:

The order of the Minister of Education and Science of Georgia №10/б (4.02.2010) on the "Rules for Transfer from the Higher Education Institution to Other Higher Education Institutions and Approval of Fees" students shall be enrolled in accordance with the mobility rules.

Program actuality

The physician's profession is the key field of the healthcare system that relates to the maintenance and improvement of human health. The pressing issue of modern medicine is patients' safety. Hence, the modern methods of prevention and treatment are very topical. This requires highly qualified professionals, as present market lacks the relevant specialists.

The modern, rapidly developing research by using high technologies, ways and means of treatment and rapidly updated knowledge in medicine help reveal pathologies at the initial stage and increase the life expectancy of patients.

Very often at medical organizations and rehabilitation centers employed personal lacks modern knowledge and experience, which in it's turn influences the patients' service and its quality. The solution to the problem is possible by quality improvement of the relevant academic education and delivering the programmes that meet the market requirements.

The purpose of the programme

The goal of the program is to raise a medical professional in accordance to modern international standards (1), which will be able to apply principles of evidence based medicine in practice (2), use relevantly principles of ethics, research and communication in practice (3) and be able to establish self and continue development within constantly changing professional environment (4).

1. Field knowledge	• Profound knowledge of biomedical, behavioral, clinical, and social disciplines; • Describes the principles of diagnosis and treatment; • Describes health promotion and disease prevention; • Describes the ethical and legal principles of medical practice; • Analyzes the role of the doctor in the health care system.
2. Carry out a consultation with a patient	• Collects anamnesis; • Conducts a physical examination; • Assesses the status of the patient's psycho-emotional state; • Makes valid clinical decisions; • Gives patients advice and explanations, supports them.
3. Assess clinical presentations, order investigations, make differential diagnoses, and negotiate a management plan	• Assesses the complexity of the clinical manifestation of the disease, identifies them; • Appoints relevant investigators, interprets the results; • Conducts a differential diagnosis; • Discusses the disease management plan with patients and their caregivers; • Establishes a plan for the management of the patient's condition, in collaboration with the patient and his environment; • Cares for the terminal patient and his / her environment; • Manages chronic diseases.
4. Providing first aid in emergency medical situations (First aid and resuscitation measures)	• Identifies and evaluates emergency medical conditions; • Provides basic first aid, taking into account age characteristics (children, the elderly); • Implements basic life-saving measures in accordance with current guidelines; • Carries out extended life-saving measures in accordance with current guidelines; • Treats injuries in accordance with current guidelines.
5. Drug prescription	• Prescribes medication clearly and correctly, taking into account the age of the patient; • Chooses drugs according to the clinical context; • Assesses the suitability of medications and other treatments for potential benefit and risk; • Manages pain and distress; • Analyzes drug compatibility and interaction when prescribing treatment.

6. Conducting Practical Procedures	• Evaluates vital signs: pulse, respiration, temperature; • Measures pressure; • Measures saturation; • Washes his/her hands properly; Wears gloves properly; • Does venipuncture of the peripheral vein (using a simulator); • Performs peripheral vein catheterization (using a simulator); • Performs intravenous injection of the drug (using a simulator) • Injects subcutaneously and / or intramuscularly (using a simulator or under the supervision of a patient); • Delivers oxygen; • Describes patient transport and handling techniques; • Puts sutures (using a simulator); • Handles the wound and puts a bandage; • Does bladder catheterization (using a simulator); • Describes the technique of taking urine analysis; • Takes an electrocardiogram; • Interprets an electrocardiogram; • Conducts functional tests of the respiratory system; • Uses inhalation preparations correctly.
7. Communicate effectively in a medical context	• Effectively establishes communication with the patient; • Effectively establishes communication with colleagues; • Effectively communicates when reporting bad news; • Effectively establishes communication with the patient's environment; • Effectively communicates with people with disabilities; • Communicates effectively to obtain informed consent; • Maintains written communication (including the production of medical records); • Copes with aggressive and conflict situations through appropriate communication; • Effectively communicates with patients through a support person; • Establishes proper communication with law enforcement agencies and the media as needed; • Establishes communication with any person, regardless of their social, cultural, religious and ethnic background.
8. Use of ethical and legal principles in medical practice	• Protects privacy; • Uses ethical principles and analytical skills during treatment; • Obtains informed consent if necessary and makes the appropriate record; • Issue a death notice; • Requests autopsy in cases provided by the legislation of Georgia; • Uses the current norms of Georgian and international legislation during treatment; • Effectively manages medical activities in a multicultural society.
9. Evaluation of psychological and	• Assesses the psychological factors of the manifestation of the disease and its impact on the patient;

