



Tbilisi State Medical University

Faculty of Physical Medicine and Rehabilitation

The First Cycle of Academic Higher Education Program

Physical Medicine and Rehabilitation

**Bachelor's Academic Degree of
Physical Medicine and Rehabilitation**



Title:	Physical Medicine and Rehabilitation
Qualification:	Bachelor of Physical Medicine and Rehabilitation
Number of Credits:	240 ECTS Credits
Language of Instruction:	English

Aim of the Program

Aim of the program is to prepare competitive and competent bachelor of Physical Medicine and Rehabilitation through outcome-based teaching approach and development of clinical/practical skills relevant to the learning outcomes, able to:

- to apply basic biomedical research methods and evidence-based practice to the process of physical therapy examination, evaluation, intervention, and rehabilitation management, based on biopsychosocial approach, to prevent or remediate impairments, functional limitations and disabilities as related to movement and health across all ages, to improve functional movement potential and quality of life;
- to provide rehabilitation services in both in-patient and out-patient settings, based on the multi/interdisciplinary team approach, utilizing appropriate interpersonal skills;
- to conduct in professional and ethical manner, with responsible approach to societal needs;
- to develop independent learning skills/activities and foster continuing professional growth and life-long learning.

Enrolment Requirements

- Foreign Nationals/Non-Georgian citizens with corresponding documentation should apply (send the documents) to the Ministry of Education and Science of Georgia. After approval from the Ministry and proof of proficiency in English at B2 level they have right to start the undergraduate course.
- Provided by the Law of Higher Education, Georgian citizens are required to pass through the Unified National Exams (MoES, №224/5, 29.12.2011) and overcome barrier in English $\geq 75\%$.
- Students to be enrolled in the program via mobility rule (MoES, N10/5 04.02.2010).
- During enrolment current edition of the legal acts/legislation are taken into account.



Learning Outcomes

	Generic Learning Outcomes	Subject/Field Specific Learning Outcomes
Knowledge and Understanding	<ul style="list-style-type: none"> • Demonstrate knowledge of theories and concepts determining the field of physical medicine and rehabilitation; • Demonstrate understanding of complex matters of the field, synthesize knowledge across courses and other experiences; • Demonstrate understanding of team-working principles. 	<p>1. Demonstrate knowledge of the field of physical medicine and rehabilitation involving a critical understanding of theories and principles:</p> <ul style="list-style-type: none"> • Demonstrate knowledge and critical understanding of biomedical, behavioral, social, clinical sciences, and theories, concepts and principles of the physical medicine and rehabilitation; • Demonstrate knowledge and understanding of the bio-psycho-social model of the functioning, disability and health, and critical approach to organization and practice of rehabilitation system based on this model; • Demonstrate knowledge and understanding of main profession related procedures/interventions, techniques, technologies and rehabilitation programs; recognize complexity of the field-specific clinical conditions and problem solving methods; • Demonstrate knowledge of the ethical standards and values of the profession, the social system and national legislation concerning disability and rehabilitation, recognize the role of physical medicine and rehabilitation in health care, the role of the professional of the field and the multi/interdisciplinary problem-solving team work.
Applying Knowledge in Practice	<ul style="list-style-type: none"> • Ability to apply knowledge and skills to planning and providing services relevant to the professional competence; • Demonstrate competences through devising and sustaining arguments and solving problems within the field of study, to educate and consult relevant to the professional competence, systematically and 	<p>2. Conduct a patient examination, evaluation and critically interpret the relevant information, implement planned physical therapy intervention:</p> <ul style="list-style-type: none"> • Demonstrate appropriate handling skills during examination, obtain a history and perform physical assessment safely, and ensure patient dignity during assessment; • Analyze, critically interpret and evaluate assessment findings to identify the impact of a health condition on functioning, considering personal and environmental factors, including



