



**TBILISI MEDICAL ACADEMY**  
MEDICINE STARTS HERE

**PETRE SHOTADZE**  
**TBILISI MEDICAL ACADEMY**

One-Step Educational Programme Description

Medicine

2025-2026  
Academic Year

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## Academic Calendar for 2023-2024

<b>Fall Semester</b>
<b>I Semester:</b> Lecture period - 15.09.25 - 17.01.26 Midterm exams – 31.10.25 – 08.11.25 Christmas Holidays – 01.01.26 - 07.01.26 Final/additional exams - 23.01.26 -07.02.26/09.02.26 - 14.02.26
<b>III Semester:</b> Lecture period - 15.09.25 - 17.01.26 Midterm exams - 19.11.25 - 29.11.25 Christmas Holidays 01.01.26 - 07.01.26 Final/additional exams - 21.01.25 - 07.02.26/09.02.26 - 14.02.26
<b>V Semester:</b> Lecture period - 15.09.25 - 17.01.26 Midterm exams - 12.11.25 - 22.11.25 Christmas Holidays 01.01.26 - 07.01.26 Final/additional exams – 21.01.26 - 07.02.26/09.02.26 - 14.02.26
<b>VII, IX, XI Semesters:</b> Lecture period - 15.09.25 - 07.02.2026 Christmas Holidays – 01.01.26 - 07.01.26 Final exams, at the end of each course Additional exams - 09.02.24 - 14.02.26



## Spring Semester

### **II, Semester:**

Lecture period -02.03.26 – 27.06.26

Midterm exams - 24.04.26 - 02.05.26

Easter Holidays – 10.04.26 - 13.45.26

Final/additional exams - 03.07.26 -18.07.2/20.07.26 - 25.07.26

### **IV Semester**

Lecture period -02.03.26 – 27.06.26

Midterm exams - 22.04.26 - 02.05.26

Easter Holidays – 10.04.26 - 13.45.26

Final/additional exams - 01.07.26 -18.07.2/20.07.26 - 25.07.26

### **VI Semester:**

Lecture period -02.03.26 – 27.06.26

Midterm exams - 29.04.26 - 09.05.26

Easter Holidays – 10.04.26 - 13.45.26

Final/additional exams - 01.07.26 -18.07.2/20.07.26 - 25.07.26

### **VIII, X, XII Semesters:**

Lecture period -02.03.26 - 18.07.26

Easter Holidays – 10.04.26 - 13.04.26

Final exams, at the end of each course

Additional exams- 20.07.26 - 25.07.26



## General Information

TMA is one of first private medical educational institutions in Georgia, which was established by famous Georgian doctor, Prof. Petre Shotadze in 1992. Paramount priority of TMA, since its establishment, is sustainable development, thus year after year, TMA aspires to implement and exercise international standards within processes of teaching, learning and research.

More than 2500 TMA graduates are leading successful careers at leading hospitals, scientific-research institutions and healthcare organizations on local, as well as international setting.

Tbilisi Medical Academy is actively involved in various international exchange programmes, which provide successful students with opportunities to spend part of their studies at universities abroad and obtain priceless experience for further development into international standard professionals.

TMA is recognized and listed by international organizations:

International Association for Health Professions Education (AMEE)

Association of Medical Schools in Europe (AMSE)

European Medical Students Association (EMSA)

WFME - World Federation for Medical Education

World Health Organization – (WHO AVICENNA)

International Directory of Medical Education (IMED)

Foundation for Advancement of International Medical Education and Research (FAIMER)

Educational Commission for Foreign Medical Graduates (ECMG)

NMC – National Medical Commission (India)

Currently TMA successfully runs two one-step educational programmes – (Medicine - taught language Georgian and Medicine – taught language English) as well as residency programmes of postgraduate education. Being Georgia the Bologna Process country and TMA MD educational programs accredited in 2020 with WFME expert in panel, promotes the mobility of students and gives them the opportunity to participate in exchange programs in European Universities as well as enables the graduates to continue their studies in residency programs worldwide.

TMA has successfully accomplished institutional authorization in 2024 and accreditation of MD programs in 2020

## *Mission*

*TMA, as a student-oriented higher education institution, primarily seeks to teach and develop national and international healthcare professionals in an innovative manner by using evidence-based knowledge, whilst practically benefiting the community in Georgia through research-based outreach activities.*



## Educational program Medicine

The name of the program	One-step educational program – Medicine
Level	One-step educational program -equals to the II stage of higher academic education
Duration of the program	6 years, 12 Semester
Volume of the program - Number of Credits (ECTS)	
1 Credit	30 hours
Semester	30 Credits
Year	60 Credits
Total	360 Credits
Granted Degree	Medical Doctor
Language of instruction	Georgian

### Admission Criteria

**Citizens of Georgia** with general secondary education are admitted to One-Step Educational Program – Medicine (taught language Georgian) based on results of Unified National Examinations, including following subjects: Georgian Language, English Language and Biology - which are obligatory and one of the following electives: chemistry/physics/mathematics.

**Citizens of foreign countries or citizens of Georgia living abroad**, with secondary education are admitted to the program, in accordance to acting legislation of Ministry of Education and Science of Georgia, bypassing Unified National Examinations.

### The Aim of the Program

Is to raise Medical Doctors, through developing and strengthening among them the roles and competencies of physician in society: empowering them with international standard up-to-date evidence-based knowledge, raising awareness regarding public health care systems and role of a doctor within; elaborating clinical, communication and research skills and fostering among them highest ethical values and attitude required for medical practice, enable them to become self-reflective professionals, motivated for life-long learning.

### The Objectives of the Program

1. **To teach students Mechanisms and Treatment of Disease:** To give evidence based, modern knowledge at the molecular, cellular, organ-system, whole body and societal level of norm and pathology and integrate this knowledge with clinical science and skills to diagnose and treat disease.
2. **To enable students to perform Clinical Reasoning:** to promote clinical judgment based on application of knowledge - a thorough understanding of the clinical problem, application of scientific and societal principles, and knowledge of the health care systems.

