



DAVID TVILDIANI MEDICAL UNIVERSITY

AIETI Medical School



Medical Doctor (MD) Undergraduate Education Program The program has been functioning since 1992, granted The copyright (Nº 1-01/21-34) in 1997. Undergraduate medical education program involves one-stage integrated higher medical education after successful termination of which a person receives an academic degree of a Medical Doctor.

The objective of the program is to prepare medical personnel of international level.

The task of the program is to organize the contents and extent of teaching courses and teaching process in a way that promotes:

- Achievement of up-to-date knowledge in basic medical and clinical sciences;

- Acquisition of clinical skills required for the appropriate stage of teaching (stage I of medical education);

- Development of ethical principles crucial for the medical profession;
- Readiness for continuous education and development while being on medical duty.

Length of education year and credit amount:

1. Undergraduate Medical Education Program lasts for 6 years and consists of 360 credits.

2. Education year at AIETI Medical School involves 40 working weeks (240 working days) and consists of 2 semesters – Fall semester (20 weeks) and Spring semester (20 weeks). The semesters are separated by vacations.

3. Education is conducted using the system of modules.

4. Based on the European Credit System implementation each 20-week semester of an academic year comprises 30 credits distributed to different subjects while the annual extent of education equals to 60 credits.

5. One credit involves 30 working hours of which 16 hours are intended for contact and 14 hours – for students' independent work;

Structure of the Education Program

The 6 -year Undergraduate medical studies are divided into 3 stages:

Stage I – Basic (theoretical) medical sciences;

The stage takes first 5 semesters of the program (2.5 years). The extent of the basic medical education equals to 150 credits (150 ECTS)

The First year of the education program is devoted to topic-oriented studies. Programs of the learning courses are organized in a way that allows learning of general aspects of a subject thus providing the basic knowledge for learning human organ systems during the 2nd year of education.

The 2nd year completely as well as the fall semester of the 3rd year (IV-V semesters) are intended for human organ system learning. Basic medicine learning courses are horizontally integrated and are as well in connection with Principles of Physical Examination and Diagnosis and pharmacology (an element of vertical learning), creating 9 modules for learning organ systems:

1. The sum of the credits awarded to the modules and separate academic courses per semester and per year equals to 30 and 60 credits, respectively.

2. 6 modules of learning organ systems are taught in the 2nd year: muscular- skeletal system -7 credits, blood system -10 credits, cardiovascular system -11 credits, respiratory system -9 credits, digestive system -10 credits, nervous system -7 credits, other subjects - 6 credits.

3. 3 modules of learning organ systems and other academic courses (with the sum of credits -30) are delivered during 3rd year (V semester): urinary system -7 credits, reproductive system -7 credits, endocrine system -9 credits, other subjects -7 credits.

4. Learning of each system starts with Embryology and is followed by macroscopic (anatomy) and microscopic (histology) structure and principles of normal functioning of each system (physiology and biochemistry), further by etiology and pathogenesis of diseases of each system (microbiology, pathology – pathologic anatomy, pathophysiology), clinical assessment of pathological processes, typical clinical features of diseases, Principles of Physical Examination and Diagnosis and drug treatment (pharmacology).

Thus at the first stage, the basic medicine course, of topic-oriented (I) and system-oriented learning (II, III) the following subjects are delivered:

- 1. Human anatomy –16.5 credits
- 2. Histology and embryology –10.5 credits;
- 3. Medical physiology 15 credits;
- 4. Medical biochemistry --- 14 credits;
- 5. Medical pharmacology 14.5credits;
- 6. Microbiology 10 credits;
- 7. Immunology 5.5 credits;
- 8. Medical genetics and molecular biology 7 credits;
- 9. Pathology 23 credits;
- 10. Behavioral sciences 6 credits;
- 11. Biostatistics 2 credits;
- 12. Principles of clinical diagnosis with Clinical assessment of pathological processes-15 credits;
- 13. Biomedical ethics-2 credits;
- 14. Basics of science research-4credits
- 15. Clinical Skills 2 credits;
- 16. Topographical Anatomy-2 credits;
- 17. Elective subjects 10 credits.

Stage II- Clinical Medicine Course – takes next 5 semesters (VI-X). The extent of education in each semester equals to 30 credits. The total course of clinical medicine comprises 150 credits 10 credits of which are intended for elective subjects.

Clinical Medicine Course delivers:

- 1. Internal medicine involves 42 credits:
- a. Cardiology 7 credits;
- b. Pulmonology 4 credits;
- c. Gastroenterology 4 credits;
- d. Nephrology 3 credits;
- e. Endocrinology and metabolism 4 credits;
- f. Rheumatology and systemic diseases 3 credits;
- g. Hematology 3 credits;
- h. Allergy and clinical immunology 3 credits;
- i. Clinical pharmacology 3 credits;
- j. Differential diagnosis and treatment of internal diseases –7 credits.
- 2. Surgery involves 37 credits:
- a. General surgery 8 credits;
- b. Special Surgery– 13 credits;
- c. Oncology –4 credits;
- d. Urology 3 credits;
- e. Traumatology and orthopedics 3 credits;
- f. Ophthalmology 3 credits.
- 3. Obstetrics and Gynecology 12 credits;
- 4. Pediatrics 8 credits;
- 5. Infectious diseases 7 credits;
- 6. Nervous diseases -7 credits;
- 7. Psychiatry 6 credits;

- 8. Healthcare organization and epidemiology 6 credits;
- 9. Medical Radiology 4 credits;
- 10. Dermatovenerology 4 credits;
- 11. Preventive medicine with ecology 4 credits;
- 12. Basics of science research– 6 credits
- 13. Clinical abilities 1 credits;
- 14. Legal Principles of Medical Activity– 2 credits;
- 15. Elective subjects 4 credits.

Stage III - General Specialization. This stage takes one year (VI year of education). General specialization is performed in the following clinical disciplines:

- 1. Internal medicine: 19 credits;
- Syndrome Differential Diagnosis and Emergency Therapy 14 credits;
- Rational Pharmacotherapy 3 credits;
- Physiotherapy and medical rehabilitation 2 credits;
- 2. Surgery : 11 credits
- Pediatric surgery 3 credits;
- Anesthesiology and Reanimatology 3 credits;
- Urgent surgery 5 credits.
- 3. Obstetrics and Gynecology 7 credits;
- 4. Pediatrics -7 credits;
- 5. Infectious diseases 3 credits;
- 6. Nervous diseases 3 credits;
- 7. Clinical Abilities- 4 credits
- 8. The extent of elective subjects of the 6^{th} year equals to 6-credits.

