



University of Georgia

School of Health Sciences, Department of Medicine

Modified Programme of Medicine

Presented program is a modified format of the current medicine program, which will be implemented from the fall of 2022.

Department of Medicine welcomes proposals and comments about the program from stakeholders, which you can send to the following email:
n.landia@ug.edu.ge



Modified Program of Medicine

Program: Medicine

Study Level:	One-cycle higher educational program
Program leader:	Otar Toidze
Co-leader:	Natia Landia
Language of Instruction:	English
Qualification:	Medical doctor /MD (0912)
ECTS:	360 ECTS
Admission Criteria:	<p>For citizens of Georgia/foreign countries who have received complete general education in Georgia:</p> <ul style="list-style-type: none">• National exams;• English language B2 level; <p>For entrants listed by the Order No. 224 / n of the Minister of Education and Science of Georgia (see http://www.mes.gov.ge/content.php?id=1131&lang=geo):</p> <ul style="list-style-type: none">• Approvement of the procedures provided by the Order No. 224/n of the Minister of Education and Science of Georgia and submitting relevant documents.• English language B2 level.• Admission exam/interview in Biology-Chemistry-Physics (Basic Issues); <p>The following certificates can prove the knowledge of English language (B2): TOEFL, IELTS, FCE and CERTUS. If the applicant does not have the above-mentioned certificate, the English language competence will be proved at university exam.</p>
Program Aim:	<p>The program aims to prepare medical doctors who ready to adopt roles customary to modern physicians, such as Medical Expert, Communicator, Leader, Health Advocate, and Professional. They will be expected to continuously improving their knowledge and skills in a competent, ethical and professional manner thereby facilitating improvement of health and wellbeing of their local communities as well as global society. Graduates will be able to successfully further medical education, enroll in Masters or Doctoral programs, apply for clinical position, participate in scientific and academic activities, etc.</p> <p>Areas of possible employment: graduate of one cycle higher education program (Medical Doctor) is not granted to run the independent medical practice according to the applicable legislation, she/he can get be employed as the Junior Doctor, implying performing the duties of a doctor according to the instructions and under the responsibility of an independent medical practitioner; (The Law of Georgia on Medical Practice, Article 5). A graduate holding a higher</p>

	<p>medical institution diploma has the right to: a) complete a postgraduate vocational training program acquire the right to perform an independent medical practice after passing a state certification examination; b) carry out research (Master, PhD degrees) and teaching activities in the theoretical fields of medicine or other fields of health care that do not include an independent medical practice (The Law of Georgia on Medical Practice, Article 17/ https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/88317/118650/F-928788116/GEO88317%20Geo.pdf)</p>
<p>Teaching and learning Methods:</p>	<ul style="list-style-type: none"> • Lectures • Seminars • Case Based Learning (CBL) • Problem Based Learning (PBL) • Team Working • Tutorials • Clinical Rotations at University /Teaching Hospitals • Bedside teaching • Role-playing • Communication (with Outpatients and Hospitalized Patients) • Portfolio based education. • Workshops • Workplace learning • Teaching in clinical and simulation environment • Case Based Clinical Reasoning (CBCR) • Studying video movies • Team working with resuscitative patient • Clinical rotation in Practice in Medical settings (outpatients and inpatients) • Clinical rotation
<p>The specific methods of assessment:</p>	<ul style="list-style-type: none"> • Oral/writing exam; • The direct observation (with report of assessment); • Multiple Choice/One clue Tests • The direct observation (with report of assessment) • Feedback gained from different sources; • Objectively Structured Clinical Exam (OSCE) • Direct Observation of Procedural Skills (DOPS) • 360-Degree Evaluation • The Mini clinical exam with Standardized patients (Mini-Cex) • Portfolio
<p>Learning outcomes:</p>	<p>Knowledge and understanding:</p>

1. Demonstrates knowledge of established and evolving biomedical sciences, as well as the application of this knowledge to patient care.
2. Demonstrate knowledge of human development throughout the lifespan and its impact on health and disease.
3. Demonstrates knowledge of established and evolving principles of social–behavioral sciences to provision of patient care, including assessment of the impact of psychosocial–cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care.
4. Demonstrates knowledge of pharmacology and how to evaluate options for safe, rational and optimal application of drug therapy.
5. Demonstrates knowledge of established and evolving principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations.
6. Demonstrates knowledge of established and emerging principles of clinical sciences to diagnostic and therapeutic decision-making, clinical problem solving, and other aspects of evidence-based health care.
7. Demonstrates understanding of medical ethics, human values, legal principles, quality improvement and patient safety and their implications for provision of safe, equitable and patient-centered care.
8. Demonstrates understanding of the health service and healthcare systems and patient journey through the full range of healthcare and social care settings.
9. Demonstrates understanding of biomedical scientific principles, method and knowledge to medical practice.
10. Demonstrates knowledge of established and evolving scientific method and approaches to research and scholarship.

Skills:

1. Demonstrates patient-centered interview skills.
2. Demonstrates collaborative decision-making skills with patients, families and interprofessional team members.
3. Demonstrates communication effectively, openly and honestly with confidentiality appropriately.
4. Demonstrates the essential and accurate information gathering about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests.
5. Demonstrates clinical reasoning (information gathering, hypotheses generation, problem representation, differential diagnosis, leading of working diagnosis, diagnostic justification, management and treatment) in gathering focused information relevant to a patient’s care.
6. Demonstrates clinical judgements when considering or providing compassionate interventions or support for patients who are nearing or at the end of life.
7. Demonstrates prescribing drugs safely, effectively and economically.

8. Demonstrates providing first aid in emergency medical situations (First aid and resuscitation measures).
9. Demonstrates providing practical procedures safely and effectively.
10. Demonstrates awareness and skill in using information technology to access accurate and reliable medical information.
11. Demonstrates skill in appraising sources, content, and applicability of evidence.
12. Demonstrates communication effectively, openly, and honestly with confidentiality appropriately.

Attitudes & Responsibility

1. Demonstrates appropriate generic personal values and behaviors, adherence to sensitivity to a diverse patient population and vulnerable patient population.
2. Demonstrates professional and legal responsibilities, the adherence to high ethical and moral standards, principle of social justice and responding to societal needs.
3. Demonstrates the clinical responsibilities and dedicating themselves to developing, refining and modifying the seven characteristics of the modern doctor throughout their career.
4. Demonstrates social responsibility to the needs of patients and society that supersede self-interest.
5. Demonstrates accountability to patients, society, and the profession, individual physicians and the profession taking responsibility for physician behaviors.
6. Demonstrates humanism - compassion, empathy, honor, integrity and respect in dealing with self, patients, team members and other colleagues.
7. Demonstrates honesty, efficiency in communication, clinical knowledge and skills.
8. Demonstrates altruism - the interests of patients guide physician behavior.
9. Demonstrates confident, personal viewing the patient as a person rather than a disease.
10. Demonstrates the safely practice, participate in and promote activity to improve the quality and safety of patient care and clinical outcomes.
11. Demonstrates developing others, supporting patients, colleagues and organizations to achieve their goals through teamwork, education, leadership, advocacy and innovation.
12. Demonstrates excellence - commitments to competence, life-long learning, continuous improvement and the advancement of knowledge.
13. Demonstrates Curiosity, skepticism, objectivity to the practice of medicine and research.

Date of approval:	02-26-2016
Approval protocol number:	07-16
Date of program update:	23.07.2021
Update protocol number:	08 / 21

<p>Program details:</p>	<p>The program takes 6 years of teaching and covers 360 ECTS. Core course - 333 ECTS (Including Professional core –321 ECTS and Georgian Language – 12 ECTS); Electives -27 ECTS (Including clinical electives -15 ECTS and non- clinical -12 ECTS)</p> <p>The duration of the academic year is 44 weeks Number of semesters - 2 (each semester 22 weeks) Study duration -18 weeks Examination period duration- 2 weeks Make up / Retake – 2 weeks The total number of contact hours (theoretical and practical) no less than 5,500. The number of contact hours per week does not exceed 24 hours.</p>
<p>Teaching Process Characteristics:</p>	<p>The curriculum mainly consists of the following areas: basic / biomedical, social and behavioral, clinical sciences, longitudinal development of clinical and scientific skills. Blocks, modules, and subjects are mentioned as a course and are grouped within directions to develop each of them. Each block is created by grouping relevant subjects according to systems. The development of a partially integrated curriculum required the introduction of appropriate as well as integrative teaching and assessment methods. Accordingly, SPICES model (Student-centered, Problem-based, Integrated, interprofessional, Community-based, Elective-driven, Systematic) was used, which introduced the goals, learning outcomes and contents of the one-cycle program in medicine and is based on competence progression from the first semester to the end of the curriculum. The Essential Core provides students with a solid foundation in scientific principles and evidence-based inquiry that they can build on throughout their career, along with updates on existing and emerging technologies that are likely to affect the future of medicine. Of equal importance, this core nurtures the ethical and humanistic qualities of students by introducing them to compassionate, personalized patient care in their Introduction to Clinical Practice I, II, III – longitudinal courses of clinical skills.</p> <p>The Essentials core (I, II and III years) consists of biomedical interdisciplinary blocks and social- behavioral sciences modules with the goal of presenting basic and social sciences in a clinical context. In addition, students begin to explore personal interests with a mentor through the Scientific Research and Project Course I, II, III - longitudinal courses of scientific skills Scholarly Activity program.</p> <p>The Clinical Core (IV, V and VI years) basically consists of required interdepartmental clerkships and clinical electives in XII semester. Clinical teaching provides intensive clinical experiences in the hospital, ambulatory clinics, emergency room, labor and delivery suite, and operating rooms. During the clinical core, students participate in history-taking, physical examination and assessment, development of a differential diagnosis, diagnostic decision-making, interpretation of laboratory results, treatment planning, transitions of care, and re-evaluation of patient status after treatment is initiated. These activities and others provide medical students with opportunities to develop skills in lifelong self-directed learning, critical analysis of evidence, and clinical problem solving.</p>

The Longitudinal learning contains clinical and scientific components that extend from first semester until the end of the study. The Clinical components last for six years. Thematic areas of research project are selective: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area.

Non-clinical electives in the first, sixth, and tenth semesters of Medicine supplement the required courses and provide additional experiences that allow for career exploration and support the diverse interests of students. The clinical electives for twelfth semester are designed to foster the development of graduates who are knowledgeable, skillful, and ethical, as well as broaden and balance the overall education of each student. It serves the purpose of career exploration and focuses students on preparation for graduate medical education.

The program consists of theoretical and laboratory teaching, as well as practice, which is implemented within the courses based on the thematic direction. Theoretical lectures can be concurrently conducted in two and more groups. From seventh semester clinical rotations of medical profiles starts, which consider daily and intensive teaching and is organized as in the university campus as well as in the affiliated medical institutions. The practical training is conducted using mentor and preceptor system. The structured (integrated) evaluation system in simulation and clinical setting is used for assessment of professional skills.

Teaching and learning process is conducted in accordance with governmental resolutions and university regulations. Lecture and defined seminar classes are held using online platform. The laboratory, clinical and practical components will be conducted on the relevant university and clinical bases in accordance with the requirements established for that period.

University of Georgia, school of Health Sciences follows the recommendations of the Association of Quality Assurance Agencies of Higher Education (ENQA) and the National Center for Quality Development in Education regarding quality assurance in e-learning.

Code	Subject	ECTS	Semester
Program Core			
MEDC 1110	Introduction to Basic Medical Sciences	7	I
MEDC 1120	Basic Medical Sciences I	7	I
MEDC 1130	Introduction to Clinical Practice I	7	I
KART 1110	Georgian Language for Medical Education I	3	I
MEDC 1230	Basic Medical Sciences II	6	II
MEDC 1240	Basic Medical Sciences III	8	II
MEDC 1250	Basic Medical Sciences IV	6	II

MEDC 1260	Scientific Research and Project Course I	7	II
KART 1210	Georgian Language for Medical Education II	3	II
MEDC 2160	Cardiovascular System	6	III
MEDC 2170	Respiratory System	6	III
MEDC 2180	Gastrointestinal System and Metabolism	8	III
MEDC 2130	Introduction to Clinical Practice II	7	III
KART 2110	Georgian Language for Medical Education III	3	III
MEDC 2210	Nervous system	8	IV
MEDC 2220	Urogenital and Endocrine Systems	8	IV
PHMC 2210	Biostatistics and Epidemiology	6	IV
MEDC 2260	Scientific Research and Project Course II	5	IV
KART 2210	Georgian Language for Medical Education IV	3	IV
MEDC 3110	Infectious Diseases & Hematopoietic System	7	V
MEDC 3120	Cardiovascular & Respiratory Systems	7	V
MEDC 3130	Gastrointestinal System	7	V
MEDC 3140	Medical Ethics and Medical Law	6	V
PHMC 3110	Public Health and Social Medicine	6	V
MEDC 3210	Endocrine, Reproductive & Urinary Systems	8	VI
MEDC 3220	Nervous System and Psychiatry	7	VI
MEDC 3230	Musculoskeletal System	5	VI

MEDC 3240	Patient Safety and Quality Improvement	7	VI
MEDC 4110	Family Medicine	9	VII
MEDC 4120	Emergency Care	6	VII
MEDC 4130	Hospitalized Adult Care I (Internal Medicine I)	9	VII
PHMC 1130	Community Medicine and Health Promotion	6	VII
MEDC 4210	Hospitalized Adult Care II (Internal Medicine II)	30	VIII
MEDC 5110	Infant, Child & Adolescent Care	11	IX
MEDC 5120	Neurologic Care	10	IX
MEDC 5130	Psychiatric Care	9	IX
MEDC 5210	Operative & Perioperative care I	10	X
MEDC 5220	Obstetrics & Gynecology	11	X
PHMC 1140	Global Health and Healthcare Management	6	X
MEDC 6110	Operative & Perioperative care II	20	X1
MEDC 6120	Medical Law and Forensic Medicine	4	XI
MEDC 6140	Research Project in Health Sciences	6	XI
MEDC 6210	Advances Experiences in Clinical Medicine	15	XII
	Credits sum:	333	

Program Elective

To complete the program, the student is required to accumulate 27 ECTS credits from the offered 111 ECTS credit elective courses listed below:

Code	Subject	ECTS	Semester
Clinical Electives			
MEDC 6220	Preparatory course for Entering Residency (EPAs)	3	XII
MEDC 6230	Family Medicine Internship Program	12	XII
MEDC 6240	General Surgery & Emergency Internship Program	12	XII
MEDC 6250	Internal Medicine Internship Program	12	XII
MEDC 6260	Obstetrics & Gynecology Internship Program	12	XII
MEDC 6270	Pediatrics Internship Program	12	XII
MEDC 6280	Psychiatry Internship Program	12	XII
Non-Clinical Electives			
PSYC4111E	Age Psychology	3	VI or X
PSYC1275E	Social Psychology	3	VI or X
MGMT2121E	Leadership	3	VI or X
MGMT5797E	Sociology	3	VI or X
MKTG4550E	Social Media Marketing	3	VI or X
COMM4135E	Technique of Public Speaking	3	VI or X
INFO3253E	Introduction to Cyber Security	3	VI or X
HELM 4150E	SPSS: Data Analysis and Formation in healthcare	3	VI or X
MEDC 1111	Medical Tourism and Telemedicine	6	I

ENGM 1110	English for Medical Education	6	I
		Credits sum:	111

Evaluation system

The following assessment system is used in the semester: Midterm exam – 60 points; Final exam 40 points; A total of 100 points

Point	GPA	The university assessment	The general assessment in Georgia	
97-100	4,00	A+	A	Excellent
94-96	3,75	A		
91-93	3,50	A-		
87-90	3,25	B+	B	Very good
84-86	3,00	B		
81-83	2,75	B-	C	good
77-80	2,50	C+		
74-76	2,25	C		
71-73	2,00	C-	D	Satisfactory
67-70	1,75	D+		

Modules Description

SYLLABUS

Semester I

Introduction to Basic Medical Sciences

- 1. Course identification code: MEDC 1110**
- 2. Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili; Biophysics – Marika Gamkrelidze; Histology & Embryology - Lia Gelazonia; Medical Biology – Khatuna Vashakmadze; Medical Microbiology – Marina Tediashvili; Organic Chemistry – Lili Arabuli; Physiology – Marika Gogichadze.
- 4. Goals**
To convey:
 1. basic term and concepts on anatomy, physiology, embryology, histology, medical biology, biophysics, organic chemistry and microbiology;
 2. basic knowledge on viability;
 3. knowledge on cellular structure and functions.
- 5. Prerequisite:** N/A
- 6. Co-requisite:** N/A
- 7. Intended learning outcomes**

Knowledge and understanding

- 1.0. Defines fundamental concepts of anatomy;
 - 1.1. Defines anatomy, its historical development and basic anatomical terms;
 - 1.2. Explains basic concepts related to regional and systemic anatomy, and osteology;
- 2.0. Defines anatomical properties and clinical implications for bones of the upper and lower limbs;
- 3.0. Explains basic terms and concepts related to basic physics, basic biophysics, international units, biomechanics, bio-optics, and bioelectronics;
- 4.0. Explains mechanic, electrical and optical processes that are characteristics of living organisms;
- 5.0. Describes the main types of microscope and their uses;
- 6.0. Explains the histological methods;
- 7.0. Explains human genome project and the importance of the results;
- 8.0. Explains the structure and function of eukaryotic subcellular organelles;
- 9.0. Identifies the molecules involved in the communication between the cells;
- 10.0. Explains the mechanism of signal transduction;
- 11.0. Describes the programmed cell death;
- 12.0. Explains history of discovery for important microorganisms causing infections in humans;
- 13.0. Defines structure of atom and chemical bonds;
- 14.0. For organic compounds - 14.1. Defines functional groups; 14.2. Classifies possible reactions;
- 15.0. Defines homeostasis;

16.0. Explains case scenario related basic medical science topics in a clinical context.

Skills

- 1.0. Applies basic laboratory techniques and use of equipments;
- 2.0. Demonstrates scientific reasoning, information literacy and skills of self-directed, life-long learning.

Attitudes & Responsibility

- 1.0. Values teamwork.

8. Teaching method(s)

Lecture
Theoretical Interactive learning – Seminars
Videos of learning
Videos of teaching
Practical Work
Laboratory Work - in Anatomy, Histology, Physiology
Problem Based Learning (PBL)

9. Course content:

Anatomy: Introduction to Anatomy; Terminology in Anatomy; Introduction to Osteology; Bones of the Shoulder; Bones of the Upper Limb; Bones of the Pelvis; Bones of the Pelvis & Lower Limb.

Biophysics: Introduction to Biophysics; Medicine, Science or Art; Physical Measurements and Units, Unit Standards; Statics (Mass and Weight), Gravitation Law; Newton's Laws of Motion; Center of Mass, Moment; Nature of Light, Electromagnetic Spectrum; Reflection and Refraction of Light; Bio-optics: Vision and Eye, Refraction errors; Optical Aberrations; Lenses; Lens-maker Equation; Optical Properties of Microscopes; Electrical Security Systems; Electric Current Effects on Human Tissue; Membrane Impedance, Bioelectrical Activity; Electric Charges, Electric Field.

Histology & Embryology: Introduction to Histology; Basic Terminology; Microscopy (Bright field, Fluorescent, Confocal); Electron microscopy; Methods of Histology; Tissue Processing; Methods of Histology; Immunohistochemistry; Other Histologic Methods.

Medical Biology: Introduction to Medical Biology; Origin of Life; Cellular Organization of Life; Cytoskeleton; Cell Adhesion; Cell Signaling Events; Cell Signaling Events; Intercellular Cell Signaling; Programmed Cell Death; Cell Membrane; Cellular Organization of Life Biological Energy Systems Enzymes and Kinetics; Cell Cycle and Mitosis-Meiosis (Introduction to Cellular Homeostasis); Cellular Homeostasis and Cell Growth; Cell Membrane; Cellular Organization of Life Enzymes and Kinetics.

Medical Microbiology: History and Scope of Microbiology.

Organic Chemistry: Acids & Bases; Alkanes & Cycloalkanes; Alkenes; Benzene & Aromaticity.

Physiology: Introduction to Physiology and Homeostasis.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	30
Competency– based assessment	LPE: Laboratory Practical Exam	LPE Checklist	Mid-term Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	10
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Biophysics	Biophysics: A Physiological Approach	Patrick F. Dillon	Cambridge University Press
		Physics in Biology and Medicine (4th edition)	Paul Davidovits	Elsevier
		Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers
3	Histology	Junqueira's Basic Histology: Text and Atlas 13th Ed.	Anthony Mescher	Mc-Graw-Hill Companies

4	Embryology	The Developing Human: Clinically Oriented Embryology, 10th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Medical biology	Molecular Biology of the Cell	Bruce Alberts et al	Garland Science
6	Medical microbiology	Medical Microbiology 8th ed, 2016	P. R. Murray et al	Mosby
7	Organic Chemistry	Organic Chemistry	John E. McMurry	Cengage Learning
8	Physiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science

SYLLABUS

Semester I

Basic Medical Sciences I

- 1. Course identification code: MEDC 1120**
- 2. Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili; Biophysics – Marika Gamkrelidze; Histology & Embryology - Lia Gelazonia; Physiology – Marika Gogichadze; Medical Biology – Khatuna Vashakmadze; Medical Microbiology – Marina Tediashvili; Organic Chemistry – Lili Arabuli.
- 4. Goals to convey:**
 1. basic term and concepts on anatomy, physiology, embryology, histology, medical biology, biophysics, organic chemistry and microbiology;
 2. knowledge on cellular structure and functions;
 3. knowledge on process from zygote to formation of organs;
 4. knowledge on system-specific (bones, skull, vertebra, and thorax) anatomy and its clinical applications.
- 5. Prerequisite:** *MEDC 1110 Introduction to Basic Medical Sciences*
- 6. Co-requisite:** N/A
- 7. Intended learning outcomes**

Knowledge and understanding

- 1.0. Defines anatomical properties and clinical implications for bones of the pelvis, thorax and vertebral column, ribs and sternum, neurocranium, viscerocranium;
- 2.0. Explains basic terms and concepts about radiation biophysics, radiation safety and use of lasers;
- 3.0. Lists effects of radiation to the organism, its evaluation methods on the cellular basis and protection approaches;
- 4.0. Defines the histological characteristics of cell membrane and functions;
- 5.0. Defines the cellular organelles and their functions;
- 6.0. Explains the cytoskeleton components and their functions;
- 7.0. Explains the histological characteristics of cell nucleus;
- 8.0. Lists the difference between mitosis and meiosis;
- 9.0. Lists the difference between male and female gametogenesis;
- 10.0. Explains the developmental events respectively from zygote to gastrulation;
- 11.0. Defines cell membrane structures and explains membrane transport mechanisms;

12.0. For distribution of substances in body fluids: 12.1. defines intra and extracellular fluid compartments; 12.2. explains the distribution and functions of electrolytes such as Na, K and Ca in body fluids 12.3. defines edema;

13.0. Defines the term osmosis and explains the conditions required for osmosis to occur and explains the dynamics of osmotic pressure;

14.0. For transport of substances through the cell membrane: 14.1. defines diffusion and explains the factors that influence the rate of diffusion through cell membranes; 14.2. defines the characteristics of carrier-mediated transport; 14.3 explains active transport mechanisms and describes how the Na⁺/K⁺ pump works;

15.0. Explains transfer mechanisms of cellular membrane and the connection of these mechanisms with material and energy requirements;

16.0. Explains the roles of DNA and RNA in the maintenance of living organism;

17.0. Lists the protein synthesis steps and defines the mechanisms of regulation of gene expression;

18.0. Defines types of mutations and emphasizes the importance of gene polymorphisms in human health and variability;

19.0. Defines plasmids and their use in molecular biology;

20.0. Explains the identification methods of chromosomes and their use in medical clinics.

21.0. For microorganisms: 22.1. classifies; 22.2. lists general characteristics.

22.0. Defines structure of organic compounds and their chemical reactions.

23.0. Defines structures and reactions of macromolecules such as amino acid, protein, lipid and carbohydrate.

24.0. Explains case scenario related basic medical science topics in a clinical context.

Skills

1.0. Applies basic laboratory techniques and use of equipments;

2.0. Demonstrates scientific reasoning, information literacy and skills of self-directed, life-long learning.

Attitudes & Responsibility

1.0. Values teamwork.

8. Teaching method(s)

Lecture

Theoretical Interactive learning – Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work - in Anatomy, Histology, Physiology

Problem Based Learning (PBL)

9. Course content:

Anatomy: Vertebral column, ribs and sternum; Neurocranium; Viscerocranium.

Biophysics: Nuclear Stability; Radiation Biophysics: Nucleus and Radioactivity; Interaction of Radiation with Matter; Interaction of X or Gamma Rays with Matter; Photoelectric Action, Compton Action; Half Value Layer, Attenuation; Units of Radioactivity; Radiation Protection (Safety); Radioisotopes in Medicine; Biological mechanisms of Radiation; Medical Imaging: Nuclear Medicine; Medical Imaging: Applications of X-ray Attenuation & Detection; Lasers in Medicine.

Histology & Embryology: Cell organelles; Cytoskeleton; Cell Nucleus and Cell Cycle; Gametogenesis; Oogenesis; Ovarian Cycle; Oogenesis; Follicular and Menstrual Cycle; Fertilization; Blastulation; Implantation; Cell Cycle (Mitosis & Meiosis); Introduction to Embryology and Human Developmental Period; Gametogenesis; Spermatogenesis; Cell; General Specification; Cell Membrane Structure & Function; Gastrulation; Primitive Streak, Notochord Formation.

Medical Biology: Cell Cycle and Mitosis-Meiosis; Deoxyribonucleic Acid and Ribonucleic Acid; Deoxyribonucleic Acid and Ribonucleic Acid; DNA and RNA (Central Dogma); Deoxyribonucleic Acid and Ribonucleic Acid (Central Dogma); Protein Synthesis and Turnover; Biosynthesis of Nucleotides; Regulation of Gene Expression; Genomics, Proteomics and Metabolomics; Chromosome Structure and Function, Plasmids, Transposable Genetic Elements; Tools in Medical Biology; DNA Damage and Repair Mechanism; Mutation and Polymorphism; Mendelian Laws and Inheritance; Cell and Gene Therapy; Nucleic Acid Purification; Epigenetics (Population Genetics); Gene Identification in Cancer; Biological Aspects of Development.

Medical Microbiology: General Structures of Bacteria; General Structure of Viruses; General structure of fungi; General Structure of Parasites.

Organic Chemistry: Alcohols and Ethers; Carbonyl Compounds; Carboxylic Acids and Nitriles; Amines; Steroids.

Physiology: Distribution of Substances in Body Fluids; Cell Membrane; Transport of Substances Through the Cell Membrane; Osmotic Pressure and Permeability of The Cell Membrane; Transport of Substances Through the Cell Membrane; Osmosis & Diffusion.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	30
Competency– based assessment	LPE: Laboratory Practical Exam	LPE Checklist	Mid-term Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	10
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	PBL-P: Evaluation of PBL Student’s Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray’s Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Biophysics	Biophysics: A Physiological Approach	Patrick F. Dillon	Cambridge University Press
		Physics in Biology and Medicine (4th edition)	Paul Davidovits	Elsevier
		Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers

3	Histology	Junqueira's Basic Histology: Text and Atlas 13th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
4	Embryology	The Developing Human: Clinically Oriented Embryology, 10th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Medical Microbiology	Medical Microbiology 8th ed, 2016	P. R. Murray et al	Mosby
6	Organic Chemistry;	Organic Chemistry	John E. McMurry	Cengage Learning
7	Physiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
8	Medical biology	Molecular Biology of the Cell	Bruce Alberts et al	Garland Science

SYLLABUS

Semester I

Introduction to Clinical Practice I

1. **Course identification code: MEDC1130**
2. **Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
3. **Person(s) responsible for course: Natia Landia**

Lecturers: Behavioral Science - George Maglakelidze; Medical Ethics –Natia Landia; Clinical Skills – Nato Shengelia

4. Description:

This course integrates the subjects of Behavioral Science, Medical Ethics and Clinical skills based on the doctor/patient relationship that are fundamental to practice patient-centered and evidenced-based care and help future physicians to develop professional behavior. The course covers the study of modern approaches and principles of interpersonal communication skills - necessary for the delivery of quality medical services and is the initial stage for the longitudinal learning of clinical skills.

5. Goals

1. To convey:
 - 1.1. basic terms and concepts for behavioral science and Medical Ethics;
 - 1.2. complementary educational experiences by improving biopsychosocial approach on medical practice;
2. To educate medical students to choose the right course of action among available choices by recognizing ethical issues and principles that may arise during the patient care delivery:
 - 2.1. decision making, clinical judgment, patient's privacy, confidentiality, informed consent
 - 2.2. management of challenging patients and their family members, resources allocation and conflict of interest;
3. To prepare students to clinical practice;
4. To equip first year medical students with knowledge and skills on First Aid approaches
5. To develop skills in Basic Life Support, Patient/Casualty Transportation and Bandaging Techniques regarding to First Aid;
6. To acquire basic knowledge on communication and experience patient-doctor encounter with standardized patient.

6. **Prerequisite:** N/A

7. **Co-requisite:** N/A

8. Intended learning outcomes

Knowledge and Understanding

- 1.0. Explains information about behavioral sciences and medical ethics;
- 2.0. Emphasizes the knowledge and cognitive skills necessary for ethical decision making
- 3.0. Focuses more directly on student's personal values, attitudes, and behavior
- 3.0. Describes basic terms and concepts about first aid.
- 4.0. Describes basic terms and concepts of communication skills

5.0. Defines the correlation between ethics and philosophy in relation with main ethical theories.

Skills

4.0. Applies first aid skills on anatomic model.

5.0. Uses communication skills in patient-doctor interviews in simulated settings.

6.0. Uses biopsychosocial approach on medical practice.

Attitudes

7.0. Values teamwork, interpersonal skills, and significance of psychosocial issues

8.0. Values the importance of informed consent

9.0. Pays attention to patient privacy

10.0. Values the importance of not exceeding the limits of his/her own competency level.

9. Teaching method(s)

Lecture

Theoretical interactive learning - Seminars

Practical Work

Teaching by using the simulations

Learning with usage of simulators

Teaching through standardized patients

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

10. Course content:

Behavioral Science: Introduction to Behavioral Science (Medicine). Basics of Doctor-patient communication; The Medical Interview; The functions of the interview; The structure of the interview, Fundamental skills to manage interview; Getting Information from patient; Giving information to patient; Elements of the medical interview: Preparing for interview, Observing the patient, Surveying problems, Detecting barriers to communication, Defense mechanisms in patients, Negotiating plans, Educating the Patient, Special circumstances and interview modifications;

Empathy; Role of empathy; Barriers to empathy and overcoming them; Getting patient's emotion; Direct inquiry; Indirect inquiry; Expression of empathy; Responding to patient with empathy; Components of empathy: Naming, Understanding, Respecting, Supporting;

Delivering Serious News; communicating serious news, Importance of discussion, Protocols for delivery: SPIKES; Communicating with Difficult patients; Dialing with Difficult patient; Problem management; Patient education; Personality traits and coping styles.

Working with specific populations of patients; Working with Families, Children, Adolescents, Older patients, Cross-Cultural Communication; Women, vulnerable Patients;

Health-Related Behavior, Behavior Change; Behavior Change models, Motivational interviewing, Stages of change and clinical strategies;

Patient adherence; Factors of Patient adherence, Application of Information-motivation-strategy model: Understanding of treatment, Motivating the patient to adherence, Creating the strategy of treatment; Somatic Symptom and Related Disorders; Etiology, Impact and outcomes, Differential diagnosis, Factitious disorder and malingering, Therapies;

Role of clinician-patient relationship. Psychological therapies; Cognitive behavioral therapy, Psychodynamic psychotherapy, Biofeedback; Integrative Medicine.