3. **To make students to elaborate clinical skills for Patient Care:** to empower students with competencies related to consultation of patient and management of clinical case, practical procedures and delivery of emergency care; to facilitate adoption of principles of safety and quality of patient-centered holistic care.
4. **To empower students with professionalism** - to facilitate elaboration of respectful and ethical behavior in students in all professional interactions by theoretical teaching, medical practice and self-reflection to provide compassionate, empathic and patient-centered care to patients and families. To develop self-reflection skills for continuous personal and professional development -to motivate students for life-long learning. To develop Critical thinking, management and leadership skills to enable students to make decisions in any complex situation in national and international context.
5. **To equip students with effective communication skills-** to teach communication with patient and family in empathic manner, interpersonal skills; to enable them to communicate effectively with colleges and other healthcare providers, academic society, media and legal authorities in oral, written and electronic form.
6. **To teach basic principles and organization of health care systems in terms of epidemiology, health promotion and disease prevention:** to facilitate application of scientific knowledge and use of clinical skills and attitudes by students to promote health and prevent disease in individuals and communities; to enable them to meet society needs in terms to provide safe, high quality and cost-efficient patient-centered care including palliative and terminal care and management of chronic diseases.
7. **To rise “social agents” with awareness of responsibility to society:** to prepare students to practice medicine with competence of cultural, social and ecological accountability to serve needs of society with diverse populations and economical constraints. To give students good knowledge of structure and organization of healthcare systems in terms of first-line, second and third-line hospitals and role of general practitioner as a gate keeper in it; to give them awareness of social determinants of diversity, goal oriented care(multi morbidity); enable them to accept and apply the principles of patient safety and quality of care, give insight of aspects of global health care and make them to feel responsible and accountable for individual patient and family as well as for the whole population.
8. **To enable students to create and disseminate the new knowledge:** to facilitate students’ critical thinking and creativity, promote use of evidence-based medicine principles. To teach students scientific approach to medicine, use of scientific methodology, research skills and ethics; empower them with competence to create and communicate new knowledge - to perform research projects guided by academic staff and write essays.
9. **To promote and teach team working and collaboration:** to give students competence to work effectively with colleagues and other healthcare providers (interprofessional attitude)- to enable them with interpersonal skills and competence to perform teamwork: share and manage responsibilities and workload.

### Didactic Concept of the Curriculum:

The didactic concept of curriculum is based on Competency Based Medical Education (CBME) principles. The latter determines the structure and content of curriculum in order to ensure gaining professional competencies of a doctor by the graduates at the end of the study. The learning outcomes/competencies of the program are defined according to **Can MEDs physician competency framework** and is in full accordance with **National Sectoral Benchmarks of Medicine**.

The curriculum is inquiry-based and adopts modern educational strategies in medical education: Student-centeredness – implies active learning, Problem-based methods - TBL (Team-based Learning), CBL, CR, CBL to teach clinical reasoning and team work, promotes life-long learning (i.e. through portfolio assignments); Integration – includes several lines of horizontally and vertically integrated modules, gives students opportunity to take Elective course, focuses on needs of Community, has Systematic approach to learning an assessment; as a result, the program equips graduates with all competencies needed to fit to purpose i.e. to

provide patient-centered, holistic care.

Throughout the curriculum, psycho-social aspects are significantly expanded and integrated with bio-medical and clinical sciences into a holistic approach to the patient. Transformative learning mode enables students to realize the nexus between knowledge, research and services to society. Such an approach besides acquired knowledge, contributes to transition of the students into social agents, therefore materializes and enhances the successful implementation of the third mission of TMA.

## Structure and Content of the Program

The program is conventionally divided into three phases:

<b>I Phase</b>	<b>Preclinical Years</b>	<b>1<sup>st</sup> – 3<sup>rd</sup> Years</b>
<b>II Phase</b>	<b>Clinical Years</b>	<b>4<sup>th</sup> – 5<sup>th</sup> Years</b>
<b>III Phase</b>	<b>General Specialization</b>	<b>6<sup>th</sup> Year</b>

On the first, **basic stage** students are taught normal structures and physiologic processes of human organs and bodily systems, pathological morphology and main pathophysiological processes, including basis and nature of infections, foundations of history taking, patient physical examination and diagnostics of diseases, recording and keeping clinical data, as well as principles of professional communication, medical ethics, medical psychology and behavioral sciences; some topics of public health and fundamentals of research.

During the second, **clinical stage**, students obtain fundamental theoretical knowledge regarding diseases and syndromes, their clinical manifestation and treatment methods, and strengthen practical skills during clinical clerkships at the bedside under supervision and at Clinical Skills and OSCE Center on SP and manikins/simulators using technical facilities.

During the **third stage**, **general specialization** which implies final year of study, rotations in fundamental disciplines – Internal Diseases, Surgery, Obstetrics/Gynecology, Pediatrics and Family Medicine theoretical and practical learning are organized not according different nosologies but according to syndromes/tasks - problems of patients; students have to consider real patient case, they independently work with real patient, examine, make differential diagnostics, gather and interpret data, determine final diagnosis, elaborate investigation and management plan.

**Curriculum includes logically interconnected chains of learning courses/modules that form several lines:**

**Integration of Professional Competencies (IPC) line** – integrated module that along with communication skills, combines psycho-social aspects of health care, clinical judgment and clinical skills, practical procedures, follows the curriculum for 6 semesters and integrates professional competencies with knowledge gained through various basic modules/disciplines.

**Lines of Integrated Modules**– two series of **organ system-based** modules - **1. Clinically Oriented Modules (COMs) line** – includes 7 modules with integration of Histology, Embryology, Anatomy and Physiology through 2<sup>nd</sup> -3<sup>rd</sup> -4<sup>th</sup> semesters, and **2. Basics of Disease and Treatment (BDT) line** – includes 6 modules with Pathology and Pharmacology through 4<sup>th</sup> -5<sup>th</sup>-6<sup>th</sup> semesters.