In order to refine practical medical skills and ensure adequate learning of the methods of timely diagnosis and proper treatment in the given clinical cases, clinical subjects are delivered in a stepwise way. For instance, teaching of internal medicine is gradually deepened vertically upwards. Principles of Physical Examination and Diagnosis (methods of diagnosis, $2^{nd} - 3^{rd}$ year of education), in particular, pathology (etiology, pathogenesis, clinics, diagnosis, prevention of diseases and principles of treatment) -3^{rd} -6th year, differential diagnosis and treatment of internal diseases – 5th year, Syndrome Differential Diagnosis and Emergency Therapy – 6th year. During the 6th year of education pharmacotherapy problem-oriented learning cycle is introduced offered by Groningen University (Groningen Method). The aim of the cycle is to form practical skills in choosing pharmacological treatment for a specific patient, develop the ability of selecting an adequate medication in particular cases and train the students to a step-by- step process of logical thinking from diagnosis to treatment. At the end of the cycle an objective examination test is performed -OSCE (Objective Structured Clinical Examination) during which students are given the roles of a patient, a physician, and an assessor

Elaboration of Students' clinical skills is performed on the basis of Clinical Skills, of specific courses; (5 academic courses, total of 7 credits) and the credit-hours allocation within the formats of all clinical courses: Cardiology-1.75 credits, Endocrinology- and Metabolism- 1 credit, Dermatovenerology-1 credit, Medical Radiology -1 credit, General Surgery – 2 credits, Pulmonology-1 credit, Nephrology – 0.75 credit, Gastroenterology – 1 credit, Hematology -0.75 credit, Special Surgery- 3.25 credits, Oncology- 1 credits, Urology 0.75 credits, Rheumatology and systemic diseases- 0.75 credits, Allergology and Clinical Immunology- 0.75 credits, Pediatrics- 5.5 credits, Nervous Diseases -3.25 credits, Obstetrics and Gynecology 6.5 credits, Clinical Pharmacology- 1 credit, Infectious Diseases – 3. 25 credits, Psychiatry – 1.5 credits, Otolaryngology- 0.75 credits, Ophthalmology- 0.75 credits, Differential diagnosis and treatment of internal diseases 1.75 credits, Orthopedics and Traumatology – 0.75 credits, Syndrome differential diagnosis of Internal Medicine and Emergency therapy- 7 credits, Physiotherapy and Rehabilitation – 1 credit, Physiotherapy and medical rehabilitation – 1 credits, Rational Pharmacotherapy – 1.5 credits; Anesthesiology and Reanimatology -1.5 credits; Pediatric surgery -1.5 credits, Urgent surgery 2.5 credits, Elective subjects 3.25 credits. The sum of the credits for the clinical abilities is 67 credits.

The training of student to research skills is performed based on 5 academic courses of the principles of scientific research, which in total equals to 10 credits, of them 6 credits are devoted to theoretical aspects (the scientific study of 1, 2, 3), and the remaining 4 credits to research work.

Within the education course the most prominent and recognized reference- and textbooks are used that are recommended by and used in the leading medical schools/universities. The educational courses are provided by leading specialists of Georgia.

The academic programs rest on the basic information source - the library that contains over 5000 volumes representing almost all branches of medicine, in particular, by up-to-date medical textbooks, manuals, guides, audio-video aids, serving as an integral part of the school academic curricula. Computer-based methods of education are widely used (computer classes, internet) as well as the visual aids provided by invited course instructors (preparations, slides, atlases, etc).

The following methods are used during the education process:

- Interactive lectures and seminars;
- Bedside teaching
- Using simulators and models;
- Patient and physician role play;
- Laboratory teaching;
- Presentations;
- Involvement in scientific researches.

During the education process the student works under supervision in an affiliated clinical institution and acquires the following clinical experience:

- Treatment of patients with acute diseases on-site and in an emergency unit;
- Treatment of internal diseases;
- Treatment of surgical patients;
- Working on the primary health care level;
- Treatment of elderly people;
- Treatment of children;
- Treatment of people with psychiatric diseases;
- Treatment of gynecological diseases, management of physiological labor;
- Treatment of critical conditions in the intensive care unit;
- Treatment of different system diseases (cardiology, pulmonology, nephrology, etc);
- Anesthesiology;
- Rehabilitation medicine;
- Treatment of different surgical diseases.

Educational program envisages an 11-credit course of elective subjects also considering the transparency in opting training bases affiliated with Clinical institutions (in Tbilisi, Sachkhere, Lithuania (Klaipeda) at Clinical Sciences Study.