Medical Ethics:

Reasoning about Ethics: Scientific reasoning in Clinical Medicine, Ethical reasoning in Clinical Medicine, The fact-value distinction, Skepticism about Ethics, The role of emotion in moral argument, Reflective equilibrium with Dialogue: Two caricatures of moral reasoning: the mathematical and the scientific models, Reflective equilibrium, Dialogue;

Tools of Ethical Reasoning: Tool 1: Distinguishing facts from values, Tools 2: Clarifying the logical form of the argument, Tool 3: Analyzing concepts, Tool 4: Reasoning from principles and theory, Tool 5: Using case comparison, Tool 6: thought experiments, Tool 7: Rational decision theory;

The slippery slope argument: The logical type of slippery slope argument, The empirical form of slippery slope argument. Ethical Theories and perspectives:

The role of ethical theory: Consequentialism: Utilitarianism: an example of a consequentialist theory of ethics;

Deontological moral theories: Kantian ethics: an example of a deontological theory;

Virtue Ethics; Perspectives: Communitarianism, A feminist approach to Ethics.

Three core concepts in Medical Ethics: Best interests: The philosophical approach to best interests, Psychologists' approach to measuring well-being, Paternalism, the legal approach to best interests;

Autonomy: Liberty and Freedom, some aspects of Autonomy, changing decisions and Autonomy, can you autonomously choose to delegate choice? Relational Autonomy;

Rights: What are Rights? Types of rights, Are rights absolute?

Understanding Legal References and Reports: Cases, Statutes; Doctors and Patients: Relationships and Responsibilities; The Doctor – Patient Relationship: The Paternalistic (traditional) model; The Informative (consumer) model; The Interpretive model; The Deliberative model;

Responsibilities of Doctors: Responsibilities to Professional Codes of Conduct, Responsibilities to personal ethical codes;

Responsibilities of Patients: Individual responsibility Collective responsibility;

Consent: Introduction, The Concept of Informed Consent, Overview of the Law on Consent: Battery, Negligence, What information should be given? The legal status of the 'consent form', When can consent be implied? Consent form disclaimers, Voluntariness;

Capacity: Does the patient lack Capacity? Elements of Capacity, Assessing Capacity; Making decisions for people who lack Capacity: The ethical approach to people who lack capacity, Best interests, Substituted judgment, Proxy, Advance directives;

The Legal Approach to adults who lack capacity: Best interests assessment for a patient lacking capacity, the role of family, Lasting Power of Attorney (LPA), Advance decisions;

Mental Health: Justifying A Mental Health Act; The Protection of the Patient or The Protection of Others; The Mental Health Act 1983: Mental Disorder, Compulsory detention in hospital, enforcing treatment outside hospital, further issues covered by the Mental Health Act.

Confidentiality: The ethical basis for Medical Confidentiality: Four ethical grounds for the importance of;

The Legal approach to Confidentiality: The balancing of public interests, The impact of the Human Right Act 1998 (HRA) on confidentiality, Confidentiality and generic information, Confidentiality and sexually transmitted diseases, Confidentiality, the police and driving.

Confidentiality and Medical Students; Confidentiality and the Patient Lacking Capacity; Confidentiality and Children: Court proceedings, medical records, and the doctor.

Resource Allocation: Rationing and Ethics: Should Ethics be rationed? 'We shouldn't put a price on life', maximizing benefit: Cost-effectiveness analysis, DALYs and utilitarianism, what is wrong with QALYs? Age and QALYs; Egalitarianism and fair allocation, responding to patient need and prioritarianism, Rawls' approach;

Responsibility for Bringing Condition on Oneself; Social Factors, Defendants and Priority; Fair Procedure for Making Allocation Decisions; Rationing and the Law; Legal challenges to resource allocation decisions.

Ethical guidance for doctors: Good Medical Practice: Professionalism in action, Domain 1: Knowledge, skills and performance: Develop and maintain your professional performance, apply knowledge and experience to practice, Record your work clearly, accurately and legibly; **Domain 2: Safety and quality:** Contribute to and comply with systems to protect patients, respond to risks to safety, Risks posed by your health; **Domain 3: Communication, partnership and teamwork:** Communicate effectively, Working collaboratively with colleagues, Teaching, training, supporting and assessing, Continuity and coordination of care, Establish and maintain partnerships with patients; **Domain 4: Maintaining trust:** Show respect for patients, Treat patients and colleagues fairly and without discrimination, Act with honesty and integrity,

Communicating information, Openness and legal or disciplinary proceedings, Honesty in financial dealings.

Ethical guidance for doctors: Confidentiality: good practice in handling patient information:

Ethical and legal duties of confidentiality, disclosing patients' personal information: a framework, Using and disclosing patient information for direct care, Using and disclosing patient information for secondary purposes, Consent, Managing and protecting personal information.

Ethical guidance for doctors: Guidance on professional standards and ethics for doctors

Decision making and consent: The seven principles of decision making and consent, The scope of this guidance, Taking a proportionate approach, The dialogue leading to a decision, Recording decisions, Reviewing decisions, Circumstances that affect the decision-making process;

Ethical guidance for doctors: Duties of a doctor in the workplace: Communication, partnership and teamwork:

Treat patients as individuals and respect their dignity, Work in partnership with patients, Work with colleagues in the ways that best serve patients' interests, maintaining trust; Working with colleagues, Maintaining and improving standards of care, Employment, Planning, using and managing resources.

Clinical Skills: Introduction to the First Aid Programs; Basic Human Body; Scene Assessment; Legal Aspect of First Aid; Basic Life Support and Heimlich Maneuver; Shock and Bleeding Control; Burns, Freezing, Frostbite; Injuries; Foreign Objects; Fractures and Dislocation; The Unconscious Casualty; Poisoning; Drowning; Insect Bite; Patient-Casualty Transportation / Bandaging Techniques; Introduction to Communication Skills; Basic Communication Skills; The Medical Interview; Giving Information; The Medical History; Patient-Doctor Communication Skills General Approach; Patient-Doctor Communication Skills Using SPs;

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	20
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	14
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12

12. Recommended literature:

Behavioral Science

1. M. D. Feldman, J. F. Christensen, - Behavioral Medicine, A Guide for Clinical Practice; Fifth Edition;
2. B. Fadem, Behavioral Science in Medicine, Second Edition;
3. Calgary –Cambridge Guide to the Medical Interview – Communication Process.

Medical Ethics

1. Dominic Wilkinson, Jonathan Herring, Julian Savulescu, Medical Ethics and Law: A curriculum for the 21st Century, Third Edition, 2020;
2. Ira Bedzow, Giving Voice Values As a Professional Physician: An Introduction to Medical Ethics, 2019;
3. Jacques P. Thiroux , Keith W. Krasemann, Ethics: Theory and Practice, Pearson Publishing House, 2011;
4. Barbara MacKinnon, Ethics: Theory and Contemporary Issues , Wadsworth Publishing, 2011;
5. Bonnie F. Fremgen, Medical Law and Ethics, Prentice Hall Publishing House, 2011.

6. General Medical Council: Ethical guidance for doctors:

<https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors>

7. Good Medical Practice

https://www.gmc-uk.org/-/media/documents/good-medical-practice---english-20200128_pdf-51527435.pdf?la=en&hash=DA1263358CCA88F298785FE2BD7610EB4EE9A530

8. Confidentiality: good practice in handling patient information

<https://www.gmc-uk.org/-/media/documents/gmc-guidance-for-doctors---confidentiality-good-practice-in-handling-patient-information---70080105.pdf?la=en&hash=08E96AC70CEE25912CE2EA98E5AA3303EADB5D88>

9. Guidance on professional standards and ethics for doctors *Decision making and consent*

https://www.gmc-uk.org/-/media/documents/gmc-guidance-for-doctors---decision-making-and-consent-english_pdf-84191055.pdf?la=en&hash=BE327A1C584627D12BC51F66E790443F0E0651DA

10. Leadership and management for all doctors

https://www.gmc-uk.org/-/media/documents/leadership-and-management-for-all-doctors---english-1015_pdf-48903400.pdf?la=en&hash=56A6B67C00925DB6A2EE73956E915DEAD3B627AC

Clinical Skills

1. Smith's Patient-Centered Interviewing, An Evidence-Based Method; Fourth Edition; 2019, a LANGE medical book;
2. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
3. Practical skills and procedures; General Medical Council; GMC.
4. Bates' Guide To Physical Examination and History Taking; 2020

SYLLABUS

Semester I

Georgian Language for Medical Education I

1. **Course identification code:** KART 1110
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Nana Shavtvaladze
Lecturers: Nana Shavtvaladze; Elene Sigua; Ana Zhorzholiani; Maia Zarnadze

4. **Course goals:** To introduce Georgian language, and to integrate international medical students with the Georgian society in a simple way. Students of the beginner stage will easily pick up speaking and writing skills by simple step-by-step learning process according to the stage A1/1 (Beginner) of European language standard. The course's body of knowledge will create a ground for continue learning at the next level considering the field of main study – medicine and will introduce topics such as: On the ward, Hospital staff, Introducing yourself to patients and etc.

5. **Prerequisite:** N/A
6. **Co-requisite:** N/A

7. **Intended learning outcomes**
 - 1.0. Reads and understand simple texts;
 - 2.0. Answers simple comprehension questions and match sentences about texts;
 - 3.0. Reconstructs texts by reordering sentences;
 - 4.0. Understands the main idea of a text;
 - 5.0. Identifies specific information in a text;
 - 6.0. Completes forms;
 - 7.0. Writes well-structured simple sentences;
 - 8.0. Writes simple texts about familiar topics;
 - 9.0. Uses simple conjunctions;
 - 10.0. Uses punctuation correctly in simple sentences;
 - 11.0. Listens for specific information e.g. personal information;
 - 12.0. Answers simple questions on informational texts;
 - 13.0. Matches information with speakers;
 - 14.0. Listens for pronunciation and intonation;
 - 15.0. Listens to complete sentences;
 - 16.0. Greetings and introductions;
 - 17.0. Makes simple conversations in familiar situations (e.g. family, weekend, hospital)
 - 18.0. Asks and responds to simple questions with modelling;

8. **Teaching method(s)**
Interactive Lectures

Laboratory work
 Workbook
 Explanatory
 Demonstration
 Verbal/Oral

9. Course content: Alphabet; Everyday phrases; Greetings; Questions words who/what; verb – to be (Present tense) ; pronouns: This/That; Introduction; Grammar: Postposition – **from**; Suffixes: ელ/უღ/ურ; verb - **to know**; People and Things; Grammar: Questions words What kind of? /How much? /How many? /Where? /Which? ; Adjectives; Ordinal Numerals; Plurals; Travel in the City; Visit to the hospital; Grammar: Questions words: Where? /How? /Whit what? ; Postpositions: - ბი/-ზე/; Instrumental case - ით; verbs: **to come/to go**; Daily Activities; Grammar: Dative/Adverbial cases -ს/-ად/-დ; verbs (Present tense): to work/to live/to think/to speak/to study/to talk; Healthcare staff and medical facilities.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	24
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12
	Essay	Essay Checklist		10
	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		10

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	საკომუნიკაციო ქართული 1 Communication Georgian 1	Shavtvaladze,N	2012, Savtvaladze
2.	მოუსმინეთ ქართულ დიალოგებს 1 +CD Listen to Georgian dialogues	Shavtvaladze,N	2006, Shavtvaladze
3.	ბილიკი წიგნი პირველი:ქართული ენა Biliki:Book 1:Georgian language	Shavtvaladze,N	2009, თბილისი: Tbilisi
4.	ბილიკი:სამუშაო რვეული 1 დონე Biliki:work book 1	Shavtvaladze,N	2008, თბილისი: Tbilisi
5.	ბილიკი:ქართული დიალოგები.საკითხავი წიგნი Biliki:Georgian dialogues:reading book	Shavtvaladze,N	2008, თბილისი: Tbilisi

SYLLABUS

Semester II

Basic Medical Sciences II

1. **Course identification code: MEDC 1230**
2. **Credit Points: 6 ECTS, Contact Hours: 94; Independent Hours: 86; Sum: 180.**
3. **Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili; Biophysics – Marika Gamkrelidze; Histology & Embryology - Lia Gelazonia; Physiology – Marika Gogichadze; Immunology– Marina Tevzadze.
4. **Goals**
To convey:
 1. basic terms and concepts for anatomy, biophysics, histology, embryology, physiology, immunology;
 2. knowledge on four fundamental tissues forming the body, cells forming these tissues;
 3. knowledge on excitation and contraction mechanisms of muscles;
 4. knowledge on system-specific (pelvis, joints of vertebrae, bones and joints of lower and upper extremities) anatomy and its clinical applications.
5. **Prerequisite:** *MEDC 1120 Cell.*
6. **Co-requisite:** N/A
7. **Intended learning outcomes**

Knowledge and understanding

Anatomy

- 1.0. Explains anatomical characteristics of joints in general;
- 2.0. Describes the link between the anatomical characteristics of bones and joints of lower and upper extremities and their clinical reflections;
- 3.0. Explains anatomical characteristics of muscles and spinal nerves;
- 4.0. Describes anatomical features, vessels, nerves of the back muscles.

Biophysics

- 5.0. Explains muscle contraction mechanism on the basis of Sliding Filament Theory;
- 6.0. Defines biophysical membrane model;
- 7.0. Explains steady state and equilibrium state for the cell

Histology & Embryology

- 8.0. Explains link between structure and role of tissues;
- 9.0. For epithelial tissue:
 - 9.1. explains general specification;
 - 9.2. recognizes eight covering epithelium subtypes;
 - 9.3. explains histological basis on which glands are classified;
- 10.0. For muscle tissue:
 - 10.1. describes histological characteristics and relates main function;
 - 10.2. summarizes the main similarities and differences between three different types of muscle;

11.0. For connective tissue:

11.1. explains the general specification;

11.2. identifies the classification and specific properties of connective tissue;

12.0. Explains the morphological properties of blood cells

Physiology

13.0. For membrane potentials and action potentials:

13.1. explains how resting membrane potential is produced;

13.2. defines depolarization, repolarization, and hyperpolarization and properties of action potentials;

14.0. Describes the gross and microscopic structure of skeletal muscles and motor unit;

15.0. For contraction of skeletal muscle:

15.1. explains the role of Ach in the neuromuscular transmission;

15.2. explains what is meant by the sliding filament theory of contraction;

15.3. defines the role of Ca²⁺ and the sarcoplasmic reticulum in excitation-contraction coupling

Immunology

16.0. Defines the basics of immune response

PBL

17.0. Explains case scenario related basic medical science topics in a clinical context.

Skills

1.0. Applies basic laboratory techniques and use of equipments;

2.0. Demonstrates scientific reasoning, information literacy and skills of self-directed, life-long learning.

Attitudes & Responsibility

1.0. Values teamwork, interpersonal skills.

8. Teaching method(s)

Lecture

Theoretical Interactive learning – Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work - in Anatomy, Histology, Physiology

Problem Based Learning (PBL)

9. Course content:

WEEK	DAY	Anatomy Content	Teaching Resources:	Teaching method(s)	Assessment Methods			
Week 1	Day 1	Introduction to Arthrology; Joints of the Cranium and Fontanelle	Videos and Atlases for teaching	Lecture				
	Day 2	Joints of the Upper Limb;						
	Day 3	Joints of the Lower Limb;						
	Day 4	Joints of the Lower Limb;						
	Day 5	Joints of the vertebral Column and Axial Skeleton;						
Week 2	Day 1	Introduction to Myology; Muscles of the Back						
	Day 2	Muscles of the Neck						
	Day 3	Introduction to Peripheral Nervous System; Spinal Nerves.						
Week 1	Day 1	Introduction to Arthrology; Joints of the Cranium and Fontanelles;				Gray's Anatomy for Students, 3th Edition; Chapter 1: pp18-24; Human Anatomy (6th Edition) by Marieb, Elaine N., Wilhelm, Patricia Brady, Mallatt, Jon B. Chapter 7 pp 204-221	Seminar	Written Examination: MCQ: Multiple Choice Questions; Scenario based MCQs.
	Day 2	Joints of the Upper Limb; Shoulder Joint; Joints of the Upper Limb; Elbow joint, Joints in the forearm and hand				Gray's Anatomy for Students, 3th Edition, Chapter 7: pp 705-712; 764-768; 774-776 ; 795-799;		
	Day 3	Joints of the lower limb; Hip Joint Anatomy	Gray's Anatomy for Students, 3th Edition Chapter 6: pp 558-562					
	Day 4	Joints of the lower limb; Knee joint, Tibiofibular joint; Hip Joint Anatomy , Foot joints, Arches of the foot.	Gray's Anatomy for Students, 3th Edition Chapter 6 pp 606-616; 638-650.					
Week 2	Day 1	Joints of the vertebral Column and Axial Skeleton;	Gray's Anatomy for Students, 3th Edition Chapter 2 Back- 77-84; 446-448					
	Day 2	Introduction to Myology; Muscles of the Back; Muscles of the Neck;	Gray's Anatomy for Students, 3th Edition Chapter 1: 25-27; Chapter 2: 84-99; Chapter 8 pp 1000-1040.					
	Day 3	Introduction to Peripheral Nervous System	Gray's Anatomy for Students, 3th Edition Chapter 2: 32-48;					
	Day 4	Spinal nerves	Gray's Anatomy for Students, 3th Edition Chapter 2-106-111					
Week 1	Day 1	Joints of the Cranium and Fontanelles; Joints of the vertebral Column and Axial Skeleton;	Laboratory of Anatomy	Laboratory Practical Work	LPE: Laboratory Practical Exam - LPE Checklist; OSPE: Objective Structured Practical Examination - OSPE Checklist.			
	Day 3	Joints of the Upper Limb;						
Week 2	Day 1	Joints of the Lower Limb;						
	Day 3	Muscles of the Back and Neck						
	Day 4	Spinal nerves						
WEEK	DAY	Biophysics Content				Teaching Resources:	Teaching method(s)	Assessment Methods
Week 2	Day 5	Digital recording of biomedical signals;				Videos for teaching	Lecture	
Week 3	Day 1	Mechanical Properties of Biomaterials;				Videos for teaching		
	Day 2	Stress-Strain, Stiffness; Elasticity; Shear Stress, Poisson's Law.	Videos for teaching					
Week 2	Day 5	Waves and Sound; Electrical Technology	Physics in Biology and Medicine; Paul Davidovits. Chapter 12; Pages 162-178	Seminar	Written Examination: MCQ: Multiple Choice Questions; Scenario based MCQs.			
Week 3	Day 1	Molecular Contacts	Physics in Biology and Medicine; Paul Davidovits. Chapter 2; Pages 21-49					
	Day 2	Stability, complexity and non-linear systems	Physics in Biology and Medicine; Paul Davidovits. Chapter 11; Pages 256-283					
WEEK	DAY	Histology & Embryology Content	Teaching Resources:	Teaching method(s)	Assessment Methods			
Week 3	Day 3	Histology of Covering Epithelium;	Videos and Atlases for teaching	Lecture				
	Day 4	Histology of Glandular Epithelium;	Videos and Atlases for teaching					
	Day 5	Histology of Striated Skeletal Muscle, Heart & Smooth Muscle;	Videos and Atlases for teaching					
Week 4	Day 1	Development of the Muscular System;	Videos and Atlases for teaching					
	Day 2	Histology of Connective Tissue, Dermis;	Videos and Atlases for teaching					
	Day 3	Extracellular Matrix; Types of the Connective Tissue;	Videos and Atlases for teaching					
	Day 4	Blood, RBC and Platelets; Hematopoiesis;	Videos and Atlases for teaching					
Week 3	Day 3	Epithelial Tissue 1	Junqueira's Basic Histology Text and Atlas by Anthony L. Mescher - Chapter 4; Pages - 71-95			Seminar	Written Examination: MCQ: Multiple Choice Questions; Scenario based MCQs.	
	Day 4	Skin 1	Junqueira's Basic Histology Text and Atlas by Anthony L. Mescher - Chapter 18; Pages - 371-378					
	Day 5	Muscle Tissue	Junqueira's Basic Histology Text and Atlas by Anthony L. Mescher - Chapter 10; Pages - 193-213					
Week 4	Day 1	Embryology of Muscle Tissue	Langman's Medical Embryology by T.W. Sadler - Chapter 11; 160-166					
	Day 2	Connective Tissue 1	Junqueira's Basic Histology Text and Atlas by Anthony L. Mescher - Chapter 5; Pages - 96-103					
	Day 3	Connective Tissue 2; Skin 2	Junqueira's Basic Histology Text and Atlas by Anthony L. Mescher - Chapter 5; Pages - 103-120; Chapter 18; Pages 378-391					
	Day 4	Blood; Hematopoiesis	Junqueira's Basic Histology Text and Atlas by Anthony L. Mescher - Chapter 12; Pages - 237-265;					
Week 3	Day 3	Histology of epithelial Tissue; Structure, Classification;	Laboratory of Histology Laboratory of Anatomy	Laboratory Practical Work	LPE: Laboratory Practical Exam - LPE Checklist; OSPE: Objective Structured Practical Examination - OSPE Checklist.			
	Day 5	Surface Specification;						
Week 4	Day 1	Histology of Muscle Tissue; General Specification;						
	Day 3	Histology of Connective Tissue; Cells;						
	Day 4	Blood WBC, Blood Smear;						

WEEK	DAY	Physiology Content	Teaching Resources:	Teaching method(s)	Assessment Methods
Week 5	Day 1	Membrane potentials and action potentials;	Lecture videos	Lecture	
	Day 2	Gross and microscopic structure of skeletal muscles and motor u			
	Day 3	Contraction of skeletal muscle;			
	Day 4	Smooth Muscle Physiology;			
	Day 5	Smooth Muscle Contractility.			
Day 5	Joints of the vertebral Column and Axial Skeleton;				
Week 6	Day 1	Physiology of Cardiac Muscle.			
Week 5	Day 1	Explanation for Initiation of resting membrane potential;	Guyton and Hall textbook of medical physiology: 13th ed.-Hall, E.John 2016- Chapter 4 ; Pages-41-59	Seminar	Written Examination: MCQ: Multiple Choice Questions; Scenario based MCQs.
	Day 2	Transport of Substances Through Cell Membranes; Generation and Properties of action Potentials.	Guyton and Hall textbook of medical physiology: 13th ed.-Hall, E.John 2016- Chapter 4 ; Pages-41-59		
	Day 3	Explanation the role of Ach in the neuromuscular transmission; Mechanism of Contraction of skeletal muscle;	Guyton and Hall textbook of medical physiology: 13th ed.-Hall, E.John 2016- Chapter 5 ; Pages 60-74		
	Day 4	Physiological properties of smooth muscle; Functions of Ca+2 and Calmodulin.	Guyton and Hall textbook of medical physiology: 13th ed.-Hall, E.John 2016- Chapter 8; Pages- 96-104		
	Day 5	Defination process of cotraction of smooth muscle;	Guyton and Hall textbook of medical physiology: 13th ed.-Hall, E.John 2016- Chapter 8; Pages- 96-104		
Week 6	Day 1	Explanation of physiological properties of cardiac muscle; Define pathway of impulse propagation in the cardiac muscle; Explanation of role transmissions Ach and Ca 2+ ions in contractility in the myocardium.	Guyton and Hall textbook of medical physiology: 13th ed.-Hall, E.John 2016- Chapter-Capter 9, 10 , 11; Pages 109 -130		
Week 5	Day 1	Intoduction in the miographical registration	Laboratory of Physiology	Laboratory Practical Work	LPE: Laboratory Practical Exam - LPE Checklist; OSPE: Objective Structured Practical Examination - OSPE Checklist.
	Day 3	Observation of muscle contraction miographically			
	Day 5	Observation of muscle contraction after light physical activity			
Week 6	Day 1	Intoduction in the cardioagrahy registration and methods			

WEEK	DAY	Immunology Content	Teaching Resources:	Teaching method(s)	Assessment Methods
Week 6	Day 3	What is Immunology;	Videos and Atlases for teching	Lecture	
	Day 3	Cells and Tissues of Immune System.	Videos and Atlases for teching		
Week 6	Day 3	Introduction to the Immune System; Innate and Adaptive Immunity; Types of Adaptive Immunity; Properties of Adaptive Immune Responses;	Basic Immunology, Functions and Disorders of the Immune System; Abul Abbas Andrew H. Lichtman Shiv Pillai; Chapter 1, Pages 1-9	Seminar	Written Examination: MCQ: Multiple Choice Questions; Scenario based MCQs.
	Day 4	Cells of the Adaptive Immune System; Tissues of the Immune System.	Basic Immunology, Functions and Disorders of the Immune System; Abul Abbas Andrew H. Lichtman Shiv Pillai; Chapter 1, Pages 9-22		

10. Distribution

MD Curriculum and Hour Distribution by Week																										
Code	Module/ Block	Name of Module/Block/Subject	ECTS	Semester	Contact Hours	Independent Work	Hours	Week														Final	Make up Restore			
								1	2	3	4	5	6	7	8	9	10	11	12	13	14			15	16	17
MEDC 1230	Block	Basic Medical Sciences II	6	II	94	86	180	15	15	15	15	15									4		94			
MEDC 1240	Block	Basic Medical Sciences III	8	II	125	115	240						15	15	15	17	19	19	2			4		125		
MEDC 1250	Block	Basic Medical Sciences IV	6	II	94	86	180											17	19	19	16	4		94		
MEDC 1260	Module	Scientific Research and Project Course I	7	II	109	101	210	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	8	10	6	109
KART 1210	Subject	Georgian Language for Medical Education II	3	II	42	48	90	4	4	4	4	4	4	4	4	4	2					4		42		

Week 1				
Anatomy				
Day 1	Day 2	Day 3	Day 4	Day 5
Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	PBL
Lab.Work	Seminar	Lab.Work	Seminar	PBL

Week 2				
Anatomy				Biophysics
Day 1	Day 2	Day 3	Day 4	Day 5
Lecture	Lecture	Lecture	Seminar	Lecture
Seminar	Seminar	Seminar	Lab.Work (Midterm)	Seminar
Lab.Work	Seminar	Lab.Work	Seminar (Midterm)	Seminar

Week 3				
Biophysics		Histology & Embryology		
Day 1	Day 2	Day 3	Day 4	Day 5
Lecture	Seminar	Lecture	Lecture	Lecture
Lecture	Seminar	Seminar	Seminar	Seminar
Seminar	Seminar (Midterm)	Lab.Work	Seminar	Lab.Work

Week 4				
Histology & Embryology				
Day 1	Day 2	Day 3	Day 4	Day 5
Lecture	Lecture	Lecture	Lecture	PBL
Seminar	Seminar	Seminar	Seminar	PBL
Lab.Work	Seminar	Lab.Work	Lab.Work (Midterm)	Seminar (Midterm)

Week 5				
Physiology				
Day 1	Day 2	Day 3	Day 4	Day 5
Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	Seminar
Lab.Work	Seminar	Lab.Work	Seminar	Lab.Work

Week 6				
Physiology		Immunology		
Day 1	Day 2	Day 3	Day 4	Day 5
Lecture	PBL	Lecture	Seminar	Oral Presentation
Seminar	PBL	Lecture	Seminar	Oral Presentation
Lab.Work (Midterm)	Seminar (Midterm)	Seminar	Seminar (midterm)	PBL

Type of Activity	Hour Distribution						
	<i>Anatomy</i>	<i>Biophysics</i>	<i>Histology & Embryology</i>	<i>Physiology</i>	<i>Immunology</i>	<i>Day 30</i>	<i>Week 19</i>
Lecture	8	3	7	6	2		
Seminar	11	5	9	8	3		
Lab.Work	5		5	4			
PBL	2		2	2		1	
Mid-term Exam	1	1	1	1	1		
Oral presentation						2	
Final Exam							4
Sum	27	9	24	21	6	3	4
						Sum	94

11. Final assessment and details explaining how the Block mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz Final Exam	15
		Scenario based MCQs		15
Competency– based assessment	LPE: Laboratory Practical Exam	LPE Checklist	LPE Exam Mid-term Exam - OSPE	5
	OSPE: Objective Structured Practical Examination	OSPE Checklist		5
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		8
Sum				100

Assessment Methods	Weighed score per subject					Weighed score per unit	Total
	Anatomy	Biophysics	Histology & Embryology	Physiology	Immunology		
Quiz	5	2	4	3	1		15
Mid-term Exam	5	2	4	3	1		15
LPE: Laboratory Practical Exam	2		2	1			5
OSPE: Objective Structured Practical Examination	2		2	1			5
Oral Presentation							12
PBL-P: Evaluation of PBL Student's Performance							8
Final Exam - Written Examination							30
Final Exam - OSPE: Objective Structured Practical Examination							10
Sum							100

Presentation Checklist

Maximum score - 12

Student Name _____

Date _____

- Excellent 91-100%
- Very Good 81-90%
- Good 71-80%
- Satisfy 61-70%
- Fair 51-60%
- Fail 41-50%

Criteria	4	3	2	1	Scores
Delivery	<ul style="list-style-type: none"> • Holds attention of entire audience with the use of direct eye contact, seldom looking at notes • Speaks with fluctuation in volume and inflection to maintain audience interest and emphasize key points 	<ul style="list-style-type: none"> • Consistent use of direct eye contact with audience, but still returns to notes • Speaks with satisfactory variation of volume and inflection 	<ul style="list-style-type: none"> • Displays minimal eye contact with audience, while reading mostly from the notes • Speaks in uneven volume with little or no inflection 	<ul style="list-style-type: none"> • Holds no eye contact with audience, as entire report is read from notes • Speaks in low volume and/ or monotonous tone, which causes audience to disengage 	
Content/ Organization	<ul style="list-style-type: none"> • Well organized; the information is presented in an easy-follow, logical, and clear manner. • Demonstrates full knowledge by answering all class questions with explanations and elaboration • Provides clear purpose and subject; pertinent examples, facts, and/or statistics; supports conclusions/ideas with evidence 	<ul style="list-style-type: none"> • Generally organized; almost all information is presented in a logical order. • Is at ease with expected answers to all questions, without elaboration • Has somewhat clear purpose and subject; some examples, facts, and/or statistics that support the subject; includes some data or evidence that supports conclusions 	<ul style="list-style-type: none"> • A little organized, but it is difficult to follow the presentation because the ideas are not well interconnected. • Is uncomfortable with information and is able to answer only rudimentary questions • Attempts to define purpose and subject; provides weak examples, facts, and/ or statistics, which do not adequately support the subject; includes very thin data or evidence 	<ul style="list-style-type: none"> • Disorganized; the information does not have a logical order • Does not have grasp of information and cannot answer questions about subject • Does not clearly define subject and purpose; provides weak or no support of subject; gives insufficient support for ideas or conclusions 	
Enthusiasm/ Audience Awareness	<ul style="list-style-type: none"> • Demonstrates strong enthusiasm about topic during entire presentation • Significantly increases audience understanding and knowledge of topic; convinces an audience to recognize the validity and importance of the subject 	<ul style="list-style-type: none"> • Shows some enthusiastic feelings about topic • Raises audience understanding and awareness of most points 	<ul style="list-style-type: none"> • Shows little or mixed feelings about the topic being presented • Raises audience understanding and knowledge of some points 	<ul style="list-style-type: none"> • Shows no interest in topic presented • Fails to increase audience understanding of knowledge of topic 	
comment					Sum

% 0

Teacher's Name _____

Signature _____

12. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Biophysics	Biophysics: A Physiological Approach	Patrick F. Dillon	Cambridge University Press
		Physics in Biology and Medicine (4th edition)	Paul Davidovits	Elsevier
		Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers
3	Histology	Junqueira's Basic Histology: Text and Atlas 13 th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
4	Embryology	The Developing Human: Clinically Oriented Embryology, 10 th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Physiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
6	Immunology	Basic Immunology, Functions and Disorders of the Immune System	Abul Abbas Andrew H. Lichtman Shiv Pillai	Elsevier Health Sciences

SYLLABUS

Semester II

Basic Medical Sciences III

- 1. Course identification code: MEDC 1240**
- 2. Credit Points: 8 ECTS, Contact Hours: 125; Independent Hours: 115; Sum: 240.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili; Biochemistry - Rusudan Sujashvili; Biophysics – Marika Gamkrelidze; Histology & Embryology - Lia Gelazonia; Medical Biology – Khatuna Vashakmadze; Immunology– Marina Tevzadze.
- 4. Goals**
To convey:
 1. basic terms and concepts for anatomy, biochemistry, biophysics, histology, embryology, medical biology and immunology;
 2. knowledge on four fundamental tissues forming the body, cells forming these tissues and the intercellular material;
 3. knowledge on system-specific (upper extremities, back and chest area muscles, vascular and nervous innervations) anatomy and its clinical applications;
 4. knowledge on basic metabolic pathways of the body.
- 5. Prerequisite:** *MEDC 1230 Tissue I.*
- 6. Co-requisite:** N/A
- 7. Intended learning outcomes**

Knowledge and understanding

- 1.0. Describes anatomical features, vessels, nervous innervations of upper extremities, head, neck, thoracic and abdominal muscles;
- 2.0. Describes the clinical implications of the anatomical features of the upper limb and axial muscles;
- 3.0. For biomolecules - 3.1. defines structural and biochemical functions of carbohydrates, lipids, proteins and nucleotides;
- 4.0. For enzymes: 4.1. lists basic properties and classes of enzymes; 4.2. describes regulatory functions of enzymes; 4.3. defines the functions of enzymes in different metabolic pathways;
- 5.0. Describes the ATP production by substrate level phosphorylation and oxidative phosphorylation;
- 6.0. Explains basic physical properties of biomaterials (such as bone and vessels); 6.1. explains general microscopic characteristics; 6.2. lists ossification steps;
- 7.0. For cartilage and bone tissue: 7.1. explains general microscopic characteristics; 7.2. summarizes the main similarities and differences between four different types of cartilage; 7.3. explains histological characteristics of the bone cells; 7.4. describes the main similarities and differences between two different types of bone; 7.5. lists ossification steps;

- 8.0. For nervous tissue: 8.1. defines the general histological structure of nervous tissue; 8.2. lists the types of neuron and glia cells;
- 9.0. Recognizes the components of extracellular matrix and their interactions with each other;
- 10.0. Defines the basics of immune response;
- 11.0. Explains case scenario related basic medical science topics in a clinical context.