**Research line** – is integrated throughout the curriculum from 1<sup>st</sup> to 12<sup>th</sup> semesters. Promotes gradual

development of research skills from basic definitions till performing practical assignments in research. The courses/modules included are: 1<sup>st</sup> semester – Academic Writing, 2<sup>nd</sup> semester-Introduction to Medical Research, 7<sup>th</sup> semester – Biostatistics and Scientific Report, 8<sup>th</sup> semester-Epidemiology, 11<sup>th</sup> and 12<sup>th</sup> semesters - Scientific Research Project 1 and 2 correspondingly.

**Metamedica Line** – includes learning courses at preclinical and clinical level related to psychosocial aspect of patient care: communication skills and medical ethics, medical psychology and health psychology, medical anthropology and medical philosophy.

In the structure of curriculum, the remarkable role is attributed to OSCE type summative exams carried out at the end of 3<sup>rd</sup> and 6<sup>th</sup> years of study, linked with Capstone courses 1 and 2 respectively. The first one summates clinical competencies taught at preclinical level and is the prerequisite for clinical disciplines, second one is graduation OSCE–summates clinical phase and is prerequisite for granting MD degree.

**Electives:** Aside of mandatory courses, TMA offers students range of elective courses. The electives are represented in preclinical as well as in clinical phases of study. In 3<sup>rd</sup>, 5<sup>th</sup>, and 7-8-9--10<sup>th</sup> semesters – 1 block of electives with 2 credits are represented in each semester, and in the last 11<sup>th</sup> and 12<sup>th</sup> semesters - 2 blocks of electives with 4 credits in each semester, **total 20 ECTS credits from 360** in curriculum, remainder 340 credits are dedicated to mandatory courses. Some electives include teaching transferable skills as well (e.g. Photography, MS Office Programs). One-week prior end of each semester, students have opportunities to choose elective course of preference for the next semester.

The total credit volume of study courses necessary for **clinical skills** development is determined by **32 ECTS**, while the total credit volume of study courses towards development of **scientific-research skills** is **15 ECTS** credits.

Students study **English/German languages(12 credits)**, which in its turn helps them to familiarize themselves with international medical literature and scientific resources and expands accessibility towards the latest information.

## Means/Methods/Formats to achieve Learning Outcomes:

### Teaching formats:

- **Seminar** – the curriculum is lecture-free, the seminar is the main format for consideration and interactive discussion of theoretical issues, interaction of teachers and students are based on application of different methods of active learning.
- **Practical work** – implies practicing in practical application of knowledge in terms of clinical reasoning (clinical case discussion), performing communication with patient, physical examination of patient, practical procedures.
- **Laboratory work** –is applied in teaching of basic biomedical disciplines as a mandatory activity to teach basic scientific practical skills. Lab. work is obligatory component of biochemistry, microbiology, pathology, immunology, physiology and laboratory medicine learning courses. Additionally, students have opportunities to engage in scientific-research projects and develop further relevant laboratory skills, while carrying out necessary tasks.
- **Early Clinical Exposure Early Clinical Exposure (ECE)**- promotes the exposure of medical students to patients as early as their first year of medical studies. students are exposed to

authentic ECE learning through visiting hospitals, out-patient clinics and geriatric care centers. During the visits, students observe real patient consultations. After they write reflections on communicator role of a doctor according to the CanMEDs framework as a part of their Portfolio assignments.

- **Active learning formats: CBCR, TBL, CBL, FC, CR sessions**
- **Case Based Clinical Reasoning (CBCR) sessions** - this format is implemented in the third year of the study in integrated Modules – Diagnostics of Diseases 1 and 2 to promote development of clinical reasoning skills. It is undertaken in format of sessions and the topic of the clinical case to be discussed is integrated with the body system studied in Diagnostics of Diseases courses.
- **Team Bases Learning (TBL) sessions**– – this a problem oriented which implies team-based approach to considering and solving clinical problems, method is adopted by TMA as alternative to PBL (Problem Based Learning). TBL format implies Clinical Reasoning (CR) sessions as part of IPC (Integration of Clinical Competencies) modules in I-VI semesters and helps to elaborate clinical reasoning skills and collaborative competencies for working in the team.
- **Flipped classroom (FC)** – this method is implemented at the basic level of the study in biomedical disciplines and implies independent reading and learning, searching in library e-resources for information, as well as consideration of clinical case in small groups during the class work. The method is especially useful during online sessions to facilitate student engagement in active learning.
- **Case Based Learning (CBL)** - is implemented in teaching of clinical disciplines and implies detailed consideration of real patient case, as well as use of evidence-based principles – searching for information, its presentation in written form and practical application by the student.
- **Clinical Clerkships/ rotations** – 4-5<sup>th</sup> years – are conducted in TMA affiliated clinics, students communicate and examine real patients under supervision; during clerkships teaching of clinical skills on SP and manikins are performed at TMA clinical Skills Center. In the 6<sup>th</sup> year of the study rotations are conducted in TMA affiliated clinics, students communicate and examine real patients independently, during rotations some clinical skills teaching/remediation is performed at TMA Clinical Skills and OSCE Center.

#### Theoretical Methods:

- **Verbal Method** – during study process, one of key forms of interacting with students is verbal method, which includes forms like: interactive lecture using power-point presentations, group working, seminars, practical sessions, poster presentations, Q&A (Question and answer) sessions and individual work with student, around subject of student's interest.
- **Working with Textbook** – considers student's independent work on preliminarily explained material, through self-directed studying, processing and analyzing of textbook materials.
- **Written Assignments** – range of subjects at TMA are considering completion of various written assignments: essays, open text question assignments and Power-point presentations, scientific reports, lab. work protocol, patient reports, medical recordings, reflections, etc.