Curriculum

		First Year of Study												
	Subjects block		N	umber	of load				and hourly by the forms of Semesters II					or Exam
No.	Academic course/ Subjects block code	Academic course/ Subjects block	Credit	Total	Lecture	Practicalo	Independent	Credit	In-Sum	Lecture	Practicalo	Independent	Form of Examination	Responsible for Exam
Ι	UGE 110	Introduction in Medical Sciences 1	6	180	24	72	84						MX	I, AC
1	UGE 102.1	Histology, Embryology and cytology 1	3	90	12	36	42						MX	I, AC
2	UGE 103.1	Medical Biochemistry 1	3	90	12	36	42						MX	I, AC
II	UGE 111	Introduction in Medical Sciences 2	11	330	44	132	154						MX	I, AC
1	UGE 101.1	Human Anatomy 1	5	150	20	60	70						MX	I, AC
2	UGE 103.2	Medical Biochemistry 2	3	90	12	36	42						MX	I, AC
3	UGE 104.1	Medical Genetics and Molecular Biology 1	3	90	12	36	42						MX	I, AC
III	UGE 112	Introduction in Medical Sciences 3	11	330	44	132	154						MX	I, AC
1	UGE 108	Immunology	5.5	165	22	66	77						MX	I, AC
2	UGE 107.1	Medical Microbiology 1	1	30	4	12	14						MX	I, AC
3	UGE 109.1	Pathology 1	4.5	135	18	54	63						MX	I, AC
IV	UGE 201	Biomedical Ethics	2	60	8	24	28						ზ	სკხ
V	UGE 113	Introduction in Medical Sciences 4						10	300	40	120	140	MX	I, AC
1	UGE 102.2	Histology, Embryology and Cytology 2						1	30	4	12	14	MX	I, AC
2	UGE 103.3	Medical Biochemistry 3						3	90	12	36	42	MX	I, AC
3	UGE 104.2	Medical Genetics and Molecular Biology 2						1.5	45	6	18	21	MX	I, AC
4 VT	UGE 106.1	Medical Pharmacology 1						4.5 9	135 270	18 36	54	63 126	MX MX	I, AC I, AC
VI	UGE 114 UGE 101.2	Introduction in Medical Sciences 5 Human Anatomy 2						9 6.5	270 195	36 26	108 78	126 91	MX	I, AC
1	UGE 101.2 UGE 104.3	Human Anatomy 2 Medical Genetics and Molecular Biology 3						6.5 2.5	195 75	26 10	78 30	35	MX MX	I, AC I, AC
VIII	UGE 104.3 UGE 115	Introduction in Medical Sciences 6						2.5 9	75 270	10 36	30 108	35 126	MX MX	I, AC I, AC
v III 1	UGE 115 UGE 107.2	Medical Microbiology 2						9 4	120	30 16	48	56	MX	I, AC
2	UGE 107.2 UGE 105.1	Medical Physiology 1						4 5	120	20	40 60	70	MX	I, AC
VIII	UGE 105.1 UGE 502.1	Basics of Science Research 1						2	60	120 12	20	28	0	I, AC

		Second Year of Stu	ıdv											
	bjects block code		Number of loading of credits and hourly by the forms of Studying and Semesters III IV							of	mination	for Exam		
No.	Academic course/ Subjects block	Academic course/ Subjects block	Credit	Total	Lecture	Practicalo	Independent	Credit	In-Sum	Lecture	Practicalo	Independent	Form of Examination	Responsible for Exam
Ι	UGE 116	Musculoskeletal System and Principles of Clinical Diagnosis	7	210	28	84	98						MX	I, AC
1	UGE 102.3	Histology, Embryology and Cytology 3	0.5	15	2	6	7						MX	I, AC
2	UGE 103.4	Medical Biochemistry 4	1	30	4	12	14						MX	I, AC
3	UGE 105.2	Medical Physiology 2	0.5	15	2	6	7						MX	I, AC
4	UGE 109.2	Pathology 2	2	60	8	24	28						MX	I, AC
5	UGE 302.1	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 1	3	90	12	36	42						MX	I, AC
II	UGE 117	Blood System and Infection	10	300	40	120	140						MX	I, AC
1	UGE 102.4	Histology, Embryology and Cytology 4	0.5	15	2	6	7						MX	I, AC
2	UGE 103.5	Medical Biochemistry 5	0.5	15	2	6	7						MX	I, AC
3	UGE 107.3	Medical Microbiology 3	4	120	16	48	56						MX	I, AC
4	UGE 106.2	Medical Pharmacology 2	0.5	15	2	6	7						MX	I, AC
5	UGE 105.3	Medical Physiology 3	0.5	15	2	6	7						MX	I, AC
6	UGE 109.3	Pathology 3	3	90	12	36	42						MX	I, AC
7	UGE 302.2	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 2	1	30	4	12	14						MX	I, AC
III	UGE 118	Cardiovascular System	11	330	44	132	154						MX	I, AC
1	UGE 101.3	Human Anatomy 3	2	60	8	24	28						MX	I, AC
2	UGE 102.5	Histology, Embryology and Cytology 5	0.5	15	2	6	7						MX	I, AC
3	UGE 105.4	Medical Physiology 4	2.5	75	10	30	35						MX	I, AC
4	UGE 106.3	Medical Pharmacology 3	2	60	8	24	28						MX	I, AC
5	UGE 109.4	Pathology 4	1.5	45	6	18	21						MX	I, AC

6	UGE 302.3	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 3	2.5	75	10	30	35						MX	I, AC
IV	UGE 502.2	Basics of Science Research 2	2	60	12	20	28						0	სკხ
v	UGE 119	Respiratory System						9	270	36	108	126	MX	I, AC
1	UGE 101.4	Human Anatomy 4						0.5	15	2	6	7	MX	I, AC
2	UGE 102.6	Histology, Embryology and Cytology 6						0.5	15	2	6	7	MX	I, AC
3	UGE 105.5	Medical Physiology 5						1.5	45	6	18	21	MX	I, AC
4	UGE 106.4	Medical Pharmacology 4						2.5	75	10	30	35	MX	I, AC
5	UGE 109.5	Pathology 5						2	60	8	24	28	MX	I, AC
6	UGE 302.4	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 4						2	60	8	24	28	MX	I, AC
VI	UGE 120	Digestive system and Nutrition						10	300	40	120	140	MX	I, AC
1	UGE 101.5	Human Anatomy 5						1	30	4	12	14	MX	I, AC
2	UGE 102.7	Histology, Embryology and Cytology 7						1	30	4	12	14	MX	I, AC
3	UGE 103.6	Medical Biochemistry 6						1.5	45	6	18	21	MX	I, AC
4	UGE 105.6	Medical Physiology 6						1	30	4	12	14	MX	I, AC
5	UGE 106.5	Medical Pharmacology 5						0.5	15	2	6	7	MX	I, AC
6	UGE 107.4	Medical Microbiology 4						0.5	15	2	6	7	MX	I, AC
7	UGE 109.6	Pathology 6						3	90	12	36	42	MX	I, AC
8	UGE 302.5	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 5						1.5	45	6	18	21	MX	I, AC
VII	UGE 121	Nervous System and skin						7	210	28	84	98	MX	I, AC
1	UGE 106.6	Medical Pharmacology 6						2.5	75	10	30	35	MX	I, AC
2	UGE 109.7	Pathology 7						2	60	8	24	28	MX	I, AC
3	UGE 202.1	behavioral Sciences 1						2	60	8	24	28	MX	I, AC
4	UGE 302.6	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 6						0.5	15	2	6	7	MX	I, AC
VIII	UGE 203	Biostatistics						2	60	8	24	28	MX	I, AC
IX	UGE 503.1	Clinical skills 1						1	30		8	22	0	I
X		Elective courses						1	30	4	12	14	0	I
	•	Sum:	30	900	120	360	420	30	900	116	356	428		

