



ივანე ჯავახიშვილის სახელობის თბილისის სახელმწიფო უნივერსიტეტი

მედიცინის ფაკულტეტი

„შეთანხმებულია“:

ფაკულტეტის ხარისხის უზრუნველყოფის სამსახურთან

პროფ. ნ. ჩიხლაძე-----

თსუ ხარისხის უზრუნველყოფის სამსახურთან

ი. გრძელიძე -----

ფაკულტეტის საბჭოსთან

ფაკულტეტის საბჭოს სხდომის ოქმი№13(29.11.2019)

პროფ. დ. კორძია -----

„დამტკიცებულია“

თსუ აკადემიურ საბჭოს მიერ

აკადემიური საბჭოს დადგენილება #



## Program Description

<b>The title of the program</b>	<b>Undergraduate Educational Program „Medicine”</b>
<b>Awarded qualification</b>	<b>Medical Doctor (MD)</b>
<b>Duration and Volume of Program in Credits</b>	<p>Program duration is 6 academic years or 12 semesters and includes 360 credits; The academic year consists of 40 working weeks that fall into two semesters - the fall semester (20 weeks) and the spring semester (20 weeks). There is a vacation between the semesters.</p> <p>Each semester comprises 19 studying weeks. During the semester, the schedule is mostly “Curative”. After completing each subject, a final exam is appointed. On the 20th week of each semester, resit exams are carried out.</p> <p>The Credit reflects the amount of work which students need to perform in order to master a particular component of the educational program and to achieve learning outcomes. The credit considers contact hours and independent work of students. Credits can be obtained only after the student has achieved the learning outcomes envisaged in the syllabus, in accordance to the Order N3 of Minister of Education and Science of Georgia, dated by January 05, 2007.</p> <p>The number of credits which should be obtained is 30 per semester and 60 credits per year. However, depending on the specifics of the program and the individual workload of the student, the number of credits per year may exceed or be less than 60, but it should not be more than 75 credits. Additionally, the program cannot be completed for less than 6 years.</p> <p>Student workload within the program involves contact and independent hours, which include: taking the courses provided by the program, lectures, seminars, laboratory works, and practical classes (including clinical studies ), preparation and submission/delivery of presentations, preparation for the mid-term, final, staging (qualifying) exams and passing them.</p> <p>Independent work, in turn, involves independent work under supervision and independent work without supervision.</p> <p>1 ECTS = 25 hours, from which 12 hours are contact hours and 13 hours are for independent work for basic and transition stage subjects. For the subjects of clinical medicine stage, 10 hours is dedicated for contact hours, 5 hours for independent work under the supervision and 10 hours for independent work without supervision.</p> <p><b>Program Structure in Credits</b></p> <p>I. Mandatory educational courses/modules in the specialty - 334 credits</p> <p>II. Elective educational courses in the specialty - 26 credits</p>



<b>Language of Education:</b>	English
<b>Head/s of the Program</b>	<b>DimitryKordzaia</b> - Professor, MD, PhD; Dean of the Faculty of Medicine <b>Maia Bitskinashvili</b> - MD,PhD, Associate Professor,Vice-Dean of the Faculty of Medicine
<b>Admission Prerequisites</b>	<p>An individual with full general education or equivalent, who has a corresponding state-approved document (certificate) and has earned the right to study on the program based on the results of the Unified National Exams is enrolled at the one-step program "medicine". The list of the subjects to be passed is regulated by the order №178/n of the Minister of Education, Science, Culture and Sport of Georgia, dated by August 27, 2019. The competence limit is established by the faculty.</p> <p>Admission to the program without passing the Unified National Exams is allowed by the order N. 224/n of the Minister of Education, Science, Culture and Sport of Georgia:</p> <ul style="list-style-type: none"><li>a) Foreign nationals and stateless persons who have received full general education or equivalent in a foreign country;</li><li>b) Citizens of Georgia who have received full general education or equivalent in a foreign country and have spent the last 2 years of full general education in a foreign country;</li><li>c) For foreign nationals (except students of the Joint Higher Education Program and exchange students) who are/were studying and have received credits/qualifications at a higher education institution recognized in accordance with the legislation of that country;</li><li>d) Citizens of Georgia (except students participating in the Joint Higher Education Program and exchange students) who have been/had been living and studying and have obtained credits/qualifications at a higher education institution in the foreign country, recognized in accordance with the legislation of that country.</li></ul> <p>In order to be able to study at the educational program for Medical Doctors in English language, a person, who has not passed the Unified National Exams has to prove proficiency in English at least B2 level and undergo a general interview in accordance to the order N90/n of the Minister of Education, Science, Culture and Sport of Georgia, dated by 2018.</p>