#### Practical Methods

- **Explanatory method** – is based on providing considerations around given subjects. In practice, students are given by teaching staff a concrete example, followed by detailed explanation of various topic related aspects.
- **Audio-Visual method** – is practiced during both stages (basic and clinical) of study by vast majority of disciplines, in terms of using posters, atlases, computer programs, animations, video clips. Audio-visual method also includes use of various slides, Power Point presentations and a white(black) board.
- **Bedside Teaching** – implies opportunity for students to be observed and given immediate feedback for improvement of clinical skills and professional behavior when working with real patient in authentic environment under supervision. Through bedside teaching students elaborate key professional qualities like collegiality, assertiveness and commitment to teamwork. Demonstration of practical skills may include following key points: taking patient history, physical examination of patient, registration of findings, ordering relevant investigations and laboratory tests, interpreting examination/lab test results, (determining type and grade of lesion, analysis of lab tests etc.) making differential diagnosis, making diagnosis, creating management plan and exercising appropriate communication with patients or their caretakers.
- **Demonstration method** – considers visualization of information and practical skills. This method is used at the Clinical Skills and Objective Structured Clinical Examination Centre, in terms of teaching practical procedures on manikins and patient examination on **SP**. (**Standardized Patient**). Demonstration can be carried out by teaching staff, as well as by student.
- **Role Play** – method considers application of different roles, mainly roles of doctor and patient and elaboration of practical/clinical skills through their interpretation. Role play is widely used on the basic level of education, for optimal explanation and demonstration of practical skills, as well as during OSCE examination, where SP scenarios are applied.
- **Discussion/Debates** –process of discussion regarding specified topic, significantly enhances the quality and activity of students' involvement within process, as well as increases students' abstract thinking abilities and helps them to exercise various points of view, though logical argumentation. In addition to above stated, TMA periodically hosts student scientific debates, in frames of which, students from TMA, as well as other medical HEIs are invited to state and protect their position, regarding preliminarily determined scientific subject, using factual knowledge and ethical considerations.
- **Case Study** – considers Situational Judgement Scenarios: is implemented on basic stage of education and considers discussion of clinical cases, correlations and situational scenarios in rather simple way, under guidance and supervision of teaching staff. On clinical stage of education, case studies consider demonstration of application of biomedical, social and clinical sciences' theoretical knowledge, clinical reasoning and practical skills, while assessing, analyzing and making diagnosis, elaborating management plan for given case.
- **Digital technologies** used in teaching– different computer programs/study platforms; anatomy visualization system - **Anatmage table** – for integrated teaching of biomedical and clinical disciplines: Anatomy, Histology, Embryology, Radiology; different study platforms.
- **Participation in Scientific Research** – as mentioned above, TMA students are actively involved in the scientific-research processes. On basic stage of education students are taught foundations of scientific research, which helps students to acquire valuable skills for further scientific development. Students learn how to obtain and assess evidence-based information critically, elaborate research design, plan

and organize entire process, as well as analyze and present findings in essay format both verbally and in written form.

- **Assisting a doctor** – considers student’s participation during process of patient examination or while performing manipulations.
- **Portfolio – self-reflection, PDPs** - has both teaching and assessment roles in curriculum as an important tool for reaching program learning outcomes/competences, especially of those related to professionalism. Student perform portfolio assignments throughout the 6 years of the study, portfolio activities are guided by the mentor. Portfolio assignments are mainly represented by writing self-reflection and personal development plan.

## Educational plan

### First year

I semester		
N	Learning Course	ECTS Credit
1	Human Anatomy	5
2	Cytology, Embryology, General Histology	4
3	Physiology	3
4	Genetics	3
5	Biochemistry 1	5
6	Academic Writing	3
7	Integration of Professional Competencies 1 (IPC 1)	3
8	Foreign language: 1. Medical English 1	4
ECTS		30
II semester		
N	Learning Course	ECTS Credit
1	Clinically Oriented Module 1 (Spinal Cord & Sense Organs) /COM 1	6
2	Clinically Oriented Module 2 (Brain) /COM 2	6
3	Biochemistry 2	5
4	Molecular Biochemistry	3
5	Medica Ethics	2

6	Introduction to Medical Research	3
7	Integration of Professional Competencies 2 (IPC 2)	3
8	Foreign language: 1. Medical English 2	2
ECTS		30

## Second Year

III Semester		
N	Learning Course	ECTS Credit
1	Clinically Oriented Module 3 (Cardiovascular System)/COM 3	6
2	Clinically Oriented Module 4 (Respiratory System)/COM 4	4
3	Immunology	3
4	Microbiology 1	6
5	Communication Skills	2
6	Social and Environmental Health	2
7	Integration of Professional Competencies 3 (IPC3)	3
8	Foreign languages: 1. English 1 / German1	2
9	Electives: 1. Photography 2. MS Office Programs	2
		30
IV semester		
N	learning course	credit
1	Clinically Oriented Module 5 (Endocrine & Reproductive Systems)/COM 5	4
2	Clinically Oriented Module 6 (GI System) /COM 6	4

3	Clinically Oriented Module 7 (Urinary System)/COM 7	3
4	Basics of Disease & Treatment 1 (General)/BDT 1	5
5	Basics of Disease & Treatment 2 (General)/BDT 2 Toxicology	5
6	Microbiology 2	4
7	Integration of Professional Competencies 4(IPC4)	3
8	Foreign languages: 1. English 2 / German 2	2
		30

### Third Year

V semester		
N	Learning Course	ECTS Credit
1	Basics of Disease & Treatment 3 (Cardiovascular & Respiratory Systems)/BDT 3	6
2	Basics of Disease & Treatment 4 (GI System)/BDT4	6
3	Health & Medical Psychology	3
4	Diagnostics of Diseases 1	6
5	General Surgery	4
6	Integration of Professional Competencies 5 (IPC5)	3
7	Foreign languages: 1. English 3 / German 3	2
8		30