		Third Year of Stud	y											
	ubjects block		1	Numbe	r of loa	iding of Stud		s and h nd Sem		by the VI	forms o	of	ination	r Exam
No.	Academic course/ Subjects block code	Academic course/ Subjects block	Credit	In-Sum	Lecture	Practicalo	Independent	Credit	In-Sum	Lecture	Practicalo	Independent	Form of Examination	Responsible for Exam
Ι	UGE 122	Urinary System	7	210	28	84	98						MX	I, AC
1	UGE 101.6	Human Anatomy 6	0.5	15	2	6	7						MX	I, AC
2	UGE 102.8	Histology, Embryology and Cytology 8	1	30	4	12	14						MX	I, AC
3	UGE 105.7	Medical Physiology 7	2	60	8	24	28						MX	I, AC
4	UGE 109.8	Pathology8	1.5	45	6	18	21						MX	I, AC
5	UGE 302.7	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 7	2	60	8	24	28						MX	I, AC
II	UGE 123	Reproductive System	7	210	28	84	98						MX	I, AC
1	UGE 101.7	Human Anatomy 7	0.5	15	2	6	7						MX	I, AC
2	UGE 102.9	Histology, Embryology and Cytology 9	1.5	45	6	18	21						MX	I, AC
3	UGE 105.8	Medical Physiology 8	1	30	4	12	14						MX	I, AC
4	UGE 107.5	Medical Microbiology 5	0.5	15	2	6	7						MX	I, AC
5	UGE 109.9	Pathology 9	2.5	75	10	30	35						MX	I, AC
6	UGE 302.8	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 8	1	30	4	12	14						MX	I, AC
III	UGE 124	Endocrine System	9	270	36	108	126						MX	I, AC
1	UGE 101.8	Human Anatomy 8	0.5	15	2	6	7						MX	I, AC
2	UGE 102.10	Histology, Embryology and Cytology 10	1	30	4	12	14						MX	I, AC
3	UGE 103.7	Medical Biochemistry 7	2	60	8	24	28						MX	I, AC
4	UGE 105.9	Medical Physiology 9	1	30	4	12	14						MX	I, AC
5	UGE 106.7	Medical Pharmacology 7	2	60	8	24	28						MX	I, AC
6	UGE 109.10	Pathology 10	1	30	4	12	14						MX	I, AC
7	UGE 302.9	Principles of Clinical Diagnosis with Clinical Assessment of pathological process 9	1.5	45	6	18	21						MX	I, AC
IV	UGE 202.2	Behavioral Sciences 2	4	120	16	48	56						MX	I, AC
v	UGE 501	Topographical Anatomy	2	60	8	24	28						MX	I, AC

VI	UGE 503.2	Clinical Skills 2	1	30		8	22						0	I
VII	UGE 303	Cardiology						7	210	28	84	98	MX	I, AC
VIII	UGE 307	Endocrinology & Metabolism						4	120	16	48	56	MX	I, AC
IX	UGE 313	Dermatovenerology						4	120	16	48	56	MX	I, AC
Х	UGE 317	Medical Roentgenology and Radiology						4	120	16	48	56	MX	I, AC
XI	UGE 351	General Surgery						8	240	32	96	112	MX	I, AC
XII	UGE 502.3	Basics of Science Research 3						2	60	12	20	28	0	I
XIII	UGE 503.2	Clinical skills 3						1	30		28	2	0	I
		Sum:	30	900	116	356	428	30	900	112	368	420		

		Fourth Year of Study												
	Subjects block code		Number of loading of credits and hourly by the forms of Studying and Semesters VII									lination	or Exam	
No.	Academic course/ Sub	Academic course/ Subjects block	Credit	In-Sum	Lecture	Practicalo	Independent	Credit	In-Sum	Lecture	Practicalo	Independent	Form of Examination	Responsible for Exam
1	UGE 304	Pulmonology	4	120	16	48	56						MX	I, AC
2	UGE 305	Nephrology	3	90	12	36	42						MX	I, AC
3	UGE 306	Gastroenterology	4	120	16	48	56						MX	I, AC
4	UGE 309	Hematology	3	90	12	36	42						MX	I, AC
5	UGE 352.1	Special Surgery 1	7	210	28	84	98						MX	I, AC
6	UGE 353	Oncology	4	120	16	48	56						MX	I, AC
7	UGE 354	Urology	3	90	12	36	42						MX	I, AC
8		Elective Subjects	2	60	8	24	28						0	I
9	UGE 308	Rheumatology and Systemic Diseases						3	90	12	36	42	MX	I, AC
10	UGE 310	Allergology and Clinical Immunology						3	90	12	36	42	MX	I, AC
	UGE 314.1	Pediatrics 1						8	240	32	96	112	MX	I, AC
	UGE 316.1	Nervous Diseases 1						7	210	28	84	98	MX	I, AC
11	UGE 358.1	Obstetrics and Gynecology 1						7	210	28	84	98	MX	I, AC
12		Complete scientific work						2	60		8	52	0	I
		სულ:	30	900	120	360	420	30	900	112	344	444		

		Fifth Year of Stud	у											
	Subjects block code		Number of loading of credits and hourly by the forms of Studying and Semesters									of	iination	or Exam
No.	Academic course/ Subj	Academic course/ Subjects block	Credit	In-Sum	XI Lecture	Practicalo	Independent	Credit	In-Sum	Lecture	Practicalo	Independent	Form of Examination	Responsible for Exam
1	UGE 311	Clinical Pharmacology	4	120	16	48	56						MX	I, AC
2	UGE 315.1	Infectious Diseases 1	7	210	28	84	98						MX	I, AC
3	UGE 318	Psychiatry	6	180	24	72	84						MX	I, AC
4	UGE 356	Otorhinolaryngology	3	90	12	36	42						MX	I, AC
5	UGE 357	Ophthalmology	3	90	12	36	42						MX	I, AC
6	UGE 358.2	Obstetrics &Gynecology 2	5	150	20	60	70						MX	I, AC
7		Elective Subjects	2	60	8	24	28						0	Ι
8	UGE 145	Preventive Medicine with Ecology						4	120	16	48	56	MX	I, AC
9	UGE 204	Public Health and Epidemiology						6	180	24	72	84	MX	I, AC
10	UGE 206	Legal Aspects of Medical Activity						2	60	8	24	28	0	Ι
11	UGE 312	Differential Diagnosis & Treatment of Internal Diseases						7	210	28	84	98	MX	I, AC
12	UGE 352.2	Special Surgery 2						6	180	24	72	84	MX	I, AC
13	UGE 355	Orthopedics & Traumatology						3	90	12	36	42	MX	I, AC
14		Complete scientific work						2	60		8	52	0	Ι
		Sum:	30	900	120	360	420	30	900	112	344	444		