social aspects regarding patients' disease	• Assesses the social factors of disease manifestation and its impact on the patient; • Identifies disease-related stress; • Establishes medicament and alcohol dependence.
10. The use of knowledge, skills and principles based on evidence	• Uses evidence in medical practice; • Correctly defines and conducts literary research; • Critically evaluates published literature. Draws conclusions correctly and uses them in practical activities.
11. Use information and information technology effectively in a medical context	• Properly maintains clinical records and keeps them complete; • Uses information technology in medical practice; • Searches for specific information resources; • Stores information and uses it accordingly; • Properly maintains and uses personal records.
12. Ability to apply scientific principles, method and knowledge to medical practice and research	• Properly uses the methodology of conducting scientific research; • Develops research design, plans in detail, processes the results obtained and draws conclusions; • Uses the achievements of biomedical sciences in practical activities; • Writes reviews / reports at the academic level based on critical analysis of the existing scientific literature in the field of biomedicine; • Uses ethical principles of scientific research production.
13. Implementation of health promoting events, engage with public healthcare issues, efficient performance within the healthcare system	• Chooses treatment with minimal risk of harm to the patient; • Takes appropriate measures to prevent the spread of infection; • Adequately assesses one's own health problems in relation to professional duties; • Analyzes the importance of involvement in health promotion activities at the individual and population level.
14. Professionalism	General characteristics of professionalism: • Upholds the principles of impartiality, integrity and ethics; • Carries out medical activities with proper quality; • Expresses critical and self-critical attitudes, accepts criticism; • Expresses empathy (compassion); • Reveals creativity; • Reveals initiative, expresses a desire for success; • Demonstrates the ability to constantly update knowledge; • Reveals interpersonal skills. • Demonstrates group work skills; Professionalism in activities: • Analyzes the limits of its capabilities and asks for help (if needed); • Demonstrates leadership skills;

| | • Acts independently as needed;
• Solves problems;
• Makes decisions;
• Works in a multidisciplinary team;
• Establishes communication with experts in other disciplines;
• Adapts to new situations;
• Plans and manages organizational processes, manages time efficiently.

Doctor as an expert:

• Analyzes and draws a conclusion;
• Demonstrates learning and teaching skills of others;
• Demonstrates knowledge in practical activities;
• Demonstrates research skills;

Doctor in a Global Context:

• Has the ability to work in a multicultural society to realize their diversity;
• Demonstrates respect for the culture and peculiarities of other countries;
• Operates in an international context;
• Speaks a second language;
• Has general knowledge, beyond the medical field. |

The learning outcomes of the educational program are in line with the objectives of the program (see Appendix # 1).

The components of the educational program ensure the achievement of the learning outcomes of the program (see Appendix # 2).

The volume of the MD programme

The program is built on the basis of the European Credit Transfer System (ECTS), is student-centered and based on the student workload required to achieve the goals of the educational program.

The duration of the program is 6 academic years or 12 semesters and includes 360 credits (10,800 hours in total).

 1 credit includes 30 astronomical hours.

Credit in units of time (hrs.) reflects the amount of work required by the student to master the relevant course of the program and achieve the learning outcomes. The credit includes contact and independent working hours.

During the semester, the student must overcome 30 credits (30 credits = 900 hours), and 60 credits per academic year, however, according to the student's individual curriculum, the student's study load can be set at more than 60 credits during the academic year. The total number of credits added above 60 within the

established duration of the program does not exceed 15 credits in total.

The one-cycle educational program of a Medical Doctor is partially integrated. The main feature of the integrated program is the vertical and / or horizontal integration of basic and clinical subjects.

