

Medical Doctor (MD) Educational Program

“Medicine”

(English)

**Ilia State University**

**School of Natural Sciences and Medicine**

**Tbilisi**

**2018**

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| **Program requisites** |

**The name of the program Medicine**

**Direction:** (09) Health Care

**Field / Specialty** (0901) Health Care/Medicine

**Level of the Higher Academic Education** One cycle undergraduate Medical Education

(Equivalent to the II stage)

**Language of instruction** English

**Qualification awarded** Medical Doctor (MD)

**Program capacity** 360 ECTS, 1 ECTS = 25 hour.

**Program duration** 6 years, 12 semesters

**Program supervisor:**  Ivane Abiatari

MD, PhD, Associate Professor

**Program Co-supervisor:** Olwyn M. Westwood

MD, PhD, Professor

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| **Program Overview** |

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

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

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

This single-step educational program of medical doctor ensures the implementation of university mission, which emphasizes development of society, generation and transfer of knowledge on the national and international level.

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

Educational program is based on Georgian Higher Education Medicine Sectoral Benchmarks and complies with the standards of World Federation for Medical Education (WFME). The study program ensures preparation of qualified physicians with appropriate knowledge and competencies, who will be able of effective and competitive participation in Healthcare field, both at the governmental and private sectors.

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| **Program Objectives** |

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

**Objectives of the program**:

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

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| **Learning Outcomes and Competencies** |

1. **Student will define pathological processes and its expected outcomes using the fundamental knowledge of biomedical science.**
2. **Student will evaluate clinical case, consult patient, define diagnosis and manage the state of patient based on the knowledge of clinical sciences and fundamental principles of the field.**
3. **Student will evaluate disease-related social and psychological aspects by use of the basic knowledge of behavioral and psychosocial sciences.**
4. **Student will use evidence-based principles, up-to-date scientific information and research methods in medical practice and scientific research.**
5. **Student will define and conduct disease preventive measures and promote health considering public healthcare principles for effective work in healthcare system.**
6. **Student will use ethical and legal principles in scientific and clinical practice.**
7. **Students will effectively communicate with patient, family member of patient, colleagues and other persons concerned.**
8. **Student will obtain, analyze and distribute medical information by effective use of informational technologies.**
9. **Student will perform particular laboratory and medical manipulations.**
10. **Student will demonstrate professionalism.**

**General Competencies**

**Analysis and synthesis**

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

**Management of information**

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

**Problem solving and decision-making**

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

**Ability to work in the group and new environment**

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

**Communication skill, including in foreign language**

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

**Ability to renew learning / knowledge permanently**

Can use full range of educational and informational resources, manage own learning process. Understands the necessity of life long learning and need of permanent professional development. He/she has the ability to evaluate own knowledge and competencies.

**Ability to work independently**

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

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| **Admission Requirements** |

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

* For enrollment to the program through Unified National Exam, the minimum competence for “Basic skills” exam is no less than 75%
* From the elective disciplines of the Unified National Examinations, enrollee is entitled to take the following subjects (defined by legislation): Chemistry or Biology - threshold-85%
* Enrollee must choose English language from foreign languages of Unified National Examinations.
* For the enrollment to the program the minimum competence threshold in English language at Unified National Examinations is – 90%

Candidates eligible to enroll to this single-step medical program without passing the Unified National Examinations are as follows:

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

Individuals who enroll without passing the Unified National Examinations must confirm knowledge of English language (Minimum B2 level), and take exam in chemistry or biology.

