Tbilisi State Medical University

American MD (USMD) Program

Program title: American MD Program
Education level: One – step educational program
Qualification degree: Medical Doctor
Program duration: 6 years
Program volume: 360 ECTS credits (1 ECTS credit to 30 hours)
Learning language: English

Prerequisites for access to the educational program

Persons who have high school or equivalent education and pass unified national admission exams are eligible for American MD Program. Admission requirements are acceptable results from unified national admission exams, in the subjects that are prioritized by the university. Required grade for English language for Georgian citizens is 80% + 1%.

The right to study without passing unified national exams on the program is determined by the Law on Higher Education - Article 52. Paragraph 3. Specifically:
Study in educational institutions without passing unified national exams and mobility of students is governed by the Ministry of Education and Science of Georgian regulations. Students eligible for National Exam waiver shall represent one of the following:

a) For foreign citizens and stateless persons who have received full high school or equivalent education in a foreign country;
b) For Georgian citizens who have received full - high school or equivalent education in a foreign country and completed last 2 years in a foreign, English- speaking country;
c) For persons, who study/studied and have ECTS credits from foreign country's high educational institution recognized in accordance with the legislation of Georgia.

The mobility to the different educational program is permitted after the completion of one academic year of study. Mobility is possible twice a year, in the deadlines established by the Ministry of Education and Science of Georgia, compulsory procedures approved by the Act of the Director of National Centre for Educational Quality Enhancement and in accordance with the rules established by the University.
TSMU has established English language requirements for applicants who are enrolled in English programs without national exams:
All applicants are obligated to pass the English Language Test at Tbilisi State Medical University.
Applicants will be exempted from this English language test, if one of the following criteria are met:

a) Applicant has the certificate of English school / college / university completion.
b) Valid IELTS (> 6.5) or TOEFL (> 90) certificate;

Tuition Fee: For Georgian citizens - 8,000 GEL;
Foreign citizens - 13500 USD.

Preamble:

American MD Program (Doctor of Medicine Degree Program) was established in 2013. Program was implemented, as a result of bilateral cooperation of Tbilisi State Medical University, (TSMU), Emory University School of Medicine.

The idea of the program was to develop a new, innovative curriculum, which would be fully integrated and would envision modern requirements for developing a medical curriculum. The program was based on Emory University School of Medicine Curriculum, which was modified by European and local requirements.

Today, there are widely used training programs in the United States medical schools, which allow students to be actively involved in clinical studies and carry out research activities from the early stages of medical education.

We realize that, the highest standards of quality in modern medicine, firstly implies fundamental knowledge of biomedical science, combination of research and clinical skills - and implementation of it in medical practice as the end product, so the American MD Program is fully integrated and is based on harmonious merging of basic science and clinical disciplines. Becoming a doctor is impossible without fundamental science education; the latter is the foundation for proper understanding of the processes occurring in healthy human, the knowledge of diagnostic tools, and corrects interpretation of pathological processes of the diseases. In addition, basic education in humanitarian subjects, which allows clinicians establish and manage relationships with the patients, colleagues and other representatives of the society, takes significant place in the American MD Program curriculum.

American MD Program offers a wide choice of possibilities:

1. The program is in English, which increases the degree of competitiveness of the graduates worldwide;
2. Considers the elements of general university education - the program includes a set of humanitarian subjects: In the medical field of Georgia, it is actually the only program which includesteaching disciplines such as the history of civilizations, Anthropology, Art history, Philosophy, World literature, etc. All these disciplines are integrated taking into account the so-called "Axis of Time".
3. The program is fully integrated - integration is achieved through the basic, preclinical and clinical disciplines of both horizontal and vertical principles.
4. The program structure provides to pass two steps in the US Medical License Examination - the program is so structured to allow students to be able to pass two steps to theso-called United State Medical License Examination (USMLE). In addition, on the basis of the agreement between TSMU and Emory University, any student of the American MD Program, which will pass the first level of USML exams during the course, has a right undergo some part of clinical rotations in Emory Medical School.