		Sixth Year of Study												
	Subjects block code		Number of loading of credits and hourly by the forms of Studying and Semesters XI XII										nination	for Exam
No.	Academic course/ Sul	Academic course/ Subjects block	Credit	In-Sum	Lecture	Practicalo	Independent	Credit	In-Sum	Lecture	Practicalo	Independent	Form of Examination	Responsible for Exam
1	UGE 402.1	Syndromal Differential Diagnosis of Internal Diseases & Emergencies 1	7	210		112	98						MX	I, AC
2	UGE 403	Physiotherapy & Medical Rehabilitation	2	60		32	28						MX	I, AC
3	UGE 404	Rational Pharmacotherapy	3	90		48	42						MX	I, AC
4	UGE 405	Nervous Diseases 2	3	90		48	42						MX	I, AC
5	UGE 407	Pediatrics 2	7	210		112	98						MX	I, AC
6	UGE 451	Anesthsiology & Reanimatology	3	90		48	42						MX	I, AC
7	UGE 452	Pediatric Surgery	3	90		48	42						MX	I, AC
8	UGE 503.4	Course of Clinical Skills 4	2	60		40	20						MX	I, AC
9	UGE 402.2	Syndromal Differential Diagnosis of Internal Diseases & Emergencies 2						7	210		112	98	MX	I, AC
10	UGE 406	Infectious Diseases 2						3	90		48	42	MX	I, AC
11	UGE 453	Emergency Surgery						5	150		80	70	MX	I, AC
12	UGE 454	Obstetrics & Gynecology 3						7	210		112	98	MX	I, AC
13	UGE 503.5	Course of Clinical Skills 5						2	60		40	20	MX	I, AC
14		Elective Subjects						6	180		96	84	0	Ι
		Sum:	30	900	0	488	412	30	900	0	488	412		

MX - Mixed type of Exam

O - Oral Exam

T - Test Exam

I -Instructor/Instructors of Educational Course/Courses

AC - Assessment Center

The outcomes of the education program

According to the standards of the World Federation of Medical Education (WFME), competences of the basic medical education within the countries participating in Bologna process should be assessed through the competences provided by the Tuning Project that is in accordance with the framework of European Qualifications. The competence in the appropriate field involves the following components:

• Knowledge and awareness of basic, clinical, behavioral and social sciences including the fields associated with medical practice such as public health and medical ethics.

• Clinical and other skills associated with making diagnosis, practical procedures, communications, prevention and treatment of diseases, health promotion and rehabilitation issues, clinical reasoning, problem solving, etc.

• Ability of lifelong learning and improvement of professional qualification.

Accordingly, considering the requirements of national healthcare and based on the international standards of medical education AIETI Medical School ensures the education outcomes corresponding to the undergraduate medical education program.

The education outcomes along with field and general competencies describe what knowledge, abilities and values an AIETI Medical School graduate should possess upon the termination of the education program.

Generic competencies

The graduate should be able to:

1. Ability of analysis and synthesis

Critically evaluate complicated, incomplete and contradictory data; independently analyze data, present the results of the analysis in a comprehensive manner and further use them; have critical approach to new information; analyze, summarize, integrate different data and make conclusions; present the evidence and counterarguments upon the analysis of the results

2. Information Management

Collect data from different sources; process the large amount of information and make critical analysis; use the collected information in his professional activities.

3. Problem solution/Decision making

Independently define and pose complex problems and to find the ways for their solution; provide the analysis of expected results and make a final decision; know and in case of need be able to efficiently use additional resources within the field of study.

4. Communication skills, including usage of foreign languages.

observe, listen, and ask question, as well as communicate non-verbally; participate in meetings and communicate own opinions verbally and in writing; conduct negotiations within a professional context and participate in conflict resolution.

5. Ability to stay up to date with Learning

Use the full spectrum of education and information resources; manage own learning process; understand the necessity of staying up to date with learning; objectively evaluate own knowledge and skills.

6. Adaptation with the new environment

to have ability of practical working in a team, to have ability of professional subordination/adaptation and utilization of new technologies

7. Ability to work independently

Manage time; define priorities, follow the deadlines and work on agreed issues; correctly plan the resources related to his/her activities and to be responsible for the work done; evaluate and criticize it.

8. Values.

The graduate should:

have the knowledge of ethical and legal principles in the context of Medicine, be able to protect the rights of the patient; conduct negotiations within a professional context and participate in conflict resolution with any person, regardless of its social, cultural, religious or ethnic background; communicate with the colleagues and patients following the principles of Justice, social and democratic values.

Field-Specific competencies

Field-Specific knowledge
<u>1. Knowledge of basic medical sciences</u>
Normal Function of a Human Organism (Physiology)
Normal Structure of a Human Organism (Anatomy)
Normal metabolism and hormonal function of a Human Organism (Biochemistry)
Normal immune function of the Human Organism (Immunology)
Normal Biology of the cell
Normal development of a Human Organism (Embryology)

2. Knowledge of behavioral and social sciences

Psychology Human development: (child- youth – adult – elderly) Sociology

3. Knowledge of clinical sciences Pathological structure and diseases mechanisms (Pathology) Infection (Microbiology) Immunity and immunological diseases Genetics and hereditary diseases

<u>4. Knowledge of medicines and their prescription principles.</u>
Administration of antibiotics and antibiotic resistance.
Principles of medicine prescription
Side effects of medicines.
Medicines interaction
Blood and blood product transfusion
Medicines effects and pharmacokinetics
Different medicines
Different types of alternative medicines and their use for the treatment of patients.