<b>Goal of Program</b>	<p>Undergraduate medical education is an important precondition for future successful medical practice and, consequently, the health of the country's population in general. Improving the health of the country's population, as well as the increasing internationalization of education and especially of medical education, makes it necessary to comply with international standards of medical education. Integration of basic (undergraduate) medical education and medical practice of international standards ensures the optimal functioning of the health system of any country.</p> <p>The program aims to train medical staff whose competencies are in line with the national sectoral characteristic of medicine. The program will train highly qualified specialists for the modern labor market, who will contribute to improving the efficiency of medical services for the population as well as healthcare system.</p> <p><b>The goal of educational program in Medicine is:</b></p> <ol style="list-style-type: none"><li>1. To create specialists with the knowledge, required by international and national standards of medical education, who will be competitive in both local and modern international labor markets.</li><li>2. To enable graduates to develop professional skills to perform clinical activities in an ever-changing unpredictable work environment successfully and adapt by applying new strategic approaches.</li><li>3. To develop a range of professional skills such as demonstrating self-sufficiency and a sense of responsibility while carrying out their professional duties, acting with consideration of ethical principles and realizing the necessity of lifelong learning, personal and professional development.</li><li>4. To enable the graduate to be involved in the patients' and the whole community's healthcare process, identify the needs and respond adequately, as well as participate in activities aimed at improving the quality, effectiveness, and accessibility of the health care system and medical service.</li><li>5. To develop the ability to analyze scientific papers critically and the skills of planning and implementation of scientific research and practical application of evidence-based principles as well as the ability of effective data management using information technologies.</li><li>6. To develop the skills of effective communication with patients, their relatives, colleagues, healthcare professionals as well as teamworking, managerial and leadership skills.</li></ol> <p>The program aims to develop sector-specific as well as general/ transferable</p>
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	competencies.
<b>Learning Outcomes of the Program</b>	
<b>Knowledge and understanding</b>	<p><b>After graduating all students will be able to:</b></p> <p><b>1. Demonstrate the knowledge of biomedical, behavioral and social sciences, clinical disciplines as well as knowledge of the fundamental, ethical and legal principles of the field;</b></p> <p>1.1 Demonstrate deep and systematic knowledge of biomedical sciences, describe and explain the structure and function at the level of molecular, cellular (genetic), tissue, organic and systems of the organ;</p> <p>1.2 Demonstrate knowledge of abnormal and restorative processes, know the mechanisms in which diseases cause changes in normal structures and functioning and how these changes are reversed while the recovery, and relate this knowledge with data from clinical, laboratory, instrumental (including imaging) examinations.</p> <p>1.3 Demonstrate knowledge of behavioral and social sciences; Explain the normal behavior of the individual and the changes in it which occur as a result of various social and psychological factors. Discuss the psychological and social aspects of health and disease.</p> <p>1.4 Demonstrate knowledge of clinical subjects; Integrate knowledge in biomedical science with clinical data, in order to diagnose the major (common) diseases and determine the features and prognosis of disease manifestations.</p> <p>1.5 Demonstrate knowledge of disease management; The ability to treat the patient by using medications and other means of treatment (physiotherapy, psychotherapy, etc.).</p> <p>1.6 Demonstrate knowledge of the public health system and the role of the physician in this system.</p> <p>1.7 Define and explain the importance of ethical and legal principles in medical practice.</p>
<b>Skills</b>  უნარები	<p><b>2. Carry out consultations with patients</b></p> <p>2.1 Demonstrate the ability to collect complete account of a patient's medical history (anamnesis) in the patients of all age groups.</p> <p>2.2 Perform the complete physical examination of the patients of all age groups</p>



