Program	One-circle Medical Education Program "Medicine"
Degree awarded	Medical Doctor, MD
Faculty	Faculty of Medicine
Program coordinator/coordinators	Irine Pkhakadze, MD, Ph.D. Contact Information: Tel.: 0 431 27 14 22, 5- 91-22-87-78 e-mail: irine.pkhakadze@atsu.edu.ge
Length of the program (semester, ECTS)	Educational program involves 360 ECTS credits /One credit is equal to 25 academic hours at ATSU/ and ends with final qualification exam. Program duration is 6 academic years, 12 semesters (15-15 academic weeks), maximum 22 academic contact hours per week.
Language of the Program	English (agreed with the Ministry of Education and Science)
Program development and renewal date of issue	"Approved" by the Rector: Prof. G. Gavtadze - protocol № 20 of session of Academic Council, July 13, 2012, protocol N13 of session of Academic Council, May 28, 2015 - protocol of session of Academic Council, N 24/10, 20.02. 2017, № 45, 15.09.2017, protocol of session of Academic Council, N1, 18/19, 21.09. 2018, - Accreditation Decision Number № 347, 06.09.2012

Program Prerequisites (Requirements)

- In order to become a student of the educational program "Medicine", the one having secondary education diploma (GCSE) or its equivalent officially certified education, has to have passed Unified National Examination and hold a relevant certificate.

- Entry requirements of the program include the results of the United National Examinations, taking into account the priorities of the University and the relevant coefficients.
- The right to study without passing Unified National Exams is defined by the Law of Georgia on Higher Education - Article 52. Paragraph 3. Specifically:

To encourage entrants and the mobility of students the following persons shall be allowed to enrol in a higher education institution without sitting Unified National Examinations commensurate with the procedure and timelines prescribed by the Ministry of Education and Science of Georgia:

- (a) Foreign citizens and stateless persons who acquired general secondary education or its equivalent in a foreign country;

- b) Georgian entrants who acquired general secondary education in a foreign country or its equivalent and have studied the last two years of general secondary education abroad;
- c) For the persons who studied/are studying and have accumulated credits at higher educational institution abroad and the institution is recognized on the basis of the legislation of the respective country.
- Mobility of the educational program should be allowed after the completion of one academic year of study. Mobility can be made twice a year by the Ministry of Education and Science within the timeframes established by the LEPL National Center for Educational Quality Enhancement and through the rules established by the University.

Note: For the mobility of foreign citizens equivalent document defined by an inter-governmental agreement is required.
Additional precondition for acceptance to the program: knowledge of English.

Program Objectives

Program aims -

To prepare a qualified medical doctors with an academic degree of a doctor who will have grounded knowledge of basic medical sciences and general clinical skills needed to work in medical and preventive institutions. Ability to employ and maintain moral values and ethical principles in medical practice and in protection, according to the international standards of the World Federation of Medical Education (WFME) will be committed to study throughout the lifetime.

The objective of the program is to organize the content / volume as well as teaching and study process of the courses in a way to facilitate:

- Acquire contemporary knowledge in basic medical and clinical sciences. Take faculty, compulsory, clinical and elective courses envisaged by the program;
- Development of necessary clinical skills and patient oriented competences in multi-professional environments at the appropriate level of study;
- Development of critical assessment skills of scientific and clinical innovations and to employ them in the process of solving clinical problems;
- Obtaining written and verbal communication skills;
- Knowledge of the legislative basis of the health system;
- To uphold important ethical values for the future profession;
- Awareness of the importance of continuous medical education and professional growth and readiness for development.

Note: The program provides the students with the opportunity to master fundamental medical disciplines, to develop academic and professional competences, and thus ensures the development of theoretical and practical knowledge necessary to become a competent specialist.

Actuality of the program:

Healthcare of the population is one of the most important issues and simultaneously huge attention is paid to preparing the professionals who solve the problems related to health. Nowadays learning outcome oriented education is considered the best model as it is based on international standards of medical education and accordingly it is actual to design and implement the program which provides successful, competitive specialist.

This program helps to provide more / well-prepared staff to work in the modern "complicated" sector of health care.