Skills

- 1.0. Applies basic laboratory techniques and use of equipments;
- 2.0. Demonstrates scientific reasoning, information literacy and skills of self-directed, life-long learning.

Attitudes & Responsibility

- 1.0. Values teamwork, interpersonal skills.

8. Teaching method(s)

- Lecture
- Theoretical Interactive learning – Seminars
- Videos of learning
- Videos of teaching
- Practical Work
- Laboratory Work - in Anatomy, Histology, Physiology
- Problem Based Learning (PBL)

9. Course content:

Anatomy: Muscles of the Shoulder Girdle and Axilla; Muscles of the Arm; Muscles of the Forearm; Muscles of the Hand; Brachial Plexus; Nerves of the Upper Limb; Vasculature of the Upper Limb; Cervical muscles and triangles; Muscles of the Head and Scalp; Cervical Plexus; Nerves and Vasculature of the Neck; Muscles of the Head and Scalp; Cervical Plexus, Nerves and Vasculature of the Neck; Nerves of the Head; Vasculature of the Head; Muscle of the Thoracic Wall; Nerves and Vasculature of the Head; Muscle of the Abdominal Wall and Inguinal Canal; Muscle of the Thoracic and Abdominal Wall; Nerves and Vasculature of the Thoracic and Abdominal Wall; Nerves and Vasculature of the Thoracic Wall.

Biochemistry: Classification of Carbohydrates, General Features of Carbohydrates; Glycerophospholipids, Sphingophospholipids; Monosaccharide Derivatives, Disaccharides, Polysaccharides, Starch, Glycogen; Classification of Lipids, General Features of Lipids; Saturated and Unsaturated Fatty Acids, Essential Fatty Acids; Eicosanoids; Isoprene Derivative, Steroids, Bile Acids; Amino Acids, General Features, Classification; Primary, Secondary, Tertiary, Quaternary Structures of Proteins; Triacylglycerol's; Glycoproteins, Collagen, α keratin; Nucleotides; Enzymes, Kinetics, Regulatory Enzymes; International Enzyme Commission Classification of Enzymes; ATP Production, Substrate Level Phosphorylation, Oxidative Phosphorylation; Oxidative Decarboxylation.

Biophysics: Digital recording of biomedical signals; Mechanical Properties of Biomaterials; Stress-Strain, Stiffness; Elasticity; Shear Stress, Poisson’s Law.

Histology & Embryology: Histology of Adipose Tissue; Histology of Bone Tissue; Microscopic Structure; Histology of Bone Tissue; Ossification; Development of the Axial Skeleton and Limb; Histology of Cartilage Tissue and Bone Tissue; Histology of Nerve Tissue: General Specification; Histology of Nerve Tissue: Neuron Types; Histology of Nerve Tissue: Glia Types; Histology of Nerve Tissue.

Medical Biology: Extracellular Matrix; Oxidative Stress and Antioxidant System; Biology of Oxidative Stress.

Immunology: Innate Immunity; Adaptive Immunity.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	30
Competency– based assessment	LPE: Laboratory Practical Exam	LPE Checklist	Mid-term Exam Final Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist		10
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	PBL-P: Evaluation of PBL Student’s Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Biochemistry	Textbook of Biochemistry with Clinical Correlations	Thomas M. Devlin	Wiley-Liss Publishing Company
		Harper's Illustrated Biochemistry	Robert K. Murray et al	Mc-Graw-Hill Companies
		Lehninger Principles of Biochemistry	David L. Nelson, Michael M. Cox	W.H. Freeman Publishing Compan
3	Biophysics	Biophysics: A Physiological Approach	Patrick F. Dillon	Cambridge University Press
		Physics in Biology and Medicine (4th edition)	Paul Davidovits	Elsevier
		Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers
4	Histology	Junqueira's Basic Histology: Text and Atlas 13th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
5	Embryology	The Developing Human: Clinically Oriented Embryology, 10th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
6	Medical biology	Molecular Biology of the Cell	Bruce Alberts et al	Garland Science
7	Immunology	Basic Immunology, Functions and Disorders of the Immune System	Abul Abbas Andrew H. Lichtman Shiv Pillai	Elsevier Health Sciences

SYLLABUS

Semester II

Basic Medical Sciences IV

- 1. Course identification code: MEDC 1250**
- 2. Credit Points: 6 ECTS, Contact Hours: 94; Independent Hours: 86; Sum: 180.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili, Biochemistry - Nino Besiashvili, Histology & Embryology- Lia Gelazonia, Medical Biology – Khatuna Vashakmadze, Immunology - Marina Tediashvili
- 4. Goals**
To convey:
 1. basic terms and concepts of anatomy, embryology, histology, immunology, biochemistry and medical biology;
 2. knowledge on basic energy mechanisms of the body;
 3. knowledge on process from zygote to formation of organs;
 4. knowledge on system-specific (lower extremities, muscles, vascular and nervous innervations) anatomy and its clinical applications.
- 5. Prerequisite:** *MEDC 1240 Tissue II.*
- 6. Co-requisite:** *N/A*
- 7. Intended learning outcomes**

Knowledge and understanding

- 1.0. Describes the anatomical features, vessels, nervous innervations of lower extremities;
- 2.0. Describes the clinical implications of the anatomical features of the lower limb;
- 3.0. Explains ATP synthesis in human organism and enzymatic system that this synthesis occurs by;
- 4.0. Lists enzymes involved in blood clotting and their functions;
- 5.0. Explains glycogen and glucose metabolisms;
- 6.0. For transport mechanisms in biological membranes: the permeability of biological membranes, explains its correlation with ATP usage;
- 7.0. Lists developmental events respectively from somatogenesis to neurulation;
- 8.0. Lists developmental events respectively from organogenesis to parturition;
- 9.0. Explains developmental link between embryonic layers and tissues that form organs;
- 10.0. Describes contraception and assisted reproductive techniques;
- 11.0. Associates the relation with congenital abnormalities and developmental processes;
- 12.0. Defines the features of mitochondrial genome and mutated mitochondrial genes;
- 13.0. Defines the basics of immune response;
- 14.0. Explains case scenario related basic medical science topics in a clinical context.

Skills

- 1.0. Applies basic laboratory techniques and use of equipments;
- 2.0. Demonstrates scientific reasoning, information literacy and skills of self-directed, life-long learning.

Attitudes & Responsibility

- 1.0. Values teamwork, interpersonal skills.

8. Teaching method(s)

Lecture

Theoretical Interactive learning – Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work - in Anatomy, Histology, Physiology

Problem Based Learning (PBL)

9. Course content:

Anatomy: Muscles of the Pelvic Girdle (Gluteal Region); Muscles of the Thigh; Muscles of the Leg; Muscles of the Foot; Lumbosacral Plexus; Lecture Nerves of the Lower Limb; Vasculature of the Lower Limb.

Biochemistry: Transport Through Biological Membranes; Glycogenesis; Digestion and Absorption of Carbohydrates; Glycogenolysis; Regulation of Glycogenesis and Glycogenolysis; Pentose Phosphate Pathway; Secondary Hemostasis, Procoagulation, Anticoagulation Glicolysis; Fibrinolysis, Fibrinolytic and Antifibrinolytic Agents; Gluconeogenesis.

Histology & Embryology: Extraembryonic Structures: Placenta, Chorion, Amnion; Organogenesis & Fetal Periods; Twins and Partrution; Infertility and Contraception; Assisted Reproductive Technology, Methods; Somatogenesis; Mesoderm Organization; Neurulation; Neuroectoderm Organization; Folding and Angiogenesis; Congenital Anomalies and Teratology.

Medical Biology: Genome of Mithochondria; Biology of Energy and Energy Balance; Biology of Life Span.

Immunology: Antigen-Antibody Reactions; Cytokines and Immune Markers; Signal Transduction in Immunity.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	30
Competency– based assessment	LPE: Laboratory Practical Exam	LPE Checklist	Mid-term Exam Final Exam	10 10
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Histology	Junqueira's Basic Histology: Text and Atlas 13 th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
3	Embryology	The Developing Human: Clinically Oriented Embryology, 10 th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
4	Medical biology	Molecular Biology of the cell	Bruce Alberts et al	Garland Science
5	Biochemistry	Textbook of Biochemistry with clinical correlations	Thomas M. Devil	Wiley-Liss Publishing Company
		Harper's Illustrated Biochemistry	Robert K. Murray et al	Mc-Graw-Hill Companies
		Lehninger Principles of	David L. Nelson, Michael	W.H. Freeman Publishing

		Biochemistry	M. Cox	Company
6	Immunology	Basic Immunology, Functions and Disorders of the Immune System	Abul Abbas Andrew H. Lichtman Shiv Pillai	Elsevier Health Sciences

SYLLABUS

Semester II

Scientific Research and Project Course I

1. **Course identification code: MEDC1260**
2. **Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
3. **Person(s) responsible for course: Natia Landia**

Lecturers: Medical information technology –Teimuraz Kancheli; Scientific Skills - Leila Beitrishvili

4. Description:

This course integrates the subjects of Medical information Technology and Scientific Skills based on the impact of Information and information technology on medicine and research that are fundamental to practice evidenced-based care and help future physicians to develop scientific skills. The course covers student-driven learning with advanced technology and study of the principles of biomedical scientific writing – necessary for the scientific, technological and clinical developments and is the initial stage for the longitudinal learning of scientific skills.

5. Goals

Medical information technology

1. To teach the student the basic principles, possibilities of using modern information technologies related eHealth, telemedicine;
2. To instill practical skills in working with computer eHealth applications in any public/private clinic;
3. To independently obtain new knowledge related to eHealth in the future.

Scientific skills

4. To convey basic knowledge on scientific research and scientific methodology;
5. To equip with skills of searching scientific literature;
6. To convey scientific study design and types of scientific research and basic knowledge of writing scientific project.

6. **Prerequisite:** N/A

7. **Co-requisite:** N/A

8. Intended learning outcomes

Knowledge and Understanding

- 1.0. Knowledge and understanding: 1.1. basic components of a computer; 1.2 features of input, storage, processing and output of information in the computer; 1.3. basic user functions of a text editor in Microsoft Word 2010; 1.4. Basic consumer features of Microsoft Publisher 2016; 1.5. basic user features of Microsoft Excel 2016 spreadsheet editor; 1.6. basic user features of Microsoft Access 2016 database management system;

- 2.0. Recognizes: 1.1. finding specific information resources; 1.2. saving information and using it later; 1.3. following regulations of confidential data while performing work connected with data processing; 1.4. availability of information resources and use of found information in the process of taking care of a patient, improving his/her health condition, providing information, giving advice and also in the sphere of education and research; 1.5. Ability to save personal records (portfolio);
- 3.0. Explains: 2.1. basics of scientific research and scientific methodology; 2.2. scientific plagiarism
- 3.0. Describes: 3.1. scientific study design and types of scientific research; 3.2. How to prepare a project application;
- 4.0. Lists the parts of an article (aim, hypothesis, abstract, introduction, methods, results, discussion, conclusions, references) and describe the methodology;
- 5.0. Lists funding options for scientific research;

Skills

- 1.0. Uses: 1.1. computer and other information technologies for saving and finding information effectively; 1.2. modern information technologies in practical works ; 1.3. principles, methods and knowledge of medical information technology during medical practice process;
- 2.0. Makes: 2.1. medical record correctly and saving it completely; 2.2. effective use of computers and other information systems, including storing and retrieving information;
- 3.0. Keeps: 3.1. accurate, legible and complete clinical records; 3.2. requirements of confidentiality and data protection legislation and use classifier of practical activities while dealing with information;
- 4.0. Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education;
- 5.0. Applies the principles, methods and knowledge of health informatics to medical practice;
- 6.0. Searches scientific literature;
- 7.0. Uses literature science engines;
- 8.0. Applies critical reading of scientific article;
- 9.0. Writes a scientific article review;

Attitudes

- 1.0. Displays (demonstrate) scientific reasoning, information literacy and skills of self-directed, life-long learning

9. Teaching method(s)

Lecture

Theoretical interactive learning - Seminars

Practical Work

Videos for learning

Videos for teaching

Maintaining medical documentation (Including by the means of information technologies)

Production of medical documents (including information technology usage)

10. Course content:

Medical information technology

Rationale for strengthening health information systems: Approaches to health information system strengthening, The power of partnership – the Health Metrics Network (HMN);

Health information – introduction, use;

Health information systems – opportunities and challenges; E-health: General characteristics of information technologies; Medical information systems and local information networks: The purposes of creating an HIS, Benefits for the patient, Benefits for the physician, and Benefits for the governmental institutions (Ministry of Health, others); HIS levels; **Flashback:** Examples of HIS; Modern understanding of HIS; Classification of medical information systems;

Components and Standards of a Health Information System: The six components of a health information system; Data types; Data collection procedures - Public health surveillance, population-, individual level data; Sources of information about the country health information system; Data management; Information products;

Core indicators for country health information system performance; Strengthening Health Information Systems – Principles, Processes and Tools: Guiding principles for health information system development, Implementation processes for health information system strengthening, Health information systems for administrative, medical and scientific purposes, opportunities and challenges;

Vital statistics: Medical registries in Georgia - history, possibilities, data availability, EHR – use, examples, validation, Telemedicine, telehealth.

GDPR – general data protection regulation, ethics in data collection, reporting, presentation, External and internal validity, random and systematic errors, Quality control and quality assurance (QC/QA), consistency checks, Mobile applications – ways of implementation, use and possibilities, Big data – use of big data in biomedical research; **Information Technologies (ITs) in Medical Education:** Systematic literature search – use of online databases for search the literature, Reference management applications.

Scientific Skills

What is Scientific Research and Scientific Methodology? Searching Scientific Literature; Scientific Study Design and Types of Scientific Research; How to Prepare and Write a Scientific Project?

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	40
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12
	Essay	Essay Checklist		
	Short article review (SRPC -I)	Review Checklist		14
	Scientific research Presentation (SRPC -II)	Presentation Checklist		

12. Recommended literature:

Medical information technology

1. Information Technologies (ITs) in Medical Education

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3564180/>

2. HANDOVER TOOLKIT, A resource to help teach, assess and implement, a handover improvement program, Editors: Zia Bismilla & Brian Wong, Royal College of Physicians and Surgeons of Canada, 2018;

3. Medical Informatics, e-Health, Fundamentals and Applications, Edited by Alain Venot, Anita Burgun, Catherine Quantin, Springer-Verlag France 2014;

4. Medical Informatics, An Executive Primer, Third Edition, Edited by Ken Ong, MD, MPH, FACP, FIDSA, CPHIMS, FHIMSS, 2015 by Taylor & Francis Group, LLC.

Scientific Skills

1. Assessment and Teaching of 21st Century Skills, Research and Applications, Edited by Esther Care, Patrick Griffin, Mark Wilson, Springer International Publishing AG 2018;

2. Research skills for students, Anne Hilton, Sue Robinson Centre, Library; British Library Cataloguing in Publication Data, 2016

SYLLABUS

Semester II

Georgian Language for Medical Education II

1. **Course identification code:** KART 1210
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Nana Shavtvaladze
Lecturers: Nana Shavtvaladze; Elene Sigua; Ana Zhorzholiani; Maia Zarnadze
4. **Course goals:**
To develop students' general and professionally oriented communicative language competences in medical Georgian to enable them to communicate effectively in their academic environments according to the stage A1/2 of European language standard;
5. **Prerequisite:** Georgian Language for Medical Education I
6. **Co-requisite:** N/A
7. **Intended learning outcomes**
 - 1.0. Skims for main ideas and scan for specific information;
 - 2.0. Finds information in documents;
 - 3.0. Understands texts about familiar topics;
 - 4.0. Answers multiple choice and short answer questions about a text;
 - 5.0. Uses simple texts as models for writing;
 - 6.0. Writes simple descriptions;
 - 7.0. Writes well-structured sentences;
 - 8.0. Devises questions to form a survey and respond to questions in writing;
 - 9.0. Completes application forms;
 - 10.0. Listens for specific information e.g. numbers, names, countries;
 - 11.0. Answers questions on informational texts;
 - 12.0. Responds to questions in familiar situations;
 - 13.0. Follows directions;
 - 14.0. Talks about familiar topics and routines;
 - 15.0. Asks and respond to straightforward questions;
 - 16.0. Makes arrangements and plans;
8. **Teaching method(s)**

Interactive Lectures
Laboratory work
Workbook
Explanatory
Demonstration

Verbal/Oral

9. **Course content:** Healthcare staff and medical facilities; Time, Grammar: Genitive case - *oʻl/ʻl*; verbs (Past tense)- to work/to live/to think/to speak/to study/to talk; Colors; Human body; Body parts; Pain; Grammar: Ordinal Numerals: 11-100; verb (Present tense) – to like; Clothes Grammar: Degree of the Adjectives; Grammar: Genitive Case - *-oʻl/ʻl*; At the Clinic Grammar: Instrumental Case *-n*; Suffixes - *-oʻlʻl/-ʻl-ʻl*. Questions words-Where?/How?/Whit what?; Postpositions-*ʻn/-ʻn/-n*; verbs- to come/to go; Holidays, Grammar: Determination Pronouns - *ʻn/-n*; verbs (Present tense)- to work/to live/to think/to speak/to study/to talk.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	24
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12
	Essay	Essay Checklist		10
	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		10

11. Recommended literature:

NO	Textbook	Author	Publisher
1	საკომუნიკაციო ქართული 1 Communication Georgian 1	Shavtvaladze,N	2012, Savtvaladze
2	მოუსმინეთ ქართულ დიალოგებს 1 +CD Listen to Georgian dialogues	Shavtvaladze,N	2006, Shavtvaladze
3	ბილიკი წიგნი პირველი:ქართული ენა Biliki:Book 1:Georgian language	Shavtvaladze,N	2009, თბილისი: Tbilisi
4	ბილიკი:სამუშაო რვეული 1 დონე Biliki:work book 1	Shavtvaladze,N	2008, თბილისი: Tbilisi
5	ბილიკი:ქართული დიალოგები.საკითხავი წიგნი Biliki:Georgian dialogues:reading book	Shavtvaladze,N	2008, თბილისი: Tbilisi

SYLLABUS

Semester III

Cardiovascular System

- 1. Course identification code: MEDC 2160**
- 2. Credit Points: 6 ECTS, Contact Hours: 94; Independent Hours: 86; Sum: 180.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Biophysics - Marika Gamkrelidze; Medical Biology - Khatuna Vashakmadze; Anatomy - Nato Durglishvili; Histology & Embryology - Lia Gelazonia; Biochemistry – Rusudan Sujashvili; Physiology - Mariam Gogichadze; Immunology - Marina Tediashvili, Peter Lydyard; Pathology - Tamar Goderidze; Medical Microbiology - Marina Tediashvili
- 4. Goals**
To convey:
 1. knowledge about biophysical, biological, anatomical, embryological, histological, physiological and biochemical properties of cardiovascular system;
 2. knowledge on hemodynamics of cardiovascular system; Information about electrical activity and functional activity of heart by defining all basic parameters;
 3. Information about cardiovascular system anatomy;
 4. basic, general knowledge about immunology;
 5. basic, general knowledge about microbiology and information about the structural/biological features and pathogenesis of fungi.
- 5. Prerequisite:** *MEDC 1250 Energy and Metabolism*
- 6. Co-requisite:** N/A
- 7. Intended learning outcomes**
 - 1.0. For cardiovascular systems: explains biophysical changes, associates with the clinical reflections;
 - 2.0. For cardiovascular system: explains biological characteristics of the system, associates with the clinical reflections;
 - 3.0. For cardiovascular system: describes their anatomy; associates with adjacent tissues and organs; explains their functional and clinical reflections;
 - 4.0. For thorax and diaphragm: describes their anatomy, associates with adjacent tissue and organs, explains their functional and clinical reflections;
 - 5.0. Describe of development of Neck and Pharyngeal Archs;
 - 6.0. For cardiovascular system: explains developmental stages, lists embryological origins of organs, associates the relation between major birth abnormalities and developmental process, explains the histological properties of cardiovascular system;
 - 7.0. For Lymphoreticular System and Blood: explains the histological properties of Lymphoreticular system and Blood;

- 8.0. Explains hemodynamics of cardiovascular system and electrical activity of heart by biophysical mechanisms;
- 9.0. Describes the structure, functions, synthesis and degradation of hemoglobin;
- 10.0. Describes erythrocyte-specific metabolisms;
- 11.0. Describes formation, differentiation and functions of blood cells;
- 12.0. Describes physiopathology of diseases, such as anemia, leukemia, hemophilia;
- 13.0. Describes heart rhythm, cardiac output and cardiac cycle;
- 14.0. Describes nervous (autonomous) control of cardiovascular system;
- 15.0. Explains functions of cardiovascular system;
- 16.0. Explains functions and dynamics of circulatory system;
- 17.0. Explains measurements of hematocrit, blood group analysis, blood pressure and ECG methods. For immune system: explains development and differentiation of immune cells, relates changes with diseases, describes the properties of immune response;
- 18.0. For hemodynamic changes: explains mechanisms of development, describes mechanisms for cellular damage, describes pathologies occurring due to cell and tissue damage;
- 19.0. Describes the factors that determine pathology as a basic science;
- 20.0. Explains the factors of tissue damage;
- 21.0. Describes the pathological consequences and interactions of cellular injury on the cell and tissue morphology with examples;
- 22.0. Describes examples of pathological consequences of immune response;
- 23.0. Explains the factors that affect the clinical course and outcome of cell injury;
- 24.0. Lists disorders resulting from hemodynamic changes;
- 25.0. Describes how to discuss scientific articles in the view of literature;
- 26.0. Prepares a presentation of scientific research;
- 27.0. Describes the structural/biological features and pathogenesis of fungi;
- 28.0. Explains case scenario related basic medical science topics in a clinical context.

8. Teaching method(s)

Lecture

Theoretical Interactive learning – Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work - in Anatomy, Histology, Microbiology, Biochemistry.

Problem Based Learning (PBL)

9. Course content:

Anatomy: Thoracic Cavity & Mediastinum; Introduction to Cardiovascular System; Pericardium and Outer Surface of the Heart; Chambers of the Heart; Great Vessels of the Heart; Major Vessels

of the Body; Coronary arteries, Cardiac Veins, and Cardiac Conduction System; Introduction to Lymphatic System; Circulation of Lymph; Fetal circulation; Review of the Cardiovascular System.

Biochemistry: Porphin, Porphyrins, Heme, Hemoglobin, Structure of Hemoglobin; Functions of Hemoglobin; Synthesis of Hemoglobin, Disorders Concerning Synthesis of Hemoglobin; Degradation of Hemoglobin; Disorders Concerning Hemoglobin Metabolism; Blood Coagulation, Primary Hemostasis; Secondary hemostasis, Procoagulation, Anticoagulation, Fibrinolysis.

Biophysics: Introduction to bio electromagnetics, Magnetic Field; Hemorheology; Introduction to bio electromagnetics: Electromagnetic Field; Bioelectromagnetic Effects on the Heart; Biophysics of Hemodynamics; Measurements of Different Hemodynamic Parameters.

Histology & Embryology: Histology of Circulatory Systems; Gn Spec. Arteries; Histology of Circulatory Systems; Capillaries & Veins; Histology of Lymph Organs; General Aspects, Thymus and Lymph Node; Histology of Lymph Organs; Spleen and MALT (Tonsils); Development of Head; Splanchnocranium, Neurocranium; Development of Neck; Pharyngeal Arches and Anomalies; Development of Circulatory System; Endocardial Tube Formation & Looping; Development of Circulatory Systems; Septation; Congenital Heart Anomalies; Development of Circulatory Systems; Arteries and Anomalies; Veins and Anomalies.

Immunology: Leucocyte Circulation and Migration into Tissue; Immunology of heart and vessels.

Medical Biology: Oxygen, Oxidative Stress, NO, Redox Disequilibrium in the Failing Heart and Cardiovascular System; Biological Basis of Cardiovascular Diseases; Death Begets Failure in the Heart.

Microbiology: Introduction to Medical Microbiology; Sterilization and Disinfection; introduction to Mycology; Systemic Mycoses; Superficial/Subcutaneous Mycosis; Opportunistic Mycoses-I; Opportunistic Mycoses-II; Diagnostic Methods in Mycology.

Pathology: Introduction to Pathology; Adaptations; Ischemia and Infarction; Hyperemia & Congestion.

Physiology: Blood Types and Transfusion Reactions; Lymphocytes and the Immune System; Regulation of Cardiac Function; Rhythmical Excitation of the Heart; Cardiac Arrhythmias; Principles of Electrocardiography; Electrocardiographic Interpretation of Cardiac Abnormalities; Microcirculation and the Lymphatic System; Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow; Nervous Regulation of the Circulation; Vascular Distensibility and Functions of Arterial and Venous Systems; Heart Valves and Heart Sounds; Local and Humoral Control of Blood Flow by the Tissues.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	26
		Scenario based MCQs	Final Exam	20
Competency-based assessment	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Mid-term Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	20
	LPE: Laboratory Practical Exam	LPE Checklist		
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	Portfolio	PA Checklist		4
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Histology	Junqueira's Basic Histology: Text and Atlas 13 th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
3	Embryology	The Developing Human: Clinically Oriented Embryology, 10 th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
4	Medical biology	Molecular Biology of the	Bruce Alberts et al	Garland Science

		cell		
5	Biochemistry	Textbook of Biochemistry with clinical correlations	Thomas M. Devil	Wiley-Liss Publishing Company
		Harper's Illustrated Biochemistry	Robert K. Murray et al	Mc-Graw-Hill Companies
		Lehninger Principles of Biochemistry	David L. Nelson, Michael M. Cox	W.H. Freeman Publishing Company
6	Immunology	Basic Immunology, Functions and Disorders of the Immune System	Abul Abbas Andrew H. Lichtman Shiv Pillai	Elsevier Health Sciences
7	Biophysics	Biophysics: A Physiological Approach	Patrick F. Dillon	Cambridge University Press
		Physics in Biology and Medicine (4th edition)	Paul Davidovits	Elsevier
		Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers
8	Microbiology	Medical Microbiology 8th ed	P. R. Murray et al	Mosby
9	Pathology	Basic Pathology, 10ed	Vinay Kumar MBBS MD et al. 2017 (ISBN-13: 978-0323353175)	Elsevier
10	Physiology	Guyton and Hall Textbook of Medical Physiology	John E. Hall, 13th Edition, 2016	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
		Medical Physiology	Walter F. Boron, Emile L. Boulpaep 3rd Edition, 2016	Elsevier

SYLLABUS

Semester III

Respiratory System

1. **Course identification code: MEDC 2170**
2. **Credit Points: 6 ECTS, Contact Hours: 94; Independent Hours: 86; Sum: 180.**
3. **Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili; Biophysics – Marika Gamkrelidze; Histology & Embryology - Lia Gelazonia; Immunology-Marina Tevzadze; Medical Genetics – Khatuna Vashakmadze; Medical Microbiology – Marina Tediashvili; Pathology – Tamar Goderidze; Physiology – Marika Gogichadze;
4. **Goals**
To convey:
 1. information about biophysical, biological, anatomical, embryological, histological, and physiological properties of respiratory system;
 2. information about functional activity of lungs by defining all basic parameters;
 3. information about respiratory system anatomy;
 4. basic, general knowledge about immunology;
 5. basic, general knowledge and information about the structural/biological features and pathogenesis of bacteria;
5. **Prerequisite:** *MEDC 1250 Energy and Metabolism*
6. **Co-requisite:** N/A
7. **Intended learning outcomes**
 - 1.0. For respiratory system: 1.1. explains biophysical changes; 1.2. associates with the clinical reflections;
 - 2.0. For nose, paranasal sinus, pharynx, larynx, and lung: 2.1. describes their anatomy; 2.2. associates with adjacent tissues and organs; 2.3. explains their functional and clinical reflections;
 - 3.0. For respiratory system: 3.1. explains developmental stages; 3.2. lists embryological origins of organs; 3.3. associates the relation between major birth abnormalities and developmental process;
 - 4.0. Explains functions of pulmonary system;
 - 5.0. Explains mechanisms of oxygen and carbon dioxide exchange and transportation;
 - 6.0. Describes dynamics of microcirculation together with general and pulmonary circulation;
 - 7.0. Describes nervous (autonomous) control of pulmonary system;
 - 8.0. Describes dynamics and control of pulmonary circulation;
 - 9.0. Describes measurement of spirometry method;
 - 10.0. Explains basics of exercise physiology and the effects of exercise on the cardiovascular and respiratory systems;

11.0. Explains the adaptive changes in the respiratory system in extreme conditions and basic information about pathophysiology of respiratory system disorders;
12.0. For immune system; 12.1. describes the properties of pulmonary immune response;12.2. relates changes with infection diseases;
13.0. Explains inherited and non-inherited genetic mechanisms in neoplasia;
14.0. Describes the structural/biological features and pathogenesis of bacteria;
15.0. List methods used in protection from microorganisms;
16.0. For endogenous and exogenous harmful agents; 16.1. describes their mechanisms of cell and tissue damage; 16.2. describes adaptation process of cells;
17.0. List pathologies resulting from endogenous and exogenous harmful agents and consequently emerging diseases;
18.0. Explains case scenario related basic medical science topics in a clinical context.

8. Teaching method(s)

Lecture

Theoretical Interactive learning – Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work - in Anatomy, Medical Microbiology, Histology

Problem Based Learning (PBL)

9. Course content:

Biophysics: Principle of Surface Tension & Alveolar Mechanic; Modeling in Circulatory&Respiratory Systems.

Anatomy: Introduction to Respiratory System; Nasal Anatomy and Paranasal Sinuses; The Pharynx; The Larynx; The Trachea; The Lungs; Pleura and Diaphragm; Review of the Respiratory System.

Histology & Embryology: Histology of the Upper Respiratory Tract; Development of the Respiratory Systems & Anomalies; Histology of The Respiratory Systems; Conducting Part.

Immunology: Infection and Immunity; Pulmonary Innate Immune Response.

Medical Genetics: Introduction to Medical Genetics; Introduction to Medical Genetics; The Human Genome and Chromosomal Basis of Heredity; Cytogenetics and Chromosomal Disorders; Developmental Genetics and Birth Defects; Cancer Genetics and Genomics; The Human Genome and chromosomal Basis of Heredity; Cytogenetics and Chromosomal Disorders ;Molecular Basis of Genetic Diseases; Tools of Human Molecular Genetics; Treatment of Genetic Disease - Introduction to Gene Therapy; Genetics of Complex Diseases.