- 2.3 Provide the patient with advice and explanations related to his/her condition
- 2.4 Assess the patient's psychological status
- 2.5 Take care of the patient and protect his/her rights
- 3. Assess a clinical case, schedule appropriate investigations, make a differential diagnosis, and develop a patient management plan**
- 3.1 Integrate basic scientific knowledge with clinical manifestations.
- 3.2 Understand and evaluate the complexity of clinical manifestations of the disease.
- 3.3 Appoint the appropriate tests and interpret the results obtained.
- 3.4 Make a differential diagnosis.
- 3.5 Develop and discuss a plan for managing acute or chronic illnesses with patients and their caregivers, take care of the terminally ill patient and his/ her family.
- 4. Provide emergency medical care to the patient**
- 4.1 Provide basic first aid based on age characteristics.
- 4.2 Identify and evaluate emergency medical conditions.
- 4.3 Perform management (treatment) of emergency medical cases.
- 4.4 Carry out basic life support and cardiopulmonary resuscitation according to guidelines.
- 4.5 Carry out extended life-supporting activities according to guidelines.
- 4.6 Manage the treatment of injuries according to guidelines.
- 5. Appoint and prescribe medication**
- 5.1 Prescribe medication clearly, accurately and legibly.
- 5.2 Combine medication with clinical manifestations
- 5.3 Review medication and other treatment activities and evaluate potential benefits and risks for the patient.
- 5.4 Consider the compatibility of medications with a particular patient when prescribing treatment.
- 5.5 Treat pain and distress
- 6. Perform first-aid practical medical procedures (diagnostic, curative (including surgical)) in certain area of medicine:**
- 6.1 Determine the vital signs: pulse, breathing, temperature;
- 6.2 Measure the blood pressure;
- 6.3 Define the oxygen saturation;
- 6.4 Wash hands and put on the gloves;
- 6.5 Undertake the venipuncture of peripheral vein
- 6.6 Insert a catheter into the peripheral vein;
- 6.7 Deliver an injection of medications into the vein and use an infusion device;
- 6.8 Undertake an injection subcutaneously and into the muscle;
- 6.9 Prescribe and administer oxygen;
- 6.10 Safely manage the transport the patients;
- 6.11 Undertake skin suturing ;
- 6.12 Manage wounds and place dressing;



- 6.13 Carry out catheterization of the bladder;
- 6.14 Make a urinalysis;
- 6.15 Record ECG;
- 6.16 Interpret the electrocardiogram;
- 6.17 Perform functional respiratory tests;
- 6.18 Explain and demonstrate the use of inhalation medication.
- 7. Establish successful medical communication**
- 7.1 Demonstrate effective verbal, non-verbal (including written) communication with patients and/or their family members in order to create a trust-based environment for cooperation, regardless of their social, cultural, religious or ethnic background.
- 7.2 Demonstrate the ability to communicate adequately with colleagues, healthcare professionals, law enforcement or the media representatives, as well as with the team, in order to perform the professional duties effectively.
- 7.3 Keep the medical records in written or electronic form, accurately, in full, in an organized manner, in accordance with regulations and legal requirements.
- 8. Apply ethical and legal principles in medical practice**
- 8.1 Respect confidentiality;
- 8.2 Obtain informed consent from the patient and make an appropriate record;
- 8.3 Apply internationally recognized ethical principles and Georgian legislation while treatment;
- 8.4 Require autopsy in the cases envisaged by the legislation of Georgia;
- 8.5 Certify death and issue a death certificate.
- 9. Assess the psychological and social aspects of the disease**
- 9.1 Identify the impact of psychological factors on the patient;
- 9.2 Identify the impact of disease-related social factors on the patient;
- 9.3 Identify disease-related stress;
- 9.4 Identify alcohol and drug abuse.
- 10. Apply knowledge and skills of evidence-based principles**
- 10.1 Identify and carry out research of the literature properly;
- 10.2 Evaluate the published literature critically, draw conclusions and apply it in practical work;
- 10.3 Use evidences in medical practice.
- 11. Apply data and information technologies effectively in medical practice**
- 11.1 Search for specific information assets;
- 11.2 Make effective use of computers and other information technologies to search for and keep information;
- 11.3 Save and use personal records in the future;
- 11.4 Use obtained information to support patient care and health, as well as research and education;
- 11.5 Maintain correctly and keep completely clinical records.
- 12. Apply scientific principles, methods, and knowledge of biomedicine in medical practice and research**



	<p>12.1 Discuss and explain methods of carrying out scientific research;  12.2 Plan research in details, process the results and draw conclusions;  12.3 Apply advancements in biomedical sciences to practical work;  12.4 Write an abstract based on a critical analysis of the scientific literature;  12.5 Demonstrate knowledge of ethical principles while conducting scientific research.</p> <p><b>13. Be engaged in health promotional activities; participate in public health issues and its effective work.</b></p> <p>13.1 Take measures to reduce the risk of harm to the patient during treatment;  13.2 Take measures to prevent the spread of infection;  13.3 Take care of patient safety;  13.4 Assess own health and understand the problems associated with it in terms of professional duties;  13.5 Participate in health promotion activities at both the individual and population levels;  13.6 Promote changes in health care system, aiming at improving services;  13.7 Implement disease supervision for its prevention and health promotion with respect to individual patients.</p>
<p><b>Autonomy and responsibility</b></p>	<p><b>14. Demonstrate skills of professionals</b></p> <p>14.1 Demonstrate relevant professional behaviors and relationships in all aspects of medical practice: honesty, fairness, humility, responsibility, compassion, respect, altruism, and respect for differences;  14.2 Understand the primary duty of a doctor, take care of the health and well-being of each patient and community in accordance with ethical principles and in accordance with Georgian legislation.  14.3 Understand the limits of own abilities and ask for help;  14.4 Adapt to difficult clinical situations and work independently and with the sense of responsibility when needed;  14.5 Identify gaps in own knowledge and skills and understand the obligation of necessary lifelong learning, work out the ability of constant improvement of personal and professional development;  14.6 Work in a multidisciplinary team, demonstrate problem-solving, decision-making, time management and leadership skills.</p>
<p><b>Program Description and structure</b></p>	<p>The undergraduate educational program “Medicine” is developed in accordance with the National Qualifications Framework and national standards in the field of medicine. Implementation of the program is ensured by the relevant human resources, modern material base and considering many years of experience and traditions of the faculty. The components of the educational program "Medicine" are aimed at achieving the objectives set in the program and developing the competences of a qualified medical doctor. The logical sequence of courses and blocks of subjects defines the content, structure of the program and</p>



