Tbilisi State Medical University

Faculty of Medicine

One Step Educational Program for MD

(English medium)

Program title - **One Step Educational Program for MD (English medium)**

Education level - **One step medical education**

Given degree - **Medical Doctor (MD)**

Program volume: **360 ECTS credits** (**1 ECTS** credit equals to **30 hours**)

Learning language - **English**

Preface

Result-oriented education nowadays is regarded as an optimal model for medical education. Based on international standards of medical education, it anticipates national health care demands and provides the preparation of successful and competitive physician.

In according to Georgian legislation for Medical Activity, medical practice is: "the professional activity of a person with medical background, professional skills and practical experience the aim of which is to protect, maintain and restore the health or ease suffering of a human being".

Quality of basic medical education appears as a predictor for successful medical practice. Its matching to international standards is a crucial for providing the optimal functioning of the national health care system. It is necessary to obtain not only theoretical knowledge in fundamental humanitarian and clinical sciences, but also to achieve high level of clinical skills in medical practice. Ethic values and formation of specific relations are also the highly important factors. All these are reflected in the competency standards for general and medical practice.

English medium MD program goals

MD program aims to bring up competitive qualified physicians with proper competences, who are ready for further postgraduate education and special training. The program also aims to prepare medical staff in according to demands from National Healthcare System.

The program should provide:

- Medical education corresponding to progressive and current knowledge and technologies;
- Ability and motivation for the future physicians during the whole life;
- Preparation of medical staff using modern information and teaching technologies;
- Matching of medical education to the demands and abilities of National Healthcare System.

Graduate from the English medium MD program at TSMU:

- Has knowledge in basic, clinical, behavioral and social sciences which are essential for medical practice;
- Has general clinical skills;
- Can evaluate and use properly obtained medical information for solving different clinical problems;
- Is able to assess health condition of each member of society and improve national health service on the basis of knowledge obtained in clinical, biomedical and behavioral sciences
- Can critically evaluate scientific and clinical news and utilize them to improve the clinical practice;
- Understands essentiality of continuous medical education and professional development

Requirements for involvement:

- Foreign Nationals with corresponding documentation should apply (send the documents) to the Ministry of Education and Science of Georgia. After approval from the Ministry they have right to start the undergraduate course.
- Georgian citizens are required to pass through the National Exams.

Outcomes of English medium MD program

Field Specific competences

Field knowledge

Knowledge of:

- Basic and humanitarian sciences
- Behavioral and social sciences
- Clinical sciences
- Medication and drug prescription
- Social health care system and understanding the role of physician in the system
- Ethical and legal principles

MD graduate should:

1. Consult a patient:

- Take history of illness
- Make physical examination
- Be able for clinical thinking and decision making
- Support and defend the patients' rights
- Evaluate psychological state of patient

2. **Evaluation of clinical cases, physical examination, differential diagnosis, discussion about diseases management**

- Understanding and evaluation the complexity of clinical case report
- Proper examination and interpretation of the results
- Differential diagnosis
- Discussing the plan of the disease management with patients and medical personnel
- Care for terminal patients and their family
- Management of chronic diseases

3. **First aid in case of emergencies (First aid and resuscitation)**

- Recognition and evaluation of emergencies
- treatment of emergencies
- Basic first aid
- Basic life saving and cardiopulmonary resuscitation according to current guidelines
- Cardiopulmonary resuscitation
- Advantage life saving measures according to current guidelines
- Trauma management according to current guidelines

4. Medication

- Prescription of medicines in understandable and accurate way

- Making close links between medication and clinical activities
- Discussing benefits and risks of medication for the patients
- Pain and distress treatment
- Considering the drug interaction during multi-drug treatment

5. Practical procedures

- Measurement of arterial pressure
- Puncture of veins
- Lumbar puncture
- Vein catheterization
- Intravenous medication and infusion systems
- Subcutaneous and intramuscular injections
- Provision of oxygen supply
- Patients' transportation and care
- Making stitches
- Blood transfusion
- Catheterization of the urine bladder
- Urine analysis
- Making and interpretation of ECG
- Conducting functional tests of the respiratory system

6. **Effective communication in medical context**

- Communicating with patient
- Communicating with colleagues
- Delivering bad news to patients
- Communicating with patients family and relatives.
- Communicating with patients with disabilities.
- Communicating for informational consent.
- Written communication.
- Communication in case of conflict.
- Communication with support of the third person.
- Communication with legal organs and mass media.
- Effective communication with any person in spite of his/her social, cultural, religious, racial or ethnical character.