Learning outcomes (the map of competences is attached)	
Knowledge and understanding	• Has a wide knowledge of the field that comprises critical understanding of theories and principles; Profound and systematic knowledge of natural, behavioral, social and clinical sciences; • Know the main groups of drugs, the principles of their action and appointment according to pathological conditions and diseases; • Has a wide knowledge of the public health system and is aware of the role of a physician in this system (in the context of individual/family environment, in general); • Has a profound knowledge of ethical and legal principles; • Is aware of the importance of complex clinical problems and knows how to solve them.
Applying knowledge	According to the accuired knowledge, is able to: evaluate clinical cases, including urgent medical conditions; to appoint examinations; to relate relevant treatment means and other treatment measures to clinical context; to evaluate potential benefits and risks of treatment. • Is able to employ selective approach to treatment means and to consider compatibility of the pharmaceutical medications. • Is able to assess the disease and its social (alcohol and drug addiction) and psychological (disease-related stress) impacts on the patient; • Is able to demonstrate basic clinical skills, including information / anamnesis gathering from the patient as well as ability to carry out physical examination, to select necessary diagnostic procedures and to interpret their results; • Has the ability to carry out the practical procedures and/or is familiar with the treatment on moulage and/or under the supervision of the doctor and/or has observed the following procedures: how to measure blood pressure, venipuncture, lumbar puncture, catheterization, infusion/use of infusion device, oxygen supply, injection under the skin and muscle, participation in referrals, urine catheterization of the bladder and urinary tests, conducting functional tests of the respiratory system, ECG. Transfusion/interpretation, transfusion of blood and blood substitutes, management of physiological delivery, antenatal examination (including at maternity hospital recipients), doing appropriate records, identification of pathological signs, carrying out adequate actions, evaluation of the condition of the newborn, examination / treatment of gynecologic patients);

	• Has ability to work in a multidisciplinary group as a member and leader. Can clearly formulate tasks, agree with group members, coordinate their activities and adequately evaluate group members' abilities, manage conflict and force-majeure situations; • Has ability to participate in health promotion activities at individual as well as national levels; • Has ability to apply biomedical scientific principles, methods and knowledge to medical practice and research; Implementation of research and practical projects in accordance with predetermined instructions.
Making judgement	• Is able to: collect and analyze the information characteristic to the field; analyze the data and the situations through standard and specific methods; critically analyze incomplete and controversial data of the researches; determine a diagnosis and argument it; make grounded assumptions; • Has ability to demonstrate decision-making skills, strengths and weaknesses, skills and knowledge and employ them into practice through evidence-based principles;; • Has the ability to make a conclusion about the patient's assistance strategy based on risk of identification.
Communication skills	• Is able to express his/her own effectively thoughts and opinions in written and verbal forms in medical contexts, conduct dialogue in native and foreign languages with colleagues and patients, through the use of modern means of communication; • Has ability to communicate in order to obtain informed consent; • Participation in health promotion activities through observation, listening, asking questions. Also, the ability of non-verbal communication; • Has well-developed skills to carry out creative and innovative activities and professional communication.
Learning skills	• Has ability to use the full spectrum of educational and informational resources, manage his/her own study process, raise literacy skills and develop further learning; • Has ability to organize time, determine priorities, meet with timelines and fulfill agreed work; • Can obtain, process and critically evaluate information from various sources; • Has ability to consistently evaluate his/her study process and determine further learning needs; • Is aware of the necessity to contenuously update knowledge and work for professional development.
Values	• Has knowledge of ethical and legal principles in the context of medicine, can protect the patient's rights; Demonstrates the attitudes required to achieve high standards of patient support;

	• Has ability to conduct negotiations in the professional context and participate in conflict settlement with any person; • Has his/her own attitudes towards ethical aspects associated with culture, gender, religion and health risks as well as regarding established prejudices and taboos; • when dealing with patients and colleagues, he/she is fair, guiding with social and democratic values, respecting their choice, recognizes the privacy and autonomy of private life; • Participates in the process of forming values, strives to establish them.
Research skills	• Understands methodological principles of empirical research, is familiar with modern research strategies, traditional and latest research technologies and methods; • Has developed critical analysis of literature, is able to identify problematic issues and their connection to the wide context, interpretes research material obtained and is aware of formal professional written language; • Is familiar with the principles of ethics for scientific research.
Fields of employment	***A Medical Doctor*** • Has the right to continue his/her studies in doctoral studies, or has the right to undergo residency course and receive the right to carry out independent medical practice after the passing of a unified state certification examination; • Work as a junior doctor in any organization, activities of which are related to health care and medical care of the population; • Carry out research and pedagogic activities in the theoretical fields of medicine and / or other field of health care, which does not include independent medical practice (scientific research institute, different hospitals, etc.); • To be employed in national and international pharmaceutical companies • Work for forensic medical examination centers.
Teaching methods	
• Interactive and modified lectures; • Practical classes with reflection, laboratories; • Group discussion; • Teaching in clinical environment; • Demonstrating clinical skills with the use of simulators; • Case study; • Role play; • Literature review; • Involvement in the research process; • Presentation; • Clinical practice	