determines the achievability of learning outcomes/competencies and the effectiveness of the program.

In order to achieve the objectives of the program and the planned results, the program envisages dynamic development of competences. The curriculum is divided into 3 stages conditionally, dialectically related to each other. Its components are built on the principles of horizontal, vertical and spiral integration.

I - Basic Science Stage - It includes the first and second years when basic, biomedical sciences are studied by integrating clinical aspects.

II - Transitional Stage - Along with studying propaedeutic clinical courses, the ratio of practical components and teaching in the clinical environment is significantly increased.

III - Stage of clinical medicine (practice) - Teaching takes place in clinics, in a practical environment, with the integration of elements of the basic science.

The necessary condition for continuing studying at the next stage is to pass the staging ("qualification") exam after completing each of the three major stages.

The program considers teaching such subjects as Research Skills and Clinical Skills from the very first year. Each of these courses considers 10 credits, taught at all three basic stages, and the distribution of its modules follows such principles as "from simple to difficult", "From understanding to ability", "from basic medicine to clinical medicine".

Practical training in clinical skills is conducted at the Clinical Skills Center equipped with various simulators, where the student is given the possibility to practice and develop the skills necessary for a practitioner. The development of clinical skills is assessed by Objective Structure Clinical Examination (OSCE) or Direct Observation of Procedural Skills (DOPS). In addition, the development of mandatory clinical skills is provided in specific clinical disciplines, for example: Internal Medicine Block, Surgery Block, Obstetrics & Gynecology Block, etc.

Courses in research skills will teach students how to select, search and analyze literature, develop critical thinking and independent reasoning. Studying the types, methodologies, methodic procedures and methods of scientific research, as well as developing academic writing skills within the same subject will assist the student in possible scientific and educational work as well as in the application of evidence-based knowledge in professional work in the future; Mastering research ethics will help the student to understand copyright, plagiarism, the selection of the object of a



scientific experiment, and the basic principles of the legal aspects of the field.

The development of research skills is evaluated by the presentation of a research project in the final year of studying. The student presents this project in front of the commission.

These courses, along with the elective courses of the specialty, which are distributed across all three major stages in a growing intensity, greatly enhance program integration and promote generalization of knowledge. In addition, they ensure that the student's comprehensive interests and requirements are met and that his/her personal and academic independence is enhanced, which will facilitate his/her professional development in satisfying the labor market requirements, or in terms of further learning and professional development.

The program is result-oriented. It is designed to provide the future doctor with the necessary foundation to successfully apply the gained knowledge, practical habits, and clinical reasoning skills and values during the practical work.

Prevention and health promotion issues are included in the program from the very first year and continued spirally throughout the program in the different clinical courses.

The study of medical ethics and issues of medical law also begins in the first year and is continued spirally during the learning of different clinical courses.

The aim of the elective courses of specialty is to enrich the student's knowledge in the field of his/her own interest. Such courses are available at basic, as well as transitional and clinical stages of education. Elective courses are logically linked to compulsory courses (see list and distribution of elective courses according to stages).

The sum of elective courses in the program amounts to 26 credits. The number of elective courses increases along with the academic years and reaches the maximum in the last year of learning.

In the last semester, the student has the opportunity to choose a field of interest and to take clinical practice in that field.

During the first two years (4 semesters) of the basic (1st) block, the student gains a clinically oriented basic education. The curriculum begins with the learning of medical chemistry and physics, followed by an introduction to clinical anatomy and embryology, and basic of histology, physiology and biochemistry, which are a fundamental part of medicine.

Afterwards, the program focuses on systems, for example, the "nervous



system", "digestive system", "respiratory system," etc. Additionally, each system is studied comprehensively from the perspective of anatomy, embryology-histology, physiology, and biochemistry and ends with one unified integrated exam.

