Tbilisi State Medical University

Educational PhD Program – Medicine

Program Name	PhD in Medicine
Program Leader	Professor Givi Javashvili
Qualification to be awarded	Academic Doctor of Medicine
Program volume in credits	180 credits
Language of Instruction	Georgian
Aim of the program, which is focused on developing student competences and defining the sphere of employment	The aim of the PhD program is to train and prepare the doctor of philosophy with one's own systemic understanding of the medical field who will have essential skills and knowledge of scientific-research methods top work successfully in this field. The aim of the program is to train independent, competitive academic researchers who will have enough knowledge, skills and experience to be integrated into various world universities and the scientific world. Academic (scientific) personnel are trained at the Medical University in accordance with the legislation in force and requirements of healthcare of the country/public. Successfully going through the program ensures validity of the knowledge of program graduates and their competitiveness (within the scope of the competence). Study outcomes of the program envisage interests of all the parties in the academic process: PhD student/student, academic personnel, alumni and potential employers, national and international field-specific standards.
Pre-requisites of the program	The rule of admitting to the PhD program/PhD research is defined by the decree of the medical faculty of Tbilisi State Medical University on PhD program and corresponds with the law of Georgia on high education. Pre-conditions of getting enrolled into the educational program:

	1) PhD research program, approved by the academic council; 2) for the candidate - degree of diploma obtained medical person and being a successful winner of the competition. The competition for being accepted at the PhD program includes: a) Assessment of submitted documentation b) Exam: testing – interview in one's field and the foreign language
Learning Outcomes	Program learning outcomes fully correspond with the knowledge and skills essential for the independent researcher as well as the possibility to be employed within the scope of already obtained competence. The PhD Candidate fulfills the work focused on research which will end with reaching the outcomes having original, scientific and methodological value, submitting the dissertation (and accompanying documentation) to the dissertation board and the public defense. Upon completing the PhD program the academic/medical doctor should be able to (general competencies): • Independently plan, implement and supervise innovative research • Write a scientific publication; should have in-depth, systemic and most updated knowledge which gives the possibility to work at the essential standard level for the international peer-reviewed publication • Develop new research and analytical methods and approaches which are focused on gaining new knowledge and are reflected in international peer-reviewed publications • Critical analysis, synthesis and assessment of new, difficult and opposing ideas and approaches which will promote development of new methodology; making proper and

	efficient decisions for problem solving independently • Processing complicated and disputable information and delivering it efficiently to the colleagues and the wider public taking into consideration the level of quality of the latter, including, in the foreign language. • Researching the ways of establishing new values and developing innovative methods for their establishment • Planning and managing the process of teaching others • Taking the academic position and handling the respective workload
Methods of Achieving Study Outcomes	The doctoral program, its research component and academic courses are based on modern scientific knowledge, which implies full and respective inclusion of evidence-based knowledge and methodology accumulated in the field into the study process, which ensures achievement of program study outcomes. Instruction is based on student-centered methods, which besides the actual work implies active involvement of the PhD candidate in the learning process and includes: the case study method, playing the role of the patent and the doctor, modeling of clinical cases, including, electronically and their presentation, laboratory learning, discussion, interactive classes, empirical teaching, seminars, colloquia, projects and presentations. The candidate is the immediate and main executor of the scientific seminar. Each method separately and collectively ensures achievement of the outcomes envisaged by the program. The PhD program “Medicine” is regarded as the educational stage which is integrated functionally. The study component of the PhD program is the unifying element, which

	consists of the unified parts defined by sub-fields. Individual PhD research programs correspond with various sub-fields/sub-directions of the field of medicine. The PhD program is made up of training courses/modules and includes scientific research whose theoretical, experimental and clinical outcome is of substantial importance for medical-biological scientists. The program content, volume and teaching methods ensure achievement of the program aims and those outcomes which correspond with the third level of the high education qualification framework. Training courses/modules are structured within the scope of the law of Georgia on high education and other normative under it. Teaching methods correspond with the modern methodological requirements of preparing the PhD candidate, including, specific demands. The program is built up in accordance with the European credit-transfer system. A separate method of academic activity ensures achievement of outcomes envisaged by the PhD program and unity of these methods together with the fulfillment of the scientific component of the PhD program by the PhD candidate.
System of assessing student knowledge	The form of mid-term assessment of achieving the research component of the PhD program is annual attestation (reporting) with the basic department/s. The final, summative assessment of the research is made during the public defense of the dissertation (the PhD candidate is either granted the degree or not). The dissertation submitted for the academic degree of the doctor should actually be a finished scientific research in which a critical scientific problem/s is solved and international level theoretical, experimental or clinical outcomes are achieved.