5. <u>Knowledge of public health care system and understanding of a physician's role within this system</u>
Disease prevention
Life style, diet and nutrition
Health promotion

Disease screening and supervision Disability Gender issues in health care Epidemiology The impact of cultural and ethnic factors on health care Resources distribution and health economics Global health and inequality

<u>6. Knowledge of ethical and legal principles in medical practice</u>Patients' rightsRights of disabled personsPrinciples of communication with colleagues

7. Doctor's role in healthcare system Legislation related to medical field Professional regulation Systems Clinical audit principles Healthcare availability

Field-Specific Skills

A graduate should be able to:

 Medical advice provision Take history Perform physical examination Think clinically and make decision Give advice and explanations Encourage a patient and defend the patient's rights Assess mental status of a patient.

2. Assessment of a clinical case, ordering further examination, making differential diagnosis, discussion of disease management plans
Understand and evaluate the complicacy of clinical report and presentation
Administer appropriate investigation and interpret the results
Make differential diagnosis
Discuss the disease management plan with patients and the care-takers.
Take care of a terminal patient and his family members
Manage chronic diseases.

<u>3. Provision of the first aid assistance in case of emergency (first aid and resuscitation)</u>
Recognize and assess the emergency situation
Provide the first aid treatment
Provide basic first aid.
Provide advanced life support according to the guidelines and cardiopulmonary resuscitation.
Provide advanced life support Extended activities according to the guidelines.
Manage traumas in accordance with the guidelines.

4. Prescription of medicines

Prescribe medicine in an easily understandable and accurate manner

Link relevant medicines administration and other treatment procedures with the clinical context Discuss the adequacy of medication and other treatment and evaluate potential benefits and risks for a patient.

Manage pain and distress

Consider the medicines interaction upon the prescription .

5. Practical procedures

Measure blood pressure Venepuncture Inserting a catheter into the vein Perform intravenous injection and use of the infusion equipment Perform subcutaneous and intramuscular injection Provide a patient with oxygen Provide transportation and care of a patient Suturing Perform blood transfusion Perform catheterization of the urinary bladder Perform urinalysis Record and interpret an electrocardiogram Perform basic respiratory function tests

6. Efficient communication in medical practice

Communication with a patient

Communication with colleagues

Communication while conveying bad news

Communication with patient relatives

Communication with the disabled

Communication to receive Informed consent

Written communication (including the medical history)

Communication in a conflict situation

Communication through the mediator

Communication with law enforcement agencies and mass media

Efficient communication with any person irrespective of social, cultural, religious and ethnic belonging./status/

7. Use of ethical and legal principles in medical practice

Keep confidentiality Use the ethical principles and analytical skills in treatment process Get an informed consent and make a relevant record Issue a death certificate Request autopsy (in cases envisaged by Georgia legislation) Apply Georgian and international legislation during treatment Implement medical activities within multi-cultural environment

8. Assessment of psychological and social aspects related to a patient's disease Assessment of the psychological influence of the disease diagnosis on the patients Assess the social impact of the disease diagnosis on the patient Identify the disease- related stress Identify the drug and alcohol dependence /abuse/ 9. Using of evidence-based medicine principles, skills and knowledge

Use evidence in practice

Define and implement the relevant literature research

Critically evaluate published literature, make conclusions and use them in practice

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

Keep clinical records complete and in order

Use modern information technologies in practice

Search for specific information resources

Store and further use of information

Keep personal records (Make a portfolio)

<u>11. Use of biomedical research principles, methods and knowledge in medical research and practice</u> Knowledge of research conducting methodology; posses research designing, planning, result processing and conclusion-making skills

Be able to use the achievements of biomedicine in practice

Possess the report/review writing skills based on critical analysis of the research literature in biomedicine

Knowledge of research conducting ethical principles.

12. Implementation of health promotion, involvement in public healthcare issues, efficient performance within the healthcare system

Provide treatment to minimize the patient's health risk

Implement measures for the prevention of infection spread

Understand own health-related problems and evaluate own health status with respect to professional responsibilities

Participate in health promotion events both on individual and population-based level.

Student's assessment system in AIETI Medical School

The grading system allows the assessment as follows:

A) Five types(variants) of positive assessment:

A – Excellent- 91% and over of a maximal score (91% of the program acquisition)

B – Very good - 81-90 % of a maximal score (81-90 % of the program acquisition)

C – Good - 71-80 % of a maximal score (71-80 % of the program acquisition)

D- Satisfactory- 61-70 % of a maximal score (61-70 % of the program acquisition)

E – Sufficient - 51-60 % of a maximal score (51-60 % of the program acquisition)

B) Two types (variants) of negative assessment:

a) (FX) – Fail - 41-50 % of the program acquisition; some more work is required, the student is allowed to make an additional effort to pass the exam

b) (F) – Fail- 40% and less of the program acquisition; the student will have to repeat the academic course.

The educational program is conducted in three stages.

Stage I- Basic Medical Sciences,

Stage II - Clinical Sciences and

Stage III- Clinical Clerkship.

Basic Medical Science

1. *Oral pass a'credit*. An oral pass a'credit is performed in each discipline, which is included in the module and Student knowledge is assessed by marks.

1.1. Assessment of a pass a' credit exam results are performed according to ECT system assigned in Latin letters corresponding to numerical values/equivalents (points):

A (excellent)	- 5 (Pass)
B (above average)	- 4 (Pass)
C (good)	- 3 (Pass)
D (satisfactory)	- 2 (Pass)
E (minimal)	- 1 (Pass)
FX (fail)	- 0 (Fail)

1.2. If a student has missed more than 20% of the hours allotted to the subject block of a module, he/she gets grade FX (Fail) in the pre-quiz examination of this discipline. A student is allowed to re-sit this pass a' credit exam after he /she has restored the missed practical hours.

2. Quiz – the Multiple Choice Questions (MCQ) Exam. During the course of Basic Medicine, Quiz - the Multiple Choice Questions (MCQ) Exam –is held periodically during each semester, simultaneously in several disciplines following the completion of a particular topic. Each semester comprises 3 quizzes.

2.1. A student who has completed practical hours on the disciplines defined by a Quiz program and has passed pre-quiz or oral pass a' credit exams is admitted to a Quiz (MCQ Exam) only.

2.2. The results of a Quiz are assessed by points both in total and separately for each discipline which is performed according to ECT system assigned in Latin letters corresponding to numerical values/equivalents.