Medical Microbiology: Introduction to Bacteriology; Bacterial Genetics; Bacterial Pathogenesis; Gram Positive Cocci; Growth and Cultivation of Bacteria; Microbiome; Mycobacteria; Aerobic Actinomycetes; Gram Positive Aerobic Bacilli; Non-fermenters; Enterobacteriaceae; Gram Negative Cocci; Culture Methods in Diagnostic Microbiology; Other Gram Negative Bacilli-I; Other Gram Negative Bacilli-II; Anaerobic Bacteria; Mycoplasma, Chlamydia, Rickettsia; Miscellaneous Bacteria; Diagnostic Methods in Bacteriology.

Pathology: Cellular Injury and Necrosis; Hemodynamics; Hemorrhage and Thrombosis; Injury by Endogenous Substances; Injury by Toxic Substances and Pneumoconiosis.

Physiology: Pulmonary Ventilation; Pulmonary Circulation, Pulmonary Edema, Pleural Fluid; Diffusion of Blood Gases; Transport of Blood Gases; Regulation of Respiration; Aviation, High-Altitude and Space Physiology; Physiology of Deep-Sea Diving and Hyperbaric Conditions; Sports Physiology; Introduction to Pathophysiology of Respiratory System.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	26
		Scenario based MCQs	Final Exam	20
Competency-based assessment	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Mid-term Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	20
	LPE: Laboratory Practical Exam	LPE Checklist		
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	Portfolio	PA Checklist		4
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
		Last's Anatomy: Regional and Applied	Chummy S. Sinnatamby, 12th Edition	Churchill Livingstone
2	Biophysics	Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers
3	Histology	Junqueira's Basic Histology: Text and Atlas 13th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
4	Embryology	The Developing Human: Clinically Oriented Embryology, 10th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Medical Microbiology	Medical Microbiology: with Student Consult	P. R. Murray et al	Saunders
6	Pathology	Basic Pathology, 10e	Vinay Kumar MBBS	Elsevier
7	Physiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
		Medical Physiology	Walter F. Boron, Emile L. Boulpaep	Elsevier
8	Immunology	Basic Immunology: Functions and Disorders of the Immune System	Abul K. Abbas, Andrew H. H. Lichtman, Shiv Pillai	Elsevier
9	Medical Genetics	Emery's Elements of Medical Genetics	Turnpenny, Peter D, Ellard, Sian	Elsevier

SYLLABUS

Semester III

Gastrointestinal System and Metabolism

1. **Course identification code: MEDC 2180**
2. **Credit Points: 8 ECTS, Contact Hours: 125; Independent Hours: 115; Sum: 240.**
3. **Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy - Nato Durglishvili; Biochemistry – Rusudan Sujashvili; Biophysics - Marika Gamkrelidze; Histology & Embryology - Lia Gelazonia; Immunology – Marina Tevzadze; Medical Biology – Khatuna Vashakmadze; Medical Microbiology - Marina Tediashvili; Pathology - Tamar Goderidze; Physiology - Marika Gogichadze.
4. **Goals**
To convey:
 1. information about anatomical, biochemical, biophysical, histological, embryological, biological, physiological and properties of gastrointestinal system;
 2. knowledge on metabolic events in human organism and their clinical reflections;
 3. information about the structural/biological features and pathogenesis of parasites;
 4. basic, general knowledge about immunology;
5. **Prerequisite:** *MEDC 1250 Energy and Metabolism*
6. **Co-requisite:** *N/A*
7. **Intended learning outcomes**
 - 1.0. Describes metabolic events in human organism, using concepts of internal energy, work, temperature, entropy, free energy and enthalpy;
 - 2.0. Describes gastrointestinal system biology and basics of proper alimentation;
 - 3.0. For oral cavity, temporomandibular joint, chewing muscles, pharynx, esophagus, stomach, small intestine, large intestine, liver, gallbladder and tracts, pancreas, spleen and peritoneum:
 - 3.1. describes the anatomy;
 - 3.2. associates with adjacent tissue and organs;
 - 3.3. explains their functional and clinical reflections;
 - 4.0. For abdominal wall, inguinal canal and portal system:
 - 4.1. describes anatomy;
 - 4.2. associates with adjacent tissue and organs;
 - 4.3. explains their functional and clinical reflections;
 - 5.0. For digestive system and related glands:
 - 5.1. classifies embryological origins, developmental stages and histological properties;
 - 5.2. associates the relation between birth abnormalities and developmental processes;
 - 5.3. explains the histological properties of Upper Gastrointestinal tract;
 - 5.4. explains the histological properties of Lower Gastrointestinal tract;
 - 5.5. explains the histological properties of gland associated with Gastrointestinal system;
 - 6.0. For lipid, protein and carbohydrate metabolisms:
 - 6.1. describes physiological mechanisms;
 - 6.2. explains the relation to each other;
 - 6.3. associates the changes of these relations at fasting and postprandial phase;

7.0. In digestive system; 7.1. lists exocrine glands secreting acid-neutralizing fluids; 7.2. explains their secretion mechanisms; 7.3. explains hormonal and neural factors;
8.0. Classifies the roles of enzymes and hormones in digestion and absorption of lipids and proteins;
9.0. Explains types and roles of lipoproteins;
10.0. Explains metabolisms of fatty acids, cholesterol, ketone bodies;
11.0. Explains amino acid metabolisms, synthesis of urea and control mechanism of the synthesis;
12.0. Describes the structural/biological features and pathogenesis of parasites;
13.0. Describes the properties of mucosal immunity;
14.0. Explains case scenario related basic medical science topics in a clinical context;
15.0. Explains inflammatory processes, termination pathways, effects on tissues and mechanisms for inducing diseases.

8. Teaching method(s)

Lecture

Theoretical Interactive learning – Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work - in Anatomy, Histology, Biochemistry, Microbiology

Problem Based Learning (PBL)

9. Course content:

Anatomy: Overall Developmental Anatomy of the Digestive System; Oral Cavity; The Stomach; Duodenum; The Esophagus; Small Intestine; Large Intestine; Clinical and Topographic Anatomy of the Anterior Abdominal Wall; Abdominal Cavity and Peritoneum; Liver; Biliary System; The Pancreas and Spleen; Abdominal Cavity and Peritoneum; Nerves and Vasculature of the Abdominal Cavity.

Biochemistry: Transport of Lipids in Plasma; Digestion and Absorption of Lipids; Cholesterol Metabolism; Lipogenesis, Triacylglycerol Synthesis; Lipid Determination in Blood; Digestion and Absorption of Proteins; Ketone Bodies; Oxidation of Fatty Acids; Metabolisms of Individual Amino Acids; Urea Cycle; Interrelationships and Provision of Tissue Fuels; Citric Acid Cycle; Metabolic Interrelationships and Provision of Tissue Fuels; Overview of Metabolites; Purine and Pyrimidine Metabolism; Xenobiotic Metabolism; Lipolysis.

Biophysics: Bio-thermodynamics, Laws of Thermodynamics; The Zeroth and First Laws of Thermodynamics; Energy Transformation & Distribution in Bio- molecular Systems; Applications of the First Law to Isothermal and Adiabatic Processes; Applications of the First Law to Isochoric,

Isobaric Processes, Enthalpy; Entropy, Free Energy, Boltzmann Distribution; Repetition all of the Material.

Histology and Embryology: Histology of Upper Gastrointestinal Tract; Oral Cavity; Histology of Upper Gastrointestinal Tract; Tongue, Salivary Gland; Histology of Alimentary Canal; Esophagus, Stomach; Histology of Alimentary Canal; Small Intestine; Histology of Alimentary Canal; Large Intestine & Appendix; Gland Associated with the Digestive System; Gall Bladder; Gland Associated with the Digestive System; Pancreas; Gland Associated with the Digestive System; APUD System; Development of Gastrointestinal Tract; Alimentary Canal; Development of Gastrointestinal Tract; Glands; Congenital Anomalies of Gastrointestinal tract.

Immunology: Mucosal Immunity.

Medical Biology: Interrelationship of Biology of Major Organs; Nutrigenomics.

Medical Microbiology: Introduction to Parasitology; Parasitic Pathogenesis; Protozoa-I; Protozoa-II; Animalia – I; Animalia – II; Animalia – III; Animalia – IV; Animalia – V.

Pathology: Inflammation; Wound Healing; Acute Inflammation; Chronic Inflammation.

Physiology: Gastrointestinal Functions; Propulsion and Mixing Movements in the GI Tract; Digestion and Absorption in the Gastrointestinal Tract; Secretory Functions of the Alimentary Tract; Body Temperature and Its Regulation.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	26
		Scenario based MCQs	Final Exam	20
		OSCE: Objective Structured Clinical Examination	OSCE Checklist	Mid-term Exam
Competency-based assessment	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	20
	LPE: Laboratory Practical Exam	LPE Checklist		
	Oral Presentation	Presentation Checklist		10
Performance-based assessment	Portfolio	PA Checklist		4
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
		Last's Anatomy: Regional and Applied	Chummy S. Sinnatamby, 12th Edition	Churchill Livingstone
2	Biophysics	Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers

3	Histology	Junqueira's Basic Histology: Text and Atlas 13th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
4	Embriology	The Developing Human: Clinically Oriented Embryology, 10th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Medical microbiology	Medical Microbiology: with Student Consult	P. R. Murray et al	Saunders
6	Pathology	Basic Pathology, 10e	Vinay Kumar MBBS	Elsevier
7	Physiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
		Medical Physiology	Walter F. Boron, Emile L. Boulpaep	Elsevier
8	Immunology	Basic Immunology: Functions and Disorders of the Immune System	Abul K. Abbas, Andrew H. H. Lichtman, Shiv Pillai	Elsevier
9	Biochemistry	Textbook of Biochemistry with Clinical Correlations	Thomas M. Devlin	Wiley-Liss Publishing Company
		Harper's Illustrated Biochemistry	Robert K. Murray et al	Mc-Graw-Hill Companies
		Lehninger Principles of Biochemistry	David L. Nelson, Michael M. Cox	W.H. Freeman Publishing Company
10	Medical Biology	Molecular Biology of the Cell	Bruce Alberts et al	Garland Science

SYLLABUS

Semester III

Introduction to Clinical Practice II

1. **Course identification code: MEDC2130**
2. **Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
3. **Person(s) responsible for course: Natia Landia**

Lecturers: Medical Psychology - Maia Jincharadze; Medical Anthropology - Maia Jincharadze
Medical Sociology - Nino Ganugrava; Clinical Skills - Marina Jimukhadze

4. Description:

This course integrates the subjects of Medical Psychology, Medical Anthropology and Clinical Skills based on the psychological, anthropological and social aspects of a patient's illness that are crucial for gathering relevant psychosocial and anthropological information about patients and their conditions through history-taking and help future physicians to develop patient-centered interview skills. The course covers the study of practical procedures and modern approaches and principles of collaboration skills that result in the effective exchange of information and collaboration with patients, their families and is the further stage for the longitudinal learning of clinical skills.

5. Goals

Medical Psychology

1. To convey: 1.1. basic terms and concepts for Medical Psychology; 1.2. Interview the patient and understand different methods of communication in patient-doctor relationship;
2. Identifies and manages psychological reactions and psychiatric disorders in medical and surgical patients in clinical practice and in community setting.

Medical Anthropology

3. To provide different perspectives of medical issues according to anthropological holistic approach for medical students;
4. To present how social science interprets concepts of health, sickness, illness and disease. To show how culture bound symptoms can vary from culture to culture;
5. To discuss all health problems are universal or cultural and how anthropology describes medical phenomenon by theoretically and methodologically.

Medical Sociology

6. To convey: 6.1. comprehensive advising and significant research and independent study opportunities; 6.2. Conceptions of health and illness, although not uniform the world over or even in any one society, are of fundamental importance in every society;

Clinical Skills

- 7. To convey: 7.1. hygienic skills (hand washing, sterile glove wearing) in working environment; 7.2. measurement skills for basic vital findings;
- 8. To equip with basic interventional skills (nasogastric tube and urinary catheter application; intramuscular, intradermal and subcutaneous injection, intravenous annulation).

6. Prerequisite: MEDC 1130 Introduction to Clinical Practice I

7. Co-requisite: N/A

8. Intended learning outcomes

Medical Psychology

- 1.0. Describes the Milestones of development (Pregnancy through old age), Piaget's cognitive development theory, approaches on personality development: Psychoanalytic-Theory and Defense mechanisms, Humanistic Theories;
- 2.0. Describes the biology of behavior including genetic influences, behavioral Neuroanatomy and Neurotransmission; substance related disorders;
- 3.0. Defines consciousness, stages of sleep and sleep-related disorders, and neurophysiology of perception;
- 4.0. Understands: 4.1. the physiological bases of emotions and related behavior, human sexuality and the influences of culture in illness; 4.2. role of communication in maintaining and promoting health and acquires methods for promoting it;
- 5.0. Defines abnormality; compare and contrast psychological disorders on the DSM system; determination of violence and abuse; legal and ethical issues in medicine and appropriate physician-patient relationship;
- 6.0. Acquires: 6.1. basic knowledge of shaping, motivation, stress, and life-span development. 6.2. basic theories and methodologies for maintaining and promoting health and basic knowledge of social stress and health; 6.3. basic knowledge of the effects of social and cultural factors on health; 6.4. theory and actual knowledge related to responses to stress (stress coping and stress management);
- 7.0. Develops: 7.1. the ability to devise strategies for treating hypothetical cases of difficult situations and guidances strategies for maintaining and promoting health by applying the above knowledge and theoretical understanding; 7.2. Develop the ability to motivate and offer guidance to people so that they can behave in a way that will help them to live healthy lives;

Medical Anthropology

- 8.0. Emphasizes cultural patterns of health;
- 9.0. Applies anthropological methods to the study of global health, well-being, and disease;
- 10.0. Investigates how human behavior that lives in a society is affected by own cultural health patterns;

- 11.0. Discusses case studies about how cultural phenomenon affects human and public health;
- 12.0. Understands importance of health that is constructed within culture structure by human society;
- 13.0. Examines universal definition of health “state of complete physical, mental and social well-being” culturally;
- 14.0. Realizes interaction between items of cultural system and health system basically; get into the level of knowledge, skills and attitudes.

Medical Sociology

- 15.0. Identifies and explains patterns of social life and human behavior by emphasizing how large-scale social phenomena (such as class, race, and gender inequality) affect the everyday experiences of individuals and vice versa;
- 16.0. Comprehends the psychosocial approach in medicine;
- 17.0. Improves comprehension of psychosocial factors affecting patients.

Clinical Skills

- 18.0. Describes: the techniques of hand washing and sterile glove wearing in accordance with the skill procedure; measurement of blood pressure with sphygmomanometer in adults in accordance with the skill procedure;
- 19.0. Counts: 19.1. nasogastric probe types, application indications, contraindications and the steps in application procedure; 19.2. urinary catheter types, application indications, contraindications and the steps in application; 19.3. application indications, contraindications and the steps in application procedure of intramuscular, intradermal and subcutaneous injections as well as intravenous cannulation;
- 20.0. Applies hand washing and sterile glove wearing skill completely in accordance with the skill procedure;
- 21.0. Measures blood pressure by adult sphygmomanometer completely in accordance with the skill procedure;
- 22.0. Performs: 22.1. nasogastric probe application on an adult model in accordance with the skill procedure. 22.2. urinary catheter application in an adult woman and male model in accordance with the skill procedure. 22.3. intramuscular, intradermal and subcutaneous injection as well as intravenous cannulation applications in an adult model in accordance with the skill procedure;
- 23.0. Describes the process to be carried out to the patient before any intervention;
- 24.0. Values: 24.1. the importance of informed consent; 24.2. the importance of not exceeding the limits of his/her own competency level;
- 25.0. Pays attention to patient privacy.

9. Teaching method(s)

- Lecture
- Theoretical interactive learning - Seminars
- Practical Work
- Laboratory Work

Teaching by using the simulations

Learning with usage of simulators

Teaching through standardized patients

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

10. Course content:

Medical Psychology

Life Cycle: Pregnancy through Preschool; Life Cycle; School Age, Adolescence and Adulthood; Life Cycle; Aging, Death and Bereavement; The Biological Bases of Behavior; Sleep and Sleep Disorders; Substance Related Disorders; Psychoanalytic Theory and Defense Mechanism; Learning Theory; Perception; Emotion; Culture and Illness; Human Sexuality; Violence and Abuse; Introduction to Psychopathology.

Medical Anthropology

To explain that what is anthropology? What is medical anthropology? What is the relationships between social science and medical? Why we need to be explain some concepts according to perspectives of medical anthropology? The meaning of symptoms: cultural bound symptoms, the personal and social meaning of illness, the stigma and shame of illness; What is the positioning of medical doctors for patients and caregivers; Doctor-Patient relations; patients associations; Biological Citizenship; Medicalized Selves, Biopolitics.

Medical Sociology

Sociology and the Study of Health and Illness; A Social History of Health and Illness; Health Behavior; Illness Behavior and the Illness Experience; Social Causes of Health and Health Problems; Global Disparities in Health and Disease, Physicians and Their Interaction with Patients; Hospitals and Other Health Care Settings; How health is defined in various societies; how the ill are viewed by the well; how illness is treated; who the healers are, how they are trained, and what their position is in society; the relationships among the religion, class, gender, and age of the ill and their healers; and when and how public health policies are inaugurated.

Clinical Skills

Hand Washing & Wearing Sterile Gloves; Vital Signs; Nasogastric Tube Administration; Intramuscular/ Intradermal/ Subcutan Injection; Cannulation; Bladder Catheterization;

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	20
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	18
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	Essay	Essay Checklist		
	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		12

12. Recommended literature:

Medical Psychology

1. Fadem B. BRS Behavioral Science (Board Review Series). 6th ed. Philadelphia: Lippincott Williams & Wilkins; 2013.
2. International Society of Behavioral Medicine. Education and training-related activities in the 12th ICBM, August 29th - September 1st 2012. Budapest, Hungary. <http://www.isbm.info/education/html/activities.html>.
3. Glanz K, Owen N, Wold JA. Perspectives on behavioral sciences research for disease prevention and control in populations. J Natl Inst Public Health. 2009; 58(1). <http://www.niph.go.jp/journal/data/58-1/j58-1.html>. Accessed 19 July 2015.

Medical Anthropology

Donald Joralemon, Exploring Medical Anthropology, Fourth Edition, 2017

Medical Sociology

1. William C. Cockerham, Medical Sociology, Fourteenth Edition, University of Alabama at Birmingham, 2017
2. HEALTH, ILLNESS, AND SOCIETY, An Introduction to Medical Sociology, STEVEN E. BARKAN, ROWMAN & LITTLEFIELD, 2017

Clinical Skills

1. Smith's Patient-Centered Interviewing, An Evidence-Based Method; Fourth Edition; 2019, a LANGE medical book;
2. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
3. Practical skills and procedures; General Medical Council; GMC.
4. Bates' Guide To Physical Examination and History Taking; 2020

SYLLABUS

Semester III

Georgian Language for Medical Education III

1. **Course identification code:** KART 2110
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Nana Shavtvaladze
Lecturers: Nana Shavtvaladze; Elene Sigua; Ana Zhorzholiani; Maia Zarnadze

4. **Course goals:**

To develop students' general and professionally oriented communicative language competences in medical Georgian to enable them to communicate effectively in their academic and professional environments according to the stage A2/2 of European language standard; course contains dialogues on patients' complaints, history-taking. Exercises consist of a pre-listening activity designed to model existing knowledge and vocabulary, a listening section involving both comprehension and new colloquial vocabulary, as well as practice of useful phrases.

5. **Prerequisite:** Georgian Language for Medical Education II
6. **Co-requisite:** N/A

7. **Intended learning outcomes**

- 1.0. Skims for main ideas and scans for specific information;
- 2.0. Guess the meaning of words from context;
- 3.0. Understands texts about a range of familiar and unfamiliar topics;
- 4.0. Uses texts as a basis for discussion;
- 5.0. Writes well-constructed paragraphs
- 6.0. Writes patients history;
- 7.0. Listens for gist and specific information;
- 8.0. Matches information to specific criteria;
- 9.0. Identifies main points and summarizes information in listening texts;
- 10.0. Talks about personal and study activities;
- 11.0. Talks with standardized patients;
- 12.0. Describes people and places;
- 13.0. Talks about the future and plans.

8. **Teaching method(s)**

Interactive Lectures
Laboratory work
Workbook
Explanatory
Demonstration
Verbal/Oral

9. **Course content:** Organ systems – blood and lymph, digestive system, endocrine system, muscular system, nervous system, reproductive system, respiratory system, skeleton, urinary system. medical examinations: physical examinations and instrumental examinations; Offering medical examinations;

10. **Form(s) of assessment and details explaining how the module mark is calculated**

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	24
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12
	Essay	Essay Checklist		10
	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		10

11. Recommended literature:

NO	Textbook	Author	Publisher
1	საკომუნიკაციო ქართული 2 Communication Georgian 1	Shavtvaladze,N	2014, Savtvaladze
2	Teacher's handout		
3	მოუსმინეთ ქართულ დიალოგებს 1 +CD Listen to Georgian dialogues	Shavtvaladze,N	2006, Shavtvaladze
4	ბილიკი წიგნი პირველი:ქართული ენა Biliki:Book 1:Georgian language	Shavtvaladze,N	2009, თბილისი: Tbilisi
5	ბილიკი:სამუშაო რვეული 1 დონე Biliki:work book 1	Shavtvaladze,N	2008, თბილისი: Tbilisi
6	ბილიკი:ქართული დიალოგები.საყითხავი წიგნი Biliki:Georgian dialogues:reading book	Shavtvaladze,N	2008, თბილისი: Tbilisi

SYLLABUS

Semester IV

Nervous System

- 1. Course identification code: MEDC 2210**
- 2. Credit Points: 8 ECTS, Contact Hours: 125; Independent Hours: 115; Sum: 240.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Anatomy- Nato Durglishvili; Embryology and Histology-Lia Gelazonia; Physiology- Mariam Gogichadze; Pharmacology- Tamar Kezeli; Biophysics – Marika Gamkrelidze; Medical Biology - Khatuna Vashakmadze; Immunology – Marina Tevzadze.
- 4. Goals**
To convey:
 1. basic knowledge on biophysical, biological, anatomical, embryological, histological, physiological and biochemical properties of nervous system;
 2. knowledge on histology and development of central and peripheral nervous system and special senses;
 3. knowledge on biological basics of vision, hearing and taste;
 4. development mechanisms of inflammatory processes;
 5. general knowledge about neuro immunology;
 6. basic knowledge about pharmacology;
 7. knowledge about the drugs effecting nervous system.
- 5. Prerequisite:** *MEDC 1250 Energy and Metabolism*
- 6. Co-requisite:** N/A
- 7. Intended learning outcomes**

Knowledge and understanding

- 1.0. Describes biophysical basis of nervous system;
- 2.0. Describes biology of nervous system;
- 3.0. In nervous system: 3.1. describes the anatomy of cerebrum, cerebellum, meninges, brain stem, cranial nerves and spinal cord; 3.2. describes limbic and autonomic nervous system;
- 3.3. describes the anatomy of structures forming eyes and ears; 3.4. describes the anatomy of skin and its derivatives and the mammary glands; 3.5. describes descending and ascending pathways; 3.6. associates with adjacent tissue and organs; 3.7. explains functional and clinical reflections;
- 4.0. For central and peripheral nervous system and special senses: 4.1. classifies embryological origins; 4.2. explains developmental stages; 4.3. describes histological properties.
- 5.0. Explains nervous conduction, ion channels and intracellular, extracellular ion concentration differences;
- 6.0. Describes neuron, neuroglia, neurotransmitters and nerve fibers;
- 7.0. Explains the synthesis and inactivation of neurotransmitters;

8.0. Describes the energy mechanisms of brain;
9.0. In the nervous system: 9.1. explains parts and functions of brain cortex; 9.2. describes sensorial transmission pathways and special senses; 9.3. describes control of motor function (cortex, cerebellum, basal ganglions and brain stem); 9.4. describes functions of hypothalamus;
10.0. explains the relationship of learning-memory with hippocampus;
11.0. For brain waves and reflexes: 11.1. describes, 11.2. explains how they are measured in clinics;
12.0. Explains biochemical basics of vision, hearing and taste senses;
13.0. In drug metabolism: 13.1. explains mechanisms and factors affecting absorption; 13.2. explains mechanisms and factors affecting distribution; 13.3. explains mechanisms and factors affecting excretion; 13.4. for drug pharmacokinetics; 13.5. explains clinical importance;
14.0. Analyzes examples;
15.0. Describes the properties of neuroimmunology;
16.0. Explains case scenario related basic medical science topics in a clinical context;

8. Teaching method(s):

Lecture
Theoretical interactive learning- Seminars
Videos of learning
Videos of teaching
Practical Work
Laboratory Work- in Anatomy, Histology, Microbiology
Problem Based Learning (PBL)

9. Course content:

Anatomy: Introduction to Neuroanatomy; Spinal Cord; Cranial nerves; Brainstem; Cerebellum; Diencephalon; Basal Ganglia; Telencephalon; Diencephalon; Limbic System; Orbit and Eye; Visual Pathway; Ascending and Descending Pathways of the CNS; Taste and Smell Pathways; Vasculature of the CNS; Meninges and Dural Venous Sinuses ; Ear; Auditory Pathways; Introduction to Autonomic Nervous System; Sympathetic Nervous System; Parasympathetic Nervous System; Skin, its derivatives and the Mammary Glands.

Pharmacology: Scope of Pharmacology and Passage of Drugs Across Membranes; Drug Distribution; Drug Metabolism; Drug Application Routes and Pharmaceutical Forms of Drugs; Drug Excretion; Dopamine and Drugs Effecting Dopaminergic System; Serotonin and Drugs Effecting Serotonergic System of CNS.

Embryology and Histology: Histology of CNS; PNS, meninges and Spinal Cord; Histology of CNS; Brain, Cerebellum; Development of Central Nervous System; Early Stages; Development of Central Nervous System; Late Stages; Congenital Anomalies of Nervous System; Histology of Sensory Organs; Eye; Nervous Coat and Appendix; Development of Sensory Organs; Eye; Histology of Skin and Appendage; Epidermis, Dermis, Appendage; Development of Skin and Appendage.

Physiology: Organization of Nervous System; Synapse and Neurotransmitters; Sensory Receptors and pathways; Peripheral Nervous System; Cutaneous Senses; Physiology of Pain; Motor Functions of Spinal Cord; Cortical and Brainstem Control of Motor Function ; Functions of Cerebellum and Basal Ganglia in motor control; States of Brain Activity-Sleep and Brain Waves; Physiology of Vision; Cerebral Cortex, Intellectual Functions of the Brain; Learning and Memory; Physiology of Hearing; Chemical Senses: Taste and Smell ; Limbic System and the Hypothalamus; Physiology of Hearing ; Autonomic Nervous System; Cerebrospinal Fluid and Brain Metabolism.

Biophysics: Electrical Activity of Cortex and Evoked Potentials. Neural Coding; Biology of Nervous System; Auditory System Biophysics and Function.

Medical Biology: Biology of Nervous System.

Immunology: Neuro immunology.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	26
		Scenario based MCQs	Final Exam	20
Competency-based assessment	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Mid-term Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	20
	LPE: Laboratory Practical Exam	LPE Checklist		
Performance-based assessment	Oral Presentation	Presentation Checklist		10
	Portfolio	PA Checklist		4
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Pathology	Basic Pathology, 10e	Vinay Kumar MBBS MD et al. 2017 (ISBN-13: 978-0323353175)	Elsevier
3	Histology	Junqueira's Basic Histology: Text and Atlas 13 th Ed.	Anthony Mescher	Mc-Graw-Hill Companies
4	Embryology	The Developing Human: Clinically Oriented Embryology, 10 th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Pphysiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
6	Pharmacology	Goodman & Gilman's The Pharmacological Basis of Therapeutics	L.L. Brunton ed.	McGraw-Hill, New York,
		Basic and Clinical Pharmacology	B. G. Katzung	McGraw-Hill, New York
		Principles of Pharmacology	Golan, D.E et al	Lippincott Williams & Wilkins

SYLLABUS

Semester IV

Urogenital and Endocrine Systems

- 1. Course identification code: MEDC 2220**
- 2. Credit Points: 8 ECTS, Contact Hours: 125; Independent Hours: 115; Sum: 240.**
- 3. Person(s) responsible for course:** Salome Tsaria, Nino Lomidze.
Lecturers: Medical Biology - Khatuna Vashakmadze; Anatomy - Nato Durglishvili; Histology & Embryology - Lia Gelazonia; Physiology- Mariam Gogichadze; Biochemistry – Rusudan Sujashvili; Pathology - Tamar Goderidze; Pharmacology - Tamar Kezeli; Medical Microbiology – Marina Tediashvili; Immunology – Marina Tevzadze; Biophysics -Marika Gamkrelidze.
- 4. Goals**
To convey:
 1. knowledge about biological, anatomical, embryological, histological, physiological, immunological and biochemical properties of urogenital and endocrine systems;
 2. general knowledge about interrelationship of hormones and immunology;
 3. knowledge about structural/biological features and pathogenesis of viruses;
 4. development mechanisms of neoplasia and its effects and consequences on organism;
 5. information about good laboratory and clinical practices in research projects.
- 5. Prerequisite:** *MEDC 1250 Energy and Metabolism*
- 6. Co-requisite:** N/A
- 7. Intended learning outcomes**
 - 1.0. Describes biology of gonadal development and genetic differentiation;
 - 2.0. In urogenital system, for male and female genital system organs, kidney, ureter, bladder, urethra, pelvis and perineum: 2.1. describes its anatomy; 2.2. associates with adjacent tissue and organs; 2.3. explains their functional and clinical reflections;
 - 3.0. In endocrine system, for thyroid, parathyroid, suprarenal gland and thymus: 3.1. describes its anatomy; 3.2. associates with adjacent tissue and organs; 3.3. explains their functional and clinical reflections;
 - 4.0. For endocrine system: 4.1. classifies embryological origins; 4.2. explains developmental stages; 4.3. describes histological properties; 4.4. associates the relation between birth anomalies and developmental processes;
 - 5.0. For urogenital systems: 5.1. classifies embryological origins; 5.2. explains developmental stages; 5.3. describes histological properties; 5.4. associates the relation between birth anomalies and developmental processes;
 - 6.0. In endocrine system: 6.1. describes endocrine, paracrine and neuroendocrine secretion; 6.2. explains the regulatory role of hypothalamus and pituitary gland; 6.3. lists secretions and functions of endocrine glands and organs;

7.0. In urinary system: 7.1. explains renal function and structure of nephrons; 7.2. explains renal blood flow and mechanisms of urine production; 7.3. explains liquid-electrolyte and acid-base equilibrium;

8.0. In genital system: 8.1. explains reproductive hormones and their functions in men and women; 8.2. describes changes in the maternal body in pregnancy and lactation;

9.0. For hormones: 9.1. classifies according to mechanisms of action; 9.2. explains their effects and relation to each other;

10.0. Explains biochemical functions of vitamins and minerals;

11.0. Describes factors causing neoplasia, formation, mechanisms of occurrence, neoplastic diseases in organism, classification and staging of neoplasia;

12.0. Distinguishes mechanisms of actions of drugs and explains toxicity of drugs;

13.0. Analyzes events developing in response to drug receptor interactions;

14.0. Describes general principles of antimicrobial chemotherapy;

15.0. Describes general principles of cancer chemotherapy;

16.0. Describes pharmacology of inflammation and immunomodulation;

17.0. Describes the structural/biological features and pathogenesis of viruses;

18.0. Describes the interrelationship of hormones and immunology;

19.0. Describes the general principles of magnetic resonance imaging;

20.0. Describes how to prepare a scientific research presentation;

21.0. Prepares a research article presentation;

22.0. Explains case scenario related basic medical science topics in a clinical context.

8. Teaching method(s):

Lecture

Theoretical interactive learning- Seminars

Videos of learning

Videos of teaching

Practical Work

Laboratory Work- in Anatomy, Medical Microbiology, Biochemistry, Histology.