Vertical integration involves the integration of basic and clinical subjects into one curriculum by system and / or syndrome. In horizontal integration, unification refers to contiguous objects in the basic or clinical aspect, when unification takes place mainly around the system. This approach helps not only to give the student static knowledge but also to develop flexible clinical thinking. An integrated and semi-integrated program creates a curriculum that helps the student develop critical thinking and determine a path to self-development.

In an integrated program, different sources of information from different domains intersect in favor of a unified concept. This, in turn, helps the student to combine knowledge and skills gained from different sources in the context of a real clinical situation.

In the process of developing a one-cycle educational program of a Medical Doctor, adjacent basic training courses were integrated around the human body systems within the framework of partial integration. Parts of the presentation and analysis of clinical cases were also included in the same training courses, which serve to bring the student closer to the real clinical practice at the very beginning of the education process. The combination of clinical training courses took place around the main directions, which provides the student with systematic thinking in the clinical aspect.

The one-cycle educational program of a Medical Doctor includes the field of basic education and free components, namely:

- Basic education components with a total of 334 credits. between them:

  a) Compulsory components in the field of basic education with an amount of 324 credits;
  b) 10-credit elective courses in the field of basic education;

- The educational program also provides a free component with 26 credits, including:

  a) A mandatory free component of 12 credits focused on the development of general transfer skills;

  b) Elective free component with 14 credits focused on general transfer skills development within which the student is given the opportunity to choose courses offered by the MD educational program or to choose subjects from any relevant study level educational program by keeping prerequisite requirements for admission to the course.

MD Programme comprises 4 phases:

Phase I – Human Body Structure and Function (I-II yrs)

The basic phase of medicine includes horizontal integrated modules: human body I, II, III, IV - which include musculoskeletal, cardiovascular, respiratory, digestive, endocrine and urogenital system Anatomy, physiology and radiology , On functioning and radiological picture. Genes, cells and tissues I, II, III, IV - Integrated life sciences: biochemistry, cell biology, histology / embryology, biophysics, immunology and microbiology. Clinical and professional skills I, II, III, IV - Modules from the very first semester of the program include clinical practice, communication with the patient and the study of practical skills. Within the integrated modules, Medicine and Society I, II and Scientific Reasoning I, II The student is introduced to the basics of public health and scientific research skills in the very first phase. These courses will be taught through various teaching-learning methods and activities (lectures, PBL, role-playing games, practical work, work in a simulation laboratory, etc.). Students will study regional anatomy through virtual dissection and the use of mannequins

Phase II – Mechanisms of Health and Disease (III yr)

At the pre-clinical training stage, the main focus is on discussing aspects of human illness such as pathology, disease development mechanisms, and treatment mechanisms. In addition, students learn diagnostic thinking by reviewing cases in different medical fields and perfect their physical examination skills within integrated modules: Basics of Disease and Treatment I, II (Basics of Pathology, Basics of Pharmacology). Introduction to Clinical Diagnosis I, II - Physical Diagnosis, Clinical Skills. In the same phase the student masters neuroanatomy, neurophysiology and behavioral science in an integrated module of brain, mind and behavior. The acquired knowledge prepares students for a full understanding of clinical subjects, which will start in the program from next year. Within the longitudinal module of clinical and professional skills, students are involved in the process of solving clinical problems, which in turn is carried out through various clinical scenarios (clinical thinking course). This method focuses on in-depth analysis and synthesis of information by students, as well as its practical application in a clinical context.

Phase III - Core Clinical Clerkships (IV-V yrs)

During 4th and 5th years students study the main clinical subjects in the form of clinical rotations - internal medicine (system-based), surgery, obstetrics and gynecology, emergency medicine, pediatrics, psychiatry, radiology, otorhinolaryngology, etc. In parallel, students continue to explore clinical and professional skills that include perfecting professional behavior in the simulation center and clinical setting. These courses are taught in both outpatient and clinical settings.