7. Ethical and legal principles in medical practice

- Confidentiality
- Using ethical principles and analytical abilities during treatment.
- Getting informational consent and making proper written statement.
- Delivering of notification of dying.
- Asking for autopsy (in cases regulated by Georgian legislation).
- Utilizing Georgian and International legislations during treatment.
- Practice medicine in multicultural societies.

8. Evaluation of psychological and social aspects associated to disease

- Evaluation of disease relevance and psychological factors affecting the patient
- Evaluation of disease relevance and social factors affecting the patient

- Stating stress which is caused by specific disease
- Stating drug and alcohol abuse

9. Using of evidence based principles abilities and knowledge

- Evidences in practice
- Correct definition and conduction of proper literature review
- Critical evaluation of published literature, decision making and using in practice;

10. Effective use of information and information technologies in medical context

- Accurate and full storage of clinical notes
- Application of modern technologies in practice
- Searching for specific informational resources
- Storage and further usage of information
- Ability to keep personal notes (portfolio)

11. Scientific principles, methods and knowledge of Biomedicine in medical practice and research

- Knowledge of methodology of scientific research; Ability of making: design of research, detailed planning, interpretation of the results and decision taking
- Ability to use achievements of biomedical sciences in practice
- Writing a review on the basis of critical analysis of scientific literature
- Knowledge of ethical principles for conduction of scientific research

12. An effective work and involvement in health care system

- Conducting the type of treatment for patients, which reduces the risks to minimum
- Conduction of measures against infection spreading
- Understanding of personal health problems and evaluation of personal health regarding to personal occupation/profession;
- Taking part in health care supporting activities as an individual, as well as at population level.

Thus, MD graduate in his/her competences can utilize obtained knowledge and practical skills for provision of ever-increasing quality in work planning and conducting on a proper level. He/she is able to evaluate properly and precisely the needs of professional help and provide patient's safety.

General competences

Knowledge and understanding – has deep and systemic knowledge of the field, which provides ground for new, original ideas and problem solving skills.

Is able to use full spectrum of learning-informative resources. Can manage personal learning process. Understands the importance of continuous renovation. Has the ability for objective evaluation of personal knowledge and skills;

Ability of apply knowledge in practice - use of knowledge in practice; acting in a new, unpredictable and multidisciplinary environment; searching for new original ways for solving complex problems, and among them, ability to conduct research independently, with modern technologies and approaches;

Student can critically evaluate, analyze complex, incomplete and contradictory data; Interpreting an understandable way the results of the analysis and after, use them in practice; Analyze, make

decision and summation for different data; Provide evidences and/or counterarguments in analyzing of the results;

Making conclusions - making evidence based conclusions on the ground of critical analysis in case of complex and incomplete information (including modern researches); Innovative synthesis of information, issued from modern data. MD graduate can identify specific problems, finding a reliable, operative and safe ways for problem solving, and make correct actions after proper conclusion.

Communication skills - To make and share proper conclusions, arguments and research methods to academic and professional society, according to standards of academic integrity and Information - communication technologies; To have the ability of observation, listening, asking questions, as well as non-verbal communication skills. Able to participate in different meetings and convey own opinions both in verbally and written way. Able to conduct negotiations in a professional context as well as in conflicts resolution.

Learning ability – conduct studies independently, understanding specific features of study process and providing high level of strategic planning.

Obtain information from different sources; deal with and critically evaluate a large volume of information; has ability to utilize obtained information in practice.

Values – evaluation of self and others dependency on values. Personal contribution in establishing new values.