Problem Based Learning (PBL)

9. Course content:

Anatomy: Introduction to Urinary System; The Kidneys; Urinary Tracts and Suprarenal Glands; Body Fluids and Functions of Kidneys; Introduction to Genital Systems; Male Genital Organs; Female Genital Organs Nerves of the Pelvis; Vasculature of the Pelvis; Perineum and Ischioanal Fossa; Review of the Urinary System, Endocrine Organs.

Microbiology: Introduction to Viruses; Viral Pathogenesis/ Oncogenesis; DNA Viruses I; DNA Viruses II; DNA Viruses III; DNA Viruses IV; DNA Viruses V; RNA Viruses I; RNA Viruses II; RNA Viruses III; RNA Viruses IV; Diagnostic Methods in Virology; Specific Viruses; Viral Oncogenesis; Prions; Vaccines.

Pharmacology: Viral Pathogenesis/ Oncogenesis; Mechanism of Drug Action 1; Mechanism of Drug Action 2; Post-receptor Events and Second Messengers; Introduction to Rational Pharmacotherapy; Eicosanoids; Introduction to Drug Development; Development of

Biopharmaceuticals; Pharmacogenetics & Pharmacogenomics; Drug Toxicity 1; Drug Toxicity 2; Vasoactive Peptides; Histamine and Antihistamines.

Histology: Histology of Urinary System: General Aspect, Kidney Nephron; Histology of Urinary System: Excretory Passage; Histology of Endocrine System: General Aspect, Hypothalamus, Epiphysis; Histology of Endocrine System: Hypophysis; Histology of Endocrine System: Thyroid and Parathyroid and Suprarenal Glands; Histology of Male Genital System: Testis; Histology of Male Genital System: Excretory Parts; Histology of the Female Genital System: Ovaries; Histology of the Female Genital System: Conducting Part.

Biochemistry: Mechanisms of Hormone Actions, Intracellular and Cell Surface Receptors; Hormones of Hypothalamus and Pituitary; Thyroid Hormones; Mechanisms of Hormone Actions, Intracellular and Cell Surface Receptors; Hormones of Hypothalamus and Pituitary; Hormones of Adrenal Cortex and Adrenal Medulla; Hormones Regulating Calcium Metabolism; PTH, Calcitonin, Calcitriol; Insulin, Glucagon; Vitamins; Insulin, Glucagon; Minerals.

Physiology: Urine Formation and Renal Blood Flow; Urine Formation: Tubular Processing; Fluid and Electrolyte Balance ; Regulation of Acid-Base Balance; Regulation of Calcium & Phosphate Metabolism and Bone Formation; Introduction to Endocrinology; Pituitary Gland and Hypothalamic Control; Posterior Pituitary Hormones; Thyroid Metabolic Hormones; Insulin, Diabetes Mellitus; Adrenocortical Hormones ; Regulation of Calcium & Phosphate Metabolism and Bone Formation; Physiology of Growth Hormones; Pineal Gland & Melatonin; Male Reproductive Physiology; Female Reproductive Physiology; Fetal and Neonatal Physiology; Endocrine Disruptors; Pregnancy and Lactation; Pregnancy and Lactation.

Histology& Embryology: Development of Urinary System and Anomalies; Prenatal Diagnosis.

Immunology: Hormones and Immunity.

Pathology: Introduction to Neoplasia and Biologic Behaviors of Neoplasm; Oncogenesis, Incidence and Distribution of Cancer; Histogenesis and Nomenclature; Tissue Damage by Eating Disorders and Diabetes Mellitus; Development of Genital System; General Aspects.

Medical Biology: Biology of Endocrine System; Biology of Sexual Differentiation and Development.

Biophysics: Seeing with Sound: Images from Echoes (Diagnostic Ultrasound Imaging); Basics of MRI.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	26
		Scenario based MCQs	Final Exam	20
		OSCE: Objective Structured Clinical Examination	OSCE Checklist	Mid-term Exam
Competency-based assessment	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	20
	LPE: Laboratory Practical Exam	LPE Checklist		
	Oral Presentation	Presentation Checklist		10
Performance-based assessment	Portfolio	PA Checklist		4
	PBL-P: Evaluation of PBL Student's Performance	PBL Student Evaluation Form		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1	Anatomy	Gray's Anatomy for Students	R.L. Drake et al	Churchill Livingstone
		Hollinshead's Textbook of Anatomy	Cornelius Rosse & Penelope Gaddum-Rosse	Lippincott Raven
		A Textbook of Neuroanatomy	Maria Patestas & Leslie P. Gartner	Blackwell
2	Pathology	Basic Pathology, 10e	Vinay Kumar MBBS MD et al. 2017 (ISBN-13: 978-0323353175)	Elsevier
3	Histology	Junqueira's Basic Histology: Text and Atlas	Anthony Mescher	Mc-Graw-Hill Companies

		13th Ed.		
4	Embryology	The Developing Human: Clinically Oriented Embryology, 10th Ed.	Keith L. Moore & T. V. N. Persaud	Saunders
5	Physiology	Guyton Physiology	John E. Hall	Saunders
		Human Physiology	Stuart Fox	Mc-Graw-Hill Science
6	Pharmacology	Goodman & Gilman's The Pharmacological Basis of Therapeutics	L.L. Brunton ed.	McGraw-Hill, New York,
		Basic and Clinical Pharmacology	B. G. Katzung	McGraw-Hill, New York
		Principles of Pharmacology	Golan, D.E et al	Lippincott Williams & Wilkins
7	Medical biology	Molecular Biology of the Cell	Bruce Alberts et al	Garland Science
8	Biochemistry	Textbook of Biochemistry with Clinical Correlations	Thomas M. Devlin	Wiley-Liss Publishing Company
		Harper's Illustrated Biochemistry	Robert K. Murray et al	Mc-Graw-Hill Companies
		Lehninger Principles of Biochemistry	David L. Nelson, Michael M. Cox	W.H. Freeman Publishing Company
9	Medical microbiology	Medical Microbiology: with Student Consult	P. R. Murray et al	Saunders
10	Immunology	Basic Immunology: Functions and Disorders of the Immune System	Abul K. Abbas, Andrew H. H. Lichtman, Shiv Pillai, 5th edition,.2015	Elsevier
11	Biophysics	Introductory Biophysics: Perspectives on the Living State	J.R. Claycomb, J.P. Tran	Jones & Bartlett Publishers

SYLLABUS

Semester IV

Biostatistics and Epidemiology

Course identification code: PHMC 2210

1. Credit Points: 6 ECTS, Contact Hours: 84; Independent Hours: 96; Sum: 180.

2. Person(s) responsible for course: Anano Kiria, Nana Ubilava

3. Lecturers: Natia Kvaratskhelia; Ekaterine Cherkezishvili

4. Goals:

To convey:

1. basic knowledge about biostatistics and epidemiology;
2. knowledge on epidemiology of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems;
3. necessary knowledge on prevention of clinical conditions, and protection or improvement of health against those clinical conditions related to cardiovascular and respiratory systems;
4. knowledge on principles of bio statistical analysis;
5. knowledge on epidemiology of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to gastrointestinal system;
6. necessary knowledge on prevention of clinical conditions, and protection or improvement of health against those clinical conditions related to gastrointestinal system;
7. knowledge on bio statistical analysis of association between variables;
8. knowledge on epidemiology of infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
9. biostatistical knowledge required in design of medical research;
10. knowledge on epidemiology of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to hematopoietic system;
11. necessary knowledge on prevention of clinical conditions, and protection or improvement of health against those clinical conditions related to hematopoietic system;
12. knowledge on comparative bio statistical analysis of study groups;
13. understanding of epidemiological language and terminology by reading, examining and discussing various types of epidemiological research papers and to develop the desire and enthusiasm for epidemiological studies.

5. Prerequisite: *MEDC2130 Introduction to Clinical Practice II*

6. Co-requisite: *MEDC 2260 Scientific Research and Project Course II*

7. Intended learning outcomes

1.0. Explains the main concepts of statistic;

2.0. Lists:

2.1. the names of the data types; 2.2. the types of the graphics; 2.3. the types of descriptive statistics for cartilage and bone tissue;

3.0. Describes a frequency distribution;

4.0. Prepares a research article presentation;

5.0. Counts: 5.1. significance tests in biostatistics; 5.2. biostatistical sampling methods;

6.0. Chooses significance tests according to the properties of bio statistical data.

7.0. Explains:

7.1. prevention of clinical conditions, and protection or improvement of health against those clinical conditions related to cardiovascular and respiratory systems; 7.2. principles of bio statistical analysis; 7.3. requirements for prevention of infectious clinical conditions, and protection or improvement of health against these conditions, in healthy or susceptible individual or community; 7.4. interactions of health conditions (healthy and clinical conditions) at individual, family and community levels in relation to infectious agents, and importance of infectious agents and infectious clinical conditions from the aspect of public health;

8.0. Defines:

8.1. bio statistical analysis of association between variables; 8.2. approaches (education, sanitation, hygiene, disinfection/antiseptis/sterilization, screening, surveillance, vaccination, prophylaxis, isolation, design/renovation) to control risks in infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health; 8.3. bio statistical knowledge required in design of medical research (research design, planning medical research);

9.0. lists:

9.1. principles of comparative bio statistical analysis of study groups; 9.2. the types of the statistical hypothesis; 9.3. the names of epidemiological studies 9.4. the risk measurements that are used in epidemiological studies; 9.4. the types of errors in statistical decision making;

10.0. Explains:

10.1. use of biostatistics in clinical research and for evidence search in medical literature; 10.2. the steps of a statistical hypothesis test; 10.3. the meanings of the values of these measurements for epidemiology;

11.0. Recognizes:

11.1. the meaning of epidemiology 11.2. epidemiology of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to hematopoietic system; 11.3. prevention of clinical conditions, and protection or improvement of health against those clinical conditions related to hematopoietic system; 11.4. epidemiology of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems; 11.5. epidemiology of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to gastrointestinal system; 11.6. epidemiology of infectious clinical

conditions which are frequent in community and/or pose high risk for individual or community health, and/or life threatening or constitute an emergency,

12.0. Discusses the history, development, and applications of epidemiology

13.0. Describes:

13.1. the natural history of disease, i.e., disease causation, pathogenesis, and prognosis

13.2. public health problems in terms of magnitude, person, time, and place;

13.3. various study designs and understand the strengths and limitations of each design;

14.0. Identifies:

14.1. and interprets existing data and understand the strengths and limitations of each source;

14.2. principles and limitations of public health screening and evaluate the validity and reliability of screening tests;

14.3. sources of bias in epidemiologic studies and discuss the impact of bias on the interpretation of measures of association;

15.0. Distinguishes among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions.

Skills

1.0. Calculates:

1.1. standard normal scores and resulting probabilities;

1.2. measures of disease frequency, excess risk, and impact;

2.0. Presents and write a scientific article;

3.0. Comprehends various types of epidemiological research;

4.0. Presents orally or a written way evidence based presentation about health administration, epidemiological and health outcomes, related to health care services;

5.0. Applies descriptive statistical techniques commonly used to summarize public health data;

6.0. Interprets:

6.1. results of statistical analyses found in public health studies;

6.2. epidemiologic study results and communicate them to both lay and professional audiences;

7.0. Develops:

7.1. written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences;

7.2. a plan of an outbreak investigation, list steps involved and activities involved in each of them;

8.0. Chooses descriptive and inferential methodologies according to the type of study design for answering a particular research question.

Attitudes and responsibilities:

1.0. Appreciates:

- 1.1. values unique to the healthcare administration profession and the healthcare delivery sector;
- 1.2. effective participation on team work;
- 1.3. rules of healthy living;
- 3.0. Renovates and improves him/herself continually;
- 4.0. Takes responsibility as an individual and a team member in the problems encountered in the related field applications.

8. Teaching method(s):

Lecture

Theoretical and practical learning - Seminars

Videos for learning Videos for teaching

Role playing

Scenarios based simulation training

Practical studies

Participation in scientific studies

Case-based learning – CBL.

9. Course content

Definition and role of public health, its essential functions and services, medical errors, quality of health care services and its improvement, Clinical Decision Support tools and its use to improve clinical practice; definition of epidemiology, its history, its application in medicine and public health, natural history of disease, levels of prevention, immunity and vaccination; Diagnostic Testing; Theoretical Distributions; Probability; Test Hypotheses and Significance in Large Samples; Test Hypotheses and Significance-Chi-Square Test; Test Hypotheses and Significance-Z-Test; Linear Regression; Analysis of Variance and Multiple Comparisons; Test Hypotheses and Significance- Z-Test; Correlation; Some Common Problems in Research; Power Analysis and Sample Size Calculation I; Power Analysis and Sample Size Calculation II; The Description of Epidemiology; Epidemiological Research Methods; Epidemiological Research Methods and Calculation of the Risk; epidemiologic approach, chain of infection, epidemic disease occurrence, Epicure and its use in the outbreak investigation; on basic epidemiologic measures of morbidity, mortality and natality ; calculating age-adjusted rates, basics of analytic epidemiology and different study designs used to study health and diseases .

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		FSAQ: Fill-in-the Blank Short Answer Questions	Final Exam	40
		T/F Questions, mostly based on case studies		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	Essay	Essay Checklist		
	Report	Report Checklist		
	PWPE: Project Writing and Presentation Evaluation	Presentation Checklist		12
	CBL-P: Evaluation of CBL Student’s Performance	CBL Checklist		6

11. Recommended literature:

1. Pagano, Marcello, Gauvreau, Kimberlee. Principles of Biostatistics. Duxbury Press, 2000.
2. Glantz, Stanton A. Primer of Biostatistics. 7th Edition. McGraw Hill Professional, 2011.
3. Clinical Epidemiology: How to do clinical practice research. Third edition, 2006. Lippincott Williams & Wilkins. R. Brian Haynes, David L. Sackett, Gordon H. Guyatt, and Peter Tugwell.

SYLLABUS

Semester IV

Scientific Research and Project Course II

1. **Course identification code: MEDC2260**
2. **Credit Points: 5 ECTS, Contact Hours: 78; Independent Hours: 72; Sum: 150.**
3. **Person(s) responsible for course:** Natia Landia

Lecturers: Evidence Based Medicine – Ekaterine Cherkezishvili; Scientific Skills - Leila Beitrishvili

4. Description

This course integrates the subjects of Evidence Based Medicine and Scientific Skills based on the impact of evidence-based medicine on medical practice and research and help future physicians to develop scientific skills. The course covers study of the principles and tools for practicing of evidence-based medicine, planning, and writing research proposals for the research project – necessary for the scientific and clinical developments and is the further stage for the longitudinal learning of scientific skills.

5. Goals

Evidence Based Medicine

To convey how to access to the updated information that is needed in making decisions about the care of individual patients;

To develop skills for using the obtained evidence

Scientific Skills

To equip second year medical students to discuss scientific articles in the view of literature and to make presentation of a scientific research.

6. Prerequisite: MEDC 1260 Scientific Research and Project Course I
7. Co-requisite: N/A

8. Intended learning outcomes

Evidence Based Medicine

1.0. Defines:

- 1.1. the steps to evidence based medicine,
- 1.2. a clinical question in Pico format from a patient scenario
- 1.3. main databases necessary for evidence based medicine
- 1.4. research methods and hierarchy among methods for producing evidence
- 1.5. the types of clinical questions
- 1.6. clinical evidence using clinical query database

- 1.7. common study designs. identify the major strengths and limitation of each.
- 1.8. which study designs are best for answering clinical questions related to therapy/prevention?
- 2.0. Therapy/prevention:
 - 2.1. Assesses study for validity
 - 2.2. Derives number needed to treat (nnt), number needed to harm (nnh)
 - 2.3. Interprets confidence intervals, p values, relative risk, odds ratio, hazard ratio
 - 2.4. Applies therapy evidence to patients
 - 2.5. Defines bias in epidemiologic studies
 - 2.6. Defines confounding factor in epidemiologic studies
- 3.0. Diagnosis
 - 3.1. Assesses study for validity
 - 3.2. Derives sensitivity, specificity, positive predictive value, negative predictive value, and likelihood ratios.
 - 3.3. Applies diagnostic evidence to patients
 - 3.4. Summarizes diagnostic evidence in written report
 - 3.5. Summarizes diagnostic evidence verbally to colleagues
 - 3.6. Summarizes and interpret diagnostic evidence for a patient in terms he/she will understand
- 4.0. Communication skills
 - 4.1. Identifies common pitfalls to communicating evidence to patients
 - 4.2. Describes the steps to communicating evidence to patients
 - 4.3. Advocates and use the evidence based medicine approach

Scientific Skills

- 5.0. Describes how to discuss scientific articles in the view of literature
- 6.0. Prepares a presentation of scientific research

9. Teaching method(s)

Theoretical Teaching (Interactive Seminars and Lectures)
 Participating in scientific research
 Teaching research skills

10. Course content:

Evidence Based Medicine: Introduction to EBM; Preparation for EBM Homework: Constructing answerable EBM questions and searching for evidence; Structured group presentations and discussions; Discussion (Large Group)/ An EBM Story; Preparation for EBM homework; Preparation for, and submission of the EBM; The facilitator's feedback to the student on the EBM homework; Revision of the EBM homework; Evaluation of the EBM homework; Evaluation of group presentations and discussions.

Scientific Skills

Discussion of Scientific Articles in the View of Literature; Presentation of Scientific Research; Scientific articles in the view of literature; scientific theory; scientific research presentation.

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		Scenario based MCQs	Final Exam	40
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12
	Essay	Essay Checklist		
	Short article review	Review Checklist		14
	Scientific research Presentation Evaluation	Presentation Checklist		

12. Recommended literature:

Evidence Based Medicine

1. Straus SE, Glasziou P, Richardson WS, Haynes RB. Evidence-based medicine: how to practice and teach it. Fourth Edition 2011. Churchill Livingstone Elsevier;
2. Glasziou P, Del Mar C, Salisbury J. Evidence-based Practice Workbook. BMJ Books, Blackwell Publishing;
3. Mayer D. Essential Evidence-based Medicine. Second Edition 2010. Cambridge University Press.
4. R. Brian Haynes, David L. Sackett, Gordon H. Guyatt, and Peter Tugwell. Clinical Epidemiology: How to do clinical practice research. Third edition, 2006. Lippincott Williams & Wilkins.
5. Howick J. The philosophy of evidence-based medicine. 2011, Blackwell Publishing Ltd.
6. Greenhalgh T. How to read a paper: the basics of evidence-based medicine. Fourth edition, 2010. BMJ Books

Scientific Skills

Evidence-based medicine skills that last: A transferable model utilizing integration, spaced learning, and repetition with a single study design among second-year medical students

<https://www.mededpublish.org/manuscripts/1360>

SYLLABUS

Semester IV

Georgian Language for Medical Education IV

1. **Course identification code:** KART 2210
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Nana Shavtvaladze
Lecturers: Nana Shavtvaladze; Elene Sigua; Ana Zhorzholiani; Maia Zarnadze
4. **Course goal:**
To develop all four language skills to achieve level B1/1 according to the European language standard; To provide students with the confidence to communicate in Georgian with patients and medical staff in clinical settings considering specific terminology based on students' needs.
5. **Prerequisite:** Georgian Language for Medical Education II
6. **Co-requisite:** N/A
7. **Intended learning outcomes**
 - 1.0. Reads for main points and specific information;
 - 2.0. Answers comprehension questions on a text;
 - 3.0. Makes inferences from written texts;
 - 4.0. Identifies different text types (narrative, news report, informational text etc.);
 - 5.0. Uses text types as models for different types of writing;
 - 6.0. Writes emails, descriptions and narratives;
 - 7.0. Writes for study purposes;
 - 8.0. Gives opinions in writing;
 - 9.0. Uses several types of linking words in their writing;
 - 10.0. Listens for main idea and specific information;
 - 11.0. Uses listening as a basis for discussion and extension;
 - 12.0. Answers questions based on listening texts;
 - 13.0. Listens and reconstructs a story;
 - 14.0. Talks about a variety of familiar topics;
 - 15.0. Gives advice and make suggestions;
 - 16.0. Gives opinions and suggest solutions to problems.
8. **Teaching method(s)**
 - Interactive Lectures
 - Laboratory work
 - Workbook
 - Explanatory
 - Demonstration
 - Verbal/Oral

9. **Course content:** Past medical history; Family history; Social history; present complaints; Pain; Body temperature and sweat; Nausea and vomiting; Dyspnoea; Cough; Body weight and diet; Heart symptoms; blood; Bowel movements;

10. **Form(s) of assessment and details explaining how the module mark is calculated**

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	24
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		12
	Essay	Essay Checklist		10
	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		10

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	საკომუნიკაციო ქართული 2 Communication Georgian 1	Shavtvaladze,N	2014, Savtvaladze
2.	Teacher's handout		
3.	მოუსმინეთ ქართულ დიალოგებს 1 +CD Listen to Georgian dialogues	Shavtvaladze,N	2006, Shavtvaladze
4.	ბილიკი წიგნი პირველი: ქართული ენა Biliki:Book 1:Georgian language	Shavtvaladze,N	2009, თბილისი: Tbilisi
5.	ბილიკი: სამუშაო რვეული 1 დონე Biliki:work book 1	Shavtvaladze,N	2008, თბილისი: Tbilisi
6.	ბილიკი: ქართული დიალოგები. საკითხავი წიგნი Biliki: Georgian dialogues: reading book	Shavtvaladze,N	2008, თბილისი: Tbilisi

SYLLABUS

Semester V

Infectious Diseases & Hematopoietic System

1. **Course identification code: MEDC 3110**
2. **Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
3. **Person(s) responsible for course: Salome Tsaria, Nino Lomidze**

Lecturers: Infectious Diseases- Lali Sharvadze; Medical Microbiology – Marina Tediashvili; Pharmacology – Tamar Kezeli; Pathology – Tamar Goderidze; Hematology – Tamta Makharadze; Immunology – Peter Lydyard; Medical Genetics – Khatuna Vashakmadze; Pediatrics – Leila Beirishvili; Pathophysiology – Tamar Goderidze; Phytotherapy – Tamar Kezeli; Oncology – Davit Tabagari; Family Medicine – Tamar Goderidze; Emergency Medicine – Irina Tsirkvadze; Propaedeutic – Giorgi Javakhishvili; Laboratory Medicine - Nino Gulatava; Diagnostic Radiology - Tamar Dundua; Introduction to Clinical Practice III – Marina Jimukhadze; Scientific Research and Project Course III – Leila Beirishvili.

4. Goals

Infectious Diseases

In evidence based manner:

1. To remind knowledge on structures of agents that cause infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
2. To convey:
 - 2.1. knowledge on pathogenesis mechanisms of agents that cause infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
 - 2.2. knowledge on mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing infectious clinical conditions, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. necessary knowledge on pharmacology of drugs used in infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
 - 2.5. necessary knowledge on genetical basis of clinical conditions;
3. To equip with basic clinical skills, (intravenous injection on phantom model), required at primary health care service level;
4. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Hematopoietic System

In evidence based manner:

1. To remind knowledge on anatomy, histology and physiology of hematopoietic system;
2. To convey:
 - 2.1 knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems;
 - 2.2. knowledge on mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to hematopoietic system;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to hematopoietic system, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. knowledge on pharmacology of drugs that are effective on hematopoietic system or on clinical conditions involving hematopoietic system;
 - 2.5. knowledge on phytotherapeutic agents that have immune-modulatory effects;
 - 2.6. basic knowledge on phytotherapy;
3. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Scientific Research and Project Course III

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beitrishvili;

Goals

1. To equip third year medical students with knowledge and skills of writing a scientific project proposal, and furthermore to equip with basic knowledge and skills for scientific career;
 2. To help students identify a project in an area of their interest and to select a mentor who can support them in pursuing and completion of their project;
 3. To best support students, three thematic areas of scholarship have been defined. These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area;
 4. Students continue their research project with mentors during the 4th and 5th years.
-
5. **Prerequisite:** *MEDC 2160 Cardiovascular System; MEDC 2170 Respiratory System; MEDC 2180 Gastrointestinal System and Metabolism; MEDC 2210 Nervous system; MEDC 2220 Urogenital and Endocrine Systems; MEDC 2130 Introduction to Clinical Practice II; MEDC 2260 Scientific Research and Project Course II.*
 6. **Co-requisite:** N/A
 7. **Intended learning outcomes**

Infectious Diseases

1.0. Explains basic characteristics of infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

2.0. Recalls structures, and:

2.1. explains mechanisms of pathogenesis of agents (bacteria, viruses, fungi, parasites, prions) that cause infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

3.0. Classifies infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, based on causative agents and systems;

4.0. Explains mechanisms of change in structure and function at molecular, cellular, tissue, system, multi-system and organismal levels in infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

5.0. Explains mechanisms of host immune response to and consequences in infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

6.0. Explains mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

7.0. At multi-system level or related to a body system:

- for healthy conditions in an individual or community with a request against infectious clinical conditions that pose risks;
- in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a community;
- for infectious clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

Explains in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes;

- health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:

7.1. Practices of history taking and physical examination;

7.2. Evaluates emergency case (sepsis and septic shock);

7.3. Approaches to healthy individual or patient (fever);

7.4. Laboratory tests/examinations (urine sample collection, urine strip/dipstick test, urine culture);

7.5. Imaging tests/examinations (nuclear medicine tests in infectious diseases);

7.6. Points of care testing (urine strip/dipstick test);

7.7. Makes preliminary diagnosis or definitive diagnosis decision;

7.8. Makes non-intervention or intervention decision;

- 7.9. Practices at non-intervention or intervention;
- 7.10. Refers/transport of healthy individual or patient;
- 8.1. Lists goals and principles of drug use;
- 8.2. Describes effects;
- 8.3. Explains mechanism of action (pharmacodynamics);
- 8.4. Lists indications, contraindications, pharmacological features, pharmacokinetic characteristics, drug-drug interactions and side effects;
- 8.5. Explains resistance mechanisms of drugs (principles of antimicrobial chemotherapy; antibacterial, antifungal, antiviral, antiprotozoal, antihelminthic drugs, antiseptics and disinfectants) used in infectious clinical conditions;
- 9.0. Explains hereditary immune system disorders;
- 10.0. Performs basic clinical skills, practiced on phantom models (suturing technique), required at primary health care service level.

Hematopoietic System

- H1. Recalls anatomy, histology and physiology of hematopoietic system;
- H2. Explains etiopathogenesis of clinical conditions (hematological syndromes, disorders and diseases, leishmaniasis) which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to hematopoietic system;
- H3. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to hematopoietic system;
- H4. At multi-system level and/or related to hematopoietic system:
 - for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
 - in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a community;
 - for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
- Explains** in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes:
 - health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:
 - H4.1. practices history taking and physical examination;
 - H4.2. evaluates emergency case;
 - H4.3. approaches to healthy individual or patient (anemia, lymphadenopathy);
 - H4.4. laboratory tests/examinations (peripheral/venous blood collection for hematology tests, hematology tests for anemia);
 - H4.5. imaging tests/examinations (nuclear medicine tests in hematology);
 - H4.6. points of care testing (hematology-peripheral blood smear examination, hematology-complete blood count);

- H4.7. makes preliminary diagnosis or definitive diagnosis decision;
- H4.8. makes non-intervention or intervention decision;
- H4.9. practises at non-intervention or intervention;
- H4.10. refers/transport of healthy individual or patient;
- H5. Classifies blood products and blood groups;
- H6. Defines principles of transfusion;
- H7. Explains pharmacology of drugs (antianemic drugs, antineoplastic drugs, hematostatic drugs and blood products, immunomodulators) that are effective on hematopoietic system or on clinical conditions involving hematopoietic system;
- H8. Explains mechanisms of bone marrow toxicity of drugs and other chemicals;
- H9. Lists principles of cancer chemotherapy;
- H10. Explains chemotherapy in leukemia and lymphoma;
- H11. Lists phytotherapeutic agents with immunomodulatory effects;
- H12. Explains basic knowledge on phytotherapy (basic concepts and terms, uses in modern medicine, regulations, standardization and quality control).

Introduction to Clinical Practice III - Infectious Diseases & Hematopoietic System

Intended learning outcomes

Knowledge and Understanding

- 1.0. Defines the basic terminology used in general and organ system specific physical examination;
- 2.0. Describes the steps of history taking and physical examination of ear/nose/throat;
- 3.0. Describes suture materials and choose the appropriate material.

Skills

- 4.0. Performs sutures in accordance with the skill procedure;
- 5.0. Performs history taking and physical examination of ear/nose/throat on simulated patients or mannequins in accordance with the skill procedure;
- 7.0. Performs intramuscular, intradermal and subcutaneous injection as well as intravenous cannulation applications in an adult model in accordance with the skill procedure;
- 8.0. Describes the process to be carried out to the patient before any intervention.

Attitude

- 9.0. Values the importance of informed consent;
- 10.0. Pays attention to patient privacy;
- 11.0. Values the importance of not exceeding the limits of his/her own competency level.

Scientific Research and Project Course III

Intended learning outcomes

- 1.0. Develop a research question, problem, or design;
- 2.0. Apply basic principles and knowledge found in the literature related to the research question;

- 3.0. Develop a research proposal to address or resolve a specific research question or problem; Apply and evaluate methodology throughout the project;
- 4.0. Collect, interpret, and critique data to resolve a research question or evaluate a design;
- 5.0. Communicate research findings;
- 6.0. Appreciate what the process of scientific research entails.

8. Teaching method(s)

Lecture

Theoretical interactive learning - Seminars

Videos for learning

Videos for teaching

Practical Work

Laboratory Work

Teaching by using the simulations

Learning with usage of simulators

Teaching through standardized patients

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

Participating in scientific research

Teaching research skills

9. Course content:

Infectious Diseases: Hospital Infection; Febrile Neutropenia; Bacterial and Viral Skin & Soft Tissue Infections; Infections in Immunocompromised Host; Zoonotic Diseases I; Zoonotic Diseases II; Fungal and Parasitic Skin and Soft Tissue Infections; Blood Components and Transfusion Indications; Blood Groups; Occupational Health Hazards I; Occupational Health Hazards II; Vaccines; Semiology-I; Semiology-II; Parasitic Infections II; Lymphoreticular Infections I; Lymphoreticular Infections II; Tuberculosis & Other Mycobacterial Infections I; Tuberculosis & Other Mycobacterial Infections II.