	Pre-requisites of defending the dissertation are to fulfill the learning components and publish basic research outcomes in peer-reviewed scientific journals of the field, collections of works, which are published in publications in Georgia and abroad and distributed internationally. The minimal amount of scientific works is four, including, at least one published in the international peer-reviewed or impact factor publication. The size of the dissertation should not exceed 150 printed A4 format pages without references and appendices. The dissertation should fully illustrate: ➢ Information/data about the actual nature of research, scientific novelty, research aim and objectives – introduction; ➢ Review of scientific literature about the research of the doctoral research, including – as of the data of recent 10 years; ➢ Description of research material and methodology; ➢ Detailed and actual description of one's own research outcomes; ➢ Description of criteria verifying the reliability of results; ➢ Discussion and analysis of the results of one's own research; ➢ Obtained scientific conclusions; ➢ Scientific theoretical and/or practical importance of outcomes; ➢ List of references used; ➢ Summary of the work in English which should contain the information/data about the actual nature of PhD research, scientific novelty, aim and objectives of research, theoretical and practical value of research; ➢ Appendix – copies of publications around the topic of the dissertation. The precondition of submitting the work at the dissertation council is its preliminary discussion (apporbation) in those structural

	sub-divisions which and/or department where the PhD dissertation was prepared. The PhD thesis should be submitted and supported by professional/field specific associations. In case of obtaining primary materials at the study, research or clinical establishment, reliability is verified in writing by the head of the respective department/establishment. The expert board assesses the PhD thesis and related documentation. Scientific actuality of the research conducted has to be assessed in the expert's report along with the novelty, originality, theoretical and practical values, adequacy of research design and methodology, objectivity and truthfulness of primary material of research, structure of the dissertation, quality of preparing it technically well and linguistic mastery. With the view of determining the specialized board composition for the public defense of the dissertation, main and bordering specialties are indicated in the report. If the majority of experts gives a positive assessment, after the chairman of the dissertation board of the faculty gives approval, the dissertation is printed and handed for public defense to the specialized dissertation board. If the majority of the expert board issues a negative report, the dissertation is returned to the candidate and it should be re-submitted within the period of not earlier than a year. The dissertation is publically defended according to the rule defined by article 5 of regulations on establishing the dissertation board of the medical faculty, activities and granting the academic degree of the doctor.

	The European system of transferring and accumulating credits is applied in respect with the teaching components of the program and the university as a whole (ECTS). Calculating credits of the educational program and assessing the achievements of the student is carried out in accordance with the Decree N 3 of 5.01. 2007 of the Minister of Education and Science. Principles of assessing the knowledge of the PhD candidate as well as the criteria are transparent and known to all subjects involved in the academic process. They correspond with the interest of objectively assessing the quality of acquiring practical skills as well as gaining theoretical knowledge by the student. Upon assessing the knowledge and skills both oral exam and written test combination is used along with presentations, thesis, which is provided in the written form in the syllabus.

Academic plan by indicating the peculiarities of organizing learning

The doctoral program is the unity of individual research projects of areas of medicine and learning components; the learning component, in its own way, is structured from two types of courses and modules:

1) Focused on the planning the academic/research process and gaining the knowledge and skills necessary for its efficient implementation

2) Focused on creating new knowledge/information and passing it in the area of specific doctoral research the basis of which is the original research having the well demonstrated scientific/methodological/practical value.

The doctoral program ends with the defense of the dissertation.

75 % (135 credits) of the doctoral program (180 credits) includes the research component whereas 25 % (45 credits) - learning/teaching component. The research components is defined by the individual doctoral research program, the plan of executing this program compulsory scientific activities (publications, presentation, etc.) for finalizing the program/dissertation defense and the dissertation work itself. All the research programs are individual and one doctoral candidate takes part in it.

The learning component includes two parts: main and bordering fields/disciplines of research program (25 credits) and unified academic courses and modules (20 credits) united in the doctoral program of medicine which are focused on developing general scientific/academic competencies.

The table below shows how learning components are divided in terms of their content and amount. The main and bordering field is selected according to the content of the doctoral research. The format and criteria of going through this module is defined by the program leader of the doctoral research and assessed in the process of examining the research program.

The learning component of PhD program and distribution of credits (45 credits)

Distribution according to the content and the amount (1 credit = 30 academic hours)

Module	**Amount of Credits**
Main and bordering field	**25**
Biostatistics and basics of scientific research	**4**
Pedagogy and psychology of high education	**3**
Bioethics	**3**
Foreign language	**10**

The scientific program is the scientific component of the program which is completed by the PhD student under the immediate supervision of the program leader in minimum three years. The PhD candidate takes part in local and international scientific forums where s/he submits the outcomes of research carried out by him/her and publishes articles. The research component includes completion of the scientific work (dissertation) and defending the dissertation. The scientific advisor defines allocation of credits of the research component and workload which is described in detail in the plan of going through the doctoral program.