



**Medical Doctor (MD) Educational Program
“Medicine”
(English)**

Ilia State University

School of Natural Sciences and Medicine

Tbilisi

2024

Program requisites

The name of the program	Medicine
Direction:	(09) Health Care
Field / Specialty	(0901) Health Care/Medicine
Level of the Higher Academic Education	One cycle undergraduate Medical Education (Equivalent to the II stage)
Language of instruction	English
Qualification awarded	Medical Doctor (MD)
Program capacity	360 ECTS, 1 ECTS = 25 hours
Program duration	6 years, 12 semesters
Program supervisor:	Ivane Abiatari MD, PhD, Associate Professor
Program Co-supervisor:	Olwyn M. Westwood MD, PhD, Professor

Program Overview

The country's health care quality and its optimal functioning are in line with the quality of basic medical education, which requires permanent development, international integration, and modern technology-based learning.

Medical doctors' profession requires deep knowledge of basic life science disciplines, which ensures the awareness of vital processes in the human body and identification/evaluation of pathological conditions. In addition, the knowledge of basic natural sciences will determine the functioning of the diagnostic and pharmacological means and its awareness of impact on the body.

Very important preconditions for successful medical practice are possession of deep clinical thinking and communication skills, social responsibility and ethical values based on international experience; furthermore, awareness of technological progress and innovations achieved in clinical medicine, and systematic updating of existing educational and information resources, understanding the importance of continuing professional development.

This one-cycle educational program of Medical Doctor ensures the implementation of the university mission, which emphasizes the development of society, generation, and transfer of knowledge on the national and international levels.

The language of instruction is English. Study materials are offered in English. This will enable students and lecturers to use up-to-date literature, utilize the latest achievements and experiences in the field.

The educational program is based on Georgian Higher Education Medicine Sectoral Benchmarks and complies with the standards of the World Federation for Medical Education (WFME), as well as envisages the practical and pedagogical experiences of Georgian universities. The study program ensures the preparation of qualified physicians with appropriate knowledge and competencies, who will be able to effectively and competitively participate in the Healthcare field, both in the governmental and private sectors.

Program Objectives

The program "Medicine" aims to prepare qualified and competent Medical Doctors, open to modern approaches and equipped with appropriate knowledge, skills, and competencies to respond to tomorrow's global challenges in the field. Furthermore, to be competitive at both - national and international levels. Graduates of the program are eligible to continue further medical education, work as junior doctors and teachers.

Objectives of the program:

- Provide students with deep and practice-based knowledge that will consider trends in the field, modern challenges, technological advancement, and international medical standards;
- Generate skills and roles characterized for modern physicians, based on practical teaching. Herewith, prepare students to understand the meaning of social responsibility, values, and principles of ethics which are of utmost importance for physicians employed in this field;
- Equip students to understand principles and methods of social and behavioral sciences in the wider context of the medical field. Moreover, to realize the importance of public healthcare and the role of physicians in this system;
- Generate skills that will support students to work and develop themselves individually. Equip students with the awareness of the imperative for consistently updating knowledge and skills.

1. The graduate defines pathological processes and their expected outcomes using the fundamental knowledge of biomedical science.
2. The graduate evaluates the clinical case, consults the patient, defines diagnosis, and manages the state of the patient based on the knowledge of clinical sciences and fundamental principles of the field.
3. The graduate evaluates disease-related social and psychological aspects by use of the basic knowledge of behavioral and psychosocial sciences.
4. The graduate uses evidence-based principles, up-to-date scientific information, and research methods in medical practice and scientific research.
5. The graduate defines and conducts disease preventive measures and promotes health considering public healthcare principles for effective work in the healthcare system.
6. The graduate uses ethical and legal principles in scientific and clinical practice.
7. The graduate effectively communicates with the patient, family members of the patient, colleagues, and other persons concerned.
8. The graduate obtains, analyzes, and distributes medical information by effective use of informational technologies.
9. The graduate performs particular laboratory and medical manipulations.
10. The graduate demonstrates professionalism.

General Competencies

Analysis and synthesis

The graduate can critically evaluate, complex, incomplete, and contradictory data, their independent analysis, report the results of the analysis understandably, and then use them. Can critically approach new information, analyze, summarize, integrate, conclude, and bring evidence and/or opposing arguments in analyzing the obtained results.

Management of information

The graduate can obtain information from various sources processing of large volume of information and critical assessment of it. Has the ability to use obtained information in professional activities.