Phase IV – Advanced Clinical Clerkships (VI yr)

Year 6 (graduation) - during graduating year students have clinical attachments mastering and gaining necessary competencies in Internal Medicine, Surgery, Obstetrics/Gynecology, Infectious Diseases, Family Medicine, Ophthalmology, Geriatrics, Pediatrics and Emergency Medicine. According to integration

principles and spiral curriculum requirements they revisit basic subjects (Clinical Pharmacology and Medical Genetics). Students work in small groups and are assigned to a variety clinical activity in various inpatient and outpatient settings oriented to prepare graduating students to their future specialization in residency.

The components of the curriculum, the amount of component credits, the prerequisites, and the distribution of the components according to the semesters are defined in the appendix to the syllabus of the program (see Appendix # 4).

Assessment system, assessment forms, methods and criteria

The assessment determines the relevance of student achievement to the specific outcomes of the program. In the one-cycle educational program of a Medical Doctor, the assessment of student knowledge is based on criteria that determine whether the student possesses the learning outcomes specified in the course.

The grading system used within the program complies with the "Rules for Calculating Higher Education Programs with Credits" approved by the Minister of Education and Science of Georgia № 3 of January 5, 2007.

The level of achievement of learning outcome is assessed through assessment components, mid-term assessment, and final assessment, the sum of which is the final assessment. The maximum final grade of the training course is 100 points.

The student's assessment system allows:

a) five types of positive assessment:

    (A) Excellent – 91-100 points;

    (B) Very good – 81-90 points;

    (C) Good – 71-80 points;

    (D) Satisfactory – 61-70 points;

    (E) Acceptable – 51-60 points;

b) two types of negative assessment:

    (FX) Failed to pass – 41-50 points, meaning that the student is required to work more for passing the exam, and that she/he is entitled to retake exam only once after independent work;

    (F) Failed to pass – 40 points and less, meaning that the work done by the student is not sufficient and she/he has to redo the study course/subject.

A student is allowed to take make-up exam in case she/he got a negative assessmen (FX) or scored minimum 51 points, but did not obtain minimal competence level set for the final assessment. A make-up exam is appointed no later than 5 days since the announcement of the examination results.

The point of the make-up exam is not added to the point of the final exam. Make-up exam point is the final assessment of the educational component of the educational program.

60% (60 points) of final assessment is allocated to the midterm assessment grade and 40% (40 points) of final assessment - to the final exam grade.

Midterm assessment consists of different components. Obligatory component of midterm evaluation is midterm exam, scheduled in the eighth-ninth week of the academic calendar (during curation midterm exam period is defined by the course syllabus). Midterm assessment components and the allocation of points to each component are determined by the lecturer within the course syllabus.

A student is admitted to the final exam if she/he scored minimal competence level set for the midterm assessment. Final exam is considered as passed if a student scored minimal competence level set for the final exam grade.

Minimal competence levels set for midterm assessment and final exam grade are as follows: 50% of midterm assessment (a student is admitted to the final exam if she/he scored minimum 30 points of midterm assessment), 50%+1 of final exam grade (final exam is considered as passed if a student scored minimum 21 points).

A credit can be awarded only after obtaining minimal competence levels set for midterm assessment and final exam grade and scoring 51 points or more.

The personnel implementing the learning course, taking into account the specifics of the learning course, has the right to determine a different (higher) interim and final assessment minimum competence limit, in accordance with the requirements established by the current legislation of Georgia.

In the case of integrated study courses, the staff implementing the course is authorized to determine the minimum competence limit for each component of the same course. In this case, it will be possible to grant credit in the case of passing the minimum competence threshold established for each component, passing the minimum competence threshold in the evaluation components of the course (midterm and final assessment) and receiving at least 51 points as a result of summing up the points obtained in the midterm and final assessments.

The personnel implementing the learning course, taking into account the goals, learning outcomes and the specifics of the learning course, has the right to determine the minimum competence limit in the evaluation method/methods. In the case of the existence of a minimum competence limit in the evaluation method/methods, it will be possible to grant credit In case of exceeding the minimum competence threshold in each assessment method, exceeding the minimum competence threshold in each assessment component (intermediate final assessment) and obtaining at least 51 points as a result of the points and sums obtained in the interim and final assessments.