2.3. In each subject block Student performance is assessed by the components of the of subject block. To assess each subject block within a module, as well as the entire module four components are used:

Component I- the Index of Attendance to the cycles of lectures and practical classes in the Exam disciplines.

In component I student can collect a maximum of 5 points.

Component I of the module is the arithmetical mean of Components I of the module- composing Subject blocks.

Component II- the **Index** of Student Activity. In Component II student can collect a maximum of 25 points.

Component II of the module is the arithmetical mean of Components II of the module- composing Subject blocks.

Component III - – the score obtained at pre-quiz and oral pass a' credit examinations, i.e. The <u>Oral</u> pass a' credit exam Assessment Index. In component III a student can collect a maximum of 30 points.

Component III of the module is the arithmetical mean of Components II of the module- composing Subject blocks.

The sum of the formative assessment points of a subject block (the sum of points gained by the students in three (I-III) components) is the assessment (score) (pre-quiz point) of the pre-quiz attendance.

A student can collect a maximum of 60 pre-quiz points in the first three (I-III) components.

The sum of the formative assessment points of the module is the arithmetical mean of the of formative assessment points(pre-quiz points) of the module-composing subject blocks .

A student is admitted to a Quiz (MCQ Exam) only if he/she obtains 51 points based on the maximum points obtained at formative assessment(the sum of the first three (I-III) components) and the summative exam - the quiz. Otherwise, the student will not be admitted to the quiz.

Component IV- – the score obtained at quizzes assessed by the ECTS 100-point scale, i.e. the Quiz Assessment Index

A student can collect a maximum of 40 points in component IV.

The concluding assessment point is calculated from the scores gained at the exam (in each subject block, as well as total points by 100-points scale of ECTS) multiplied by 0.4, as this component accounts for 40% of the components of student attendance assessment both in the subject block and in the module.

2.4.The module is considered " pass" if a student obtains 51 points or more by 100-points scale of ECTS at the summative examination or quiz. If the total assessment of the quiz equals to 51 points or more, however a student by 100-points scale of ECTS gained 51 points or less in more than ¹/₄ of subject blocks, the module is considered "fail"

2.5 If a student passes a module quiz or the re-exam of the quiz (i.e. obtains not less than a total of 51 points required to pass the module), however in $\frac{1}{4}$ or more of the subject blocks does not receive 51 points or more, then he must pass each failed subject block in a test format at the end of the semester.

2.6 The final assessment point of each subject block of a module is the sum of the points obtained at formative and concluding assessments.

2.7 The final assessment point of a module is the sum of the mean arithmetical of the points obtained at the formative assessment of each subject block and the concluding assessment of the module.

2.8 The final assessment point of the module as well as of the subject blocks is determined according to the ECTS 100-point scale and the numerical equivalent (point) - the Grade Point (Quiz Grade Point - QGP) from 1 to 5 and by an appropriate Latin letter - the Mark.

90	5	A (excellent)
81 - 90	4	B (above average)
71 - 80	3	C (good)
61 - 70	2	D (satisfactory)
51 - 60	1	E (minimal)
Fail	0	FX (unacceptable)
Fail	0	F (Fail)
	81 - 90 71 - 80 61 - 70 51 - 60 Fail	81 - 90 4 71 - 80 3 61 - 70 2 51 - 60 1 Fail 0

2.9 If a student obtains less than 51 final points of the module, in particular, 41-50 points, then the student is considered to fail the module (FX (0)) and is allowed to take the re-exam of the module final quiz without re-completing the rest components (I-III) of the module subject blocks.

2.10 A student fails an exam if he/she obtains less than 41 points (0-40 points) and is accordingly assessed F(0). In this case the student is not allowed to re-exam the quiz, is not given appropriate credits and has to re-complete the subject block components of the module (I-III).

2.11. Re-examination of a quiz as well as failed quiz-composing subject blocks is conducted in a test format and allowed only once.

Clinical Science

1. Oral pas a'credit exams and quizzes in Clinical Sciences

1.1. Examinations in clinical subjects are taken after completion of certain topics. Each study cycle is concluded by an oral pass a'credit exam.

1.2. If a student has missed more than 10% of days scheduled for a discipline he/she is not admitted to a quiz automatically receiving FX. A student is permitted to re-sit a quiz only after the restoration of the missed hours has been accomplished.

1.3. Assessment of a pass a' credit exam results is performed according to the ECT system assigned in Latin letters corresponding to numerical values/equivalents

1.4. During the course of Clinical Medicine the quiz is held only once at the end of each semester on the subjects taken during a semester. Only the students who have passed all pass a'credit exams are admitted to the quiz.

1.5 Five components are used for the evaluation of Clinical Sciences knowledge:

Component I: - the Attendance Index - the Index of Attendance to the cycles of lectures and practical classes in the Exam disciplines. In component I a student can collect a maximum of 5 points.

Component II - the **Index** of Student Activity (the **Student activity**). In component II a student can collect a maximum of 20 points.

Component III - Clinical skills assessment. In II component a student can collect a maximum of a 15points.

Component IV- the scores obtained by a student in pre-quiz and pass a'credit examinations. In component IV a student can collect a maximum of 20 points.

The sum of formative assessment points (i.e. the points gained in the first four components (I-IV) is the pre-quiz attendance point (pre-quiz point).

A student in the first four (I-IV) components can collect a maximum of 60 pre-quiz points. Students, who have gained 51 points according to the formative assessment (total points in I-IV components) and the highest score in the concluding quiz, are admitted to the exam only.

Component V – assessment of student knowledge by ECTS 100-point scale obtained at the summative quiz i.e. the Exam Assessment Index. A student can collect a maximum of 40 points.

The summative assessment point is calculated from the scores gained at the exam/quiz by ECTS 100-point scale multiplied by 0.4, as this component accounts for 40% of the components of student attendance assessment

1.6. The course in clinical medicine is considered "pass" in the case that a student obtains 51 or more points by the ECTS 100 -point scale.

1.7. The final score in Clinical Sciences knowledge is the sum of points gained at the formative and concluding assessment

1.8. The final assessment of Clinical Sciences knowledge is determined according to the ECTS 100point scale and the numerical equivalent (point) - the Grade Point (Quiz Grade Point - QGP) from 1 to 5 and by an appropriate Latin letter - the Mark.