Problem-solving and decision-making

The graduate can independently identify complex problems, determine the ways of solving them, analyze the expected results, and final decision-making. Knows and effectively uses additional resources within the limits of their own specialization.

Ability to work in a group and new environment

The graduate can work in the group as a member and leader. Practical work habits in-group, professional subordination/adaptation skills. Can clearly formulate tasks, agree with group members, coordinate their activities and adequately assess the capabilities of group members, manage conflict and force majeure situations. Has the ability to assimilate new technology.

Communication skills, including in foreign language

The graduate has observation, listening, questioning, and non-verbal communication skills. Can participate in meetings and convey his/her opinions in oral and written form. Can conduct negotiations in the professional context and participate in conflict resolution.

Ability to renew learning/knowledge permanently

The graduate can use a full range of educational and informational resources, manage their own learning process. Understands the necessity of lifelong learning and the need for permanent professional development. He/she can evaluate own knowledge and competencies.

Ability to work independently

The graduate can organize time, select priorities, timing protection, and ability to fulfill agreed work. Can plan the resources related to its activities properly. Can properly manage the plans associated with his/her activities. Is responsible for the work done and can evaluate and criticize it.

Admission Requirements

An individual who has the state-approved certificate of full secondary or equivalent education and who will gain the right to study through the Unified National Exam is eligible to apply to the one-cycle medical program.

Candidates eligible to enroll in this one-cycle medical program without passing the Unified National Examinations are as follows:

- a) Foreign citizens and stateless persons who have completed secondary or equivalent education in a foreign country;
- b) Georgian citizens, who received full secondary or equivalent education abroad and have studied the last two years of full secondary education in a foreign country;
- c) Individuals (except joint educational and exchange programs students) who have lived abroad for the last one year or more, currently study / have studied, and have received credits/qualifications at an academic higher educational institution recognized under the laws of that country.
- d) Georgian citizens (except joint educational and exchange programs students) who have lived abroad for the time defined by the Ministry of Education and Science of Georgia, currently study / have studied and have received credits/qualifications at an academic higher educational institution recognized under the laws of that country.

Individuals who enroll without passing the Unified National Examinations must confirm knowledge of the English language** (Minimum B2 level), take university exams* in chemistry or biology and pass a general interview following the order N90/n of 2018 of the Minister of Education, Science, Culture and Sports of Georgia.

*A person enrolled without the unified national exams, who has a bachelor's or master's degree in the field of biological or related sciences (in a foreign country at a higher educational institution recognized by the legislation of this country), is exempted from university testing.

**The English language requirement may be waived if the applicant is a native English speaker or graduated from an English medium high school/university in countries, the official language of which is English.

For other applicants, there are fixed English-language requirements to fulfill. A candidate must have a recognized English qualification aligned with CEFR level B2 to successfully apply. To prove the English qualification either one of the following must be submitted:

- a) an official international language certificate (the main certificates and minimum scores accepted are given below)
- b) an English Proficiency Statement from the university, high school, or college, confirming that English was the language of instruction

TOEFL

- Paper-based PBT 513
- internet based iBT 65
- computer-based CBT 183

IELTS

- Academic (Band 5.5)
- Cambridge ESOL (English for Speakers of Other Languages)
- Certificate of Advanced English (CAE): 160/Level B2 (also grades A/B/C)
- First Certificate in English (FCE): 160/Grade C (also grades A/B)
- Business English Certificate (Higher) BEC: 45/Level B2 (also grades A/B/C)
- Business English Certificate (Vantage) BEC: 60/Grade C (also grades A/B)
- Business Language Testing Service BULATS: 60 Overall

- PTE (General level 3)
- PTE Academic (59-75 points)

TELC (The European Language Certificates)

- telc English B2: Pass

Michigan (Cambridge Michigan)

- Examination for the Certificate of Proficiency in English ECPE: Low Pass
- Examination for the Certificate of Competency in English ECCE: Pass
- MELAB: B2

If a candidate fails to provide proof of English or meets any of the above criteria to obtain student status, the University offers the option of administering an Institutional English Proficiency Test.