Various forms oriented on the demonstration of the study results are deemed suitable for the assessment:

The Essay evaluates the level of insight of the reviewed issue. It also generally demonstrates an ability to argumentatively discuss an issue and demonstrate a critical thinking ability

Oral survey - Assessment method, which involves the lecturer asking questions to individual students to demonstrate and evaluate their knowledge of the material explained during the lecture and independently processed by them. When evaluating an oral survey, attention is paid to the student's sharpness, adequacy /

relevance of the answers, accuracy of facts, ability to convey in a clear language, persuasiveness, etc. In the case of foreign languages, the format of the oral survey involves speaking at a level appropriate to the course selected by the lecturer or structured dialogue, which serves to assess the student's oral language skills.

Quiz - test / open questions/short answer allow to check the level of knowledge of a significant amount of material in a short time.

Clinical case analysis - allows to check the ability to apply knowledge in practice and find ways to solve a problem. clinical judgment, the ability to reason, the ability to apply theoretical knowledge into practice, the ability to interpret examination results and define diagnosis correctly.

Presentation - The presentation gives an idea of the student's ability to convey information clearly, shows the depth of knowledge of the presented material and the speaker's presentation skills as well as the ability to communicate with the audience.

Laboratory work – The student performs a specific laboratory task indepedently based on knowledge of the use of laboratory equipment.

Practical activity - The student independently performs various activities / manipulations based on relevant knowledge.

Day/Evening shifts - The student is dutying in the clinic within the relevant clinical module, where is assesing: medical knowledge, patient care, professionalism, communication skills, performance of practical procedurs. It is necessary for the student to fill a diary during the shifts, what she/he observe or did during the shift under control of supervisor, which is checked by the lecturer according to the criteria given above.

Portfolio - Assessment is based on documents/evidence that reflect the student's activity during the teaching period. The portfolio has a significant impact on the current and final assessment of the student's academic performance, it objectively and reasonably reflects the strengths and weaknesses of the development of the student's clinical thinking, skills, and general professional qualities.

The Objective Structured Clinical Examination (OSCE) is an assessment method based on students' performance that measures their clinical competence. Students are introduced to different medical scenarios through a series of Patient Station. The assessment emphasizes the following elements of the candidate: clinical judgment, clinical skills, ability to reason, as well as problem solving, communication skills including behavior towards the patient, linguistic dissemination and perceptiveness.

Objectively Structured Practice Exam (OSPE) Used in the teaching stage of basic disciplines, which includes the assessment of theoretical and practical knowledge (example: histology, pathology), can evaluate the student's performance during programmed test stations.

Virtual scientific project –There is a variety of work aimed at solving a specific problem or implementing an initiative, during which the student's research, creativity, cooperation and communication skills are developed. During the virtual project, the student chooses a research topic, creates a research question and problem based on literature search and analysis. The research question defines an appropriate research method and design, as well as creates a virtual research sample and performs data analysis. Interprets the

results and writes a conclusion. At the end of the semester, the research project will be presented in the form of a presentation. The goal of the project is to use existing and current experience in practice.

Midterm Exam is the element of midterm assessment held once in a term at the end of the second five-week period in the form/method defined in the curriculum. It aims at measuring the gained knowledge and skills of the covered material.

Final Exam is the component of the final assessment held once a term in order to evaluate the obtained knowledge and skills in the form/method defined in the curriculum.

Field of employment and opportunity to continue education

According to the current legislation of Georgia, in case of obtaining a state certificate giving the right to independent medical activity, a graduate of a one-cycle educational program of a Medical Doctor has the right to carry out the independent medical activity (Law of Georgia on Medical Activity, Article 7).

According to the Law on Medical Activities (Article 17), a graduate with higher medical education has the right to carry out the following activities:

A) Pass a postgraduate professional training course and obtain the right to independent medical practice after passing the state certification exam;

B) Carry out research and pedagogical activities in theoretical fields of medicine or other fields of health care, which do not involve independent medical activities;

C) Work as a junior doctor.

A graduate of a one-cycle educational program of a Medical Doctor is eligible to continue his / her studies at a postgraduate level (doctoral).

Head (s) of the Educational Program:

Professor Dr. Zaza Avaliani

Professor Dr.Tinatin Gognadze

Acting Head of Quality Assurance Office:

Sophio Khundadze