5. Research component - research component is presented in the program with considerable volume, which considers the involvement of a student in a basic or clinical medicine, health care organization and other areas of medicine.
6. One of the features of the program is structured system of student public education: Each student is associated with the public, that's why the program devotes much attention to this issue. Each group has a public advisor - a small group coordinator who helps the student during the full course of the program in the process of adaptation to the academic environment, university and general requirements of the society.
7. The extracurricular part of the program is project of "Summer at Emory" and "Winter at Emorie", which was initiated by Emory University to encourage program students. This project is implemented twice a year and aims to introduce the American medical education and health care systems to TSMU students. The project is 4 weeks long and students have the opportunity to attend the current study process (lecture-seminars), as well as the daily clinical activities of American doctors.

The goal of the educational program

American MD (USMD) program is designed to train internationally competitive and competent, highly qualified physicians (Doctors) who are ready for postgraduate education and the specific training courses, both in Georgia and abroad (particularly in the U.S.). The medical cadres are prepared according to the requirements and standards of the country medical/public health care system.

Therefore, the program must:

- Provide a modern, internationally recognized standards, scientific knowledge and technological advancement of medical education;
- The future doctors should develop life-long learning skills and self-motivation;
- Ensure that medical personnel preparation and training using new information technologies;
- Ensure that the medical education meets the requirements and standards of the national healthcare system;

Learning outcomes

The learning outcomes are based on field specification of the program and accreditation standards for educational programs of higher education institution.

Field competencies

Field knowledge

- Knowledge of basic natural sciences
- Knowledge of behavioral and social sciences
- Knowledge of clinical sciences
- Medications and principles of their appointment
- Knowledge of public health system and understanding the role of a doctor in this system
- Knowledge of ethical and legal principles

Field skills:

Graduates should be able to:

1. **Patient counseling**

- Gather anamnesis
- Conduct physical examination
- Clinical judgment and make decision
- Give explanation and advice
- Encourage patients and protect their rights
- Assessment of patients' psychological status

2. **Clinical Case Evaluation, scheduling of examinations, conduct differential diagnosis, discussion of disease management plan**

- Understanding and evaluating the complexity of clinical report
- Conduct the corresponding examinations and interpretation of results
- Conduct differential diagnosis
- Discussion with patients and their caregivers about the plan of disease management
- Take care of patients in terminal condition and their family members
- Chronic disease management

3. **Help in emergency medical care**

(Primary assistance and resuscitation measures)

- Recognition and evaluation of emergency medical condition
- Treatment of emergency medical condition
- Provide basic first aid
- Conduct the basic life-saving and cardiopulmonary resuscitation measures in accordance with guidelines
- Provide extended life-saving measures in accordance with guidelines
- Treatment of traumas in accordance with guidelines

4. **Subscription of medicines**

- Subscribing medication in a readable and accurate way
- Connecting the medication and other treatment measures to the clinical context

- Considering the accordance between the medication and other treatment and evaluate the potential benefits and risks
- Pain and distress management
- Considering compliance with medication when applying for treatment

5. Conduct practical procedures

- Pressure measurement
- Venipuncture
- Lumbar Puncture
- Establish a catheter in Vein
- Injection medications into the vein and using the infusion device
- Make injection under the skin (subcutaneous) and muscle
- Oxygen delivery
- Transportation and treatment of patients
- Shedding
- Blood transfusion
- Catheterization of the urinary bladder
- Make urine analyze
- Performing and interpreting ECG
- Conduct a functional tests of respiratory system

6. Effective communication in medical context

- Communication with patient
- Communication with colleagues
- Communication in case of bad news
- Communication with relatives of patient
- Communication with persons with disabilities
- Communication in order to receive informed consent
- Written communication (including medical records)
- Communication in case of conflict
- Communication by means of auxiliary person
- Communication with law enforcement agencies and mass media
- Effective communication with any person irrespective of their social, cultural, religious or ethnic background