The problem-based learning (PBL), as the method that distinguishes this program from others, makes the student get used to the critical thinking, helps to develop a wide range of skills. Students study via the scenarios of the such-called "Cases", which is directed by (guides,is in charge of) tutor, acting not as a teacher but as a "facilitator".

Structure of the Program

Structure of the Program is attached

The program is built on the principle of student-oriented approach - teaching and learning in the context of student actions gradually resembling professional (physician) actions and decisions. This is a problem-based and patient-oriented approach. Clinical and communication skills are recognized as an important component, and the research is considered as an essential requirement for integrated learning.

According to Georgian legislation, the program "Medicine" is one-circle program and equals to master's degree. The program is based on ECTS system and includes 360 ECTS credits, 60 credits per year, 30 credits per semester. The standard duration of the educational program is 6 years, or 12 semester. The semester will consist of 19 weeks, the academic year is set for 38 weeks. The number of credits per year may be no more than 75, depending on the student's individual loading. The program involves basic medical and clinical sciences, as well as their supporting courses.

The curriculum includes:

- Compulsory courses - 341 (ECTS), including:

- Basic / Preclinical Courses – 145 (ECTS) Includes Integrated Basic Courses / Modules - 46 (ECTS)
- Clinical courses - 140 (ECTS)
- Clinical Practice - 23 (ECTS)
- Research Skills - 13 (ECTS)
- PBL Learning Method In PBL Session Format - 12 Credits,

The last mentioned enhances the quality of integration of the program and provides the opportunity to achieve effective learning outcomes certified doctor.

- Elective courses - 19 (ECTS)

Assessment System

Assessment of the academic performance of students of higher education programs at Akaki Tsereteli State University is carried out via using modern indicators on the basis of the orders of the Minister of Education and Science of Georgia No. 785 (05.01.2007), №3 (21.09.2009) and No.102 / n of August 18, 2016, the decisions issued by the Academic Council of Akaki Tsereteli State University (No. 12; 30.10.2009; Reinsurers №35; 10.11.2010; № 1, 17/18 15.09. 2017).

The credits attributed to the program component can be obtained only in case when the learning outcomes are achieved in the syllabus, which is confirmed with one of the positive assessments provided by the assessment system:

The student's assessment foresees:

a) Mid-term assessments, which include the component of student attendance on lecture-practices, daily academic activity (survey, testing, presentation, essay), activities on tutorials, practical skills assessment and ongoing assessment. Mid-term assessment may also include other components.
b) Assessment of the final exam.

Overall Assessment is made on the basis of the sum of mid-term assessments and final assessments.

Student is required to have accumulated at least 18 points before he/she takes final exam.

Maximum assessment of the course/module/subject block is 100 points equal to the maximum score of 40 points. The assessment methods are mainly used: test, oral or combined examinations.

There are five types of positive and two negative assessment.

The assessment system allows:

a) **Five types of positive assessment:**
   a.a) (A) Excellent - 91-100 points;
   a.b) (B) Very good - 81-90 points of maximum evaluation;
   a.c) (C) Good - 71-80 points for maximum evaluation;
   a.d) (D) satisfactory - 61-70 points of maximum evaluation;
   a.e) (E) enough - 51-60 points for maximum evaluation.

b) two types of negative assessment:

b.a) (FX) failed to pass - 41-50 points of maximum assessment, which means that the student needs more work to pass and is given the right to pass an additional exam with independent work;
b.b) (F) failed - The maximum score of 40 points and less, which means that the work carried out by the student is not enough and he/she has to retake the course

Minimum margin of assessment received by the student on the final exam is 20 points.