> 50 (Pass)	90	5	A (excellent)
> 50 (Pass)	81 - 90	4	B (above average)
> 50 (Pass)	71 - 80	3	C (good)
> 50 (Pass)	61 - 70	2	D (satisfactory)
> 50 (Pass)	51 - 60	1	E (minimal)
41 - 50	Fail	0	FX (unacceptable)
0 - 40	Fail	0	F (Fail)

1.9. If a student obtains less than 51 points i.e. 41-50 points, the course of Clinical Sciences is considered "fail" [FX (0)] and the student is allowed to re-sit the final quiz without completing the rest components (I-IV) of the course.

1.10. The course of Clinical Medicine is considered "fail" if the student obtained less than 41 points (0-41) and accordingly assessed F (0). In this case the student is not allowed to re-sit the quiz, loses credits and has to re-complete the rest components (I-IV)

1.11. Re-examination of a quiz as well as a test format exam in Clinical Sciences and allowed only once.

Summative Examinations.

1. Summative Examination_in Basic Medical Sciences

2. After the completion of the Basic (theoretical) Medical Sciences learning at the end of the fall semester of the 3^{rd} academic year (V semester) a 400-450- question Examination is held covering all Basic Medical Sciences subjects. The number of questions from each subject is defined based on the quotas of the amount of each academic program (course)

3. Only the students who have passed all the modules are allowed to sit the Summative Examination in Basic Medical Sciences

4. The outcomes/results of the Summative Examination in Basic Medical Sciences are evaluated using summarized and study program-specific scores according to ECTS system

5. The Summative Examination in Basic Medical Sciences is considered "pass" if a student has collected a summarized(ES) score of 51 points or more and obtained at least 51 points in each exam subject or if the number of failed subjects does not exceed 1/4 of the total number of subjects. In the latter case a student has to take test examinations in the failed subjects before the beginning of next (VI) semester. Student transfer from the Basic Medical Science stage to the Clinical Science stage is allowed only after test examinations have been passed.

6. If a student has obtained the summarized score of more than 50 points in the Summative Examination, however could not gain at least 51 points in more than 1/4 of the subjects to be passed or if a student obtained the summarized score of 41-50 points, then the Examination is considered "fail" and the student is admitted to the re-examination.

7. A student is considered to fail if his/her examination score is less than 41 points (0-40) and is estimated as F (0), respectively. A student is not allowed to take the re-examination and must repeat the academic year.

8. In Basic Medical Sciences, the formative assessment at the Summative Examination of each course accounts for not more than 60% of the final assessment. 30% fall on separate blocks of different study course–constituting modules, as well as on the arithmetical mean of intermediate assessment points (pre-quiz points) and not more than 30% on the arithmetical mean of the final assessment (quiz points).

9. The score of each study course at the Summative Exam in Basic Medicine accounts for not more than 40% of the final assessment and is considered to be the decisive point in the integrated exam of the given course.

10. The final assessment of each course in the Summative Exam in Basic Medicine consists of the sum of the points obtained at formative and final assessment.

11. The re-examination of the Summative Exam in Basic Medicine as well as failed course-composing exams is allowed only once..

12. Having passed the Summative exams in Basic Medicine the students are allowed to move/transfer from the course of Basic (theoretical) Medicine to the course of Clinical Medicine. 13. Summative written (test) and oral exams in Clinical Medicine.

14. Summative Exam in Clinical Medicine. At the end of the 5th year a 400-500- question integrated final exam is held simultaneously in all study courses of Clinical Medicine. The number of test questions depends on the quotas of each academic program (course) amount. The Exams are held in a computer- based or other format.

15. The students who have passed all the quizzes are admitted to the exam in Clinical Medicine only.

16. The assessment of the exam results in Clinical Medicine is performed by points both in total (ES) and separately for each discipline. According to the European Credit Transfer and Accumulation System

17. The Summative Exam in Clinical Medicine is considered "pass" if a student obtains a total of 51 points or more and simultaneously obtains not less than 51 points in each study course or failed to gain a minimum of 51 points in ¼ of courses. In this case the student must re-exam the written test before the beginning of the following (IV) year in each failed course. Only after passing all the exams the students are allowed to move /transfer from the course of clinical medicine to the course of general specialization.

18. In the case that a student is unable to obtain more than 50 points in the Summative Exam in Clinical Medicine, and has not gained required 51 points in $\frac{1}{4}$ of the subjects or has scored 41 to 50 points, the student is considered to fail the exam [assessment FX (0)]. The student is allowed to re – sit the exam.

19. A student fails an exam in the case that he/she has not obtained more than a total of 41 points (0-41) and received F(0). In this case the student is not allowed to pass the exam in Clinical Medicine before re-completing the formative components of the educational/ academic course.

20. The formative assessment of each educational/ academic course at the Summative exam in Clinical Medicine, accounts for more than 60% of the final assessment. Of these, the formative assessment of a given course accounts for not more than 30% – pre-quiz point (or arithmetical mean of the intermediate assessment) and 30% fall on the concluding assessment including the quiz point (or arithmetical mean of the final assessment).

21. Concluding assessment of each study course at the Summative Exam in Clinical Medicine accounts for more than 40% and represents the point obtained at the integrated stage exam of the given course in Clinical Medicine.

22. The final assessment point at the Summative Exam is the total sum of formative and concluding assessment points in each course.

23. The re-examination of Summative Exam in Clinical Medicine as well as failed course-composing exams is allowed only once

24. Only after passing the Summative Exam in Clinical Medicine the students are allowed to move /transfer to the course of General specialization (VI year).

25. Final Qualifying oral exams in General specialization.

On completion of the course in general specialization the students are to pass Final Qualifying oral exams in every subject simultaneously (internal diseases, surgical diseases, gynecology, pediatrics, infectious and nervous disorders/diseases of the nervous system).

26. Final Qualifying oral exams are assessed by marks in accordance with the ECTS 100 -point scale as follows:

A (5) excellent – 95 points;

B (4) very good – 85 points;

C (3) good- 75 points;

D (2) satisfactory - 65 points and

E (1) sufficient – 55 points.

27. A student who has failed one or more oral exams (FX (0) - Fail) is allowed to re-sit the exams within a month's period.

28. A student who has successfully passed the Final Qualifying Exams is awarded an academic degree of a medical doctor and a diploma in General Medicine.