Medical Microbiology: Antimicrobial Agents: Mechanisms of Resistance I; Antimicrobial Agents: Mechanisms of Resistance II; Antimicrobial Agents: Mechanisms of Resistance II; Laboratory Diagnosis of Infectious Diseases I; Laboratory Diagnosis of Infectious Diseases II; Laboratory Diagnosis of Infectious Diseases III; Laboratory Diagnosis of Infectious Diseases IV; Laboratory Diagnosis of Infectious Diseases V; Antimicrobial Agents: Basic Concepts & Principles I; Antimicrobial Agents: Basic Concepts & Principles II; Laboratory Diagnosis of Infectious Diseases VI (Advancements in Diagnostic Microbiology)

Pharmacology: Introduction to Antimicrobial Chemotherapy; β Lactam Antibiotics I; β Lactam Antibiotics II; Vancomycin & Other Cell Wall Synthesis Inhibitors; Antimycobacterial Drugs; Aminoglycosides; Sulfonamides, Chloramphenicol & Tetracyclines; Hematostatic Drugs and Hematostatic Blood Products I; Hematostatic Drugs and Hematostatic Blood Products II; Antiemetic Drugs; Anthelmintic Drugs; Antiprotozoal Drugs; Immunomodulators; Antimalarial

Drugs; Quinolones; Macrolides; Antiviral Drugs; Antifungal Drugs; Pharmacological Basis of Cancer Therapy I; Pharmacological Basis of Cancer Therapy II

Pathology: Pathology of Mycobacterial Infections; Pathology Tissue Response to Infections; General Review of Pathology of Infections Disease; Pathology of Viral Infections I; Pathology of Viral Infections II; Pathology of Bone Marrow-1; Pathology of Bone Marrow-2; Hodgkin's Lymphoma; Non/Hodgkin's Lymphoma I; Non/Hodgkin's Lymphoma II; Pathology of Myeloproliferative Diseases I; Pathology of Myeloproliferative Diseases II; Lymphoreactive Disease; Pathology of Spleen

Hematology: Myeloproliferative Diseases; Chronic Leukemia; Aplastic and Hypoplastic Anemias; Nutritional Anemias; Plasma Cell Dyscrasias; Hypercoagulability; Immune Acquired Hemolytic Anemias / Non Immune Acquired Hemolytic Anemias; Quantitative and Qualitative Platelet Disorders; Approach to the Patient with Anemia and Laboratory Tests in Diagnosis with Anemia; Lymphoma; Acute Leukemias

Immunology: Immunodeficiencies; Case Discussion on Immunity to Infection; Transplantation Immunology

Medical Genetic: Molecular Basis of Hemoglobinopathies; Introduction to Clinical Genetics; Inherited Immune System Disorders; Genetics of Oncology I; Genetics of Oncology II

Pediatrics: Introduction to Anemias in Childhood; Introduction to Hemolytic Anemias Thalassemsias and Hemoglobinopathies (Sickle Cell Anemia and Others); Hemophilia and other Coagulopathies in Childhood; Approach to the Pediatric Patient with Fever

Pathophysiology: Pathophysiology of Infectious Diseases I; Pathophysiology of Infectious Diseases II; Pathophysiology of Infectious Diseases III; Pathophysiology of Hematopoietic System Disorders I; Pathophysiology of Hematopoietic System Disorders II; Pathophysiology of Hematopoietic System Disorders III

Phytotherapy: Phytotherapy I; Phytotherapy II; Phytotherapy III

Oncology: Introduction to Clinical Oncology I; Introduction to Clinical Oncology II; Treatment Approaches of Cancer; Introduction to Clinical Oncology

Family Medicine: Introduction to the Program of Family Medicine

Emergency Medicine: Emergency Evaluation of Sepsis and Septic Shock

Introduction to Clinical Practice III - Infectious Diseases & Hematopoietic System: Suturing technique; Ear-Nose-Throat Examination.

Scientific Research and Project Course III - Small group study (SRPC) - Introduction to Clinical Practice III - Infectious Diseases & Hematopoietic System: Suturing technique; Ear-Nose-Throat Examination

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	32
		EMQ: Extended Matching Questions	Final Exam	20
		FSAQ: Fill-in-the Blank Short Answer Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	SPP: Scientific Project Proposal	SPP Checklist		12

11. Recommended literature:

Infectious Diseases and Clinical Microbiology

Murray, Patrick R, Rosenthal, Ken S, Pfaller, Michael A. Medical Microbiology with STUDENT

CONSULT Online Access. 8th Edition, 2016.

Medical Genetics

Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436

Pharmacology

1. Harvey, Richard A. Lippincott's Illustrated Review of Pharmacology. 6th ed., Wolters Kluwer Health, 2015. ISBN: 978-1469887562.
2. Katzung, Bertram G., Masters, Susan B., Trevor Anthony J. Katzung's Basic & Clinical Pharmacology. 14th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259641152.
3. Brunton, Laurence, Chabner, Bruce, Knollman, Bjorn. Goodman&Gilman's The Pharmacological Basis of Therapeutics. 13th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259584732.

Pathology

Abbas Aster, Kumar. Robbins Basic Pathology. 9th edition, Saunders, Elsevier Inc. 2013. ISBN:978-0-8089-2432-6

Pathophysiology

Pathophysiology of Disease, An Introduction to Clinical Medicine, 8th edition, Gary D. Hammer MD, PhD; Stephen J McPhee, MD; 2019.

General Surgery

Brunicaudi, F. Schwartz's Principles of Surgery, 10th edition, July 16, 2014, ISBN: 0071796754 / 9780071796750

Hematology

Hematology for the Medical Student, Schmaier AH, and Petruzzelli, Lippincott Williams and Wilkins, 2003; Wintrobe's Clinical Hematology 2018

Immunology

Oxford Handbook of Clinical Immunology and Allergy Gavin Spickett 2019

Pediatrics

Nelson Textbook of Pediatrics Robert M. Kliegman, MD, Bonita M.D. Stanton, MD, Joseph St. Geme, Nina Schor, MD, PhD and Richard E. Behrman, MD Saunders, 2011

CURRENT Diagnosis Treatment:

(William W. Hay Jr, Myron J. Levin, Robin R. Deterding, Mark J. Abzug, Judith M. Sondheimer)
Lange

Phytotherapy

Fundamentals of Pharmacognosy and Phytotherapy Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson

Oncology

Abeloff's Clinical Oncology 2020

Family Medicine

Fred F. Ferri et al. Ferri's Clinical Advisor 2020, 1st Edition; Skills for Communicating with Patients By Jonathan Silverman, Suzanne Kurtz, Juliet Draper; Jill C. Cash, Cheryl A. Glass, Family Practice Guidelines, Fifth Edition – Complete Family Practice Primary Care Resource Book; Meghan M. Kiefer et al. Pocket Primary Care (Pocket Notebook Series) 2nd Edition; Adam Peter Staten & Paul Staten; Practical General Practice, 7th Edition

Emergency Medicine

Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition; Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency Medicine 6th edition

Introduction to Clinical Practice III

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition; Jane W. Ball, Joyce E. Dains, John A. Flynn, Barry S. Solomon, Rosalynn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018
8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

Scientific Research and Project Course III

1. Research skills in medical education
<https://www.mededpublish.org/manuscripts/1760>
2. Future of Scholarly Publishing and Scholarly Communication, Report of the Expert Group to the European Commission, 2019:
https://www.eosc-portal.eu/sites/default/files/KI0518070ENN.en_.pdf
3. Casie Gillette, 5 Ways to Improve Your Public Speaking Skills, SEJ, 2019
<https://www.searchenginejournal.com/improve-public-speaking-skills/290309/#close>
4. Scientific Skills as Core Competences in Medical Education: What do medical students think?
<https://www.tandfonline.com/doi/abs/10.1080/09500693.2015.1054919>

SYLLABUS

Semester V

Cardiovascular and Respiratory System

1. **Course identification code: MEDC 3120**
2. **Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
3. **Person(s) responsible for course: Salome Tsaria; Nino Lomidze**

Lecturers: Pharmacology – Tamar Kezeli; Pathology – Tamar Goderidze; Chest Medicine - Nino Rachvelishvili; Cardiology – Tamar Vakhtangadze; Pathophysiology – Tamar Goderidze; Infectious Disease and Medical Microbiology – Lali Sharvadze and Marina Tediashvili; ENT Diseases – Nino Sharashenidze; Thoracic Surgery - Nikoloz Pruidze; Family medicine – Tamar Goderidze; Pediatrics – Leila Beitrishvili; Medical Genetics – Khatuna Vashakmadze; Emergency Medicine – Irina Tsirkvadze; Immunology – Peter Lydyard; Propaedeutic – Giorgi Javakhishvili; Laboratory Medicine - Nino Gulatava; Diagnostic Radiology - Tamar Dundua; Introduction to Clinical Practice III – Marina Jimukhadze; Scientific Research and Project Course III – Leila Beitrishvili.

4. Goals

In evidence based manner

1. To remind knowledge on anatomy, histology and physiology of cardiovascular and respiratory systems;
2. To convey:
 - 2.1. knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems;
 - 2.2. knowledge on mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to cardiovascular and respiratory systems, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. knowledge on principles of prescription;
 - 2.5. necessary knowledge on pharmacology of drugs effective on cardiovascular system,
 - 2.6. necessary knowledge on radiation physics and biology and its use in oncology;
3. To equip with basic and advanced clinical skills (advanced cardiac life support-C2, approach to patient with cardiovascular clinical condition-C2) required at primary health care service level;
4. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Scientific Research and Project Course III

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beitrishvili;

Goals

1. To equip third year medical students with knowledge and skills of writing a scientific project proposal, and furthermore to equip with basic knowledge and skills for scientific career;
 2. To help students identify a project in an area of their interest and to select a mentor who can support them in pursuing and completion of their project;
 3. To best support students, three thematic areas of scholarship have been defined. These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area;
 4. Students continue their research project with mentors during the 4th and 5th years.
-
5. **Prerequisite:** *MEDC 2160 Cardiovascular System; MEDC 2170 Respiratory System; MEDC 2180 Gastrointestinal System and Metabolism; MEDC 2210 Nervous system; MEDC 2220 Urogenital and Endocrine Systems; MEDC 2130 Introduction to Clinical Practice II; MEDC 2260 Scientific Research and Project Course II.*
 6. **Co-requisite:** N/A
 7. **Intended learning outcomes;**
 - 1.0. Recalls anatomy, histology and physiology of cardiovascular and respiratory systems;
 - 2.0. Explains etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems:
 - 2.1. upper respiratory tract problems, nasal obstruction;
 - 2.2. infectious clinical conditions with upper and lower respiratory tract and lung involvement - pneumonia, tuberculosis;
 - 2.3. circulatory lung disorders -pulmonary embolism;
 - 2.4. obstructive/restrictive lung diseases, respiratory insufficiency, tobacco use, lung tumors, other lung diseases;
 - 2.5. diseases of coronary circulation and coronary arteries, diseases of cardiac valves, myocardial and pericardial diseases, blood stream infections and sepsis, cardiac problems in adults and children, mediastinal diseases, nasopharyngeal and oropharyngeal diseases, nasal and paranasal sinus diseases, diseases of middle ear and eustachian tube, laryngeal diseases, voice disorders;
 - 3.0. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to cardiovascular and respiratory systems;
 - 4.0. At multi-system level and/or related to cardiovascular and respiratory systems:

- for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
- in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a community;
- for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

Explains in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes, health care processes, clinical decision making process, clinical decisions and clinical practices;

- which are required for management at primary health care service level:

- 4.1. practices of history taking and physical examination (cardiovascular, pulmonary)
- 4.2. evaluates emergency case (dyspnea);
- 4.3. approaches to healthy individual or patient (cardiovascular disease, chest pain, cough and hemoptysis, dyspnea);
- 4.4. laboratory tests/examinations (cardiac markers-, coagulation tests-, blood gases-, pulmonary function tests);
- 4.5. imaging tests/examinations (radionuclide ventriculography, myocardial scintigraphy, cardiac PET, ventilation/perfusion scintigraphy, PET in lung cancer);
- 4.6. point of care testing (urine strip/dipstick test);
- 4.7. makes preliminary diagnosis or definitive diagnosis decision;
- 4.8. makes non-intervention or intervention decision;
- 4.9. practices non-intervention or intervention;
- 4.10. referral/transport of healthy individual or patient;
- 5.0. Defines radiation physics, biology and its use in oncology;
- 6.0. Explains implementation of hypertension treatment guidelines;
- 7.0. Explains pharmacology of drugs effective on cardiovascular system (autonomic system pharmacology, renin-angiotensin system pharmacology, calcium channel blockers, pharmacological approach to ischemic and congestive cardiovascular conditions, drugs effecting body fluids and volume, anti-hypertension drugs, hypolipidemic drugs, antiarrhythmic drugs, antiplatelet, antithrombotic and thrombolytic drugs, drugs used in the treatment of asthma and chronic obstructive pulmonary disease, antitussive, expectorant and surfactant drugs);
- 8.0. Explains genetics of cardiovascular and respiratory system;
- 9.0. Performs basic clinical skills, practiced on phantom models (advanced cardiac life support), and advanced clinical skills, practiced on simulated/standardized patients (approach to patient with cardiovascular clinical condition), required at primary health care service.

Introduction to Clinical Practice III - Cardiovascular & Respiratory System

Intended learning outcomes

Knowledge and Understanding

- 1.0. Defines the basic terminology used in general and organ system specific physical examination;
- 2.0. Describes the steps of history taking and physical examination of cardiovascular and pulmonary system.

Skills

- 3.0. Applies Advance Cardiac Life Support on an adult model in accordance with the skill procedure;
- 4.0. Performs history taking and physical examination of cardiovascular and pulmonary system on simulated patients or mannequins in accordance with the skill procedure;
- 5.0. Describes the process to be carried out to the patient before any intervention.

Attitude

- 6.0. Values the importance of informed consent;
- 7.0. Pays attention to patient privacy;
- 8.0. Values the importance of not exceeding the limits of his/her own competency level.

Scientific Research and Project Course III

Intended learning outcomes

- 1.0. Develop a research question, problem, or design;
- 2.0. Apply basic principles and knowledge found in the literature related to the research question;
- 3.0. Develop a research proposal to address or resolve a specific research question or problem; Apply and evaluate methodology throughout the project;
- 4.0. Collect, interpret, and critique data to resolve a research question or evaluate a design;
- 5.0. Communicate research findings.

8. Teaching method(s)

Lecture

Theoretical interactive learning - Seminars

Videos for learning

Videos for teaching

Practical Work

Laboratory Work

Teaching by using the simulations

Learning with usage of simulators

Teaching through standardized patients

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

Participating in scientific research

Teaching research skills

9. Course content:

Pharmacology: Acetylcholinesterase Inhibitors; Acetylcholine and Directly Acting Parasympathomimetic Drugs; Introduction to Autonomic System Pharmacology; Parasympatholytic Drugs; Sympathomimetic Drugs: Catecholamines & Noncatecholamines; Pharmacology Case Studies; Adrenergic Receptor Blockers; Adrenergic Neuron Blockers; Diuretic Agents I; Diuretic Agents II; Pharmacology of Renin Angiotensin System; Drugs Used in the Treatment of Dyslipidemias I; Drugs Used in the Treatment of Dyslipidemias II; Drugs Used in Cardiac Arrhythmias I; Drugs Used in Cardiac Arrhythmias II; Drugs Used in the Treatment of Angina Pectoris; Hypertension Treatment Guidelines; Anticoagulant, Antiplatelet & Thrombolytic drugs; Anti-hypertensive Drugs I; Anti-hypertensive Drugs II; Treatment of Cough & Drugs Used in the Treatment of Common Cold; Drugs Used in Congestive Heart Disease I; Drugs Used in Congestive Heart Disease II; Pharmacology and Toxicology of Tobacco; Drugs Used in the Treatment of Asthma & Chronic Obstructive Lung Disease;

Pathology: Rheumatic Heart Disease; CVS Tumors; Pathology of Endocardium & Heart Valves I; Pathology of Endocardium & Heart Valves II; Atherosclerosis & Hypertension I; Atherosclerosis & Hypertension II; Tumors of the Respiratory System I; Tumors of the Respiratory System II; Pathology of Pleural and Mediastinal Diseases; Chronic Restrictive Pulmonary Diseases I; Chronic Restrictive Pulmonary Diseases II; Congenital Heart Disease I; Congenital Heart Disease II; Myocardium; Ischemic Heart Disease I; Ischemic Heart Disease II; Pulmonary Infections I; Pulmonary Infections II; Chronic Obstructive Pulmonary Diseases; Asthma Bronchiale; Congenital Lung Anomalies & Atelectasis; Pathology of Upper Respiratory Tract; Congestive Heart Failure; Congestive Heart Failure & Pericardium;

Chest Medicine: History and Symptoms in Pulmonary Diseases; Physical Examination and Signs in Pulmonary Diseases; Chronic Obstructive Pulmonary Disease; Diagnostic Methods in Pulmonary Medicine; Clinical Application of Pulmonary Function Tests; Bronchial Hyperreactivity and Asthma; Pulmonary Tuberculosis; Pulmonary Embolism; Special Pulmonary Problems; Tracheobronchitis; Pneumoniae; Pulmonary Hypertension; Respiratory Failure; Bronchiectasis; Lung Cancer; Pleural Diseases; Interstitial Lung Diseases; Sleep Apnea Syndrome;

Cardiology: Coronary Artery Disease I; Coronary Artery Disease II; Valvular Heart Diseases; Infective Endocarditis and Acute Rheumatic Fever; General Signs and Principal Symptoms in Cardiovascular System Diseases; Examination of the Heart; Congestive Heart Failure I; Congestive Heart Failure II; Grown-up Congenital Heart Disease; Hypertension; Pericardial Diseases; Electrocardiography I; Electrocardiography II; Cardiac Arrhythmias;

Pathophysiology: Pathophysiology of Cardiovascular System Disorders I; Pathophysiology of Cardiovascular System Disorders II; Pathophysiology of Cardiovascular System Disorders III;

Pathophysiology of Respiratory System Disorders I; Pathophysiology of Respiratory System Disorders II; Pathophysiology of Respiratory System Disorders III; Pathophysiology of Respiratory System Disorders IV;

Infectious Diseases and Microbiology: Bloodstream Invasion & Sepsis I; Bloodstream Invasion & Sepsis II; Cardiac Infections; Upper and Lower Respiratory System Infections I; Upper and Lower Respiratory System Infections II;

Ear-Nose-Throat (ENT): Diseases of the Nose and Paranasal Sinuses; Nasopharyngeal and Oropharyngeal Diseases; Laryngeal and Voice Diseases; Diseases of the Middle Ear and Eustachian Tube;

Thoracic Surgery: Respiratory Muscles and Surgical Anatomy of Thorax; Surgical Disorders of Mediastinum and the Diaphragm; Surgical Treatment of Pulmonary Diseases;

Family Medicine: Approach to Patient with Chest Pain in Primary Care I; Approach to Patient with Chest Pain in Primary Care II; Approach to the Patient with Cough and Hemoptysis in Primary Care; Approach to the Patient with Dyspnea in Primary Care;

Pediatrics: Approach to the Pediatric Patient with Pneumonia; Congenital Heart Disease in Pediatrics;

Medical Genetics: Inherited Respiratory System Disorders; Inherited Cardiovascular Disorders;

Radiology: X-Ray Examination of the Lungs;

Emergency Medicine: Emergency Evaluation of Dyspnea; Pediatric Advanced Life Support;

Immunology: Hypersensitivity reactions;

Introduction to Clinical Practice III - Cardiovascular & Respiratory Systems: Advanced Cardiac Life Support; Examination of Cardiovascular and Respiratory System.

Scientific Research and Project Course III - Small group study (SRPC) – Introduction to Clinical Practice III - Cardiovascular & Respiratory Systems: Advanced Cardiac Life Support; Examination of Cardiovascular and Respiratory System.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	32
		EMQ: Extended Matching Questions	Final Exam	20
		FSAQ: Fill-in-the Blank Short Answer Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	SPP: Scientific Project Proposal	SPP Checklist		12

11. Recommended literature:

Infectious Diseases and Clinical Microbiology

Murray, Patrick R, Rosenthal, Ken S, Pfaller, Michael A.. Medical Microbiology with STUDENT CONSULT Online Access. 8th Edition, 2016.

Medical Genetics

1. Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436

Pharmacology

1. Harvey, Richard A. Lippincott's Illustrated Review of Pharmacology. 6th ed., Wolters Kluwer Health, 2015. ISBN: 978-1469887562.
2. Katzung, Bertram G., Masters, Susan B., Trevor Anthony J. Katzung's Basic & Clinical Pharmacology. 14th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259641152.
3. Brunton, Laurence, Chabner, Bruce, Knollman, Bjorn. Goodman&Gilman's The Pharmacological Basis of Therapeutics. 13th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259584732.

Pathology

Abbas Aster, Kumar. Robbins Basic Pathology. 9th edition, Saunders, Elsevier Inc. 2013.
ISBN:978-0-8089-2432-6

Pathophysiology

Pathophysiology of Disease, An Introduction to Clinical Medicine, 8th edition, Gary D. Hammer MD, PhD; Stephen J McPhee, MD; 2019.

General Surgery

Brunicaudi, F. Schwartz's Principles of Surgery, 10th edition, July 16, 2014, ISBN: 0071796754 / 9780071796750

Hematology

Hematology for the Medical Student, Schmaier AH, and Petruzzelli, Lippincott Williams and Wilkins, 2003; Wintrobe's Clinical Hematology 2018

Immunology

Oxford Handbook of Clinical Immunology and Allergy Gavin Spickett 2019

Pediatrics

Nelson Textbook of Pediatrics Robert M. Kliegman, MD, Bonita M.D. Stanton, MD, Joseph St. Geme, Nina Schor, MD, PhD and Richard E. Behrman, MD Saunders, 2011
CURRENT Diagnosis Treatment:
(William W. Hay Jr, Myron J. Levin, Robin R. Deterding, Mark J. Abzug, Judith M. Sondheimer)
Lange

Phytotherapy

Fundamentals of Pharmacognosy and Phytotherapy Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson

Oncology

Abeloff's Clinical Oncology 2020

Family Medicine

Fred F. Ferri et al. Ferri's Clinical Advisor 2020, 1st Edition; Skills for Communicating with Patients By Jonathan Silverman, Suzanne Kurtz, Juliet Draper; Jill C. Cash, Cheryl A. Glass, Family Practice Guidelines, Fifth Edition – Complete Family Practice Primary Care Resource Book; Meghan M. Kiefer et al. Pocket Primary Care (Pocket Notebook Series) 2nd Edition; Adam Peter Staten & Paul Staten; Practical General Practice, 7th Edition

Emergency Medicine

Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition; Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency Medicine 6th edition

Chest Medicine

Chest X-rays for Medical Students 2011

Cardiology

Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, 2-Volume Set, 10th Edition
Marriott's Practical Electrocardiography

Ear-Nose-Throat (ENT)

Diseases of Ear, Nose and Throat 2013

Thoracic Surgery

Shields' General Thoracic Surgery 2018

Diagnostic Radiology

Brant and Helms' Fundamentals of Diagnostic Radiology; Grainger & Allison's Diagnostic Radiology Essentials

Introduction to Clinical Practice III

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition; Jane W. Ball, Joyce E. Dains, John A. Flynn, Barry S. Solomon, Rosalyn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018

8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

Scientific Research and Project Course III

1. Research skills in medical education

<https://www.mededpublish.org/manuscripts/1760>

2. Future of Scholarly Publishing and Scholarly Communication, Report of the Expert Group to the European Commission, 2019:

https://www.eosc-portal.eu/sites/default/files/KI0518070ENN.en_.pdf

3. Casie Gillette, 5 Ways to Improve Your Public Speaking Skills, SEJ, 2019

<https://www.searchenginejournal.com/improve-public-speaking-skills/290309/#close>

4. Scientific Skills as Core Competences in Medical Education: What do medical students think?

<https://www.tandfonline.com/doi/abs/10.1080/09500693.2015.1054919>

SYLLABUS

Semester V

Gastrointestinal Systems

1. **Course identification code: MEDC3130**
2. **Credit Points: 4 ECTS, Contact Hours: 62; Independent Hours: 58; Sum: 120.**
3. **Person(s) responsible for course: Salome Tsaria; Nino Lomidze**

Lecturers: Gastroenterohepatology – Rusudan Tsulaia; Pathology, Pathophysiology, Family Medicine – Tamar Goderidze; Pharmacology, Phytotherapy – Tamar Kezeli; Infectious Disease and Medical Microbiology – Marina Tediashvili; Immunology – Peter Lydyard; Medical Genetics – Khatuna Vashakmadze; Emergency Medicine – Irina tsirkvadze; Pediatrics – Lali Beitrishvili; Pediatric Surgery, General Surgery – Nikoloz Pruidze; Propaedeutic – Giorgi Javakhishvili; Laboratory Medicine - Nino Gulatava; Diagnostic Radiology - Tamar Dundua; Introduction to Clinical Practice III – Marina Jimukhadze; Scientific Research and Project Course III – Leila Beitrishvili.

4. Goals

Gastrointestinal Systems

In evidence based manner:

1. To remind knowledge on anatomy, histology and physiology of gastrointestinal system;
2. To convey:
 - 2.1. knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to gastrointestinal system;
 - 2.2. knowledge on mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to gastrointestinal system;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to gastrointestinal system, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. knowledge on pharmacology of drugs that are effective on gastrointestinal system or on clinical conditions involving gastrointestinal system;
 - 2.5. knowledge on phytotherapeutic agents that are effective on gastrointestinal system or on clinical conditions involving gastrointestinal system;
 - 2.6. necessary knowledge on legal regulations and ethical principles for end-of-life decisions;
3. To convey knowledge on use of phytotherapy in an evidence based manner and drug interactions in phytotherapy;
4. To equip with basic and advanced clinical skills (approach to patient with gastrointestinal clinical condition-C4) required at primary health care service level;
5. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Scientific Research and Project Course III

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beirishvili;

Goals

1. To equip third year medical students with knowledge and skills of writing a scientific project proposal, and furthermore to equip with basic knowledge and skills for scientific career;
 2. To help students identify a project in an area of their interest and to select a mentor who can support them in pursuing and completion of their project;
 3. To best support students, three thematic areas of scholarship have been defined. These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area;
 4. Students continue their research project with mentors during the 4th and 5th years.
5. **Prerequisite:** MEDC 2160 Cardiovascular System; MEDC 2170 Respiratory System; MEDC 2180 Gastrointestinal System and Metabolism; MEDC 2210 Nervous system; MEDC 2220 Urogenital and Endocrine Systems; MEDC 2130 Introduction to Clinical Practice II; MEDC 2260 Scientific Research and Project Course II.
6. **Co-requisite:** N/A
7. **Intended learning outcomes**
- 1.0. Recalls anatomy, histology and physiology of gastrointestinal system;
 - 2.0. Explains etiopathogenesis of clinical conditions (infections, nutritional disorders, bleedings, clinical conditions related to gastrointestinal organs) which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to gastrointestinal system;
 - 3.0. Explains prevention of clinical conditions, and protection or improvement of health against those clinical conditions related to gastrointestinal system;
 - 4.0. Explains importance of healthy nutrition, principles of balanced diet, and measurement of nutritional status;
 - 5.0. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to gastrointestinal system;
 - 6.0. At multi-system level and/or related to gastrointestinal system:
 - for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
 - in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a community;
 - for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;**Explains** in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes;
 - health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:
 - 7.1. practices of history taking and physical examination (gastrointestinal);
 - 7.2. evaluates of emergency case (acute abdominal pain);

- 7.3. approaches to healthy individual or patient (diarrhea);
- 7.4. laboratory tests/examinations;
- 7.5. imaging tests/examinations (scintigraphy of liver/spleen, PET in gastrointestinal system tumors);
- 7.6. points of care testing;
- 7.7. making preliminary diagnosis or definitive diagnosis decision;
- 7.8. making non-intervention or intervention decision;
- 7.9. practices non-intervention or intervention;
- 7.10. referral/transport of healthy individual or patient;
- 8.0. Lists differences of gastrointestinal clinical conditions that may occur in children;
- 9.0. Explains liver transplantation (indications, contraindications, conditions, risks, methods, patient care, results and monitorization);
- 10.0. Explains pharmacology of drugs (agents used in the treatment of peptic ulcer, emetic and antiemetic agents, laxatives) that are effective on gastrointestinal system or on clinical conditions involving gastrointestinal system;
- 11.0. Explains genetics of gastrointestinal system;
- 12.0. Explains phytotherapeutic agents that are effective on gastrointestinal system or on clinical conditions involving gastrointestinal system;
- 13.0. Conveys knowledge on use of phytotherapy in an evidence based manner and drug interactions in phytotherapy;
- 14.0. Performs basic clinical skills, practiced on phantom models and advanced clinical skills, practiced on simulated/standardized patients (approach to patient with gastrointestinal clinical condition), required at primary health care service.

Introduction to Clinical Practice III - Gastrointestinal System

Intended learning outcomes

Knowledge and Understanding

- 1.0. Defines the basic terminology used in general and organ system specific physical examination;
- 2.0. Describes the steps of history taking and physical examination of gastrointestinal system.

Skills

- 3.0. Performs history taking and physical examination of gastrointestinal system on simulated patients or mannequins in accordance with the skill procedure;
- 4.0. Describes the process to be carried out to the patient before any intervention.

Attitude

- 5.0. Values the importance of informed consent;
- 6.0. Pays attention to patient privacy;
- 7.0. Values the importance of not exceeding the limits of his/her own competency level.

Scientific Research and Project Course III

Intended learning outcomes

- 1.0. Develop a research question, problem, or design;

- 2.0. Apply basic principles and knowledge found in the literature related to the research question;
- 3.0. Develop a research proposal to address or resolve a specific research question or problem; Apply and evaluate methodology throughout the project;
- 4.0. Collect, interpret, and critique data to resolve a research question or evaluate a design;
- 5.0. Communicate research findings;
- 6.0. Appreciate what the process of scientific research entails.

8. Teaching method(s)

Lecture

Theoretical interactive learning - Seminars

Videos for learning

Videos for teaching

Practical Work

Laboratory Work

Teaching by using the simulations

Learning with usage of simulators

Teaching through standardized patients

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

Participating in scientific research

Teaching research skills

9. Course content:

Gastroenteropathology: Functional GI Disorders & Irritable Bowel Disease; Malabsorption; Inflammatory Bowel Disease; Gastritis and Helicobacter Pylori; Gastroesophageal Reflux (GE) and Esophageal Motility Disorder; Semiology I; Semiology II; Tumors of Esophagus, Stomach and Small Intestine; Peptic Ulcer Disease; Autoimmune Hepatitis; Jaundice; Chronic Viral Hepatitis; Abdominal Pain; Disease of the Bile Duct and Gall Bladder; Steatohepatitis; Acute Liver Failure; Wilson Disease and Hemochromatosis; Acute and Chronic Pancreatitis; Tumors of the Bile Ducts and Pancreas; Cirrhosis and Portal Hypertension; Premalignant Lesion of the Colon; Alcoholic Liver Disease; Toxic Hepatitis; Mass Lesions of the Liver;

Pathology: Oral Pathology; Pathology of Esophagus I; Pathology of Esophagus II; Pathology of Stomach I; Pathology of Stomach II; Pathology of Liver I; Pathology of Liver II; Pathology of Appendix & Peritoneum; Pathology of Liver & Biliary System I; Pathology of Liver & Biliary System II; Pathology of Liver & Biliary System III; Pathology of Liver & Biliary System IV; Pathology of Intestinal Diseases I; Pathology of Intestinal Diseases II;

Pharmacology: Agents used in the Treatment of Peptic Ulcer I; Agents used in the Treatment of Peptic Ulcer II; Lecture Laxatives; Antiemetic Agents; Digestive & Antidiarrheal Drugs;

Infectious Diseases and Medical Microbiology: Acute Gastroenteritis; Hepatitis I; Hepatitis II; Food Poisoning;

Pathophysiology: Pathophysiology of Gastro–intestinal Disorders I; Pathophysiology of Gastro–intestinal Disorders II; Pathophysiology of Gastrointestinal Disorders III;

Phytotherapy: Phytotherapy-IV; Phytotherapy-V; Phytotherapy-VI;

Family Medicine: Approach to the Patient with Abdominal Pain Regarding to Primary Care; Approach to the Patient with Diarrhea Regarding to Primary Care;

Medical Genetic: Complex Diseases-Inherited Gastrointestinal System Disorders; Complex Diseases-Inherited Gastrointestinal System Disorders;

Emergency Medicine: Clinical Approach to the Patient with Acute Abdominal Pain; Mesenteric Ischemia;

Pediatrics: Clinical Nutrition;

Pediatric Surgery: Gastrointestinal Bleedings in Children;

General Surgery: Transplantation of liver;

Radiology: Radiology of Gastrointestinal System;

Immunology: Immunologic Tolerance and Autoimmunity; Immunologic Tolerance and Autoimmunity;

Introduction to Clinical Practice III - Gastrointestinal System: History Taking and Physical Examination of Gastrointestinal System.

Scientific Research and Project Course III - Small group study (SRPC) – Introduction to Clinical Practice III - Gastrointestinal System: History Taking and Physical Examination of Gastrointestinal System.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	32
		EMQ: Extended Matching Questions	Final Exam	20
		FSAQ: Fill-in-the Blank Short Answer Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	SPP: Scientific Project Proposal	SPP Checklist		12

11. Recommended literature:

Infectious Diseases and Clinical Microbiology

Murray, Patrick R, Rosenthal, Ken S, Pfaller, Michael A.. Medical Microbiology with STUDENT CONSULT Online Access. 8th Edition, 2016.