	<p>precisely evaluate need for professional help/support;</p> <ul style="list-style-type: none"> • Demonstrate ability to maintain, keep, and protect medical documentation; • Demonstrate ability to utilize principles of evidence-based practice, to carry out research and practical projects under pre-determined directions. 	<p>determination of prognosis and potential for rehabilitation;</p> <ul style="list-style-type: none"> • Determine the need for referral to appropriate qualified service providers; • Involved in planning of an appropriate intervention program with specific, measurable, attainable, realistic, and time-bound (SMART) based goals considering patient’s needs and preferences; • Deliver an holistic approach to patient management, using the ICF (International Classification on Functioning, Disability and Health)/biopsychosocial model, and demonstrating appropriate handling skills during treatment, implement a safe and effective intervention, including education to patients and their immediate environment; • Document results of examination, evaluation, and the rehabilitation process, demonstrating evidence of clinical reasoning, and in accordance with accepted standards (SOAP), ethical, and legal requirements, make clear and accurate notes. <p>3. Apply management skills in practice setting:</p> <ul style="list-style-type: none"> • Identify goals appropriate to the practice setting, prioritize and manage own work load for their attainment, and utilize resources effectively; • Demonstrate effective management skills to contribute to the interdisciplinary teamwork towards the attainment of goals and objectives.
<p>Making Judgments</p>	<ul style="list-style-type: none"> • Ability to collect data, independently analyse, summarize, critically evaluate and interpret; • Ability to integrate various data, analyze expected outcomes, develop critical, reasoned positions and make conclusions; • Utilize research findings and evidence-based practice and 	<p>4. Integrate data and make conclusions:</p> <ul style="list-style-type: none"> • Use clinical reasoning skills to formulate appropriate goals through decision making process; • Utilize sound clinical reasoning skills in planning and implementing appropriate physical therapy interventions, justify the intervention program using evidence based practice; • Use reliable and valid outcome measures to analyze and evaluate rehabilitation intervention/management and to define the need to modify;



	<p>critically approach to data processing</p>	<ul style="list-style-type: none"> • Demonstrate the ability to search and retrieve relevant scientific literature and information sources, critically analyse the available evidence.
<p>Communication Skills</p>	<ul style="list-style-type: none"> • Ability to deliver qualitative and quantitative information, asking questions, express own opinion and ideas, effectively and sequentially discuss problems and ways of their solution with both specialists and non-specialists via written or spoken word; • Effectively communicate and express own opinion, effectively and sequentially discuss problems within the field of study; • Utilise creatively modern information and communication technologies; • Present work effectively to a range of audiences; • Effectively communicate with team members • Clearly conveying goals and ideas, reach agreements within the team, consider other opinions, and participate in resolving problems/conflict situation. 	<p>5. Demonstrate proficiency in verbal, nonverbal, and written communications:</p> <ul style="list-style-type: none"> • Communicate oral and written information in a clear, structured and succinct manner, effectively and sequentially in a health care context, and prepare detailed report; • Demonstrate ability to observe, listen, asking appropriate questions, as well as utilize non-verbal communication skills; • Communicate clearly and professionally with patients, family members/care-givers or other stakeholders; • Demonstrate effective use of modern communication technologies to obtain, process, keep or demonstrate/present appropriate information; • Demonstrate effective use of modern information and communication technologies to process accurately and timely, and keep medical documentation. <p>6. Cooperate in multidisciplinary and interdisciplinary professional environment:</p> <ul style="list-style-type: none"> • Demonstrate effective interpersonal communication strategies within the multi-professional/ interdisciplinary team as well as with other stakeholders or society, effective team-working, collaboration and coordination; • Demonstrate appropriate professional behaviour and attitudes, adhere to professional and organizational policies; • Aware of one's own role and the role of others within a multi/interdisciplinary team and healthcare continuum; • Coordinate intervention program with team members, adequately assessing capacity to deal with uncertainty and complicated situation to gain optimal performance of a multi/inter-professional



		problem-solving process.
Learning Skills	<ul style="list-style-type: none"> • Ability to evaluate and manage own learning process coherently and thoroughly, and organize it, use appropriate resources; • Understands the necessity to further learning process; • Understands the necessity to update and improve knowledge, integrate with variable information. 	7. Engage in education and lifelong learning activities: <ul style="list-style-type: none"> • Ability to self-evaluate and recognize limits of own knowledge, identify further learning and professional development needs; • Engage actively in planning and management of self-directed learning process as an active learner; • Engage in professional development and lifelong learning to continually update and enhance professional knowledge and skills; • Demonstrate appropriate learning skills and ability to continue study on the second cycle of higher education.
Values	<ul style="list-style-type: none"> • Ability to participate in the formation of values and strive to establish them; • Ability to recognize and respect diverse economic, political, cultural, and religious opinions; • Recognize an ethical dilemma and demonstrate ethical approach in practice and research. 	8. Act professionally in the ethical and legal context: <ul style="list-style-type: none"> • Adhere to ethical principles, national/international legal and professional regulations; • Apply ethical principles to own clinical practice; • Respect the patients' rights; • Demonstrate commitment to meet professional obligations to provide effective, safe, quality physical therapy services to patient, to responsibly serve the profession; • Utilize a biopsychosocial approach when applying health promotion and prevention strategies to own practice; • Show sensitivity and respect the beliefs and values of others and provide equal opportunities to everyone regardless of gender, race, religious, social, and cultural belongings.