7. Implementation of ethical and legal principles in medical practice

- Save confidentiality
- Implementation of ethical principles and analyzing skills in treatment
- Receive informed consent and make appropriate records

- Issue death certificate
- Demand autopsy (in case of provided by a legislation of Georgia)
- Use the Georgian and international legislation during treatment
- Direct a medical activity in multicultural society

8. **Assessment of psychological and social aspects connected to the disease**

- Evaluate the psychological factors of disease detection and patient impact
- Evaluate the social factors of disease detection and patient impact
- Determine the stress related to the disease
- Reveal the alcohol and drug abuse

9. **Use of evidence-based principles, skills and knowledge**

- Use evidences in medical practice
- Properly define and conduct the relevant literary research
- Critical assessment of published literature, make conclusions and implement in practical activities

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

- Keep the clinical records orderly and completely
- Implementation of updated informative techniques in practical activity
- Finding specific information resources
- Keep information and use them in case of necessity
- Private record keeping skills

11. **Use of scientific principles, methods and knowledge of biomedicine in medical practice and research**

- Knowledge of scientific research methodology. Ability to make research design, detailed planning, processing of obtained results and make conclusions
- Ability to use biomedical science achievements in practical activity
- Ability to write a summary / review base on critical analysis of scientific in biomedicine
- Knowledge of the principles of ethics for conducting scientific research

12. **Implementation of health promotion activities, involvement in public health issues, effective work in the health care system**

- Conduct a treatment, that minimize the risk of damage to the patient
- Implementation the measures against the spread of infections
- Understanding of own health problems and evaluating health condition in terms of professional duties
- Participation in health promotion as an individual and population level

Therefore, medical doctor is able to use the received knowledge and practical skills, acquired in competence, in order to plan the job, maintain it in a proper level and provide increasing quality. MD is able to accordingly and exactly evaluate the necessity of professional support and provide the patients' safety.

General Competences

Knowledge and understanding – has a deep and systematic knowledge of the field that enables to develop new original ideas realizes the ways to solve a particular problems;

Has the opportunity to use the full study-research resources, can rule his/her study process. Realizes the necessity of continuous renewal of knowledge; He has the ability toobjectively evaluate his knowledge and skills.

Students have Ability to use knowledge in practice - Act in new, unforeseen and multidisciplinary environment; Search for new and original ways to solve complex problems, including independent research using the latest methods and approaches;

Can make critical assessment of difficult, incomplete and contradictory data, their independent analysis, convey analysis of the results, and then use them. Have a critical approach to new information, can analyze, summarize, integrate, conclude, can produce evidence and / or opposing arguments in analyzing the results obtained.

Conclusion skills - Developing conclusions based on critical analysis of complex and incomplete information (including recent research); Innovative synthesis of information based on the latest data;

Medical doctor can identify the specific problem, can find the safe ways for to solve this problem and make the appropriate conclusion and act correctly.

Communication skills - Communication of its conclusions, arguments and research methods with academic and vocational societies in accordance with the academic honesty standards and information-communication technologies; Has observation, listening, questions, and nonverbal communication skills. Can participate in meetings and convey his opinions in oral and written form.

Conduct negotiations in the professional context and participate in resolving conflicts.

Study skills - Study independently, realizing the peculiarities of the learning process and high level of strategic planning; Ability to obtain information from various sources, to develop large quantities of information and its critical assessment; Ability to use old information during professional activities.

Values - Assess the dependence of his/her and others to values and contribute to the establishment of new values.

Methods of achieving learning outcomes

US MD Program is fully integrated medical education program. The program consists of modules in which the horizontal and vertical integration is achieved. From the first days of teaching, the course " Becoming A Doctor " is oriented to the use of theoretical knowledge in practice.This course is

oriented to equip students with necessary communication and clininical skills from the day one in Medical School.