Medical Genetics

1. Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436

Pharmacology

1. Harvey, Richard A. Lippincott's Illustrated Review of Pharmacology. 6th ed., Wolters Kluwer Health, 2015. ISBN: 978-1469887562.
2. Katzung, Bertram G., Masters, Susan B., Trevor Anthony J. Katzung's Basic & Clinical Pharmacology. 14th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259641152.
3. Brunton, Laurence, Chabner, Bruce, Knollman, Bjorn. Goodman&Gilman's The Pharmacological Basis of Therapeutics. 13th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259584732.

Pathology

Abbas Aster, Kumar. Robbins Basic Pathology. 9th edition, Saunders, Elsevier Inc. 2013. ISBN:978-0-8089-2432-6

Pathophysiology

Pathophysiology of Disease, An Introduction to Clinical Medicine, 8th edition, Gary D. Hammer MD, PhD; Stephen J McPhee, MD; 2019.

General Surgery

Brunicaardi, F. Schwartz's Principles of Surgery, 10th edition, July 16, 2014, ISBN: 0071796754 / 9780071796750

Immunology

Oxford Handbook of Clinical Immunology and AllergyGavin Spickett 2019

Pediatrics

Nelson Textbook of Pediatrics Robert M. Kliegman, MD, Bonita M.D. Stanton, MD, Joseph St. Geme, Nina Schor, MD, PhD and Richard E. Behrman, MD Saunders, 2011

CURRENT Diagnosis Treatment:

(William W. Hay Jr, Myron J. Levin, Robin R. Deterding, Mark J. Abzug, Judith M. Sondheimer)
Lange

Phytotherapy

Fundamentals of Pharmacognosy and Phytotherapy Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson

Family Medicine

Fred F. Ferri et al. Ferri's Clinical Advisor 2020, 1st Edition; Skills for Communicating with Patients By Jonathan Silverman, Suzanne Kurtz, Juliet Draper; Jill C. Cash, Cheryl A. Glass, Family Practice Guidelines, Fifth Edition – Complete Family Practice Primary Care Resource Book; Meghan M. Kiefer et al. Pocket Primary Care (Pocket Notebook Series) 2nd Edition; Adam Peter Staten & Paul Staten; Practical General Practice, 7th Edition

Emergency Medicine

Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition; Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency Medicine 6th edition

Diagnostic Radiology

Brant and Helms' Fundamentals of Diagnostic Radiology; Grainger & Allison's Diagnostic Radiology Essentials

GastroenteroHepatology

Oxford Handbook of Gastroenterology & Hepatology 2006

Pediatric Surgery

Holcomb and Ashcraft's Pediatric Surgery 2018, Elsevier

General Surgery

Schwartz's Principles of Surgery, 10th edition
Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice, 19th edition.

Introduction to Clinical Practice III

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition;

- Jane W.Ball, Joyce E.Dains, John A. Flynn, Barry S.Solomon, Rosaliyn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
 6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
 7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018
 8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

Scientific Research and Project Course III

1. Research skills in medical education
<https://www.mededpublish.org/manuscripts/1760>
2. Future of Scholarly Publishing and Scholarly Communication, Report of the Expert Group to the European Commission, 2019:
https://www.eosc-portal.eu/sites/default/files/KI0518070ENN.en_.pdf
3. Casie Gillette, 5 Ways to Improve Your Public Speaking Skills, SEJ, 2019
<https://www.searchenginejournal.com/improve-public-speaking-skills/290309/#close>
4. Scientific Skills as Core Competences in Medical Education: What do medical students think?
<https://www.tandfonline.com/doi/abs/10.1080/09500693.2015.1054919>

SYLLABUS

Semester V

Medical Ethics and Medical law

1. **Course identification code: MEDC 3140**
2. **Credit Points: 6 ECTS, Contact Hours: 91; Independent Hours: 89; Sum: 180.**
3. **Person(s) responsible for course: Anano Kiria, Nana Ubilava**
Lecturers: Nata Kazakhashvili; Marina Darakhvelidze; Natia Landia.

4. Goals:

to convey

1. essential knowledge on medical ethics;
2. necessary knowledge, skills and attitudes essential for interpersonal communication skills in medical practice, especially with a focus on cases that may be encountered in routine clinical practice from the aspects of medical ethics and medical law;
3. knowledge of applying and caring for ethical principles of the medical profession;
4. basic legal and ethical principles followed in practice of medical profession;
5. necessary knowledge on ethical problems encountered in health care service and utilization, and on principles of solutions.

5. **Prerequisite:** *MEDC2260 Scientific Research and Project Course II*

6. **Co-requisite:** N/A

7. Intended learning outcomes:

Knowledge and understanding

- 1.0. Justifies ethical principles by recognizing ethics problems and using basic ethics approach;
- 2.0. Defines deontological sanctions recognizing part of medical deontology subjects besides legal subjects;
- 3.0. Outlines importance of informed consent in every medical attempt;
- 4.0. Classifies medical information systems in the framework of legal and ethical codes;
- 5.0. Evaluates doctor's attitude in terms of ethics in recognition of human rights concept in medicine (e.g. in cases of torture, convict Patients' treatment rights, virginity control or dead penalty);
- 5.1. Defines communication;
- 5.2. classifies communication techniques and concepts about communication, recognizing positive and negative aspects of various types of doctor patient relationships;
- 6.0. Explains useful communication techniques in relationship with people who are desperately ill, recognizing people's different roles and different reactions as important bases in the presence of desperate cases;

- 7.0. Lists concept of abortions and connected terms, describes legal and ethical responsibilities in these cases;
- 8.0. Outlines ethics approach and value conflicts about organ donation, considering complete legal regulations and ethical codes in the world and in our country;
- 9.0. Relates doctor's responsibility with ethical principles in distribution and use of medical sources;
- 10.0. Recognizes respect for Patient's privacy as a basic subject of medicine and doctors' social responsibility;
- 11.0. Recognizes ethical problems in usage of technology as new reproduction methods;
- 12.0. Defines ethical problems recognizing people's curiosity limit and doctor's social responsibility;
- 13.0. Explains importance of genetic consultancy in terms of ethics and ethical problems considering cloning and genome projects;
- 14.0. Lists international and national regulations in the face of value problems that may occur in process of search and edition;
- 15.0. Defines code of ethics that are important to protect the rights of experimental subjects;
- 16.0. Relates concepts of illness and deformity involved in plastic surgery;
- 17.0. Explains systematically and critically the process of making decision about end of life
- 18.0. Recognizes basic ethical principles completely, and distinguishes ethical and legal problems;
- 19.0. Pays importance to the rights of patient, patient's relatives and physicians, and provides services in this context;
- 20.0. Recognizes basic ethical approaches completely;
- 21.0. Distinguishes between legal and ethical issues;
- 22.0. Explains ethical problems (violation of truthfulness, responsibilities of physician and patient, allocation of scarce resources) encountered in health care service and utilization, and principles of solutions.

Skills

- 1.0. Uses body language and verbal language in communication with Patient in the right way;
- 2.0. Uses effective communication and conflict resolution skills being sensitive to value problems in relationship with patient;
- 3.0. Conducts a team work when necessary for dealing with pressure and anxiety arising from dying Patient and relatives;
- 4.0. Makes a multidisciplinary team work on organ donations by implementing a sensitive policy about organ donations and related value conflicts and ethical dilemmas.

- 5.0. Applies the principles of:
- 5.1. some contemporary public health challenges that involve law in health practice;
 - 5.2. connection between legal interventions and empirical evidence;
 - 5.3. role of law in public health practice;
 - 5.4. relationship between the Affordable Care Act and prevention and law effects on social determinants of health.

Attitudes

- 1.0. Emphasizes suitable and full information in order to solve a problem;
- 2.0. Communicates in the right way while talking to and about Patients at the end of life;
- 3.0. Improves the techniques about making rapid decision concerning the end of the life;
- 4.0. Empathizes for comprehending importance of individual privacy;
- 5.0. Consults patient and or relatives without being a router;
- 6.0. Shows respect for Patient's privacy in academic and scientific environments;
- 7.0. Comprehends that honesty is the essential principle in process of research and publication Stage;
- 8.0. Implements a sensitive policy for value conflicts and ethical dilemmas in order to justify them.

8. Teaching method(s)

Lecture
Theoretical and practical learning - Seminars
Videos for learning Videos for teaching
Role playing
Scenarios based simulation training
Practical studies
Participation in scientific studies
Case-based learning – CBL.

9. Course Content

Legal and Ethical Issues in Medicine; Introduction to the Course I; Introduction to the Course II; Physician-Patient Relationship; Confidentiality and Truthfulness; Beneficence and Non-Maleficence; Transplantation; Principles of Autonomy and Informed Consent ; Justice in Medicine; Transhumanism's and Ethics; Ethics of the Future/Future of Ethics; Bioethics; Responsible Biomedical Research; Ethics of Publication; Ethical Issues at the Beginning of Life; Ethical Issues in Pediatrics; Ethics in Intensive Care; Ethics in Psychiatry; Palliative Care Ethics; Medical Ethical Decision-Making; Ethics and the Law; Public Health Ethics ; The Ethics of Patents on Life; Ethics of Dealing with Addiction ; Ethics of Elective Interventions; The Ethics of Testing and Screening ; The Ethics of Dealing with Infectious Diseases; Ethical Issues at the End of Life; Reproductive Ethics; Gene Ethics; Introduction to the General Medical Ethics Principles; Repeating Physician-Patient Relationship Models; Application of Medical Ethics Principles to Different Physician- Patient Relationship Models; Interdisciplinary Approach Between Medical Law and Medical Ethics; Explaining the General Perspective of Medical Law Legislations in Georgia; Talking About Some Basic Examples of International Medical Legislations Which are Different from Georgia; Science Ethic; Research Ethic.

10. Form(s) of assessment and details explaining how the module mark is calculated.

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCO: Multiple Choice Questions	Mid-term Exam Quiz	30
		FSAQ: Fill-in-the Blank Short Answer Questions	Final Exam	40
		T/F Questions, mostly based on case studies		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	Essay	Essay Checklist		
	Report	Report Checklist		
	PWPE: Project Writing and Presentation Evaluation	Presentation Checklist	12	
	CBL-P: Evaluation of CBL Student’s Performance	CBL Checklist	6	

11. Recommended literature:

1. Jacques P. Thiroux, Keith W. Krasemann, Ethics: Theory and Practice, Pearson Publishing House, 2011
2. Barbara MacKinnon, Ethics: Theory and Contemporary Issues, Wadsworth Publishing, 2011
3. Bonnie F. Fremgen, Medical Law and Ethics, Prentice Hall Publishing House, 2011
4. Marcia Lewis, Carol D. Tamparo. Medical Law, Ethics, & Bioethics for the Health Professions, F.A. Davis Publishing House, 2012
5. Michael Boylan. Medical Ethics, Wiley-Blackwell Publishing House, 2013

SYLLABUS

Semester V

Public Health and Social Medicine

1. **Course identification code:** PHMC 3110
2. **Credit Points:** 6 ECTS, **Contact Hours:** 84; **Independent Hours:** 96; **Sum:** 180.
3. **Person(s) responsible for course:** Anano Kiria; Nana Ubilava
Lecturers: George Bakhturidze ; Ekaterine Cherkezishvili

4. Goals:

to convey

1. awareness of the local and global health issues;
2. competence in knowledge, skills and attitudes to manage and provide primary health care service;
3. knowledge of apply and care for ethical principles of the medical profession at national and international level;
4. capability of systematic, investigative and questioning thinking;
5. knowledge related to body systems, on prevention of clinical conditions' emergence, protection and improvement of health in healthy conditions;
6. necessary knowledge, skills and attitudes required to perform primary care prevention and treatment, preventive healthcare measures, to refer patient to advanced healthcare units upon indication.
7. human cultures and the physical and natural world as it relates to individual and population health

5. **Prerequisite:** *PHMC2210 Biostatistics and Epidemiology*

6. **Co-requisite:** N/A

7. Intended learning outcomes:

Knowledge and understanding

1.0. Recognizes:

- 1.1. principles of health management and health sector economy, models of organization and financing of health care services;
- 1.2. resources in the health care service, the principles for cost-effective use;
- 1.3. public health principles and core values;
- 1.4. health determinants including conditions that prevent access to health care;
- 1.5. resources in the health care service, the principles for cost-effective use;
- 1.6. health status of the individual and the community and the factors affecting the health, implements the necessary measures to prevent effects of these factors on the health;
- 1.7. patient-centered approach in patient management;
- 1.8. most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions;
- 1.9. preventive health services, primary prevention (i.e. prevention of diseases for the

protection of health), secondary prevention (i.e. early diagnosis and treatment) tertiary prevention (i.e. rehabilitation) and quaternary prevention (i.e. prevention of excessive and unnecessary diagnosis and treatment) services, provides consultancy on these issues;

2.0. Demonstrates:

- 2.1. knowledge and understanding of the wider determinants of health and ill-health;
- 2.2. knowledge and understanding of the roles of people and agencies who undertake work in the promotion of public health;
- 2.3. an awareness of the debates and dilemmas that may arise from the promotion of public health;

3.0. Understands:

- 3.1. theories, concepts, and skills required to assess population health;
- 3.2. psychological and societal structures and mechanisms affecting human health behavior;
- 3.3. health policy as it relates to the organization, financing, and provision of health care.
- 4.0. Defines public health and related roles and responsibilities of government, nongovernment agencies, and private organizations;
- 5.0. Describes risk factors and modes of transmission for infectious and chronic diseases and how these diseases affect both personal and population health.
- 6.0. Defines list the leading causes of mortality, morbidity, and health disparities among local, regional, and global populations.

Skills

1.0. Applies:

- 1.1. principles of social justice, through the lens of cultural humility, to achieve and sustain health equity;
- 1.2. public health methods and tools to collect and analyze population health data;
- 1.3. public health processes and practices, including working collaboratively with diverse individuals and communities, to create relevant interventions or investigations that engage and build community capacity, promote health, and reduce health inequities and disparities;
- 1.4. general and focused physical and mental examination;
- 1.5. ethical principles to the practice of public health;
- 2.0. Explains the intersectionality of environmental, social, economic, behavioral, biological and political factors influencing human health and identify opportunities for change;

3.0. Interprets:

- 3.1. basic concepts of human health and disease and research grounded in the history, philosophy, and practice of public health;
- 3.2. findings in medical history, physical and mental examination;
- 4.0. Analyzes the effects of multiple levels of policy and health systems on population and individual health outcomes and employ strategies to participate in the policy practice;
- 5.0. Makes clinical decisions using evidence-based systematic data in health care service;
- 6.0. Selects tests that have evidence-based high efficacy at the primary health care level and interprets results;
- 7.0. Employs diagnostic procedures that are used frequently at the primary health care level.;
- 8.0. Performs medical interventional procedures that are used frequently at the primary health care

level;

- 9.0. Takes medical history from the applicant himself/herself or from the individual's companions;
- 10.0. Implements the rules of healthy living;
- 11.0. Refers patient to next level care;
- 12.0. Uses English language at least at a level adequate to follow the international literature and to establish communication related to the profession;
- 13.0. Plans any requirement for further training and work experience. Teamwork capability, competently usage of technology in medicine and related areas;
- 14.0. Keeps medical records in health care provision and uses information systems to that aim;
- 15.0. Manages and leads within the health care team in primary health care organization, healthy individuals and patients in the context of health care services;
- 16.0. Promotes and uses an evidence based and evaluative approach to scope public health problems and deliver solutions;
- 17.0. Engages in collaborative and interdisciplinary approaches and teamwork for improving;
- 18.0. Displays appropriate behavior specific to work under stressful conditions;
- 19.0. Participates fully and timely in activities carried out during training;
- 20.0. Develops, prepares and presents research projects;
- 21.0. Performs medical practices in accordance with the legal framework which regulates the primary health care service.

Attitudes

- 1.0. Embraces the importance of continually renovate and self-improvement, lifelong learning and implements;
- 2.0. Investigates postgraduate work domains and job opportunities, the application requirements to postgraduate work/job domains, and distinguishes;
- 3.0. Takes responsibilities to be fulfilled.

8. Teaching method(s)

Lecture

Theoretical and practical learning - Seminars

Videos for learning Videos for teaching

Role playing

Scenarios based simulation training

Practical studies

Participation in scientific studies

Case-based learning – CBL.

Recorded audio and video materials including public speeches presentations

9. Course Content:

What Is Public Health? Images and Definitions of Public Health; Public Health as a System; Unique Features of Public Health; Value of Public Health; Measuring Population Health- Health, Illness, and Disease/ Measuring Health; Influences on Health; Analyzing Health Problems for Causative Factors; Economic Dimensions of Health Outcomes; Mandatory Premarital Screening for Antibody to the Human Immunodeficiency Virus. Public Health and the Health System; Prevention and Health Services; Changing Roles, Themes, and Paradigms in the Health System; Outcome Oriented Perinatal Surveillance; Law, Government, and Public Health; Public Health Law, Governmental Public Health, Intergovernmental, Relationships; Public Health Functions and Practice; Community Health Assessment and Improvement Tools; Strategic Planning, Standards, and Accreditation; Public Health Work and Public Health Workers; Size and Distribution of the Public Health Workforce; Composition of the Public Health Workforce; Public Health Worker Ethics and Education; Characteristics of Public Health Occupations; Public Health Workforce Growth Prospects; Public Health Practitioner Competencies; Case Study - Gulf Oil Spill Aftermath; Public Health Infrastructure Components; Human Resources Management in Public Health; Organizational Management in Public Health; Information Management in Public Health; Fiscal Management in Public Health; Performance Management in Public Health; Managing Public Health Interventions-Programs, Services; Program Management in Public Health; Case Study 11: Developing a Program Intervention; Public Health Emergency; Emergency Preparedness and Response; Public Health Roles in Emergency Preparedness and Response; National Public Health Preparedness and Response Coordination; State and Local Public Health Preparedness and Response Coordination; Public Health Practice: Future Challenges; Given an emergency situation with public health implications (such as H1N1 influenza, massive flooding, or bioterrorism threats), identify the critical components; necessary for an effective response; Key aspects of this competency expectation; Bioterrorist Attack on Food: A Tabletop Exercise.

10. Form(s) of assessment and details explaining how the module mark is calculated.

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	Mcq: Multiple Choice Questions	Mid-term Exam Quiz	30
		FSAQ: Fill-in-the Blank Short Answer Questions	Final Exam	40
		T/F Questions, mostly based on case studies		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	Essay	Essay Checklist		
	Report	Report Checklist		
	PWPE: Project Writing and Presentation Evaluation	Presentation Checklist		12
	CBL-P: Evaluation of CBL Student’s Performance	CBL Checklist		6

11. Recommended literature:

1. Topics & Objectives, Healthy People 2020 <https://www.healthypeople.gov/2020/topics-objectives>
2. Cultural Competence Education (2005) Association of American Medical Colleges
3. Public Health Emergency Preparedness and Response Capabilities, National Standards for State, Local, Tribal, and Territorial Public Health , CDC updated January 2019

SYLLABUS

Semester VI

Endocrine, Reproductive & Urinary Systems

1. **Course identification code: MEDC3210**
2. **Credit Points: 8 ECTS, Contact Hours: 125; Independent Hours: 115; Sum: 240.**
3. **Person(s) responsible for course: Salome Traria; Nino Lomidze**

Lecturers: Pathology, Pathophysiology – Tamar Goderidze; Medical Microbiology – Marina Tediashvili; Pharmacology, Phytotherapy – Tamar Kezeli; Medical Genetics – Khatuna Vashakmadze; Immunology – Peter Lydyard; Histology & Embryology – Lia Gelazonia; Endocrinology – Lali Javashvili; Obstetrics & Gynecology – Apolon Meskhi; Urology - Archil Chkhotua; Nephrology - Sopo Gongadze; Family Medicine – Tamar Goderidze; Emergency Medicine – Irina tsirkvadze; Pediatrics – Lali Beitrishvili; Pediatric Surgery, General Surgery – Nikoloz Pruidze; Infectious diseases – Lali Sharvazde; Propaedeutic – Giorgi Javakhishvili; Laboratory Medicine - Nino Gulatava; Diagnostic Radiology - Tamar Dundua; Introduction to Clinical Practice III – Marina Jimukhadze; Scientific Research and Project Course III – Leila Beitrishvili.

4. Goals

Endocrine & Reproductive Systems

In evidence based manner:

1. To remind knowledge on anatomy, embryology, histology and physiology of Endocrine and Reproductive systems;
2. To convey:
 - 2.1. knowledge on health care service practices related to reproductive care;
 - 2.2. knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to endocrine and reproductive systems;
 - 2.3. knowledge on mechanism of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to endocrine and reproductive systems;
 - 2.4. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to endocrine and reproductive systems, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.5. knowledge on pharmacology of drugs that are effective on endocrine and reproductive systems or on clinical conditions involving endocrine and reproductive systems;
 - 2.6. knowledge on genetics of endocrine and reproductive systems;
 - 2.7. knowledge on phytotherapeutic agents that are effective on endocrine system or on clinical conditions involving endocrine system;
3. To equip with basic and advanced clinical skills (normal spontaneous vaginal delivery on phantom model- C5) required at primary health care service level;
4. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Urinary System

In evidence based manner,

1. To remind knowledge on anatomy, histology and physiology of urinary system,
2. To convey:
 - 2.1. knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to urinary system;
 - 2.2. knowledge on mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to urinary system;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to urinary system, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. knowledge on pharmacology of drugs that are effective on urinary system or on clinical conditions involving urinary system;
 - 2.5. knowledge on genetics of urinary system;
 - 2.6. knowledge on phytotherapeutic agents that are effective on urinary system or on clinical conditions involving urinary system;
3. To equip with basic and advanced clinical skills (gynecological examination, "Pap-smear" collection, intrauterine device placement, breast examination, physical examination in neonate, infant and prepubertal/pubertal child) required at primary health care service level;
4. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Scientific Research and Project Course III

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beirishvili;

Goals

1. To equip third year medical students with knowledge and skills of writing a scientific project proposal, and furthermore to equip with basic knowledge and skills for scientific career;
2. To help students identify a project in an area of their interest and to select a mentor who can support them in pursuing and completion of their project;
3. To best support students, three thematic areas of scholarship have been defined. These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area;
4. Students continue their research project with mentors during the 4th and 5th years.
5. **Prerequisite:** MEDC 2160 Cardiovascular System; MEDC 2170 Respiratory System; MEDC 2180 Gastrointestinal System and Metabolism; MEDC 2210 Nervous system; MEDC 2220 Urogenital and Endocrine Systems; MEDC 2130 Introduction to Clinical Practice II; MEDC 2260 Scientific Research and Project Course II.
6. **Co-requisite:** N/A

7. Intended learning outcomes

Endocrine & Reproductive Systems

- 1.0. Recalls anatomy, embryology, histology and physiology of endocrine and reproductive systems;
 - 2.0. Explains physiology of normal spontaneous vaginal delivery;
 - 3.0. Defines practice of reproductive care;
 - 4.0. Explains etiopathogenesis of clinical conditions (menstrual cycle/developmental conditions/congenital and sexually transmitted infections) which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to endocrine and reproductive systems;
 - 5.0. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to endocrine and reproductive systems;
 - 6.0. At multi-system level and/or related to endocrine and reproductive systems:
 - for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
 - in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a Community;
 - for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
- Explains** in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes:
- health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:
- 6.1. practices of history taking and physical examination (gynecological, breast);
 - 6.2. evaluation of emergency case;
 - 6.3. approach to healthy individual or patient (pregnancy);
 - 6.4. laboratory tests/examinations (venous blood collection, throat swab specimen, sputum sample collection, thyroid function tests, diabetes tests, rapid screening [antigen/antibody] tests, throat culture, sputum culture);
 - 6.5. imaging tests/examinations (radiological examinations in gynecology, breast imaging, radioisotope imaging of thyroid and parathyroid);
 - 6.6. point of care testing (diabetes tests, rapid screening [antigen/antibody] tests);
 - 6.7. making preliminary diagnosis or definitive diagnosis decision;
 - 6.8. making non-intervention or intervention decision;
 - 6.9. practicing non-intervention or intervention;
 - 6.10. referral/transport of healthy individual or patient;
 - 7.0. Explains pharmacology of drugs (hypothalamic and pituitary hormones, drugs effecting functions and action of oxytocin and ADH, thyroid and antithyroid drugs, adrenocortical hormones and drugs, insulin and oral antidiabetic drugs, estrogens, progestines and inhibitors) that are effective on endocrine and reproductive systems or on clinical conditions involving endocrine and reproductive systems;
 - 8.0. Explains genetics of endocrine and reproductive systems;
 - 9.0. Explains mechanisms of action for phytotherapeutic agents that are effective on endocrine system or in clinical conditions related to endocrine system;

10.0. Performs basic clinical skills, practiced on phantom models (normal spontaneous vaginal delivery), and advanced clinical skills, practiced on simulated/standardized patients required at primary health care service.

Urinary System

- 1.0. Recalls anatomy, histology and physiology of urinary system;
 - 2.0. Explains etiopathogenesis of clinical conditions (renal hemodynamics, acid-base equilibrium, renal clinical conditions, urinary system stones, urinary system infections) which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to urinary system;
 - 3.0. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to urinary system;
 - 4.0. At multi-system level and/or related to urinary system:
 - for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
 - in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a Community;
 - for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;**explains** in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes;
 - health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:
 - 4.1. practice of history taking and physical examination (neonatal, prepubertal/pubertal)
 - 4.2. evaluation of emergency case (urological emergencies);
 - 4.3. approach to healthy individual or patient (urethral-vaginal-cervical discharge/swab specimen, fecal specimen collection);
 - 4.4. laboratory tests/examinations (urethral-vaginal-cervical discharge culture, fecal culture);
 - 4.5. imaging tests/examinations (uroradiology, renal scintigraphy (GFR, ERPF, Renogram);
 - 4.6. point of care testing;
 - 4.7. making preliminary diagnosis or definitive diagnosis decision;
 - 4.8. making non-intervention or intervention decision;
 - 4.9. practicing non-intervention or intervention;
 - 4.10. referral/transport of healthy individual or patient;
- 5.0. Explains pharmacology of drugs that are effective on urinary system or on clinical conditions involving urinary system;
- 6.0. Explains pharmacology of androgens and anabolic steroids, and drugs that affect bone mineral homeostasis;
- 7.0. Explains genetics of urinary system;
- 8.0. Explains mechanisms of action for action for phytotherapeutic agents that are effective on urinary system or in clinical conditions related to urinary system;
- 9.0. Performs basic clinical skills, practiced on phantom models, and advanced clinical skills, practiced on simulated/standardized patients (gynecological examination, "Pap-smear" collection, intrauterine device placement, breast examination, physical examination in neonate, infant and prepubertal/pubertal child), required at primary health care service.

Intended learning outcomes

Knowledge and Understanding

- 1.0. Defines the basic terminology used in general and organ system specific physical examination;
- 2.0. Describes the steps of history taking and physical examination of gynecological, obstetric, breast, neonatal, prepubertal / pubertal system.

Skills

- 3.0. Performs history taking and physical examination of gynecological, and obstetric, breast, neonatal, prepubertal / pubertal system on simulated patients or mannequins in accordance with the skill procedure;
- 4.0. Describes the process to be carried out to the patient before any intervention.

Attitude

- 5.0. Values the importance of informed consent;
- 6.0. Pays attention to patient privacy;
- 7.0. Values the importance of not exceeding the limits of his/her own competency level.

Scientific Research and Project Course III

Intended learning outcomes

- 1.0. Develop a research question, problem, or design;
- 2.0. Apply basic principles and knowledge found in the literature related to the research question;
- 3.0. Develop a research proposal to address or resolve a specific research question or problem; Apply and evaluate methodology throughout the project;
- 4.0. Collect, interpret, and critique data to resolve a research question or evaluate a design;
- 5.0. Communicate research findings;
- 6.0. Appreciate what the process of scientific research entails.

8. Teaching method(s)

- Lecture
- Theoretical interactive learning - Seminars
- Videos for learning
- Videos for teaching
- Practical Work
- Laboratory Work
- Teaching by using the simulations
- Learning with usage of simulators
- Teaching through standardized patients
- Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment
- Participating in scientific research
- Teaching research skills

9. Course content:

Endocrinology: Introduction to Endocrinology; Introduction to Diabetes Mellitus; Clinical and Laboratory Findings of Diabetes Mellitus; Obesity; Calcium Metabolism; Hypocalcemic Diseases; Adrenal Disorders; Hypoglycemia; Hypercalcemic Diseases; Hyperfunctioning Disorders of Anterior Pituitary Gland; Disorders of Posterior Pituitary Gland; Hypopituitarism; Diffuse Hormonal Systems and Endocrine Tumor Syndromes; Thyroid Function Tests; Thyroid Disorders.

Pathology: Pathology of Endocrine System: Introduction, Pathology of Pituitary Gland I; Pathology of Pituitary Gland II; Pathology of Adrenal Gland I; Pathology of Adrenal Gland II; Pathology of Thyroid & Parathyroid I; Pathology of Thyroid & Parathyroid II; Pathology of Pancreas I; Pathology of Pancreas II; Pathology of Breast I; Pathology of Breast II; Pathology of Vulva & Vagina; Pathology of Treponemal Infections; Renovascular Pathology; Renal Cystic Disease; Pathology of Bladder; Pathology of Urinary System Tumors; Congenital Anomalies of Urinary System; Pathology of Cervix Uteri I; Pathology of Cervix Uteri II; Pathology of Pregnancy & Placenta; Pathology of Glomerular Diseases I; Pathology of Glomerular Diseases II; Pathology of Glomerular Diseases III; Pathology of Ovary I; Pathology of Ovary II; Pathology of Tubulointerstitial Disease I ; Pathology of Tubulointerstitial Disease II; Pathology of Uterus I; Pathology of Uterus II; Pathology of Male Genital System I; Pathology of Male Genital System II.

Infectious diseases: Congenital Infections and Sexually Transmitted Diseases, Genital Infections I; Congenital Infections and Sexually Transmitted Diseases, Genital Infections II; Congenital Infections and Sexually Transmitted Diseases, Genital Infections III.

Pediatrics: Congenital Adrenal Hyperplasia; Physical Examination of Newborn Patient; Physical Examination of Child Patient; Normal Pubertal Development; Pubertal Disorders.

Surgery: Congenital Anomalies of the Urinary System.

Pathophysiology: Pathophysiology of Endocrine System Diseases I; Pathophysiology of Endocrine System Diseases II; Pathophysiology of Endocrine System Diseases III; Pathophysiology of Reproductive System Diseases I; Pathophysiology of Urinary System Diseases I; Pathophysiology of Urinary System Diseases II.

Histology & Embryology: Embryology.

Emergency Medicine: Hypertensive Disorders in Pregnancy.

Medical Genetics: Prenatal Genetic Diagnosis; Genetic Counseling; Hypocalcemic Diseases; Adrenal Disorders; Hypoglycemia; Hypercalcemic Diseases; Genetic Disorders of Gonadal Development; Chromosomal Disorders I; Chromosomal Disorders II (Sex Chromosomes and their Abnormalities).

Pharmacology: Introduction to Endocrine Pharmacology; Thyroid and Anti-thyroid Drugs I; Thyroid and Anti-thyroid Drugs II; Insulin and Oral Anti-diabetic Drugs I; Insulin and Oral Anti-diabetic Drugs II; Adrenocortical Hormones and Drugs I; Adrenocortical Hormones and Drugs II; Androgens & Anabolic Steroids; Agents Effecting Bone Mineral Homeostasis I; Agents Effecting Bone Mineral Homeostasis II; Estrogens, Progestines and Inhibitors I; Estrogens, Progestines and Inhibitors II; Hypothalamic and Pituitary Hormones I; Hypothalamic and Pituitary Hormones II.

Phytotherapy: Phytotherapy-VII; Phytotherapy-VIII.

Radiology: Imaging of Thyroid Glands; Imaging of Urinary System.

Immunology: Immunology of Reproduction.

Family Medicine: Medical History for Breast Diseases in Primary Care & Clinical Breast Examination; Delivery of Family Planning Services I; Delivery of Family Planning Services II; General Approach to the Pregnant Woman.