While teaching each system, such clinical cases are discussed that facilitate the integration of basic and clinical disciplines, prove the necessity of basic knowledge in clinical practice, and increases the motivation of the student. The motivation is also increased by the course "Introduction to Clinical Medicine", which is taught at the bedside of the patients in intensive and critical care units and aims to demonstrate the importance of basic knowledge of medicine in clinical practice. While teaching each system, clinicians are involved in the education process and they conduct trainings on a specific clinical issue, problem, or case. For example, liver transplantation and/or vagotomy are discussed within the scope of digestive system, trepanning is discussed within the scope of nervous system, and amputations are studied within the scope of musculoskeletal system.

At the end of the 2nd academic year (4th semester), a staging (qualifying) exam is held, covering all the components of the studied basic subjects. The exam is written. It includes 200 tests and 50 open-ended questions. Only after the successful passing of this exam, the students have the right to continue their studies at a next stage.

The third year of teaching is the so-called transitional period in which complex studies of pathological changes, disease manifestations, diagnostic methods, and pharmacology are taking place. During this year, there is a significant increase in the proportion of stay in the hospital and, therefore, in contact with the patient: Students spend more than half of their learning time in hospitals.

The fifth semester covers general parts of the study disciplines: "General Pathology", "General Pharmacology", "Introduction to Radiology" and "Basic Principles of Patient Examination". In the same semester, general surgery course will be taught.

In the sixth semester, pathologic changes and disease symptoms are studied according to systems in parallel with diagnostic (radiological or laboratory) methods and basic pharmacology. The learning algorithm is as follows: the study of each system begins with a pathology, continues with the propaedeutics of the disease of the same system, with radiology, and ends with pharmacology. This promotes the development of the student's



clinical thinking and application of theoretical knowledge in practice, which is reflected in (and should be reflected in) the developing of the following skills: collecting the anamnesis and analyzing the data obtained from physical examinations, the interpretation of investigation findings, and the ability to draw clinical conclusions.

The sixth semester includes an independent two-credit course in “Introduction to Clinical Reasoning”. Students' active participation in the process of teaching of this course is provided by the CBCR (Case-Based Clinical Reasoning) method of teaching.

At the end of the academic year a staging (qualifying) exam is held, which in addition to the theoretical part includes the Objective Structured Clinical Examination (OSCE). Students gain the right to continue their studies at a next stage only after the successful passing of this exam.

The third clinical-stage encompasses all those subjects, studying of which, provides the implementation of the goals of the program on one hand. On the other hand, it enables the graduates to achieve the degree of knowledge and understanding, competences, autonomy and responsibility, acknowledgment of the role and place in the public health system that are considered by the program outcomes and meet the requirements of the national standard.

Teaching of clinical disciplines is designed to develop the students skills such as communication with the patient or the person in charge, complete physical examination, planning of needed investigations, interpretation of instrumental and laboratory examination data, creating of differential diagnosis, and making diagnoses, as well as developing of patient treatment plan based on the principles of evidence-based medicine.

The fourth year of learning is a period of active teaching of clinical courses and appropriate practice, which mainly consists of large clinical blocks.

The seventh semester is dedicated to "Public Health", in which the health care system, Georgian legislation in this field, patient safety issues and others are fundamentally taught. The same semester involves “Internal Medicine Block 1”, which includes cardiology, pulmonology, and gastroenterology (in total 11 credits), as well as “General Surgery”.

The 8th semester is dedicated to “Internal Medicine Block 2”, which includes nephrology, rheumatology, endocrinology and hematology/transfusiology. The same semester includes the "Infectious Diseases and Clinical Immunology Block", which covers infectious diseases, including AIDS and tuberculosis, as well as clinical immunology



and allergology. The “Clinical Pharmacology” is taught in the same semester.

Although the fourth and fifth years (7th - 10th semesters) are mainly devoted to clinical courses, “Clinical Skills 4” is also taught as a separate course. The lectures of “Clinical Skills 3” take place at the simulation center and its program is designed to improve students' procedural skills and prepare them to work in the Hospitals.

The ninth semester of the fifth year includes such blocks as "Obstetrics-Gynecology-Reproductive medicine", "Pediatrics and Pediatric Surgery" and "Oncology (with Palliative Care)"; The same semester considers teaching of “Laboratory Medicine” and “Research Skills-4”.

The tenth semester is dedicated to teaching the following subjects: "Neurology", "Geriatrics", "Surgery-2" and "Family Medicine".

Portfolio, OSCE, Mini Cex exams, as well as clinical case reviews are used to evaluate clinical courses (see also Appendix # below).

The final year includes differential diagnostics in “Internal Medicine” and “Surgery”, as well as "Dermatology", "Ophthalmology", "Otorhinolaryngology", "Block of Emergency Medicine", "Rehabilitation", "Forensic Medicine" and "Psychiatry".