Teaching Methods

Indispensable condition of teaching is the integration of theoretical and practical training, the development of clinical skills in virtual simulation centers by use of simulators and mannequins, and the involvement of students in laboratory and clinical work. Priority is given to up-to-date technologies. From the first year of the studies, students acquire scientific as well as clinical skills. Development of these skills is gradually compounded by the student in the following courses and ends up with “clinical internship” and research work/research paper writing. To achieve the aim of the program, the following methods of learning and teaching are used:

A lecture is a creative process where a lecturer and a student take part simultaneously. The main aim of the lecture is to understand the idea of subject regulations, which means a creative and active perception of the presented material. In addition, attention should be paid to the main provisions of transferable material, definitions, indications, and assumptions. Critical analysis of main issues, facts, and ideas is necessary. A lecture should provide scientific and logically consistent knowledge of the main subject regulations to be learned without excessive details overloading. Therefore, it must be logically completed. In addition, facts, examples, charts, drawings, tests, and other visual aspects should be aimed at the explanation of the lecture’s opinion. The lecture should provide an accurate analysis of the scientific dialectical process and should be based on the free-thinking ability of students in a particular environment, understanding of the basic scientific problems, and the orientation of understanding. The lecture includes the following activities: **demonstration, discussion/debate, induction, deduction, analysis, synthesis.**

Seminar - helps students to strengthen theoretical and practical knowledge. With the help of a Professor, a student or group of students performs certain activities (based on the acquired knowledge), obtain and process additional information, prepare presentations, etc. It involves speeches, discussions, and conclusions. The professor/teacher coordinates this process. The seminar may include the following activities: **Discussion/debate, oral assessment, demonstration, role-playing, quiz, presentation, and essay.**

A practical workshop to study theoretical materials gradually to solve specific tasks. This is based on using theoretical knowledge independently (in a non-clinical environment). Student’s independent practical work in the laboratory, with computer, simulators, and mannequins. Practical lessons may include the following activities: analysis of microscopic slides, laboratory activity, and demonstration of practical skills.

Clinical work is an important part of the learning process and consists of planned and intended activities of students. It provides practical skills and strengthening of academic theoretical knowledge. This method prepares students for future professional activity. There are three parts involved in “clinical practice” – university, student, and potential employer/practice facility (hospital/medical center/center of clinical skills). It is important for all three parts: communication of academic education and theory to the real world. It helps to develop new competencies and renew educational programs according to the requirements of the changing market. Activities of clinical work are **role-playing, demonstration of practical skills / directly observed procedural skills (DOPS).**

Flipped learning method - enables students not only to obtain knowledge but also apply knowledge into practice under the mentorship of a lecturer within released auditorium time. The method fits to individual capacity of the students and gives a

possibility to identify/control time and frequency for the adoption of new information. In contrast to the traditional/classic model, functions of individual space and group space are flipped: student acquires new information outside of the auditorium, following the material given by the teacher. Student individually plans and organize the time and frequency of learning material and practice with their own natural study rhythm. During the auditorium time, the student applies acquired knowledge into practice and improves clinical skills. This method develops not only remembering but also **analysis**, **synthesis**, and **knowledge application** skills.

Case Based Learning (CBL) is an active method where students read and discuss complex, evidence-based clinical cases or standardized patients. Prior to the presentation of the case, theoretical materials are given, which helps them to prepare for the case. Students are divided into small groups to solve thematic assignments. With the supervision of the lecturer, students discuss cases, brainstorm ideas, and afterward summarize their own knowledge and identify topics necessary for solving given cases. This method develops the following skills: **teamwork**, clinical reasoning, **analysis**, and **synthesis**.

Bedside Teaching is an interactive method that is conducted in the clinic, directly at the patient's bed. A small group of students perform clinical tasks under the lecturer's observations and upon the patient's consent. In this method of teaching, the student connects theoretical knowledge with practical experience and takes on new knowledge in many ways: touch, smell, and hearing. Before the beginning of the lecture, the lecturer chooses the appropriate patient and prepares the study under the level of the students' group. The method of bedside teaching develops important skills and values such as: collecting anamnesis, communication skills, clinical ethics, clinical thinking, humanism, professionalism, and the role of the doctor and social responsibility.

Problem-Based Learning (PBL). Discussion of situational tasks - difficult/atypical cases that may require additional information on the disease, determining diagnosis, and making differential diagnostics; Method is used during the studies of life science disciplines, which facilitates clinical integration of interdisciplinary basic medical knowledge. The students will be presented with a clinical problem (case), without prior knowledge/information, and they will discuss it without the instructor in groups. Students will **brainstorm**, find the necessary information, and make conclusions. This method facilitates the development of analytical thinking - **analysis and synthesis** skills, **teamwork** and **independent learning skills**; as well as the development of **collaborative learning/working** skills; **clinical reasoning and decision-making** skills, skills of participation in medical discussions, effective **communication** in medical contexts - communication with colleagues, **professionalism**.