VI semester		
#	Learning course	ECTS Credit
1	Basics of Disease & Treatment 5 (Genitourinary and Endocrine Systems System)/BDT 5	6
2	Basics of Disease & Treatment 6 (Nervous and Musculoskeletal Systems)/BDT 6	5
3	Radiology	4
4	Behavioral Science	3
5	Diagnosis of Diseases 2	5
6	Capstone Course 1	2
6	Integration of Professional Competencies 6 (IPC6)	3
7	Electives: 1. Physiology of Behavior 2. Planetary Health	2
		30

#### Fourth year

VII semester		
N	Learning Course	ECTS credit
1	Internal Medicine 1 (Cardiology, Pulmonology)	7
2	Otorhinolaryngology (ENT)	2
3	Obstetrics	5
4	Neurology	6
5	Laboratory Medicine	3
6	Integrated module: Biostatistics and Scientific Report	3
7	Medical Anthropology	2
8	Electives: 1. Clinical Genetics 2. Basics of Nutrition	2
		30
VIII semester		
N	Learning Course	ECTS Credit

1	Internal Medicine 2 (Endocrinology & GI)	6
2	Surgery 1	7
3	Infectious Diseases	5
4	Clinical Parasitology	2
5	Urology	2
6	Gynecology	4
7	Epidemiology	2
8	Electives: 1. Tuberculosis 2. Non - Invasive Imaging in Cardiology	2
		30

### Fifth year

<b>IX semester</b>		
N	Learning Course	ECTS Credit
1	Internal Medicine 3 (Hematology, Rheumatology, Nephrology)	6
2	Allergology and clinical immunology	3
3	Demato-venerology	3
4	Ophthalmology	2
5	Pediatrics 1	4
6	Emergency Medicine	3
7	Disease Prevention and Health Promotion	2
8	Forensic Medicine	3
9	Philosophy of Medicine	2
10	Elective 1. Endocrine Diseases in Specific Groups of Patients 2. Neuroradiology	2
		30
<b>X semester</b>		
N	Learning Course	ECTS credit
1	Surgery 2	4
2	Psychiatry	5
3	Family Medicine 1	3

4	Pediatrics 2	5
5	Critical Care and Anesthesiology	4
6	Public Health	2
7	Orthopedics & Traumatology	3
8	Electives: 1. Reproductive Medicine 2. Clinical Toxicology	2
		30

### Sixth year

<b>XI semester</b>		
#	Learning Course	ECTS credit
1	Family medicine 2	3
2	Oncology & Palliative Care	3
3	Differential Diagnosis of Internal Diseases 1	6
4	Surgery 3	6
5	Clinical Pharmacology & Pharmacotherapy	3
6	Scientific Research Project 1	3
7	Healthcare Services Quality Management and Patient Safety	2
8	Electives: 1. Occupational Diseases 2. Clinical Nutritiology	2
9	Electives: 1. Pediatric Neurology 2. Interventional Cardiology	2
		30
<b>XII semester</b>		
#	Learning Course	ECTS Credit
1	Differential Diagnosis of Internal Diseases 2	7
2	Pediatrics 3	5
3	Differential Diagnosis in Obstetrics & Gynecology	4
4	Medical Rehabilitation	2
5	Clinical Ethics and Legal Basis of Medical Practice	3
5	Capstone 2	2

6	Scientific Research Project 2	3
7	Electives: 1. Good Clinical Practice/GCP 2. Pediatric Surgery	2
8	Electives: 1. Radiational Oncology 2. Vascular Surgery	2
		30

To get acquainted with the syllabuses of educational courses provided by the Educational program is available at the Library or on the website of Petre Shotadze Tbilisi Medical Academy – [www.tma.edu.ge](http://www.tma.edu.ge).

The syllabuses are protected by a code which may be received at the library or the Dean's office after the registration of the student.

## Student Assessment System

Number and nature of **class activity** subcomponents, as well as their assessment criteria are determined by the course leader and described in course syllabus respectively.

Study course relevant ECTS credits are awarded to the student, in case of positive assessment after completion of the course. Students' knowledge is assessed through 100-point system, 60 points of which are accumulated during semester, through intermediate assessment, whereas 40 points are allocated for final examination. Intermediate assessment consists of following components:

- **Class Activity**, which may involve verbal or written assessment, presentation, essay, laboratory assignment, performance of clinical manipulations, practical procedures, assessment of clinical reasoning, assessment of activities in TBL, CBCR, FC and CBL, etc.
- **Midterm Examination**, conducted on 8<sup>th</sup> week of semester for basic subjects and in the middle of rotation – for clinical disciplines. Duration of midterm examination is 1 hour.
- **Portfolio assignments** – self-reflections, personal development plans, etc.

As mentioned above, 40 points are allocated for **final examination**. In order to get admitted to final examination, student must accumulate at least **31** points through intermediate assessments and pass in portfolio assignments in related subjects. Final examination may be written, oral or combined, consisting of written, (MCQ test or open text questions) oral and/or practical (OSPE/OSCE) components. Final examination is considered to be passed, in case if student gets at least 20 points (50%) from 40 points. It is noteworthy, that in order to pass combined examination, student must obtain at least 50% of indicated mark in each component.

The student is awarded ECTS credit in case of gathering minimum 51 points in final assessment.

If student has 41-50 points in the final assessment, he/she is allowed to retake a final exam in minimum 5 days, without repeating study course. The interval between final and retake exams should be minimum 5 days. In case, if student accumulates less than 41 points in the final assessment, he/she has to repeat the study course.

**In integrated modules** all module subjects contribute to 31 points for getting allowed to final exam of the module; each subject of the module has its own 50% threshold to overcome; final examination may include both theoretical and practical components including all the subjects involved in the module.