A student shall have the right to take a makeup exam in the same semester. The time interval between the final and relevant makeup exams has to be no longer than 5 days.

- The assessment on the makeup exam is student's final assessment, which does not include negative assessments received on the main examination.
- In case of obtaining 0-50 points at the final evaluation of the educational component, the student is given an assessment F-0.

The assessment of the **modules included in the program** are carried out via points calculated in sum as well as via European Credit Transfer and Accumulation System (ECTS).

The specific criteria for assessment are determined by the syllabus of the appropriate course.

Employment opportunities

A Medical Doctor

- Has the right to continue his/her studies in doctoral studies, or has the right to undergo residency course and receive the right to carry out independent medical practice after the passing of a unified state certification examination;
- Work as a junior doctor in any organization, activities of which are related to health care and medical care of the population;
- Carry out research and pedagogic activities in the theoretical fields of medicine and / or other field of health care, which does not include independent medical practice (scientific research institute, different hospitals, etc.);
- To be employed in national and international pharmaceutical companies
- Work for forensic medical examination centers.

Supportive resources /Material and human resources:

The implementation process of the program will be conducted by the academic staff of the University and invited teachers with the relevant competences.
Study process is carried out with the use of university study and lecture halls, special PBL rooms, laboratories, libraries and computer cabinets (classes) with access to the Internet, which allows students to surf the information and access e-library. Students have access to e-mail through which closely connects them with academic staff and faculty administration. Learning process will be supported with clinical skills laboratory. Clinical disciplines are taught at relevant clinical bases, with which the university has signed agreements.

Akaki Tsereteli State University
Faculty of MEDICINE
One-Step Medical Education Program
Medicine
Study Shedule of 2018-2023 years

(I-VI Semester)

№	Course	cont hours weekly	L / Pr / s / Laboratory	Credits Number	The number of hours			Semestars						preconditions
					Total	Contact	indipedent	I	II	III	IV	V	VI	
1	Foreign Language - 1 (Georgian)	4	0/4/0/0	4	100	60/3	37	4						
2	Molecular Biology and Genetics 1	3	1/2/0/0	4	100	45/3	52	4						
3	Cytology, Embryology, General Histology	4	2/2/0/0	5	125	60/3	62	5						
4	Introduction to Anatomy	4	1/3/0/0	5	125	60/3	62	5						
5	Introduction to Physiology	2	10./10.	4	100	20/3.	77	4						
6	Medical Biochemistry (General Course)	4	2/2/0/0	4	100	60/3	37	4						
7	Medical Biophysics	2	1/1/0/0	4	100	30/3.	67	4						
		23		**30**	750	356.	394	30						
8	Foreign Language - 2 (Georgian)	4	0/4/0/0	4	100	60/3	37		4					1
9	Molecular Biology and Genetics 2	3	1/2/0/0	4	100	45/3	52		4					2
10	Medical terminologys	2	0/2/0/0	3	75	30/2	43		3					
11	Basic Clinical Skills	2	0/2/0/0	**5**	125	30/3.	92		5					
12	Nervous System and the Struct.and Regulation of Organs of Pers	8	35/80	10	250	115/3.	132		10					3,4,5,6
	(Cl.Anatom.(3 ECTS),Histology (3 ECTS),Biochemistr.(2 ECTS), Physiolog.(2 ECTS)													
13	Endocr. System - The Structure and Regulation	3,5	18/30	4	100	48/3.	49		4					3,4,5,6
	(Cl. Anatomy (1 ECTS), Histology (1ECTS), Biochemistry (1 ECTS), Physiology (1 ECTS)													
		20		**30**	**750**	**344**	**406**		**30**					
14	Introduction to Clinical Ethics	2	5/15.	3	75	20/2.	53			3				
15	General Hygiene	2	1/1/0/0	3	75	30/2.	43			3				
16	Respiratory System's Structure and Norms. Function. Regularities	5	20/60	8	200	80/3	117			8				3,4,5,6