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

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

1. an official international language certificate (the main certificates and minimum scores accepted are given below)
2. an English Proficiency Statement from the university, high school or college, confirming that English was the language of instruction
3. a certificate issued by a local or international English language instruction provider (e.g. language school), confirming the acquisition of B2 level as a result of a language course attended

TOEFL

* paper based PBT 513
* internet based iBT 65
* computer based CBT 183

IELTS

* Academic (Band 5.5)
* Cambridge ESOL (English for Speakers of Other Languages)
* Certificate of Advanced English (CAE): 160/Level B2 (also grades A/B/C)
* First Certificate in English (FCE): 160/Grade C (also grades A/B)
* Business English Certificate (Higher) BEC: 45/Level B2 (also grades A/B/C)
* Business English Certificate (Vantage) BEC: 60/Grade C (also grades A/B)
* Business Language Testing Service BULATS: 60 overall
* PTE (General level 3)
* PTE Academic (59-75 points)

TELC (The European Language Certificates)

* telc English B2: Pass

Michigan (Cambridge Michigan)

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

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| **Teaching Methods** |

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

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

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

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

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

**Flipped learning method -** enables students not only obtain knowledge, but also apply knowledge into practice under the mentorship of lecturer within released auditorium time. Method fits to individual capacity of the students and gives possibility to identify/control time and frequency for the adoption of new information. In contrast to the traditional/classic model, functions of individual space and group space is flipped: student acquires new information outside of auditorium, following to the material given by the teacher. Student individually plans and organizes time and frequency of learning material and practices with own natural study rhythm. During the auditorium time, student applies acquired knowledge into the practice and improves clinical skills. This method develops not only remembering, but **analysis, synthesis** and **knowledge application** skills.

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

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

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

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

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

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

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| **Assessment system** |

The Assessment system of teaching outcomes and competences is based on legally recognized WFME and MEDINE joint document: “standards of global medical education quality improvement – considering European character” and is in accordance with the competences elaborated by TUNING/MEDINE as well as CanMEDS 2015 Physicians Competency Framework.

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

This is the grading scale excepted on the National level:

1. Excellent - 91-100 points;
2. Very Good - 81-90 points
3. Good - 71-80 points;
4. Satisfactory - 61-70 points;
5. Sufficient - 51-60 points;

(FX) 41-50 Unsatisfactory - meaning a student needs more effort to pass an examination and is given an extra chance to pass an additional examination through independent work;

1. (F) Failure - 40 and less of the maximum of grades, meaning the student’s effort is not enough and he/she has to retake the course.

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

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| **Program structure** |

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

Integrated learning is the essential condition for modern medical education. This program includes vertically and horizontally integrated curriculum, which implies incorporation of clinical competence training and practical skills developing courses in the first year of study in parallel with natural science disciplines. In particular, the program involves integration of clinical (practical) training courses (course "Clinical Skills I") already in the second semester, which in the following semesters becomes more intensive and on the second stage of teaching (Clinical Attachment) transfers into subjective clinical rotation format and ends with the clinical workplace practice. In parallel at this stage decreases volume of basic science disciplines. At the preclinical phase of teaching program is horizontally integrated. In particular, topics of study courses are synchronized according to organ systems and functional disorders and taught in integrated modules (e.g. Body Systems Structure & Function I-III modules, which covers disciplines of Anatomy, Physiology, Histology, Biochemistry.; Inflammation & Immune System Disorders is the module that covers subjects of Pathology, Pharmacology, and Immunology). In parallel program envisages Case Based Learning (CBL) and Problem Based Learning (PBL) seminars, which provides “the correlation integration” of basic medical disciplines and prevent knowledge fragmentation.

Described format enables the student to develop basic, clinical and communication skills at the earliest stage of learning, which will later facilitate cognitive process of clinical subjects. Furthermore, each of the four phases of educational program ensures deepening and development of medical doctor’s competence related knowledge, skills and attitudes, which enables spiral integration of the curriculum.

Program is not only knowledge based but is focused on development of physician’s core competencies. During the stage of Clinical Attachment (VII-XII semester) student advances in roles defined by CanMEDS 2015 Physicians Competency Framework. Student’s activities are accumulates in Medical Portfolio, which is student centered and incorporates feedbacks, self-reflection and Life Long Learning principles.