**Structured Oral Exam (SOE)** – this innovative form of assessment is implemented in IPC1 in 1<sup>st</sup> semester midterm exam, main purpose of which, along with the evaluation of knowledge, is drawn towards assessment of students' oral communication skills and verbalization of the medical problems to SP in a lay language at 3 stations.

**Objective Structured Practical Exams (OSPE)** - are carried out in basic integrated modules and disciplines: microbiology, organ system integrated modules involving histology, anatomy, pathology.

**Objective Structured Clinical Exams (OSCE)** - are carried out at the end of 6<sup>th</sup> and 12<sup>th</sup> semesters to assess clinical competencies. At the end of 6<sup>th</sup> semester OSCE is associated with integrated module –Capstone Course 1. The main topics for OSCE at the end of 6<sup>th</sup> semester: history taking on SP, patient physical examination on manikin and interpretation of data, communication with difficult patient on SP, procedural skills on manikin. At the end of 12<sup>th</sup> semester, OSCE is linked with Capstone Course2, students pass OSCE that incorporates clinical competencies taught in core disciplines: Internal Medicine, Surgery, O&G, Pediatrics, Family Medicine and Psychiatry. Besides practical skills it focuses on clinical reasoning skills that are assessed in standard and computer -based stations.

**In the core clinical disciplines** (Internal medicine, Differential Diagnostics of Internal Diseases, Surgery, Obstetrics and Gynecology, Pediatrics and Family Medicine) the final exams have two components – written MCQ testing and oral exam that implies clinical case discussion with examiner.

**Portfolio Assignments** – In the curriculum Portfolio provides teaching and assessment tool for different competences and especially, for professionalism. Students perform portfolio assignments through 6 years of the study.

Under the frames of the portfolio, students are expected to write a self-reflection based on the experience gained while studying with the programme, by reflection on their achievements, strong and weak points to realize and adhere to the roles defined by the CAN Meds physician competency framework. Students get feedback from the mentors, which is then used to formulate a personal development plan. In result, students develop necessary skills for self-criticism and self-reflection, which is an important precondition for personal and professional growth.

In the clinical phase of the study students' clinical competencies are assessed by **WPBA** (work-place based assessment- **MiniCEX (Mini Clinical Evaluation Exercise, CbD (Case-Based Discussion), DOPS (Direct Observation of Procedural Skills))** formative methods. Assessment accumulates in portfolio with other content. At the end of the 6<sup>th</sup> year portfolio committee reviews students all portfolio assignments and gives pass/fail. Passing portfolio exam is prerequisite for diploma.

**The student Logbook** is a student diary associated with portfolio. It is implemented in clinical years accumulates evidence regarding development of clinical competences through practical work of students in frames of clinical clerkships – (patient consultation, history taking, physical examination, performance of practical procedures, observation, etc.).

**Feedback:** as a means of assessment and teaching is essential part of assessment system(formative assessment) in the educational program and is performed on regular basis in all learning courses; it can be conducted by oral

and written form by teachers, supervisors and assessors in the course of theoretical teaching and practical skills training, after each ongoing class activity, midterm exams or research activities, during clinical skills teaching at Clinical Skills Center the teacher gives immediate oral feedback and coaching, during clerkships at affiliated clinics in format of bedside teaching, WPBA, student gets immediate feedback after observation by teacher(supervisor) in oral and written form.. Feedback is essential part of portfolio, it includes narrative feedback in relation of professional behavior, academic achievements, PDP and reflections and is conducted by the mentor. After final examinations individual feedback is given only to those students that apply for appeal. Feedback has the unique role in scope of formative assessment during first year of the study, **growth-oriented tests (GOT)**, through which, without granting a score, gaps in the student's knowledge are discovered and structured feedback tailored to the student's needs is provided for further improvement of knowledge. Aside from an upgrade of the assessment system, this initiative also encompasses amplification of active, student-oriented learning and creates a less stressful environment for students to adapt to the specifics of higher education.

**Remediation:** students have opportunity to work independently and improve their clinical skills and knowledge using TMA facilities: after getting feedback during formative assessment (observation) of clinical skill(communication skills, examination of patient, practical procedures)or in the case of failure in clinical skills summative assessment they have opportunity to practice at Clinical Skills Center; students can improve their knowledge of anatomy and other basic biomedical subjects through working extra hours at Anatomage table and with tutors; they have opportunity to improve their lab. skills at TMA laboratory.

Two learning courses – **Capstone 1 and 2** have important contribution in regard of remediation of clinical skills/competencies, they are conducted at the end of 3rd and 6th years respectively and end with OSCE exams.

### The scheme of point distribution in the evaluation system

Points	Evaluation
91-100 (A)	excellent
81-90 (B)	very good
71-80 (C)	good
61-70 (D)	satisfactory
51-60 (E)	Sufficient- hasn't passed; student is permitted to retake examination
41-50 (FX)	hasn't passed; student is permitted to retake examination
0-40 (F)	failed; credit is not granted; student should repeat study course

### Program Outcomes / Competencies

**Programme Learning Outcomes/Competences** are based on **National Sectoral Benchmarks of Medicine** and **Field Specifications of Medical Education Programme** and are formulated according to **CanMEDs Physician Competency Framework**; the level of each competency is determined according to **Miller's Pyramid**.