Learning and Teaching Methods and Evaluation System

Essential terms for teaching at the faculty of medicine are: integration of theoretical and practical teaching; development of clinical skills in virtual simulation centers and clinical environment. New technologies must have an advantage during the teaching.

Teaching is student oriented which means students' active participation in the study process and involves case teaching, discussions, empiric teaching, seminars and projects.

Teaching forms used in study process:

- Interactive lectures, seminars, colloquiums
- Studying in clinical environment
- Simulators and moulages
- Performing a roll of patient or physician
- Laboratory teaching
- Presentations
- Participation in scientific research
- Practice

Development of clinical skills has a crucial importance during basic medical education. In this sense, simulations or computerized study programs with different complicity are broadly used. Those systems maximally reflect real disease, diagnostic and treatment procedures.

Utilization virtual teaching methods support the defense of patients' safety. Also it decreases a number of students in clinics, who as in great quantities can't establish proper contact with patient and develop clinical skills.

Evaluation System of Student's Knowledge

For evaluation of student's knowledge ECTS - European Credit Transfer and Accumulation System - performs at the university, which is oriented on the student, learning outcomes and transparency of study process. This system aims to provide planning, performing and evaluating the study process units, as well as students' mobility.

Every ECTS credit point stands hereby for a certain amount of work load (1 credit equals 30 hours). Credits are distributed throughout all components of the program, which itself consists of one-semester courses.One year corresponds to 60 ECTS-credits. Student load must not proceeds 75 credits annually.

Evaluation of the learning outcomes of a student includes interim and final examination evaluation - overall 100 points. A student is admitted to the terminal test if and only if his/her intermediary points and maximal score of the terminal test potentially exceed 51%.
Maximal point for final examination is 40. Final Exam is passed if student gets minimum 24 points out of 40. Student obtains credits if he/she gets 51 points out of 100.

The grading system allows:
Five positive grades:

- (A) Excellent –91% and over of maximum grade;
- (B) Very good –81-90% of maximum grade;
- (C) Good – 71-80% of maximum grade;
- (D) Satisfactory – 61-70% of maximum grade;
- (E) Acceptable –51–60% of maximum grade;

Two types of negative grades:

- (FX) Fail – 41-50% of maximum grade, meaning that a student requires some more work before passing and is given a chance to sit an additional examination after independent work;
- (F) Fail – 40% and less of maximum grade, meaning that the work of a student is not acceptable and he/she has to study the subject anew.

A student shall be entitled to sit an additional examination when awarded a negative grade at a final examination within a period of at least 10 days.

Different types of examination (oral and written exams, as well as combined exams, OSCE, presentations, thesis, etc) are used for evaluation of knowledge and skills of the student.

At the end of basic medical education student is evaluated not only in the field of basic medicine, but also in practical skills.

English medium MD educational program involves:

General educational modules: Physics, Chemistry, Biology, Georgian Language, Foreign Languages, Medical Terminology, History of Medicine;
Fundamental sciences' modules: Biophysics, Anatomy, Bioethics, Histology-Cytology-Embryology, Biochemistry, Physiology; Medical Psychology, Molecular and medical Genetics;
Preclinical modules: Pathologic Anatomy, Pathologic Physiology, Microbiology, Immunology, Topographic Anatomy, Pharmacology, Hygiene & Medical Ecology, Propedeutics of Internal Medicine, General Surgery.