Research project - This is a student's individual work under supervision and includes research and development of scientific literature, setting up research goals and tasks, planning and conducting research analyzing the results, and making conclusions. The method may include activities such as **laboratory activity, collecting and analyzing data, working on research papers, and presentations**. The method encourages analytical thinking, ethics, analysis and synthesis ability, and independent learning skills. Develop skills in participating in scientific discussions and communication with colleagues.

Presentation is the process of presenting a topic to an audience. It is typically a demonstration, lecture, or speech meant to inform, persuade, or build goodwill. Presentation is performed well when results are presented, convincingly, and precisely. It can be executed individually, in pairs, or groups. After the discussion presenter answers questions from the audience. This method supports the development of **communication** skills.

Consultation with the supervisor – contact hours with the supervisor when the student receives information about the plan of writing a thesis, searching materials, processing, concluding the content of the work, technical conclusion of the work, and preparation for the presentation.

Assessment system

The assessment system of learning outcomes and competencies is based on the Georgian sectoral benchmarks of higher medical education, which is based on the standards of WFME and corresponds to the competencies developed by TUNING/MEDINE and CanMEDS 2015.

For the assessment of knowledge and skills, oral and written exams are used. The program includes formative and summative assessment systems. Program components contain lecturer/mentor assessment, self-assessment, and peer-assessment forms. Methods used are a portfolio, objective structured clinical exam (OSCE), Mini clinical evaluation exercise (Mini-CEX), directly observed procedural skills (DOPS), presentations, essay/research paper, etc.

This is the grading scale accepted on the National level:

- (A) Excellent - 91-100 points;
- (B) Very Good - 81-90 points
- (C) Good - 71-80 points;
- (D) Satisfactory - 61-70 points;
- (E) Sufficient - 51-60 points;

Two types of negative assessment:

- (FX) 41-50 Unsatisfactory - meaning a student needs more effort to pass an examination and is given an extra chance to pass an additional examination through independent work;
- (F) Failure - 40 or less of the maximum grades, meaning the student's effort is not enough and he/she has to retake the course.

If the student receives an FX grade, an additional exam is scheduled no earlier than 5 days after the announcement of the final exam results.

Assessment forms, evaluation components, methods, and criteria, considering the specification of particular study disciplines, are individually defined and presented in the syllabi of relevant study courses.

Program structure

MD educational program consists of two stages: **1. Basic Medical Teaching** (I – III years) – preclinical stage of the medical program comprised of disciplines of life sciences and body systems (1st phase – Normal structure and function) which are vertically linked to pathology courses (2nd phase – Abnormal structure and function) and accompanied by teaching core values of medicine, professionalism, communication, clinical and research skills. Students exiting this stage acquire knowledge of the fundamental sciences and basic clinical skills. **2. Clinical Attachment** – stage with an increased focus on the development of advanced clinical competencies and skills (IV–VI years). This stage includes rotations of different clinical disciplines (3rd phase – Clinical teaching) and clinical internship/workplace practice (4th phase / 6th year) accompanied by the teaching of advanced basic science disciplines, core values of medicine as well as the development of professionalism, communication, and research skills.

Integrated learning is an essential condition for modern medical education. This program includes a vertically and horizontally integrated curriculum, which implies the incorporation of clinical competence training and practical skills-developing courses in the first year of study in parallel with natural science disciplines. In particular, the program involves the integration of clinical (practical) training courses (course "Basic Clinical Skills") already in the second semester, which in the following semesters becomes more intensive and on the second stage of teaching (Clinical Attachment) transfers into subjective clinical rotation format and ends with the clinical workplace practice. In parallel at this stage decreases volume of basic science disciplines. The preclinical phase of the teaching program is horizontally integrated. In particular, topics of study courses are synchronized according to organ systems and functional disorders and taught in integrated modules (e.g. Cardiovascular System and Blood covers disciplines of Anatomy, Physiology, Histology, and Biochemistry; Cardiovascular System Disorders are discussed in the integrated module of Pathology, Pharmacology, and Physical Examination). Integrated

modules envisage Case Based Learning (CBL) and Problem-Based Learning (PBL) seminars, which provide “the correlation integration” of basic medical disciplines and prevent knowledge fragmentation. The described format enables the student to develop basic clinical, and communication skills at the earliest stage of learning, including clinical thinking, and that will facilitate the cognitive process when studying clinical subjects later. Furthermore, each of the four phases of the program ensures the development and mastering of medical doctors’ competence-related knowledge, skills, and attitudes, which enables spiral integration of the curriculum.