## **I Medical Expert**

1. **As a medical expert the graduate integrates 6 roles of physician:** communicator, collaborator, manager, health advocate, scholar and professional IV
2. **The graduate applies the knowledge of Biomedical, Social and Clinical sciences in clinical problem solving and decision making:** - analyses pathogenesis of the disease, links it with clinical manifestations of the disease, principles of diagnostics, differential diagnosis, treatment, monitoring and prevention in the process of clinical reasoning. IV
3. **The graduate performs consultation of patient and assesses the clinical case:**
  - a. Takes relevant and accurate anamnesis IV
  - b. Performs physical examination IV
  - c. recognizes and assesses severity of patient's condition and clinical presentation IV
  - d. draws up differential diagnosis IV
  - e. collects, analyses and interprets data (anamnesis, physical findings, lab tests and etc.) IV
  - f. makes correct diagnosis IV
  - g. prescribes cost-effective and rational evidence-based treatment IV
  - h. develops patient-centered plan for self-care and ongoing care including prevention, management of chronic diseases, palliative and terminal care IV
4. **The graduate provides first aid to the patient in medical emergencies: IV**
  - a. Recognizes and assesses medical emergencies: identifies the symptoms and signs
  - b. Provides basic first aid in patients of all age groups, carries out measures for basic life support and cardiopulmonary resuscitation, advanced life support, and emergency trauma care
5. **The graduate plans and performs practical procedures skilfully and safely III/IV:**
  1. Measurement of blood pressure (non-invasive) (IV- on patient)
  2. Measurement of peripheral and central pulse (IV - on patient)
  3. Measurement of respiration rate (IV - on patient)
  4. Measurement of temperature (IV on patient)
  5. Assessment of pain using relevant scale system (IV - on patient)
  6. Measurement of oxygen saturation (IV - on patient)
  7. Oxygen administration (IV –on patient)
  8. Transportation of the patient (III –on SP or real patient)
  9. Performing pulmonary functional tests (IV - on patient)
  10. Administration of inhaled medications (IV -on patient)
  11. Identification and evaluation of medical emergencies (DRSABCDE)
  12. Performing basic life support (BLS) measures using DRSABCDE algorithm according to guidelines (III/IV - on Manikin) including the following:
    - CPR – cardiopulmonary resuscitation
    - AED – Automatic External Defibrillation
  13. Performing Basic life support measures in newborn, child, and elderly (III/IV-on manikin)
  14. Performing Advanced Cardiac Life Support (ACLS) measures according to guidelines (III/IV-on manikin)
  15. Primary emergency treatment of anaphylactic shock
  16. Hand washing( IV-on himself/herself)
  17. Proper use and utilization of personal protective equipment(PPE) (IV- on him/herself)
  18. Suturing, injection of local anesthetic (III-on manikin)
  19. Trauma management at at prehospital level:
    - a. Wound cleaning and bandaging (III-on SP patient)

- b. Management arterial and venous bleeding (III-on manikin)
- c. Types and techniques of immobilization (III -on manikin)
- 20. Trauma emergency management according to guidelines (III-on manikin)
- 21. The primary emergency management of anaphylactic shock (III-on manikin)
- 22. Intradermal injection (III - on Manikin)
- 23. Subcutaneous injection (III - on Manikin)
- 24. Intramuscular injection (III - on Manikin)
- 25. Peripheral venepuncture, phlebotomy and open blood-sampling (III - on Manikin)
- 26. Intravenous cannulation (insertion/removal of catheter in peripheral vein) (III on manikin)
- 27. Pperipheral vein transfusion of fluids and drug administration with proper use of equipment; dose calculation, dilution; peripheral vein intravenous bolus administration, Hepa-lock injection (III - on Manikin)
- 28. Nasogastric and orogastric intubation (III - on Manikin)
- 29. Urinary bladder catheterization (III - on Manikin)
- 30. Endotracheal intubation (III - on Manikin)
- 31. Nasopharyngeal and oropharyngeal swabs (III on manikin)
- 32. ECG taking techniques and procedure, interpretation of results (III/IV - on SP/real patient)

## II Communicator

- 6. **The graduate effectively communicates with patient and his/her family members** with empathy and respecting ethical principles: he/she collects anamnesis, obtains informed consent, explains diagnostic procedures and tests, treatment plan and methods to the patient; can deliver bad news, deals with an aggressive patient, communicates with a patient with disability and can communicate with the help of third party (interpreter). **IV**
- 7. **The graduate documents medical records** – The graduate documents medical records clearly, completely and consistently and communicates the data with other healthcare provider **IV**
- 8. **The graduate reports patient case /scientific research results in written /oral forms** to colleagues, other health services providers and representatives of health care system **IV**
- 9. **The graduate demonstrates interpersonal communication skills:** performs effective communication with colleagues and other healthcare providers as well as with any person irrespective of his/her social, cultural, religious or ethnic representation **IV**
- 10. **The graduate uses information technologies for effective communication:** to optimise patient care (manages patient data in confidential way, performs electronic and telephone communication with patient and colleagues) / performs research activities and shares research results with peers and scientific community **IV**
- 11. **The graduate communicates effectively with representatives of media and legal authorities:** demonstrates knowledge and application of key legal and ethical principles when communicating with media and authorities; takes part in ethical decision-making, certifies death, requests autopsy, enforces Georgian and international legislative and professional regulations in clinical practice, respects confidentiality. **IV**

## III Collaborator

- 12. **The graduate effectively engages in team work and collaborates with colleagues/other healthcare providers**  
The graduate effectively engages in team work and collaborates with colleagues /other healthcare providers: gives and receives colleague's feedback, respects other's opinion, shares the workload and responsibilities with team members **IV**

#### IV Manager

13. **The graduate manages clinical case and demonstrates leadership skills:** fairly allocates healthcare resources, sets priorities, provides safe, high quality and cost-effective care IV
14. **The graduate manages personal issues-** such as career, time, health; integrates personal life with occupational responsibilities IV

#### V Health Advocate

15. **The graduate applies knowledge of Behavioural and Social Sciences in defining and addressing the patient's healthcare needs:** The graduate evaluates psychological and social aspects related to patients' disease, navigates patient in healthcare system with preferred attention to patient's interests/rights IV
16. **The graduate applies the knowledge of healthcare systems in health promotion and disease prevention interventions both with individual patients and the population:** obtains, assesses and uses epidemiological data; evaluates environmental, social, economic, occupational, cultural and nutritional and other health determinants; sets, implements and monitors measures for primary, secondary and tertiary prevention of communicable and non-communicable diseases in primary and secondary health care and for promotion of healthy lifestyle. IV