Mapping of Program Objectives to Learning Outcomes

Program Objectives		Program Learning Outcomes							
		PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8
		Demonstrate knowledge of the field of physical medicine and rehabilitation involving a critical understanding of theories and principles	Conduct a patient examination, evaluation and critically interpret the relevant information, implement planned physical therapy intervention	Apply management skills in practice setting	Integrate data and make conclusions	Demonstrate proficiency in verbal, nonverbal, and written communications	Cooperate in multidisciplinary and interdisciplinary professional environment	Engage in education and lifelong learning activities	Act professionally in the ethical and legal context
PO-1	Graduate able to apply basic biomedical research methods and evidence-based practice to the process of physical therapy examination, evaluation, intervention, and rehabilitation management, based on biopsychosocial approach, to prevent or remediate impairments, functional limitations and disabilities as related to movement and health across all ages, to improve functional movement potential and quality of life	√	√	√	√	√		√	√
PO-2	Graduate able to provide rehabilitation services in both in-patient and out-patient settings, based on the multi/ interdisciplinary team approach, utilizing appropriate interpersonal skills	√	√	√		√	√		√
PO-3	Graduate able to conduct in professional and ethical manner, with responsible approach to societal needs	√	√	√		√			√
PO-4	Graduate able to develop independent learning skills/activities and foster continuing professional growth and life-long learning				√			√	√



Structure of the curriculum

Structure of the program provides for a sequential order of its components, an admission preconditions to the next component, and overcoming the stages (two stages: after the semester IV and semester VI). Repeated studying of an owed course is possible only before end of the stage provided by the program.

Components of the Curriculum

Preclinical Stage	
Block 1: Biomedical Sciences	45
Block 2: Humanities, Behavioral and Social Sciences	28
Block 3: Pathology	6
Block 4: The Fundamentals of Physical Medicine and Rehabilitation	25
Block 5: Basics of Diagnostics	10
Clinical Stage	
Block 6: Clinical Sciences	30
Block 7: Functional Diagnosis in Physical Medicine and Rehabilitation	8
Block 8: Therapies in Physical Medicine and Rehabilitation	45
Consolidation Stage	
Block 9: Consolidation Block	27
Elective Courses	16
Total credits	240



Curriculum

№	Course	ECTS credits
Preclinical Stage		
Semester I		30
1	Introduction to Specialty 1	2
2	Medical Physics, Biophysics	4
3	Medical Chemistry	3
4	Medical Biology, Genetics	3
5	Cytology, General Histology, Embriology	3
6	Anatomy 1	7
7	Professional Latin Language	2
8	Georgian Language 1	4
9	Public Health and Sociology	2
Semester II		30
1	Introduction to Specialty 2	2
2	Medical Biochemistry	2
3	Histology	3
4	Anatomy 2	5
5	Physiology 1	4
6	Medical Parazitology	2
7	Informational Technologies	2
8	Basics of Psychology	2
9	Bioethics	2
10	Basics of Scientific Research	2
11	Georgian Language 2	2
12	Elective course: <ul style="list-style-type: none"> ○ <i>Biophysics of Electromagnetic Radiation</i> ○ <i>Valeology</i> ○ <i>Health Care Services, Health Indicators</i> 	2
Semester III		30
1	Pathologic Anatomy	3
2	Pathophysiology	3
3	Basics of Pharmacology	3



4	Biomechanics & Kinesiology 1	5
5	Dynamic Anatomy1	4
7	Physiology 2	4
8	Microbiology	2
9	Communication Skills	2
10	Georgian Language 3	2
11	Elective Course: <ul style="list-style-type: none"> ○ <i>Basics of Health Care Management and Leadership</i> ○ <i>Special course of Nutriciology</i> ○ <i>Basics of Pedagogy</i> 	2
Semester IV		30
1	Biomechanics & Kinesiology 2	4
2	Dynamic Anatomy2	4
3	Exercise Physiology & Biochemistry	4
4	Fundamentals of Diagnostics	4
5	Laboratory Medicine	2
6	Basics of Radiology	2
7	Fundamentals of Evidence-Based Medicine	2
8	Hygiene	2
10	Emergency Medicine	2
11	History of Medicine	2
12	Elective Course: <ul style="list-style-type: none"> ○ <i>Biomechanical Basics of SPA</i> ○ <i>Chemical, bacteriologic, radiologic, and nuclear safety</i> 	2
<i>Overcome barrier</i>		
Clinical Stage		
Semester V		30
1	Internal Medicine	5
2	General Surgery	3
3	Neurology	5
4	Oncology	3
5	Dermatology	2
6	Physiotherapy and Balneology 1	4
7	Clinical and Functional Assessment in Physical Medicine 1	4