From the first semester program provides the necessary skills for scientific research (course "Academic skills"). The following semesters include courses of Bioethics, Epidemiology, Evidence-based Medicine and Bio-Medical Research, which enables students to learn scientific research methods, perform scientific work and gradually improve skills required for research activities. It is important that the students learn not only critical assessment of scientific information but also basic principles for research planning, conducting, analyzing, paper drafting and results presentation. At the end of the studies, in 12th semester, student must conduct, write and defend research work. Students will be able to regularly take part and attend the scientific activities organized by the Faculty and Research Institutes of the Ilia State University and the partner medical profile organizations.

Within first year, program provides elective courses of languages, including communicative Georgian language course for foreign students. Among medical students, popular destination countries for postgraduate education are Germany and USA. For those who might be interested, program provides basic courses of German language.

Additionally, program envisages students access to university general courses (in the field of business, management, etc.), that gives interdisciplinary knowledge, expands their awareness and generates no-sectoral, potentially useful theoretical and practical skills for future professional career.

The academic load of the program consists of 360 ECTS credits. 1 credit = 25 hours, covering both contact and independent work hours. Students must accumulate 60 credits per year (1500 hours) - an average of 30 credits (≈750 hours) during an academic semester.

The program is considered complete when at least 360 ECTS credits have been accumulated, which implies the completion of all the compulsory components provided by the program and collection of credits from minimum required amount of elective components, and passes portfolio.

In total more than 1300 (contact) hours are dedicated to the development of clinical skills (Clinical Work/Bedside Teaching) (including 13 ECTS credits (227 contact hours) at the simulation training center/clinical skills lab) and 22 credits to the development of scientific research skills.

**Program Structure**

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| **Total 360 ECTS Credits**  **(including 346 ECTS credits of sectoral courses)** | | |
| Mandatory: **332 ECTS Credits**  **Including:** | | Elective:  **28 ECTS Credits** |
| Clinical skills: 13ECTS Credits  (Simulation center) | Scientific-research skills: 22  ECTS Credits |

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| **Study Resources** |

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

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

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

* Medi Club Georgia;
* Medical Center “Innova”;
* “Aversi” Clinic;
* S. Khechinashvili University Clinic;
* G. Chapidze Emergency Cardiology Clinic;
* Medical Corporation “EVEX”;
* D. Gagua Clinic;
* Tbilisi Heart and Vascular Clinic;
* Pineo Medical Ecosystems
* National Educational Center for Family Medicine;
* St. Michael Archangel Multi-profile Clinical Hospital;
* Scientific-Practical Center for Infectious Pathology, AIDS and Clinical Immunology;
* Multiprofile Clinic Consilium Medulla;
* National Center of Tuberculosis and Lung diseases;
* Rustavi Mental Health Centre;
* Center for City Mental Health;
* Tbilisi Oncology Dispansary;
* “Aversi” Polyclinic;
* Clinic “Curatio”;
* Clinic “Neolab”;
* Clinic “Neogen”;
* David Metreveli Medical Clinic;
* “Tbilisi Balneological Resort”;
* Clinic “Guli”;
* Independent Labor Union of Medical, Pharmacy and Social Workers;
* “Dentex 95”;
* Clinic “Zeppelin”;

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| **Employment Opportunities** |

According to the law of higher education, program graduates have right to continue studies and do a doctorate degree program (the third, post-graduate academic stage of education) in Georgian or foreign university.

Graduates can pass residency program in Georgia (or residency equivalent course abroad) and after passing unified state certification examination receive permission of independent clinical practice (Georgian law “about medical activity” Art.17).

Program graduates can:

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

**Study Plan**

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| **semester** | **Course name** | **ECTS** | **Lecturers** | |
| **Academic Personnel** | **Invited Personnel** |
| **I** | **Mandatory courses** | **27** |  |  |
| 1 | Anatomy I | 5 |  | Veriko Berulava Nata Bakuradze |
| 2 | Biophysics | 3 | Nunu Metreveli | Olia Rcheulishvili |
| 3 | Medical biology I | 5 | Tamar Barbakadze | Ekaterine Gabashvili |
| 4 | Academic skills | 4 | Maia Rogava | Giga Khositashvili |
| 5 | Basics of sociology and psychology for healthcare professionals | 4 | Jana Javakhishvili | Lika Kutelia |
|  | **Elective Language Block I** | **4** |  |  |
| 6 | Georgian Language for Medical Program I | 4 |  | Maka Nozadze |
| 7 | German Language for Medical  Program I | 4 |  | Nino Tsulaia |
|  | **Elective courses** | **2** |  |  |
| 8 | History of medicine | 2 |  | Sopio Kalandarishvili |
| 9 | Latin language | 2 | Tamar Sukhishvili |  |
| 10 | English in Medical Discourse | 2 | Maia Rogava | Nino Chkhikvadze |
| **II** | **Mandatory courses** | **33** |  |  |
| 11 | Anatomy II | 5 |  | Nino Inauri |
| 12 | Physiology | 5 | Eka Lepsveridze |  |
| 13 | Biochemistry | 5 | Davit Mikeladze  Lali Shanshiashvili |  |
| 14 | Medical biology II | 5 | Cort Anderson  Mari Murtskhvaladze |  |
| 15 | Histology | 5 | Tamar Lortkipanidze | Sopio Kalandarishvili |
| 16 | Clinical skills I | 2 |  | Koka Gogichaishvili  Nana Guldedava |
| 17 | PBL Seminar I | 2 |  | Rudiko Rusia  Sophio Kalandarishvili |
|  | **Elective Language Block II** | **4** |  |  |
| 18 | Georgian Language for Medical Program II | 4 |  | Maka Nozadze |
| 19 | German Language for Medical Program II | 4 |  | Nino Tsulaia |
| **III** | **Mandatory courses** | **30** |  |  |
| 20 | Body Systems Structure & Function I  (Cardiovascular System & Blood) | 8 | Giga Gamkrelidze  Lali Shanshiashvili  Tamar Lortkipanidze  Ivane Abiatari | Gvantsa Khodeli  Rudiko Rusia  Sopio Kalandarishvili |
| 21 | Body Systems Structure & Function II  (Respiratory & Digestive Systems) | 7 |
| 22 | Body Systems Structure & Function III  (Endocrine & Urogenital Systems) | 7 |
| 23 | Microbiology I | 5 | Ekaterine Tevdoradze |  |
| 24 | Bioethics and deontology | 3 | Nino Rodonaia | Eka Sanikidze |
| **IV** | **Mandatory courses** | **30** |  |  |
| 25 | Inflammation & Immune System Disorders (Module I)  (Pathology, Immunology, Pharmacology) | 10 | Elene Zhuravliova  Lali Shanshiashvili  Olwyn Westwood | Gvantsa Khodeli  Rudiko Rusia  Sopio Kalandarishvili  Giorgi Chilingarashvili |
| 26 | Hemodynamic Disorders & Neoplasia (Module II)  (Pathology, Immunology, Pharmacology) | 4 |
| 27 | Genetic, Environmental & Infectious Disorders (Module III)  (Pathology, Pharmacology) | 5 | Elene Zhuravliova | Gvantsa Khodeli  Rudiko Rusia  Sopio Kalandarishvili  Giorgi Chilingarashvili |
| 28 | Microbiology II | 4 | Ekaterine Tevdoradze |  |
| 29 | Medical Communication | 3 | Mikheil Tsverava | Eka Sanikidze |
| 30 | Clinical skills II | 4 |  | Koka Gogichaishvili  Nana Guldedava |