#### VI Scholar

17. **The graduate is engaged in directed self-learning and development:** IV
  - a. evaluates and describes own learning needs
  - b. develops and writes personal development plan
  - c. performs independent learning activities
  - d. evaluates his/her learning results
  - e. demonstrates commitment for lifelong learning (self-reflection, personal development plan (PDP))
18. **The graduate applies knowledge of scientific research methodology:** The graduate applies knowledge of scientific research methodology: demonstrates commitment for lifelong learning (self-reflection, personal development plan (PDP) IV
19. **The graduate applies evidence-based medicine principles in clinical practice -** demonstrates critical thinking skills: formulates relevant clinical or scientific question, searches for relevant medical information sources and applies new knowledge in clinical practice IV
20. **The graduate is engaged in teaching of patients, their family members and peers/colleagues:** plans and delivers learning activities, provides feedback to enhance learning and performance IV

#### VII Professional

21. **The graduate applies the knowledge of Biomedical Ethics and fundamentals of Medical Law and healthcare regulations in clinical practice:** demonstrates commitment to ethical principles and condemns any forms of discrimination on the grounds of race, ethnicity, religion, gender or cultural differences; in communication with patient and colleagues acts in compliance to the principles of biomedical ethics and International and Georgian Medical Law and healthcare regulations; participates in ethical decision-making, respects patient's rights and dignity, keeps confidentiality and privacy IV

22. **The graduate demonstrates professional attitude and general moral values of physician:** kindness, respect, compassion, honesty, integrity, commitment, accountability, altruism and empathy; is oriented to acknowledge and correct his/her mistakes **IV**
23. **The graduate critically evaluates his/her own work and the practices of colleagues:** acknowledges his/her own autonomy limits and calls for help, has information on competency of different healthcare providers and makes correct referral, performs peer review and provides continuous safe and high-quality care. **IV**
24. **The graduate demonstrates critical thinking, creativity and decision-making skills-** adapts to new and changing/uncertain environment, analysis complex situation, makes appropriate decision and solves the problem –demonstrates creativity and leadership skills **IV**
25. **The graduate demonstrates ability to act within international context:** knows foreign language (English), is up-to-date with modern international demands and standards of patient care and principles of structure and organization of healthcare system **IV**

#### **Social accountability:**

- **Extracurricular activities:**
  - participation in research projects (community research) and student conferences
  - participation in different social projects related to roles of physician in community, disease prevention and health promotion
- **Taking in account local needs:** Curriculum emphasizes teaching of those topics which are determined as common health problems in the country and are figured out in **National Sectoral Benchmarks of Medicine**.
  - a. **Cardiology:** In addition to mandatory course of cardiology in scope of Internal Medicine 1, the elective course “Non-Invasive Imaging in Cardiology”
  - b. **Oncology:** the mandatory course “Oncology and Palliative Care”
  - c. **Geriatrics:** the related topics are included in “Family Medicine 1” course
- **Taking in account international context:**
  - a. Teaching tropical infections
  - b. Use of internationally accepted textbooks and e- resources

#### **Necessary infrastructure and human resources for programme implementation:**

Study process is conducted at the building of TMA and affiliated clinics.

Study rooms at TMA are equipped with following inventory: desks, chairs, white and smart boards, projectors and computers, posters and in some rooms, lockers. TMA has modern **library**, equipped with modern printed ((2886 printed and 10 CD/DVD units) and electronic study and scientific resources, which can be accessed from reading space and learning zones for individual study as well as distantly.

“Electronic Library” Resources:

- ☐ ClinicalKey Student -study platform
- ☐ Osmosis – study platform
- ☐ Complete Anatomy 3D anatomic atlas
- ☐ Turnitin platform
- ☐ ScienceDirect and Scopus data bases
- ☐ Web of Science - MEDLINE data base

□ Hinari data base

**Other facilities**, provided at TMA are Clinical Skills & (OSCE) Center, scientific-research laboratory, computerized examination center, (with CCTV surveillance) computer lab, staffrooms for academic personnel, conference halls and recreation spaces.

At the **Clinical Skills & OSCE Centre**, where **simulated wards** are available, students have opportunities to acquire, enhance and master basic as well as advanced clinical skills using modern manikins, as well as exercise communication or physical examination skills using **SP (standardized /simulated patients)** or perform assessment on one another under supervision and guidance of trained staff members.

Scientific-research skills are elaborated and enhanced at the **scientific-research and teaching laboratories of TMA**. Biochemistry, microbiology, pathology, immunology and physiology laboratory work is done by students in scope of basic disciplines as mandatory; as well as scientific activities performed by academic staff including guidance of extracurricular research done by students.

**For Anatomy studies:** students independently can work on different 3D platforms as well as on **Anatomy Visualization System (Anatmage Table)**- unique technology which covers several morphological disciplines – Human Anatomy, Embryology, Histology, Pathology and Radiology.

Special space with **Anatmage table** is arranged for students group work with the teacher or for independent learning.

Special spaces for teaching Anatomy, Histology and Pathology equipped with manikins, posters, microscopical slides and **light microscopes**.

Study process is carried out by academic and invited teaching staff at TMA study building, as well as at affiliated clinics.

## **The opportunities for the continuation of study**

After the completion of educational program, the graduate has the right to continue the study in the PhD program or can take a course of residency in a concrete specialty in Georgia or abroad.

## **Future employment**

After completion of the educational program, according to the Law of Georgia “On Physician’s Work” the graduate is allowed: to work as a physician’s assistant (under the supervision of certified doctor), to carry out scientific and pedagogical activities in the theoretical branches of medicine or other spheres of health care which does not mean independent work of a physician. After completion of the national residency program and getting certificate in Unified State Exams the graduate is eligible to start independent medical practice as a doctor in Georgia.

Additional Information regarding the program is available at TMA Deans Office  
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