8	Essentials of Massage	2
9	Elective Course: <ul style="list-style-type: none"> ○ <i>Otorhynolaringology</i> ○ <i>Occupational Medicine</i> ○ <i>Ophthalmology</i> ○ <i>Obstetrics/Gynecology</i> 	2
	Semester VI	30
1	Pediatrics	2
2	Pediatric Neurology	2
3	Rheumatology	3
4	Traumatology, Orthopedics	3
5	Geriatrics	2
6	Manual Therapy	3
7	Prosthetics and Orthotics in Rehabilitation	3
8	Physiotherapy and Balneology 2	3
9	Clinical and Functional Assessment in Physical Medicine 2	4
10	Speech-Language Therapy	3
11	Elective Course: <ul style="list-style-type: none"> ○ <i>Medical Tourism</i> ○ <i>Rehabilitation Principles of Cerebral Palsy in children</i> ○ <i>Legislation and Regulation in Health Care</i> 	2
	Semester VII	30
1	Clinical Principles of Physical Medicine and Rehabilitation	10
2	Therapeutic Exercise	7
3	Sports Medicine	3
4	Therapeutic Massage	4
5	Adapted Physical Education	3
6	Elective Course: <ul style="list-style-type: none"> ○ <i>Dry Needling Technique</i> ○ <i>Sports Massage</i> ○ <i>Tolerance and Diversity</i> 	3
<i>Overcome barrier</i>		
Consolidation Stage		
	Semester VIII	30
1	Pulmonary Rehabilitation	4



2	Cardiovascular Rehabilitation	5
3	Physical Rehabilitation in Neurology	5
4	Physical Rehabilitation in Pediatrics	4
5	Physical Rehabilitation in Geriatrics	4
6	Physical Rehabilitation in Traumatology & Orthopedics	5
7	Elective Course: <ul style="list-style-type: none">○ <i>Resort Management</i>○ <i>Essentials of Occupational Therapy</i>	3
Total		240

Teaching and Learning Methods

Teaching and learning methods are student centered, correspond to first cycle of higher education, and ensure achievement of intended learning outcomes of both each course and whole program.

Bachelor program of Physical Medicine and Rehabilitation Program is implemented mainly using following teaching and learning methods:

- Interactive lectures
- Seminars
- Problem Based Learning
- Case Based Learning/Clinical case study
- Practical study/classes
- Laboratory training/teaching
- Teaching/learning with simulators and moulages
- Teaching/learning through experience/ Clinical practice
- Involvement into scientific/clinical research
- Team work
- Brainstorming
- Role play
- Data analysis
- Discussion/debates
- Demonstration method



Assessment

Based on:

- Bologna Process - European Credit-Transfer System (ECTS)
- Georgian Law on Higher Education
- Decree of Minister of Education and Science of Georgia “ Approval of the Rules for Calculation of Higher Educational Program Credits” (№3, January 5, 2007)

One academic year includes 60 (ECTS) credits. Considering the peculiarities of the higher education program and / or student's individual curriculum, the student's annual workload may exceed 60 credits or be less than 60 credits. It is not permissible for student's annual workload to exceed 75 (ECTS) credits. Credits can be granted only in case of achievement of the course learning outcomes. The assessment system allows:

a) Five types of positive assessment:

A - EXCELLENT 91-100 points of maximum evaluation;

B - VERY GOOD 81-90 points of maximum evaluation;

C - GOOD 71-80 points of maximum evaluation;

D - SATISFACTORY 61-70 points of maximum evaluation;

E - SUFFICIENT 51-60 points of maximum evaluation

b) Two types of negative assessment:

Fx- Fails to pass 41-50 points of maximum evaluation, which means that the student needs more work to pass and is allowed for the exam once more with independent work.

F - FAILED 40 points and less of maximum evaluation, which means that the work out by the student is not enough and the student has to learn the subject from the beginning.

Maximum assessment of the course is 100 points. Midterm evaluation is the sum of points obtained according to the knowledge evaluation components provided by the syllabus of the course and is determined by 60 points. The final exam is evaluated with 40 points.

7 and 8th semester students are working on **Portfolio**.

Final exam may comprise of one or several components (written test, verbal answer, demonstration of practical skills, objectively structured clinical exam, etc.).



Human Resources

Academic staff and invited teachers of the Tbilisi State Medical University are engaged in the programme.

Material Resources

Programme is provided by necessary infrastructure and technical equipment, clinical skills and multidisciplinary simulation center, university clinical bases, and affiliated clinics of appropriate profile.

Employment after Graduation

The graduates – Bachelors of Physical Medicine and Rehabilitation will be employed in the rehabilitation departments of multi-profile hospitals and specialized clinics, in multi-profile and specialized rehabilitation clinics/centers, in ambulatory settings, resorts and wellness centers, private clinics, sports clubs and sports rehabilitation clinics/centers, in different level of educational organization, schools, also in community-based rehabilitation programmes/services.

Postgraduate Education

Graduates can proceed to postgraduate studies at Masters level – second cycle of higher education.