The program is focused on developing not only knowledge but also development of important physician’s core competencies. At all stages of the study, the student develops the basic competencies/roles of the doctor which are evaluated in different steps. This is reflected in the medical portfolio, which is student-centered and incorporates feedback, self-reflection, and Life Long Learning principles.

In the first semester program provides the necessary skills for scientific research (course "Academic skills"). The following semesters include courses in Bioethics, Epidemiology, and Bio-Medical Research, which enable students to learn scientific research methods, perform scientific work, and gradually improve skills required for research activities. It is important that the students learn not only a critical judgment of scientific information but also basic principles for research planning, conducting, analyzing, paper drafting, and results presentation. Students will be able to regularly take part in and attend the scientific events/activities organized by the Faculty and Research Institutes of Ilia State University and the partner organizations.

During the initial stage, the program provides language block courses, including mandatory communicative Georgian language courses for international students. For Georgian native-speaker students, the program provides basic courses in the German language.

The academic load of the program consists of 360 ECTS credits. 1 credit = 25 hours, covering both contact and independent work hours. Students must accumulate 60 credits per year (1500 hours).

In total more than 1300 (contact) hours are dedicated to the development of clinical skills, (among them over 16 ECTS credits are allocated for the teaching at the simulation training/clinical skills lab) and 25 credits to the development of scientific research skills.

The program is complete when at least 360 ECTS credits have been accumulated, which implies the completion of all the program-mandatory components and collection of credits from the minimum required amount of elective courses and when the portfolio is passed.

Program Structure

Total 360 ECTS Credits		
Mandatory: 342 ECTS Credits		Elective: 17 ECTS Credits
Including:		
Clinical skills: 16 ECTS Credits (Simulation Center)	Scientific-research skills: 25 ECTS Credits	

Study Resources

The university owns well-equipped auditoriums and computerized exam classes, computer study programs, teaching laboratories, the university library and scientific facilities, student and lecturer electronic system – ARGUS, electronic teaching portal “Moodle”. Research institutes of the university (Institute of Medical and Public Health Research) and facilities of partner organizations ensure the development and strengthening of clinical-practical and scientific research skills.

Elaboration of research and clinical skills, research planning and conducting, and work on medical simulators and manikins can be conducted at the University’s *Clinical Skills Development Center*, and Research institutes (*Institute of Medical and Public Health Research, Institute of Chemical Biology, Institute of Biophysics, Institute of Ecology, Lab of Applied Genetics, etc.*) as well as at partner clinical facilities.

For the provision of research and clinical practice, the University has cooperation agreements/liases with the following partner organizations:

- Tbilisi Heart and Vascular Clinic;
- Medical Corporation “EVEX”;
- Medical Center “Innova”;
- S. Khechinashvili University Clinic;
- “Aversi” Clinic;
- D. Gagua Clinic;
- Pineo Medical Ecosystems
- National Educational Center for Family Medicine;
- Scientific-Practical Center for Infectious Pathology, AIDS and Clinical Immunology;
- City Mental Health;
- Clinic “Curatio”;
- David Metreveli Medical Clinic;
- Medi Club Georgia;
- Clinic “Neolab”;
- Clinic “Neogen”;
- Multiprofile Clinic Consilium Medulla;
- G. Chapidze Emergency Cardiology Clinic;
- National Center of Tuberculosis and Lung diseases;
- Center for

Employment Opportunities

According to the law of higher education, program graduates have the right:

To continue their studies and do a doctorate program (the third, post-graduate academic stage of education) in a Georgian or foreign university.

To pass a residency program in Georgia (or residency equivalent course abroad) and take the unified state certification examination.

The graduates can:

- be employed as a Junior Doctors in any organization related to the healthcare and medical service.
- implement the research and pedagogical activities in the theoretical field of medicine, and/or health care field, which does not imply independent medical practice (at scientific-research institutions, hospitals, etc.).
- receive permission for independent clinical practice - after graduation from residency and passing the unified certification examination, according to the relevant state requirements.
- be employed in national and international pharmaceutical industry and forensic expertise centers.
- be employed in management units of medical and healthcare institution