Student oriented teaching method assures students' active involvement in study process. Teaching methods include the case-based teaching, Problem-oriented teachings, discussions, empirical studies, seminars and projects. In order to assess knowledge and skills, oral and written exams are used, different kind of tests, objectively structured clinical exam (OSCE), presentations, theses etc.

Forms of teaching used in the teaching process:

- Interactive lectures, seminars, quizzes;
- Teaching in clinical environments;
- Use of imulated scenarios and equipment (manikins)
- Use of standardized patients;
- Role playing;
- Laboratory teaching;
- Presentations;
- Taking place in scientific research;
- Practice.

Student knowledge assessment system

University has the European system of credit transfer and accumulation (ECTS), which is based on learning outcomes, transparency of study process and is oriented on student. The goal of this system is promoting planning, implementation, assessment / references of study units, and also student mobility.

Credit reflects the amount of work (one credit is equal to 30 hours) needed to complete a specific learning component and achieve learning outcomes. Credits are distributed among all components of the educational program. Study course (subject) is a one-semester. One academic year includes 60 ECTS. It is unacceptable that the student's annual load exceed 75 credits. Student's assessment provides interim assessment and final examination assessment; In total, 100 points. Students need 11 points to be allowed to exam. The final assessment for credit should not be less than 51. Student is rated at a maximum of 40 points at exam. The final exam will be considered as passed, if the student will collect at least 24 points out of 40. Student Assessment System includes five types (A, B, C, D, E) of positive and two types (Fx an F) of negative assessment.

- A) Excellent - 91% and more of maximum assessment;
- B) Very good - 81-90% the maximum assessment;
- C) good - 71-80% the maximum assessment;
- D) satisfactory - 61-70% of maximum assessment;
- E) enough - 51-60% of maximum assessment;

- FX) did not pass - 41-50% of the maximum assessment; The student is allowed to an additional exam with an independent work.
- F) Failed - 40% and less of maximum assessment; The student should retake the subject again.

  In case of negative assessment, the student is allowed to have an additional exam at least in 5 days after the final exam.

  During the Knowledge and skills assessment process oral, test, combined exams, objective structured clinical exam (OSCE), presentations, abstracts / thesis are used.

  Assessment of learning outcomes at the completion of basic medical education includes not only theoretical knowledge but also practical skills.

Structure of American MD Program

The program includes stages, modules and cycles.

The program consists of two main stages:

Initial - Premedical Stage and Medical Stage.

The basic goal of the premedical stage on one hand is to give the students fundamental education in the following sciences: Biology, Physics, Chemistry, and on another hand is to give them opportunity to extend their knowledge in the field of humanitarian sciences such as: Art history, History of medicine, History of Civilizations, Psychology, Anthropology, Communication skills, Philosophy, World literature and etc. Worth to be mentioned, that humanitarian sciences have not been taught in Georgian higher medical schools until now. Consequently, the leading English speaking specialists of the following sciences are invited in the program for this purpose.

In addition, the program is followed by a discipline: "Becoming a Doctor "for 6 years, which provides general medical skills and development of ability of clinical judgment from the very first day of the program.

Teaching process actively uses methods of Evidence Based Medicine, network of high-tech laboratories, simulators, incident demonstration in the immediate presence of the patient and active participation of so-called multidisciplinary team of physicians.

Medical stage (duration -5 years) is fully integrated and consists of 4 phases:

First phase: Foundations of Medicine (corresponds to the 18 month of teaching at Emory university school of medicine).

First phase is composed of two cycles:

A. Healthy Human
B. Human Disease

Cycle – Healthy Humans is organized in (that is why this program is universal) a way that repeats the natural cycles of the human development, al processes from the birth to the death (fecundate, birth, growth, sexual and physical activity, nutrition-metabolism, senility).