Clinical modules: Internal Medicine (Cardiology, Pulmonology, Endocrinology, Gastroenterology, Nephrology, Rheumatology, Allergology & Clinical Immunology, Occupational Diseases, Hematology), Surgery (Surgery, Urology, Surgery (Emergency), Traumatology & Orthopedics, Pediatric Surgery, Oncology, Neurosurgery), Obstetrics & Gynecology, Family Medicine, Radiology, Dermato-venerology, Neurology, Pediatrics (Child & Adolescent Medicine, Pediatric Neurology, Pediatric Infectious Diseases), Oto-Rhino-Laryngology, Ophthalmology, Phthysiology, Clinical Toxicology, Infectious Diseases, Psychiatry, Narcology, Forensic Medicine & Medical Law, Anesthesiology & Resuscitation, Rehabilitation, Health Resort Therapy & Physiotherapy with Medical Tourism, Elective subjects (Angiosurgery, Laboratory work, Reproductive Health; Rehabilitation for Musculoskeletal and Neurologic Disorders; Evidence-Based Medicine in Primary Care Pediatrics, Thoracic surgery);
Social sciences and health management cycle: Medical Ethics, Evidence Based Medicine & Research, Epidemiology with Biostatistics, Health Care & Management.
Clinical skills: clinical communication and consulting, skills in clinical and emergency aid.

The program is based on learning of the following items: human body structure, physiological and biochemical processes, pathogenesis of the diseases, patho- morphology, clinical course, epidemiology, treatment prevention and rehabilitation:

- Human body development, its macro and micro structures (biology, genetics, embryology, anatomy, histology, cytology, topographic anatomy);
- Functioning mechanisms of the human body: (biophysics, physiology, biochemistry, hygiene);
- Disease development mechanisms: (path. anatomy, path. physiology, microbiology, immunology);
- Principles of disease clinical features, diagnostics, treatment, prevention and rehabilitation (Internal medicine, surgery, obstetrics and gynecology, skin and venerology, neurology, pediatrics, ENT, ophthalmology, phthysiology, toxicology, infectious diseases, psychiatry, stomatology, legal aspects of medicine, narcology, anesthesiology-rheanimatology, epidemiology, rehabilitology, balneology with physiotherapy and medical tourism, social health care and management).

Program structure and study plan with indications of specificities of organization of the training:

The curriculum of the MD-programm is partially integrated. The partially integrated curriculum consists of solitary disciplines, as well as integrated modules. In clinical disciplines (internal medicine, surgery) teaching is integrated.
Integrated module for "internal medicine -1" involves parts of: cardiology, pulmonology, and endocrinology.
"Internal medicine -2" involves: gastroenterology, nephrology, rheumatology, allergology and clinical immunology, occupational diseases and hematology.
Module "Surgery-1" involves: surgical diseases and urology.
Module "Surgery-2" involves: urgent surgery, trauma and orthopedics, pediatric surgery, oncology and neurosurgery.

During the study process important place is given to CBCR (Case Based Clinical Study), Informational technologies are widely used in teaching and learning process. Development of clinical skills is provided in the departments of clinical skills, Family medicine, etc.

Integrated teaching also comprises new method of students' evaluation so-called **OSCE** –Objective Structured Clinical Examinations, which is already used in the department of internal

diseases' propaedeutics and clinical skills center. Students are evaluated by objectively structured clinical exam.
(*see the attached study plan).*

Quality assurance system for medical education

There is entire conception of quality development in the TSMU. The quality assurance department is represented by the quality group and the head of quality assurance in each faculty. The Head of department of quality assurance conducts the policy of quality development and is accountable for its realizations to academic board.
The University quality assurance department fully adopts quality assurance paradigm which is known as Shewhart cycle – **PDCA:**

- Plan (P), - Do (D), - Check (C), - Act (A)

This model greatly corresponds to the context of continuous development of quality in the University. Ending one turn of the cycle means beginning of another.

The quality assurance department actively collaborates with all, academic, administrative structures and students in the University. The criteria issued from the quality assurance department are public, and available on the University web page (page of quality assurance department). Results of different trials, conducted by the quality assurance department, are presented to the academic board, and placed on the web in case of need.

Evaluation of the program is performed once a year by quality assurance department. For this process the forms of internal and external assessments are used. In both cases, interest conflict is excluded.

Employment Opportunities of Persons Graduated from One step Educational Program for MD (English medium)

Graduate from the program certified as a Medical Doctor is able to have a medical practice according to the regulations of particular country.

Research and academic practice in the theoretical or other fields of health care not related to independent medical practice;

The person certified as a Medical Doctor is able to take the course of the Doctoral Level or take the post-graduate professional training course.