| **V** | **Mandatory courses** | **31** |  |  |
| 31 | Respiratory, Blood and Cardiovascular System Disorders  (Module IV)  (Pathology, Pharmacology, Basics of Clinical Diagnostics) | 6 | Ekaterine Berishvili-Berney;  Elene Zhuravliova;  Mikheil Tsverava. | Gvantsa Khodeli;  Natia Gagua;  Elene Khurtsidze. |
| 32 | Digestive system disorders  (Module V)  (Pathology, Pharmacology, Basics of Clinical Diagnostics) | 2.5 | Ekaterine Berishvili-Berney;  Elene Zhuravliova;  Mikheil Tsverava. | Gvantsa Khodeli;  Natia Gagua;  Elene Khurtsidze. |
| 33 | Endocrine and Genitourinary system disorders  (Module VI)  (Pathology, Pharmacology, Basics of Clinical Diagnostics) | 5.5 | Ekaterine Berishvili-Berney;  Elene Zhuravliova;  Mikheil Tsverava. | Gvantsa Khodeli;  Natia Gagua;  Elene Khurtsidze. |
| 34 | Nervous System Disorders  (Module VII)  (Pathology, Pharmacology, Basics of Clinical Diagnostics) | 2.5 | Ekaterine Berishvili-Berney;  Elene Zhuravliova;  Mikheil Tsverava. | Gvantsa Khodeli;  Natia Gagua;  Elene Khurtsidze. |
| 35 | Musculoskeletal system and Skin disorders  (Module VIII)  (Pathology, Pharmacology, Basics of Clinical Diagnostics) | 2.5 | Ekaterine Berishvili-Berney;  Elene Zhuravliova;  Mikheil Tsverava. | Gvantsa Khodeli;  Natia Gagua;  Elene Khurtsidze. |
| 36 | Biological Basis of Behavior and Behavioral Science | 3 | Malkhaz Makashvili |  |
| 37 | PBL Seminar IV | 3 |  | Salome Khubulava  Sopio Kalandarishvili |
|  | **University General (elective) Courses** | **6** |  |  |
| 38 | Essentials of Management | 6 | Nino Tandilashvili |  |
| 39 | Principles of Economics I (microeconomics) | 6 | Giorgi Papava |  |
| 40 | Business Ethics and Public Responsibility of Corporation | 6 |  | Lana Chkhartishvili |
| **VI** | **Mandatory courses** | **29** |  |  |
| 41 | Surgery I | 5 | Koba Shanava | Levan Koiava |
| 42 | Parasitology | 3 |  | Khatuna Vashakmadze |
| 43 | Pharmacology | 3 | Elene Zhuravliova | Natia Gagua |
| 44 | Preventive medicine | 3 |  | Elene Pachkoria |
| 45 | Radiology | 3 | Mikheil Okujava |  |
| 46 | Bio-medical research I | 4 | Tamar Barbakadze  Ivane Abiatari |  |
| 47 | Clinical Psychology | 3 | Revaz Korinteli |  |
| 48 | Epidemiology and evidence based medicine | 3 |  | Elene Phagava |
|  | **Elective courses** | **2** |  |  |
| 49 | Dietology | 2 |  | Salome Khubulava |
| 50 | Medical ecology | 2 |  | Sopio Kalandarishvili |
| 51 | Health promotion | 2 |  | Natia Skhvitaridze |
| **VII** | **Mandatory courses** | **30** |  |  |
| 52 | Internal Medicine I  Cardiology,  Pulmonology,  Gastroenterology,  Hematology. | 13 | Tamaz Shaburishvili; Irine Datikashvili-David | Mariam Svanidze;  Ana Rekhviashvili;  Elene Khurtsidze |
| 53 | Neurology I | 7 | Marika Megrelishvili |  |
| 54 | Surgery II | 8 | Koba Shanava | Levan Tsamalaidze |
| 55 | Laboratory medicine | 2 |  | Nana Dzneladze |
| **VIII** | **Mandatory courses** | **30** |  |  |
| 56 | Internal Medicine II  Rheumatology,  Nephrology,  Endocrinology. | 10 | Mikheil Tsverava; Ekaterine Kvaratskhelia. | Ana Rekhviashvili |