The number of elective courses (12 credits) reaches its maximum during the sixth year. The last semester is presented as a block of elective courses in clinical practice (4 credits for each discipline /see table). Student can choose 2 courses in the direction of his/her own interests and deepen relevant clinical skills.

Elective block in clinical practice

1. Internal Medicine
2. Surgery
3. Obstetrics
4. Pediatrics
5. Family Medicine
6. Psychiatry
7. Gynecology
8. Clinical Radiology
9. Infectious Diseases

Finally, the components of the medical education program ensure the achievement of the goals set by the program and development of the competencies of a physician. Prerequisites for the admission to the courses and the sequence of learning the courses are determined by the structure of the curriculum and syllabuses and are described in the so-called



	<p>permanent table (sample attached).</p> <p>All learning outcomes are assessed during the final year, that includes test exam, OSCE, Mini Cex exam, portfolio assessment and presentation of a scientific project (which is the final part of the "Research Skills" course - see above). Students should present the scientific research project in the last semester in front of the special commission. At the end of the academic year, the student passes a test exam that includes questions from different clinical courses. The student also passes a 16-station OSCE test, the commission evaluates the portfolio.</p> <p>After successful completion all of the above-mentioned components, the student is awarded a Diploma of a Medical Doctor.</p>
<b>Teaching methods</b>	<p><b>Lecture</b></p> <p>Lecture is an important learning resource of the program. It provides a scientifically and logically consistent understanding of the basic terms of the subject without overloading with the details; It aims to present the overall picture, highlight and solve problematic issues; Lectures are also used to summarize certain materials in order to study the information provided in the textbooks more effectively. Lectures are mostly interactive.</p> <p><b>Seminar</b></p> <p>The following activities are implemented at the Seminars: Oral inquiry, discussion, demonstration, role-playing. Quizzes, making presentation and writing the essays are the part of the seminars. The purpose of the seminar is to provide students with the opportunity to deepen their theoretical and practical knowledge. Academic staff coordinates and direct these processes purposefully.</p> <p><b>E – Learning</b></p> <p>The student has the opportunity to find an electronic resource in the library in order to learn independently, practice in clinical skills, prepare a presentation or a research project, etc.</p> <p>The lecturers upload presentations, textbooks/manuals, and additional information or assignments into the electronic systems (Moodle system).</p> <p><b>Team working</b></p> <p>The student works in a team that develops the ability to hear and respect each</p>



other. He/she is used to team debates, sharing responsibility for both the process and results of teamwork, agreeing on opinions, and developing other interpersonal skills. This method is used throughout the learning process. It also promotes the development of managerial and leadership skills.

### **Role-playing**

During the seminars, the student performs the role of patient and doctor under the direct supervision of the lecturer. This method provides the development and demonstration of the practical/clinical skills. The student demonstrates the ability of communication, taking patient history or carrying out physical examinations. While performing the role of the patient, the student simulates a particular disease, which helps him/her to understand and study clinical symptoms better.

### **Presentation**

The student makes presentations during studying different courses or modules of the program. The presentations are either oral, posters, individual or group projects. Generally, the presentation has the form of speech delivery, a report and is intended to inform and assure the audience. During the preparation of the presentation, the student has to search for and analyze information. The presentation includes a discussion with the audience. This method promotes the development of the skills of communication, analysis, synthesis and information management.

### **Problem-Based Learning (PBL)**

Problem-based learning involves the discussion and finding the solution of such case-problems that may require searching for additional information by the student. The students will be given a clinical problem (case), which will be analyzed by the group of students without the supervision of lecturer. Students will identify the ways (tasks) to solve the clinical problem, find out the necessary information and draw the conclusions. This method promotes the development of analytical thinking (analyzing and synthesizing skills), teamworking and independent learning. It also helps to develop the research skills, ability of clinical judgment and decision making, participating in medical discussions, effective communication in the medical context (communication with colleagues), which is important for the process of becoming a professional.

### **Case-Based Learning (CBL)**

CBL is an active teaching method in which students discuss the real-life clinical cases (“cases”). The group of students will be provided with theoretical material prior to the case presentation, which will help them to



prepare for the case. During the discussion of the case, students divided into small groups are given a thematic assignment. With the guidance and assistance of lecturer, students will discuss the case, after which the existing knowledge on the case will be summarized and new issues will be identified, which is necessary to "solve" the case. This method develops analytical and clinical reasoning, as well as teamworking skills. This method is applied from the very first year of teaching and facilitates the integration of basic and clinical courses.

**Note:** During the third year students are offered the subject "Basics of Clinical Reasoning", which is taught by the method of the Case-Based Clinical Reasoning (CBCR). It is an independent course, which is not integrated with other courses. Its essence is to enable the student to develop clinical reasoning, problem-based thinking, and to master its model. The CBCR teaches the student to apply theoretical knowledge obtained in the past to solve the patient problems, just as it happens in the real clinical practice.