	(Clinic. Anatomy (2 ECTS) Histology (2 ECTS) Biochemistry (2 ECTS) Physiology (2 ECTS)													
17	Cardio-Vascular systems. The Structure and Regulation. Function. Regu	7	40/60	10	250	100/3	147			10				3,4,5,6
	(Clinic. Anatomy (3 ECTS) Histology (3 ECTS) Biochemistry (2 ECTS) Physiology (2 ECTS)													
18	Electives- 1	2	0/0/2/0	4	100	30/2	68			4				
19	PBL - 1		22	**2**	50	22/2.	26			**2**				
		18		**30**	**750**	**296**	**454**			**30**				
	List of the Electives- 1													
	Electives- 1													
1.1	Ecology													
1.2	Medicine and internet													
1.3	Additional foreign language courses -1													
1.4.	History of Medicine													
1.5.	History of Art													
20	Medical Microbiology	3	1/2/0/0	5	125	45/2	78				5			9
21	General Immunology	2	1/1/0/0	3	75	30/2	43				3			
22	Medical Parazitology	3	10/30.	**3**	75	40/2	33				3			9
23	Digestive System Structure and Regulation	6	25/65	8	200	90/3	107				8			3,4,5,6
	(Clinic. Anatomy (2 ECTS) Histology (2 ECTS) Biochemistry (2 ECTS) Physiology (2 ECTS)													
24	Urine - the Reproductive System, Structure and Regulation	4,5	25/40	6	150	65/3	82				6			3,4,5,6
	(Clinic. Anatomy (2 ECTS), Histology (1 ECTS), Biochemistry (1 ECTS), Physiology (2 ECTS)													
25	Electives - 2	2	0/0/2/0	3	75	30/2	43				3			3,4,5,6
26	PBL - 2		22	2	50	22/2.	26				2			
		20		**30**	**750**	**338**	**412**				**30**			
	List of the Electives -2													
	Electives -2													
2.1.	Principles of Demography													
2.2.	Additional foreign language courses -2													
2.3.	Medical Informatics													
27	Clinical Anatomy	4	2/2/0/0	**5**	125	60/3	62					**5**		4,12,13,16,17,23,24
28	Pathology -1	5	2/3/0/0	7	175	75/3	97					7		5
29	Physical Examinations-1	4	1/2/0/0	5	125	45/2	78					5		

30	Pharmacology -1	3	1/2/0/0	4	100	45/2	53					4		5,6
31	General Surgery -1	3	1/2/0/0	4	100	45/2	53					4		12,16,17,21,22,23,24
32	Electives -3	2	0/0/2/0	3	75	30/2	43					3		
33	PBL - 3		22	2	50	22/2.	26					2		
		21		**30**	**750**	**338**	**412**					30		
	List of the Electives -3													
	Electives -3													
3.1.	Medical Deontology													
3.2.	Additional foreign language courses -3													
3.3.	Laboratory Medicine													
3.4.	History of world litaraturae													
34	Pathology -2	4	2/2/0/0	**7**	175	60/3	112						7	28
35	Physical Examinations-2	3	1/2/0/0	5	125	45/2	78						5	29
36	Pharmacology -2	3	1/2/0/0	5	125	45/2	78						5	30
37	General Surgery -2	3	1/2/0/0	4	100	45/2	78						4	31
38	Emergency Clinical Skills	2	0/3/0/0	**6**	150	45/2	103						6	29,30.
39	Behavioural Science	2	10./20.	**3**	75	30/2.	43						3	29
		17		**30**	**750**	**283**	**492**						30	
Total														
atory - Preconditions - in line with the number - sequential number of the course;														
(VII -	course													
№		dayly durat.	l/pr	credit number				semestars						preconditions
								VII	VIII	IX	X	XI	XII	
40	Internal Medicine -1 (cardiology ECTS- 4, pulmonology ECTS- 2)	20	20/60	**6**	150	80/4	66	**6**						34
41	Urgent. Surgery -1	10	10/30	**4**	100	40/2	58	**4**						31,36
42	Neurology	10	20/30	5	125	50/2	73	5						12,34
43	Obstetrics -1	10	10/30	4	100	40/2	58	4						27
44	Diagnostics of Children's Diseases	10	10/30	3	75	40/2	33	3						34
45	Public Health @ Legal Medical Aspects Public	10	10/30	**4**	100	40/2	58	**4**						
46	Epidemiology with Biostatistics	5	10/20	4	100	30/2.	68	4						
		75		**30**	**750**	**336**	**414**	**30**						