Cycle "Healthy Human" includes following modules:

Prologue 1- Basics of Medicine, Human development: Embryology, Cell, Tissue, Aging and dying. Neuroscience, Exercise and movement, Nutrition and metabolism, Endocrine control, Genetics and evolution, Together with the mentioned above, clinical activity of the students is conducted in parallel mode, which is mainly carried out within the course " Becoming a Doctor" in the clinical environment: clinics, outpatient departments and polyclinic type establishments. Interesting to note that the individual topic of each module is discussed as a complex and read by a number of specialists from different field of medical sciences. E.x. the theme- "Obesity and related problems" is discussed by endocrinologist, biochemist, psychiatrist and surgeon.

The cycle "Healthy Human" continuous with the module Prologue 2- Basics of Pathology, within which the principles of pathology, immunology and pharmacology is discussed.

Practically Prologue 2 is a transitional module to the following cycle - "Human Disease".

The Cycle "Human Disease" uses the integration, based on the anatomical systems and combines the following modules: Skin and Muscle-skeletal System, Respiration System, Cardio-vascular System, Gastrointestinal System, Urogenital system, Endocrine and reproductive system, also modules: Hematology, Neuroscience-1 and Neuroscience -2. Every constituent theme of each module includes integrated learning of basic and clinical subjects.

Second phase

Application of Medical Sciences Phase

The second phase provides applying the students' basic medical knowledge in the clinical medicine. During the mentioned phase, students are involved in clinical activity – implements the function of so-called Auxiliary medical staff (Core Clerkship) in the following areas of the clinical medicine: Internal Medicine (8weeks), Surgery (8weeks), Pediatrics (8weeks), Obstetrics and Gynecology (6weeks), Psychiatry (6weeks), Primary Care (6weeks), Elective module (6weeks) which includes: Critical and urgent medicine, radiology (4weeks) and so on.

Third Phase

Discovery phase – involves structured time for students who conduct research in the different field of basic or clinical medicine, health care or other areas of medicine.

Fourth Phase

Translation of Medical Sciences Phase

During this phase students are established as a practitioner of medicine. The phase forces clinical rotations such are: Critical medicine, Urgent medicine, Internal Medicine, Surgery, Pediatrics, Urology, Oncology and so on.

The phase implements experience of clinical work in intensive care unit and emergency therapy.

The phase ends with Capstone Course.

System of ensuring of development of medical educational quality

There is a united conception of quality development at Tbilisi State Medical University; here is a quality assurance service (system) that is composed by a University quality group and heads of faculty

quality assurance service. Head of faculty quality assurance service is accountable for implementation of quality development policy toward the Faculty Board. Head of faculty quality assurance service presents current reports, assessments and recommendations, also reports at the end of the each year. The university has the united conception of quality development. Based on it, head of faculty quality assurance service is subordinated to head of University quality assurance department and works according to the faculty program. The scheme excludes different interpretation of the information, supports and shares the approaches of the mission of university.

Quality assurance service of university and faculty fully shares cyclic paradigm of quality management/provision – known as a "Shewhart cycle" **(PDCA):**

- Plan=P
- Do=D
- Check=C
- Act=A

This model is most relevant to the context of continuous development of quality – of University: The end of one cycle is the start of the new one and so forth.

Quality assurance service cooperates virtually to all part of the university: Academic, administrative, supporting staff and students. Criteria, developed by this service are public and are located on the TSMU website in the category of quality assurance service. Results and assessments of the evaluation, conducted by the service of quality assurance is presented to the Academic Board and according to the content and necessity will be posted on website.

Evaluation of teaching programs is conducted once in an academic year. In the evaluation process internal and external assessment forms are implemented. Conflict of interests is excluded in both cases.

Administrative and academic personal of Emory University School of Medicine is involved and actively takes part in both, content and quality analyze of the program.

Possibility of employment for graduates of American MD Program

Possibility of independent medical practice for the graduates – Medical doctors – is regulated by employer country's legislation.

Graduates of the program have a right to scientific and academic activity.

A person with a diploma of an academic degree of medical doctor has the right to continue his studies in doctoral degree, or take special course of professional training (residency). T**he students, who will have passed the both steps of American licensing exams, will have the right to participate in the competition for the residency in United States of America.**

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