### **Portfolio-based learning**

From the first year, the students fill in the assignment diary, where they write information about the various activities performed (anatomical dissection, manipulations on experimental animals or raining models, the examination of the histological specimen, autopsy in the dissecting room or cutting out of samples, etc.), about the patient in the examination and treatment of whom they were involved, as well as the ethical and legislative issues discussed; they name the skills they have mastered; Thus, cases observed in various clinical settings and developed skills, gathered experience are collected in the diary. The student gathers a great deal of information while studying clinical subjects. The student's personal curriculum is also part of the portfolio; The student has the possibility to identify own strengths and weaknesses and determine ways to improve them. The portfolio includes recommendations and assessments from the lecturers that are important for student development.

### **Teaching in clinical environment**

Teaching in the clinical environment involves observing clinical practice and teaching at the patient's bed. The student learns observing clinical practice by looking at the relationship between the doctor and the patient. He/she stays in the hospitals longer or on a night shift.

**Bedside teaching** is an interactive method that is carried out directly in the clinics, at the patient's bed. A small group of students, with the patient's consent, attend their examination process at the clinic, which is led by a doctor and they participate in the process. They perform clinical assignments under the supervision of a teacher. The bedside teaching method develops



such important skills and values as: gathering knowledge, communication skills, clinical reasoning, humanism, professionalism, understanding the doctor's role and social responsibility.

Teaching in the clinical setting should be reflected in the portfolio.

### **Clinical/Laboratory work**

The purpose of clinical/laboratory work is to develop the clinical-practical skills of the students in order to facilitate preparation for future independent professional activities. During this time, the student gains the experience of being engaged in the working environment and forming professional relationships.

### **Performing a research project**

The student works individually, under the supervision of a supervisor in order to complete the research project. Within the framework of the project, the student learns and develops skills of searching and processing scientific literature, developing a research hypothesis (research problem), setting goals and objectives, planning and implementing research, and analyzing results, drawing conclusions. The method promotes the development of analytical thinking (ability to analyze and synthesize), the ability to follow professional ethics, independent learning skills, as well as develops skills needed for engagement in scientific discussions and communication with colleagues.

### **Learning clinical skills**

Clinical skills learning begins in parallel with the study of basic disciplines from the first year of the program and continues through the years of clinical practice. The student studies in the clinical skills center (laboratories), where he/she develops various clinical skills on the training models and mannequins in safe environment.

The Faculty of Medicine has joined the **Lecturio** Online Academy, a learning platform that will allow students to listen lectures delivered by world-renowned professors in both basic and clinical subjects. The program contains about 50,000 videos. Each area has a rich and varied Q-Bank, which enables students to test knowledge through specially designed questionnaires / quizzes. Lecturio provides the opportunity to gain knowledge in accordance with international standards and requirements. Academic staff of the faculty also have access to the program. The program is actively used worldwide to prepare for international exams



<b>rules of assessment and Methods</b>	<p>The following grading system is used for the assessment of the Students:</p> <ul style="list-style-type: none"><li>(A) Excellent - 91-100 points from maximum grading points;</li><li>(B) Very good - 81-90 points from maximum grading points;</li><li>(C) Good - 71-80 points from maximum grading points;</li><li>(D) Satisfactory - 61-70 points from maximum grading points;</li><li>(E) Sufficient – 51-60 points from maximum grading points</li></ul> <p>Two types of negative assessment:</p> <ul style="list-style-type: none"><li>(FX) Unsatisfactory – 41-50 points from maximum grading points; considerable further work required from the student; after independent work he/she will have only one chance to pass additional exam;</li><li>(F) Failed– 40 and less from maximum points, meaning that the work performed by the student is not enough and further work required to learn the subject over again.</li></ul> <p>In case of receiving (FX), an additional exam is scheduled at least 5 calendar days after the final exam results are announced. The student will have received feedback on his performance in the earlier assessment.</p> <p>The student's assessment grades of the additional exam are not added to the grades of the final exam.</p> <p>The assessment grade of the additional exam is the final grade and will be reflected in the final evaluation of the curriculum component of the educational program.</p> <p><b>Methods of Assessment</b></p> <p><b>Oral exam</b> - Several examiners interview students, they identify specific problems, and determine ways to solve them. It is used to assess knowledge &amp; understanding and general transferable skills. As a rule, an oral exam is used together with other forms of the exam as of one of the components for assessment.</p> <p><b>Multiple choice question (MCQ)</b>, is a form of the exam where the student chooses the best answer from the provided list of possible answers in response to a short question. An important part of the questions is asked in a</p>
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format of clinical scenario. It is used to assess knowledge & understanding.