47	Internal Medicine 2 (Gastroenterology ECTS-3)	5	5/15	3	75	20/2.	53		3					34
48	Urgent. Surgery - 2	15	15/45	5	125	60/2	63		5					40
49	Obstetrics -2	10	10/30	4	100	40/2	58		4					42
50	Dermatology, Venerology	10	20/30	5	125	50/2	73		5					34
51	Pediatrics -1 / Neonatology /	10	10/30	4	100	40/2	58		4					43
52	Oto-Ryno-Laryngology	10	10/20	3	75	30/2	43		3					27,36
53	Electives - 4	8	8/24	4	100	32/2	66		4					
54	PBL-4		22	2	50	22/2.	26		2					
		68		**30**	**750**	**310**	**440**		**30**					
	gg													
4.1.	Pediatric Neurology													
4.2.	Tuberculosis and chest diseases													
55	Internal Medicine - 3 (Nephrology ECTS-2, Endokrin. ECTS - 2)	10	10/30	4	100	40/2	58			**4**				34
56	Urology	7	7/21	3	75	28/2.	45			3				36
57	Traumatology - Ortopedy	10	10/30	4	100	40/2.	58			4				36
58	Gynecology -1	10	10/30	4	100	40/2	58			4				48
59	Infectious Deseases , virology	15	15/45	5	125	60/2.	63			5				20
60	Pediatrics -2	10	10/20	3	75	30/2	43			3				43
61	Medical Psychology, Psychiatry	10	10/30	4	100	40/2	58			4				38
62	Clinical Immunology, Allergology	10	10/20	3	75	30/2	43			3				21
		82		**30**	**750**	**324**	**426**			**30**				
63	Internal Medicine - 4 (Reumat. ECTS -2, Hematology ECTS -2)	10	10/30	4	100	40/2	58				4			34
64	Neurosurgery	5	5/15	3	75	20/2.	53				3			36
65	Gynecology - 2	5	5/15	3	75	20/2.	53				3			57
66	Oncology, Radiotherapy	5	7/21	3	75	28/2.	45				3			34
67	Ophthalmology	5	5/15	3	75	20/2.	53				3			12
68	Pediatric Surgery	5	5/15	3	75	20/2.	53				3			43
69	Evidence Based Medicine and Research Process (Scientific skills)	5	5/15	**3**	75	20/2.	53				**3**			45
70	Clinical skills (practice)	15	–	**4**	100	75/2	23				**4**			37
71	Electives - 5	5	5/15	**2**	50	20/2.	28				**2**			
72	PBL - 5		22	**2**	50	22./2.	26				**2**			

		60		**30**	**750**	**305.**	**445**				**30**			
	List of the Electives - 5													
5.1.	Forensic Medicine													
5.2.	Dentistry													
5.3.	Physitian-Patient Communications													56, 57, 60
73	Disorders and Syndroms in Therapy	15	15/45	8	200	60/2	138					8		39,46,54,62
74	Anaesthesiology - Resuscitation Medicine	10	10/30	**5**	125	40/2	83					**5**		34,35
75	Clinical Pharmacology	10	10/30	**5**	125	40/2	83					**5**		35
76	Radiology	10	10/30	**4**	100	40/2	58					**4**		34
77	Geriatry	5	5/15	**3**	75	20/2.	53					**3**		34
78	Electives - 6	5	5/15	**3**	75	20/2.	53					**3**		
79	PBL -6		22	**2**	50	22	28					**2**		
		55		**30**	**750**	**254**	**496**					**30**		
	List of the Electives - 6													
6.1.	International security													
6.2.	Cardiosurgery													
6.3.	Nutriciology													
80	Pain Managment	5	5/15	4	100	20/2.	78						4	30,35
81	Family Medicine, Ambulatory care	15	15/45	6	150	60/2.	88						6	72
82	Disorders and Syndroms in Surgery	15	15/45	6	150	60/2.	88						6	40,47
83	Clinical ClerkSip	30	150	8	200	150/2.	48						8	69
84	Course Work // Research skills			6	150	30/2.	118						6	45, 68
		65		**30**	**750**	**330**	**420**						**30**	
Total														
tions - in line with the number - sequential number of the course;														