| 57 | Obstetrics | 5 | Mariam Kharaishvili | Vakhtang Gurabanidze |
| 58 | Otorhinolaryngology | 3 |  | Bejan Khelashvili |
| 59 | Clinical skills III | 4 |  | Nana Guldedava  Koka Gogichaishvili |
| 60 | Pediatrics I | 5 |  | Tinatin Davitaia |
| 61 | Urology | 3 |  | Paata Giorgadze |
| **IX** | **Mandatory courses** | **29** |  |  |
| 62 | Gynecology | 6 | Mariam Kharaishvili | Vakhtang Gurabanidze |
| 63 | Neurology II | 4 | Marika Megrelishvili | Mamuka Khachidze |
| 64 | Anesthesiology and Reanimatology | 3 |  | Nikoloz Rtveliashvili |
| 65 | Pediatrics II | 4 |  | Tinatin Davitaia |
| 66 | Dermatovenerology | 3 | Lali Mekokishvili |  |
| 67 | Ophthalmology | 3 |  | Nino Tkhelidze |
| 68 | Infectious diseases I | 4 |  | Elene Pachkoria |
|  | **Elective courses** | **2** |  |  |
| 69 | Nanomedicine | 2 | Ia Jvania |  |
| 70 | Biotechnology | 2 | Neli Datukishvili |  |
| **X** | **Mandatory courses** | **31** |  |  |
| 71 | Clinical immunology and allergology | 4 |  | Marina Bezarashvili |
| 72 | Psychiatry | 4 | Nino Makhashvili  Marine Gegelashvili |  |
| 73 | Family medicine | 4 |  | Tamar Melikidze |
| 74 | Traumatology and orthopedics | 4 |  | Irakli Vardzukashvili |
| 75 | Infectious diseases II | 4 |  | Mariam Svanidze Elene Pachkoria |
| 76 | Oncology | 3 |  | Eka Dgebuadze |
| 77 | Public health | 4 | Giorgi Gotsadze  Nino Mirzikashvili |  |
| 78 | Geriatrics | 2 | Mikheil Tsverava |  |
|  | **Elective courses** | **2** |  |  |
| 79 | Reproductology | 2 |  | Vakhtang Gurabanidze |
| 80 | Addictiology | 2 | David Otiashvili |  |
| 81 | Transplantology | 2 | Koba Shanava |  |
| 82 | Pthysiatry | 2 |  | Elene Khurtsidze |
| **XI** | **Mandatory courses** | **30** |  |  |
| 83 | Emergency medicine | 6 |  | Tinatin Khutsishvili;  Nikoloz Rtveliashvili; |
| 84 | Forensic medicine | 3 |  | Meri Gonashvili |
| 85 | Syndrome based Differential diagnostics | 6 | Mikheil Tsverava | Ana Rekhviashvili |
| 86 | Medical Rehabilitation | 4 |  | Tamar Chilingarishvili |
| 87 | Clinical Radiology | 4 | Mikheil Okujava |  |
| 88 | Bioinformatics for Medical Studies | 3 | Vincenzo Lagani |  |
|  | **Elective courses** | **4** |  |  |
| 89 | Pediatric Surgery | 2 |  | Paata Giorgadze |
| 90 | Rational use of drugs | 2 |  | Natia Gagua |
| 91 | Occupational diseases | 2 | Mikheil Tsverava |  |
| 92 | Neurosurgery | 2 |  | Irakli Chelishvili |
| 93 | Palliative Medicine | 2 |  | Eka Dgebuadze |
| 94 | Pediatric endocrinology | 2 | Eka Kvaratskhelia |  |
| **XII** | **Mandatory courses** | **30** |  |  |
| 95 | Clinical Practice | 18 | Ivane Abiatari |  |
| 96 | Bio-medical research II | 8 | Sophia Adamia  Ekaterine Berishvili-Berney |  |
| 97 | Healthcare Management | 2 | Iagor Kalandadze |  |
|  | **Elective courses** | **2** |  |  |
| 98 | Vascular Surgery | 2 |  | Giorgi Kenchadze |
| 99 | Pain Management | 2 | Marika Megrelishvili | Nika Rtveliashvili |
| 100 | Sport medicine | 2 |  | Manana Rukhadze |
| 101 | Dentistry and maxillofacial surgery | 2 |  | Irakli Chachua |