**Quiz/Combined Test.** The questionnaire allows checking of the level of knowledge of a significant amount of material in a short time and is useful to give formative feedback.

**Mini clinical exam (Mini Cex)** is used while studying clinical courses. Observation of how a student performs an examination, makes a diagnosis and develops a treatment plan of a real or standardized patient, is performed directly in the clinical setting.

**Objectively structured clinical exam (OSCE).** The student performs tasks according to a structured list of tasks, which may include practical procedures, interviews or data interpretation. It can simultaneously assess a range of clinical competencies: habits of collecting history, proficiency in various methods of patient examination, communication skills, professionalism, manual habits, clinical thinking, reasoning and problem solving, medical documentation and disease management.

**Clinical cases.** The student is given specific clinical cases where he/she interprets the information about the patient, evaluates data from clinical, laboratory, and various examinations. He/she also plan treatment and management activities. Clinical cases allow testing the ability to apply knowledge in practice and finding ways to solve problems.

**Direct observation of procedural skills (DOPS).** During this method, it is observed how the student performs separate procedures to prove competence (e.g. pressure measurement, ECG, etc.).

**Assessment with portfolio.** The student gathers a set of evidence that demonstrates students' ability to make and receive constructive criticism for their experiences, personal development, and learning. It is used to evaluate clinical, communicative and professional skills.

**The syllabus for each course contains the applied teaching and assessment methods.**

At the end of the second year, an integrated staging (qualifying) exam is conducted in the basic subjects. The exam considers the assessment of the materials studied during the two years. The exam is conducted in the form of tests, open-ended questions and a set of questions to be discussed. Passing the



	<p>exam successfully is a prerequisite for continuing the study.</p> <p>The final assessment of the learning outcomes of the program is carried out in the last year of the study.</p> <p>All learning outcomes are assessed in the final year. The assessment includes test, OSCE, Mini Cex exam, portfolio assessment and presentation of a scientific project (which is the final part of the "Research Skills" course - see above). Students should present the scientific research project in the last semester in front of the special commission. At the end of the course, the student passes a test that includes questions from different clinical courses. The student also passes a 16-station OSCE test, <b>the commission evaluates the portfolio.</b></p> <p>The student also writes a scientific research project that he/she should pass successfully in the last semester.</p> <p>Upon successful completion of all these stages, you will be awarded the status of Doctor of Medicine.</p>
<p><b>Fields of Employment</b></p>	<p><b>A person with an academic degree of the Medical Doctor has the right to:</b></p> <ul style="list-style-type: none"> <li>) Continue medical practice as a junior doctor (junior doctor shall perform the duties of a doctor according to the instructions and under the responsibility of an independent medical practitioner (Article 5 of the Law of Georgia on Medical Practice);</li> <li>) Be engaged in pedagogical and scientific activities;</li> <li>) Take a residency course and obtain the right of independent medical practice after passing the unified state certification exam;</li> <li>) Take a doctoral program (holding an academic degree of a Medical Doctor, an equalized academic degree to the master's degree entitles to take a doctoral program (Law of Georgia on Higher Education, Article 48).</li> </ul> <p><b>A graduate of higher medical educational institution (Medical Doctor, MD), is not entitled to carry out independent medical practice under the legislation in force.</b></p>
<p>Tuition fee for foreign students</p>	<p>) Tuition fee for the program is 7000 \$</p>
<p>Human and material resources required for implement the</p>	<p>There are 25 departments of both the University and the Faculty of Medicine are</p>



<b>program</b>	<p>involved in implementation of the program, 53 academic and 54 invited (including 4 foreign) staff. Total - 107.</p> <p>The ratio between academic and invited staff is 50/50, which is Ensures the sustainability of the program. Part of the invited teachers has been working with TSU for many years.</p> <p>The qualifications, teaching and research experience of the academic staff involved in the program are in full compliance with the objectives of the program.</p> <p>The program is served by a faculty with appropriate competence Administrative and support staff with years of experience.</p> <p>The number of students on the program is 430, the ratio between teachers and students is 1/4.</p> <p>The foundation for effective implementation of the program is the relevant infrastructure and material and technical resources of the university. That includes study equipment equipped with appropriate inventory, work rooms for academic and administrative staff; Individual meeting rooms with students; Conference rooms; Computer Resource Center, Clinical Skills Center, specially designed rooms for effective implementation of OSCE, training laboratories equipped with relevant microscopes and laboratory equipment.</p> <p>Fundamental disciplines are taught at university bases, including the Alexander Natishvili Institute of Morphology, and clinical, preventive and epidemiological disciplines are taught at more than fifty affiliated universities and scientific-clinical-practice centers.</p>
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