Obstetrics & Gynecology: The Gynecological History and Examination; Endometriosis & Adenomyosis; Puerperal Infections; Normal and Abnormal Labor; Antenatal Care; Disorders of Early Pregnancy (Miscarriage; Ectopic; GTD); The Menstrual Cycle and Disorders of the Menstrual Cycle; Normal and Abnormal Sexual Development & Puberty; Menopause; Fertility Control; Infertility; Conditions Affecting Vulva & Vagina; Malign Diseases of the Uterus and the Cervix; Malign Diseases of the Ovary; Conditions Affecting Vulva & Vagina; Benign Diseases of the Uterus and the Cervix; Benign Diseases of the Ovary.

Nephrology: Fluid, Electrolyte I; Fluid, Electrolyte II; Acute Kidney Injury-I; Acute Kidney Injury-II; Nephritic Syndrome; Nephrotic Syndrome; The Kidney Systemic Disease and Inherited Disorders; Chronic Kidney Disease; Acid/ Base Balance I; Acid/ Base Balance II; Clinical Study of Renal Functions and Urinary Findings; Nephritic and Nephrotic Syndrome.

General Surgery: Transplantation of Kidney.

Urology: Benign Prostatic Hyperplasia-I; Benign Prostatic Hyperplasia-II; Urologic Emergencies; Approach to the Patient with Urinary Tract Symptoms; Urologic Oncology I; Urologic Oncology II.

Introduction to Clinical Practice III - Endocrine, Reproductive & Urinary Systems: Follow-up of Pregnancy & Stages of Normal Labour & Gynecological Examination, Pap smear obtaining; Physical Examination of the Newborn and Child Patient; Clinical Breast Examination.

Scientific Research and Project Course III - Small group study (SRPC) – Introduction to Clinical Practice III - Endocrine, Reproductive & Urinary Systems: Follow-up of Pregnancy & Stages of

Normal Labour & Gynecological Examination, Pap smear obtaining; Physical Examination of the Newborn and Child Patient; Clinical Breast Examination.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	32
		EMQ: Extended Matching Questions	Final Exam	20
		FSAQ: Fill-in-the Blank Short Answer Questions		
	OE: Oral Exam			
Competency–based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	SPP: Scientific Project Proposal	SPP Checklist		12

11. Recommended literature:

Infectious Diseases and Clinical Microbiology

Murray, Patrick R, Rosenthal, Ken S, Pfaller, Michael A.. Medical Microbiology with STUDENT CONSULT Online Access. 8th Edition, 2016.

Medical Genetics

Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436.

Immunology

Basic Immunology, Functions and Disorders of the Immune System-Abul Abbas Andrew H. Lichtman Shiv Pillai; Elsevier Health Sciences.

Histology & Embryology

1. Junqueira's Basic Histology: Text and Atlas 13th Ed. Anthony Mescher. Mc-Graw-Hill Companies;
2. The Developing Human: Clinically Oriented Embryology, 10th Ed. Keith L. Moore & T. V. N. Persaud. Saunders.

Pharmacology

1. Harvey, Richard A. Lippincott's Illustrated Review of Pharmacology. 6th ed., Wolters Kluwer Health, 2015. ISBN: 978-1469887562;
2. Katzung, Bertram G., Masters, Susan B., Trevor Anthony J. Katzung's Basic & Clinical Pharmacology. 14th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259641152;
3. Brunton, Laurence, Chabner, Bruce, Knollman, Bjorn. Goodman&Gilman's The Pharmacological Basis of Therapeutics. 13th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259584732.

Phytotherapy

Fundamentals of Pharmacognosy and Phytotherapy Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson.

Pathology

Abbas Aster, Kumar. Robbins Basic Pathology. 9th edition, Saunders, Elsevier Inc. 2013. ISBN: 978- 0-8089-2432-6.

Pathophysiology

Pathophysiology of Disease, An Introduction to Clinical Medicine, 8th edition, Gary D. Hammer MD, PhD; Stephen J McPhee, MD; 2019 year.

Laboratory Medicine

Oxford Handbook of Clinical and Laboratory Investigation; A Manual of Laboratory and Diagnostic Tests

Diagnostic Radiology

Brant and Helms' Fundamentals of Diagnostic Radiology; Grainger & Allison's Diagnostic Radiology Essentials

Endocrinology

Williams Textbook Of Endocrinology 2016, Elsevier; Harrison's Endocrinology 2016.

Obstetrics & Gynecology

Current Obstetrics and Gynecology, Elsevier Publishing 2015.

General Surgery

Brunicaudi, F. Schwartz's Principles of Surgery, 10th edition, July 16, 2014, ISBN: 0071796754 / 9780071796750.

Urology

Campbell-Walsh Urology, 11th Edition 4-Volume Set. By Alan J. Wein, MD, FACS, PhD (hon), Louis R. Kavoussi, MD, Alan W. Partin, MD, PhD and Craig A. Peters, MD, FACS, FAAP. Imprint: Elsevier. ISBN: 978-1-4557-7567-5. Copyright: 2016.

Nephrology

1. Oxford Textbook of Clinical Nephrology 2016;
2. Comprehensive Clinical Nephrology 2019.

Family Medicine

Fred F. Ferri et al. Ferri's Clinical Advisor 2020, 1st Edition; Skills for Communicating with Patients By Jonathan Silverman, Suzanne Kurtz, Juliet Draper; Jill C. Cash, Cheryl A. Glass, Family Practice Guidelines, Fifth Edition – Complete Family Practice Primary Care Resource Book; Meghan M. Kiefer et al. Pocket Primary Care (Pocket Notebook Series) 2nd Edition; Adam Peter Staten & Paul Staten; Practical General Practice, 7th Edition

Emergency Medicine

Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition; Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency Medicine 6th edition

Pediatrics

1. Nelson Textbook of Pediatrics, Robert M. Kliegman, MD, Bonita M.D. Stanton, MD, Joseph St. Geme, Nina Schor, MD, PhD and Richard E. Behrman, MD, Saunders, 2011;
2. CURRENT Diagnosis Treatment: (William W. Hay Jr, Myron J. Levin, Robin R. Deterding, Mark J. Abzug, Judith M. Sondheimer), Lange.

Pediatric Surgery

Holcomb and Ashcraft's Pediatric Surgery 2018, Elsevier

Introduction to Clinical Practice III

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition; Jane W. Ball, Joyce E. Dains, John A. Flynn, Barry S. Solomon, Rosalyn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018
8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

Scientific Research and Project Course III

1. Research skills in medical education
<https://www.mededpublish.org/manuscripts/1760>
2. Future of Scholarly Publishing and Scholarly Communication, Report of the Expert Group to the European Commission, 2019:
https://www.eosc-portal.eu/sites/default/files/KI0518070ENN.en_.pdf
3. Casie Gillette, 5 Ways to Improve Your Public Speaking Skills, SEJ, 2019
<https://www.searchenginejournal.com/improve-public-speaking-skills/290309/#close>
4. Scientific Skills as Core Competences in Medical Education: What do medical students think?
<https://www.tandfonline.com/doi/abs/10.1080/09500693.2015.1054919>

SYLLABUS

Semester VI

Nervous System and Psychiatry

1. **Course identification code: MEDC 3220**
2. **Credit Points: 7 ECTS, Contact Hours: 109; Independent Hours: 101; Sum: 210.**
3. **Person(s) responsible for course: Salome Tsaria; Nino Lomidze**

Lecturers: Neurosurgery - Ivane Avazashvili; Neurology – Otar Toidze; Gvanca Arveladze; Pharmacology – Tamar Kezeli; Pathology, Pathophysiology – Tamar Goderidze; Psychiatry, Child Psychiatry – Nana Zavrashvili; Pediatrics – Leila Beitrishvili; Family Medicine – Tamar Goderidze; Medical Genetics – Khatuna Vashakmadze; Ophthalmology – Nino Tkheldze; Immunology – Peter Lydyard; Infectious Diseases and Medical Microbiology – Marina Tediashvili; Radiology – Tamar Dundua; Emergency Medicine – Irina Tsirkvadze; Propaedeutic – Giorgi Javakhishvili; Laboratory Medicine - Nino Gulatava; Diagnostic Radiology - Tamar Dundua; Introduction to Clinical Practice III – Marina Jimukhadze; Scientific Research and Project Course III – Leila Beitrishvili.

4. Goals

In evidence based manner

1. To remind knowledge on anatomy, histology and physiology of nervous system;
2. To convey:
 - 2.1. knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to nervous system and psychiatry;
 - 2.2. knowledge on mechanism of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to nervous system and psychiatry;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to nervous system and psychiatry, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. necessary knowledge on drugs that are effective on nervous system or on clinical conditions related to nervous system and psychiatry;
 - 2.5. necessary knowledge on common problems in medical research;
3. To convey knowledge on phototherapeutic agents;
4. To equip with basic and advanced clinical skills (suturing and tying-C7, neuropsychiatric evaluation-C7) required at primary health care service level;
5. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Scientific Research and Project Course III

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beirishvili;

Goals

1. To equip third year medical students with knowledge and skills of writing a scientific project proposal, and furthermore to equip with basic knowledge and skills for scientific career;
 2. To help students identify a project in an area of their interest and to select a mentor who can support them in pursuing and completion of their project;
 3. To best support students, three thematic areas of scholarship have been defined. These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area;
 4. Students continue their research project with mentors during the 4th and 5th years.
-
5. **Prerequisite:** *MEDC 2160 Cardiovascular System; MEDC 2170 Respiratory System; MEDC 2180 Gastrointestinal System and Metabolism; MEDC 2210 Nervous system; MEDC 2220 Urogenital and Endocrine Systems; MEDC 2130 Introduction to Clinical Practice II; MEDC 2260 Scientific Research and Project Course II.*
 6. **Co-requisite:** N/A
 7. **Intended learning outcomes;**
 - 1.0. Recalls anatomy, histology and physiology of nervous system;
 - 2.0. Defines biochemical and psychodynamical basis of behavior;
 - 3.0. Grades physical, psychosocial and cognitive development of child;
 - 4.0. Explains etiopathogenesis of clinical conditions (central and peripheral nervous system disorders, epilepsy, organic brain syndromes, CNS tumors, psychiatric disorders/diseases) which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to nervous system and psychiatry;
 - 5.0. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to nervous system and psychiatry;
 - 6.0. At multi-system level and/or related to cardiovascular and respiratory systems system:
 - for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
 - in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a community;
 - for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

Explains in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes:

 - health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:

- 6.1. practices in history taking and physical examination (neurological/neuropsychiatric-C7);
- 6.2. evaluates emergency case (neurological emergencies-C7);
- 6.3. approaches to healthy individual or patient (neurological symptoms-C7, headache-C7, depression-C7, dementia-C7);
- 6.4. laboratory tests/examinations;
- 6.5. imaging tests/examinations (conventional neuroradiological examinations-C7, spinal neuroradiology-C7, cranial CT-C7, cranial MRI-C7, brain perfusion scintigraphy-C7, brain PET-C7)
- 6.6. points of care testing;
- 6.7. makes preliminary diagnosis or definitive diagnosis decision;
- 6.8. makes non-intervention or intervention decision;
- 6.9. practices at non-intervention or intervention;
- 6.10. refers/transport healthy individual or patient;
- 7.0. Explains pharmacology of drugs (parkinsonism and other movement disorders, antiepileptics, CNS stimulants and hallucinogenic drugs, sedative/hypnotic drugs, opioid analgesics and antagonists, general/local anesthetics, antipsychotic drugs, bipolar disease and lithium, antidepressant drugs, alcohols, drug dependence and abuse) that are effective on nervous system or on clinical conditions related to nervous system and psychiatry;
- 8.0. Lists common problems in medical research;
- 9.0. Performs basic clinical skills, practiced on phantom models (suturing and tying-C7), and advanced clinical skills, practiced on simulated/standardized patients (neuropsychiatric evaluation-C7), required at primary health care service.

Introduction to Clinical Practice III - Nervous System and Psychiatry

Intended learning outcomes

Knowledge and Understanding

- 1.0. Defines the basic terminology used in general and organ system specific physical examination;
- 2.0. Describes the steps of history taking and physical examination of neurological / psychiatric system.

Skills

- 3.0. Performs history taking and physical examination of neurological / psychiatric system on simulated patients or mannequins in accordance with the skill procedure;
- 4.0. Describes the process to be carried out to the patient before any intervention.

Attitude

- 6.0. Values the importance of informed consent;
- 7.0. Pays attention to patient privacy;
- 8.0. Values the importance of not exceeding the limits of his/her own competency level.

Scientific Research and Project Course III

Intended learning outcomes

- 1.0. Develop a research question, problem, or design;
- 2.0. Apply basic principles and knowledge found in the literature related to the research question;
- 3.0. Develop a research proposal to address or resolve a specific research question or problem; Apply and evaluate methodology throughout the project;
- 4.0. Collect, interpret, and critique data to resolve a research question or evaluate a design;
- 5.0. Communicate research findings;
- 6.0. Appreciate what the process of scientific research entails.

8. Teaching method(s)

Lecture
Theoretical interactive learning - Seminars
Videos for learning
Videos for teaching
Practical Work
Laboratory Work
Teaching by using the simulations
Learning with usage of simulators
Teaching through standardized patients
Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment
Participating in scientific research
Teaching research skills

9. Course content:

Neurology: Signs and Symptoms in Neurology; Cranial Nerves I; Cranial Nerves II; Epilepsy; Neurological Emergencies; Cerebral Lobes and their Disorders; Dementia; Extrapyrarnidal System Disorders; Headache in Neurologic Patient; Demyelinating Disorders I; Demyelinating Disorders II; Peripheral Nerve Disorders; Cerebrovascular Disease;

Psychiatry: Psychiatric Epidemiology and Classification; Neuroscience I; Neuroscience II; Mood Disorders I; Mood Disorders II; Anxiety Disorders: An Introduction; Introduction to Psychiatry; Psychiatric Interview, History; Schizophrenia Spectrum and Other Psychotic Disorders I; Schizophrenia Spectrum and Other Psychotic Disorders II; Developmental Psychopathology: Risk and Protective Factors in Mental Development; Signs and Symptoms in Psychiatry;

Child Psychiatry: Introduction to Child and Adolescent Psychiatry; Common Childhood Psychiatric Problems; Mental Development in Childhood and Adolescence;

Neurosurgery: Intracranial Tumors I; Intracranial Tumors II; Surgical Neuroanatomy; Cerebrovascular Diseases in Neurosurgery I; Cerebrovascular Diseases in Neurosurgery II; Functional Neurosurgery; Spinal Trauma in Neurosurgery; Cranial Trauma in Neurosurgery; Clinical Presentation, Anatomic Concepts and Diagnosis in a Neurosurgical Patient; Pediatric Neurosurgery; Hydrocephalus; Neurosurgical Infections;

Pathology: Pathology of Myelin & Neuronal Storage Diseases I; Pathology of Myelin & Neuronal Storage Diseases II; Developmental Disorders of CNS; Cranial Trauma & Intracranial Hemorrhage I; Cranial Trauma & Intracranial Hemorrhage II; Neurodegenerative Disorders I; Neurodegenerative Disorders II; Tumors of CNS I; Tumors of CNS II; Pathology Laboratory Lecture; Infectious Diseases of CNS I; Infectious Diseases of CNS II;

Pathophysiology: Pathophysiology of Nervous System Diseases I; Pathophysiology of Nervous System Diseases II;

Pharmacology: Pharmacological Approach to Parkinsonism & Other Movement Disorders I; Pharmacological Approach to Parkinsonism & Other Movement Disorders II; Introduction to Central Nervous System Pharmacology; Antiepileptics; Opioid Analgesics & Antagonists I; Opioid Analgesics & Antagonists II; Local Anesthetics; General Anesthetics; Drug Dependence & Abuse; The Alcohols; Sedative / Hypnotic Drugs I; Sedative / Hypnotic Drugs II; CNS Stimulants and Hallucinogenic Drugs; Bipolar Disease & Lithium; Antipsychotic Drugs; Antimigraine Drugs; Antidepressant Drugs;

Pediatrics: Infectious Disease of the Nervous System; Neurodegenerative Disorders; Cerebral Malformations; Mental and Motor Development;

Family Medicine: Depression in Primary Care; Approach to the Patient with Dementia in Primary Care; Approach to Smoking Patient in Primary Care;

Radiology: Conventional Neuroradiological Examinations;

Medical Genetics: Genetic Etiology of Mental Retardation I; Genetic Etiology of Mental Retardation II; Genetic Aspects of Psychiatric Disorders;

Infectious Diseases and Medical Microbiology: Acute and Chronic Meningitis, Encephalitis I; Acute and Chronic Meningitis, Encephalitis II;

Ophthalmology: Paralytic Strabismus and Nystagmus; Diseases of Optic Nerves and Visual Fields; Papilla;

Emergency Medicine: Approach to Intoxicated Patient;

Immunology: Neuroimmunological Disorders; Neuroimmunological Disorders;

Introduction to Clinical Practice III - Nervous System and Psychiatry: General Physical Examination; Neurological Examination & Psychiatric Examination;

Scientific Research and Project Course III - Small group study (SRPC) – Introduction to Clinical Practice III - Nervous System and Psychiatry: General Physical Examination; Neurological Examination & Psychiatric Examination;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	32
		EMQ: Extended Matching Questions	Final Exam	20
		FSAQ: Fill-in-the Blank Short Answer Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	SPP: Scientific Project Proposal	SPP Checklist		12

1. Recommended literature:

Infectious Diseases and Clinical Microbiology

Murray, Patrick R, Rosenthal, Ken S, Pfaller, Michael A.. Medical Microbiology with STUDENT CONSULT Online Access. 8th Edition, 2016.

Medical Genetics

1. Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436

Pharmacology

1. Harvey, Richard A. Lippincott's Illustrated Review of Pharmacology. 6th ed., Wolters Kluwer Health, 2015. ISBN: 978-1469887562.
2. Katzung, Bertram G., Masters, Susan B., Trevor Anthony J. Katzung's Basic & Clinical Pharmacology. 14th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259641152.
3. Brunton, Laurence, Chabner, Bruce, Knollman, Bjorn. Goodman & Gilman's The Pharmacological Basis of Therapeutics. 13th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259584732.

Pathology

Abbas Aster, Kumar. Robbins Basic Pathology. 9th edition, Saunders, Elsevier Inc. 2013. ISBN:978-0-8089-2432-6

Pathophysiology

Pathophysiology of Disease, An Introduction to Clinical Medicine, 8th edition, Gary D. Hammer MD, PhD; Stephen J McPhee, MD; 2019.

Immunology

Oxford Handbook of Clinical Immunology and Allergy Gavin Spickett 2019

Pediatrics

Nelson Textbook of Pediatrics Robert M. Kliegman, MD, Bonita M.D. Stanton, MD, Joseph St. Geme, Nina Schor, MD, PhD and Richard E. Behrman, MD Saunders, 2011

CURRENT Diagnosis Treatment:

(William W. Hay Jr, Myron J. Levin, Robin R. Deterding, Mark J. Abzug, Judith M. Sondheimer) Lange

Family Medicine

Fred F. Ferri et al. Ferri's Clinical Advisor 2020, 1st Edition; Skills for Communicating with Patients By Jonathan Silverman, Suzanne Kurtz, Juliet Draper; Jill C. Cash, Cheryl A. Glass, Family Practice Guidelines, Fifth Edition – Complete Family Practice Primary Care Resource Book; Meghan M. Kiefer et al. Pocket Primary Care (Pocket Notebook Series) 2nd Edition; Adam Peter Staten & Paul Staten; Practical General Practice, 7th Edition

Emergency Medicine

Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition; Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency Medicine 6th edition

Diagnostic Radiology

Brant and Helms' Fundamentals of Diagnostic Radiology; Grainger & Allison's Diagnostic Radiology Essentials

Ophthalmology: Ophthalmology Myron Yanoff, Jay S Duker, Elsevier 2018; Kanski's Clinical Ophthalmology John F. Salmon, Elsevier 2020

Neurology: Neurointensive Care Unit: Clinical Practice and Organization (Current Clinical Neurology) 1st ed. 2020 Edition

Neurosurgery: Handbook of Neurosurgery Mark S. Greenberg 2019

Psychiatry: Psychiatry, 2nd ed., Vol 1, Tasman A, Kay J, Lieberman JA, eds., John Wiley & Sons, 2003. Introduction to clinical psychology-8th ed. Kramer, Geoffrey P. others. 2014

Child Psychiatry: Kaplan and Sadock's Concise Textbook of Child and Adolescent Psychiatry Benjamin J. Sadock, Virginia Alcott Sadock 2008

Introduction to Clinical Practice III

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition; Jane W. Ball, Joyce E. Dains, John A. Flynn, Barry S. Solomon, Rosaliyn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018

8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

Scientific Research and Project Course III

1. Research skills in medical education

<https://www.mededpublish.org/manuscripts/1760>

2. Future of Scholarly Publishing and Scholarly Communication, Report of the Expert Group to the European Commission, 2019:

https://www.eosc-portal.eu/sites/default/files/KI0518070ENN.en_.pdf

3. Casie Gillette, 5 Ways to Improve Your Public Speaking Skills, SEJ, 2019

<https://www.searchenginejournal.com/improve-public-speaking-skills/290309/#close>

4. Scientific Skills as Core Competences in Medical Education: What do medical students think?

<https://www.tandfonline.com/doi/abs/10.1080/09500693.2015.1054919>

SYLLABUS

Semester VI

Musculoskeletal System

1. **Course identification code: MEDC 3230**
2. **Credit Points: 5 ECTS, Contact Hours: 78; Independent Hours: 72; Sum: 150.**
3. **Person(s) responsible for course: Salome Tsaria; Nino Lomidze**

Lecturers: Orthopedics and Traumatology – Gia Chelidze; Rheumatology – Lali Kilasonia; Pharmacology – Tamar Kezeli; Pathology, Pathophysiology – Tamar Goderidze; Physical Medicine and Rehabilitation – Tamar Chilingarashvili; Immunology – Marina Tevzadze; Medical Genetics – Khatuna Vashakmadze; Emergency Medicine – Irina Tsirkvadze; Propaedeutic – Giorgi Javakhishvili; Laboratory Medicine - Nino Gulatava; Diagnostic Radiology - Tamar Dundua; Introduction to Clinical Practice III – Marina Jimukhadze; Scientific Research and Project Course III – Leila Beitrishvili.

4. Goals

In evidence based manner

1. To remind knowledge on anatomy, histology and physiology of musculoskeletal system;
2. To convey:
 - 2.1. knowledge on etiopathogenesis of clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to musculoskeletal system;
 - 2.2. knowledge on mechanism of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to musculoskeletal system;
 - 2.3. necessary knowledge together with performance measures on health care processes, clinical decision making process, clinical decisions and clinical practices required for managing clinical conditions related to musculoskeletal system, which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, at the level of primary health care service;
 - 2.4. necessary knowledge on pharmacology of drugs that are effective on musculoskeletal system or on clinical conditions related to musculoskeletal system;
 - 2.5. necessary knowledge on clinical research methods and searching medical literature;
 - 2.6. necessary knowledge on phytotherapeutic agents;
3. To equip with basic and advanced clinical skills (peripheral venous catheter insertion-C8, physical examination of musculoskeletal system-C8) required at primary health care service level;
4. To equip Semester V students with basic and advanced professional and clinical (interventional or non-interventional) skills necessary for practice of medical profession.

Scientific Research and Project Course III

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beitrishvili;

Goals

1. To equip third year medical students with knowledge and skills of writing a scientific project proposal, and furthermore to equip with basic knowledge and skills for scientific career;
 2. To help students identify a project in an area of their interest and to select a mentor who can support them in pursuing and completion of their project;
 3. To best support students, three thematic areas of scholarship have been defined. These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area;
 4. Students continue their research project with mentors during the 4th and 5th years.
-
5. **Prerequisite:** *MEDC 2160 Cardiovascular System; MEDC 2170 Respiratory System; MEDC 2180 Gastrointestinal System and Metabolism; MEDC 2210 Nervous system; MEDC 2220 Urogenital and Endocrine Systems; MEDC 2130 Introduction to Clinical Practice II; MEDC 2260 Scientific Research and Project Course II.*
 6. **Co-requisite:** N/A
 7. **Intended learning outcomes;**
 - 1.0. Recalls anatomy, histology and physiology of musculoskeletal system;
 - 2.0. Explains etiopathogenesis of clinical conditions (congenital, traumatic, metabolic; degenerative, oncological conditions of bone, rheumatological disorders, diseases/disorders of connective tissue, vascular diseases, pathological posture, pain) which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to musculoskeletal system;
 - 3.0. Describes mechanisms of occurrence for frequently encountered clinical complaints, symptoms, signs and findings in clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency related to musculoskeletal system;
 - 4.0. At multi-system level and/or related to cardiovascular and respiratory systems system:
 - for healthy conditions in an individual or community with a request against clinical conditions that pose risks;
 - in an individual with clinical complaint, symptom, sign or laboratory/imaging finding or in a community;
 - for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;**Explains** in an evidence-based manner and together with performance measures from the aspects of reliability, practicality and outcomes:
 - health care processes, clinical decision making process, clinical decisions and clinical practices which are required for management at primary health care service level:
 - 4.1. practices of history taking and physical examination (musculoskeletal-C8);
 - 4.2. evaluates of emergency case (trauma-C8);
 - 4.3. approaches to healthy individual or patient (musculoskeletal dysfunction-C8);
 - 4.4. laboratory tests/examinations (monitorization of drug therapy-C8);

- 4.5. imaging tests/examinations (radiological imaging of musculoskeletal system-C8, radiological examinations in benign ve malign tumors of bones-C8, bone scintigraphy-C8);
- 4.6. points care testing;
- 4.7. makes preliminary diagnosis or definitive diagnosis decision;
- 4.8. makes non-intervention or intervention decision;
- 4.9. practices at non-intervention or intervention;
- 4.10. refers/transport of healthy individual or patient;
- 5.0. Explains pharmacology of drugs (non-opioid analgesics, skeletal muscle relaxants, disease modifying antirheumatic drugs) that are effective on musculoskeletal system or on clinical conditions related to musculoskeletal system;
- 6.0. Explains effects of phytotherapeutic agents on musculoskeletal system or on clinical conditions related to musculoskeletal system;
- 7.0. Performs basic clinical skills, practiced on phantom models (peripheral venous catheter insertion-C8), and advanced clinical skills, practiced on simulated/standardized patients (physical examination of musculoskeletal system-C8), required at primary health care service;

Introduction to Clinical Practice III - Musculoskeletal System

Intended learning outcomes

Knowledge and Understanding

- 1.0. Defines the basic terminology used in general and organ system specific physical examination;
- 2.0. Describes the steps of history taking and physical examination of musculoskeletal system;
- 3.0. Describes suture materials and choose the appropriate material.

Skills

- 4.0. Performs sutures in accordance with the skill procedure;
- 5.0. Performs history taking and physical examination of musculoskeletal system on simulated patients or mannequins in accordance with the skill procedure;
- 6.0. Performs intramuscular, intradermal and subcutaneous injection as well as intravenous cannulation applications in an adult model in accordance with the skill procedure;
- 7.0. Describes the process to be carried out to the patient before any intervention.

Attitude

- 8.0. Values the importance of informed consent;
- 9.0. Pays attention to patient privacy;
- 10.0. Values the importance of not exceeding the limits of his/her own competency level.

Scientific Research and Project Course III

Intended learning outcomes

- 1.0. Develop a research question, problem, or design;
- 2.0. Apply basic principles and knowledge found in the literature related to the research question;
- 3.0. Develop a research proposal to address or resolve a specific research question or problem; Apply and evaluate methodology throughout the project;
- 4.0. Collect, interpret, and critique data to resolve a research question or evaluate a design;
- 5.0. Communicate research findings;
- 6.0. Appreciate what the process of scientific research entails.

8. Teaching method(s)

Lecture

Theoretical interactive learning - Seminars

Videos for learning

Videos for teaching

Practical Work

Laboratory Work

Teaching by using the simulations

Learning with usage of simulators

Teaching through standardized patients

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

Participating in scientific research

Teaching research skills

9. Course content:

Orthopedics and Traumatology: Introduction to Musculoskeletal System; Degenerative Osteoarthritis; Management of the Trauma Patient; Management of Soft Tissue Disorders; Fractures of Children; Lower Extremity Trauma; Traumatic Dislocations; Spinal Trauma; Complications of Fractures; Spinal Deformities; Osteoporosis; Benign Tumors of Bone; Malignant Tumors of Bone; Osteomyelitis; Septic Arthritis; Development Dysplasia of the Hip; Upper Extremity Trauma; Foot Deformities; Principles of Fracture Healing;

Physical Medicine and Rehabilitation: Osteoporosis and Osteoarthritis Treatment, Rehabilitation; Soft Tissue Pain; Neck, Shoulder and Wrist Pain; Low Back, Hip and Ankle Pain;

Rheumatology: Spondylarthropaties; Inflammatory Polyarthritis & Rheumatoid Arthritis; Miscellaneous Rheumatological Disorders I; Miscellaneous Rheumatological Disorders II; Miscellaneous Rheumatological Disorders III; Connective Tissue Disorders I; Connective Tissue Disorders II; Vasculitis I; Vasculitis II;

Pathology: Autopsy I; Autopsy II; Degenerative Joint Disease; Tumors of Soft Tissues I; Tumors of Soft Tissues II; Vasculitis I; Vasculitis II;

Pathophysiology: Pathophysiology of Musculoskeletal System Disorders I; Pathophysiology of Musculoskeletal System Disorders II;

Pharmacology: Nonsteroidal Antiinflammatory Drugs I; Nonsteroidal Antiinflammatory Drugs II; Skeletal Muscle Relaxants;

Immunology: Immune Mechanisms of Musculoskeletal Disorders; Immune Mechanisms of Musculoskeletal Disorders;

Medical Genetics: Skeletal Dysplasias; Muscular Dystrophies I; Skeletal Dysplasias; Muscular Dystrophies II;

Radiology: Imaging of Musculoskeletal System;

Emergency Medicine: Initial Approach to Trauma Patient; Frostbite / Burns;

Introduction to Clinical Practice III - Musculoskeletal System: Physical Examination of the Musculoskeletal System; Suturing technique.

Scientific Research and Project Course III - Small group study (SRPC) - Introduction to Clinical Practice III - Musculoskeletal System: Physical Examination of the Musculoskeletal System; Suturing technique.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	32

Knowledge-based Assessment			Quiz	
			Final Exam	20
		EMQ: Extended Matching Questions		
		FSAQ: Fill-in-the Blank Short Answer Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	OSPE: Objective Structured Practical Examination	OSPE Checklist		
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	SPP: Scientific Project Proposal	SPP Checklist		12

11. Recommended literature:

Medical Genetics

1. Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436

Pharmacology

1. Harvey, Richard A. Lippincott's Illustrated Review of Pharmacology. 6th ed., Wolters Kluwer Health, 2015. ISBN: 978-1469887562.
2. Katzung, Bertram G., Masters, Susan B., Trevor Anthony J. Katzung's Basic & Clinical Pharmacology. 14th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259641152.
3. Brunton, Laurence, Chabner, Bruce, Knollman, Bjorn. Goodman & Gilman's The Pharmacological Basis of Therapeutics. 13th Edition. McGraw Hill Companies, 2017. ISBN: 978-1259584732.

Pathology

Abbas Aster, Kumar. Robbins Basic Pathology. 9th edition, Saunders, Elsevier Inc. 2013. ISBN:978-0-8089-2432-6

Pathophysiology

Pathophysiology of Disease, An Introduction to Clinical Medicine, 8th edition, Gary D. Hammer MD, PhD; Stephen J McPhee, MD; 2019.

Immunology

Oxford Handbook of Clinical Immunology and Allergy Gavin Spickett 2019

Emergency Medicine

Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition; Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency Medicine 6th edition

Diagnostic Radiology

Brant and Helms' Fundamentals of Diagnostic Radiology; Grainger & Allison's Diagnostic Radiology Essentials

Orthopedics and Traumatology:

Orthopedic Traumatology Manish K. Sethi, William T. Obremskey, A. Alex Jahangir 2018

Rheumatology:

Rheumatology, Elsevier 2018;

Oxford Handbook of Rheumatology Gavin Clunie, Nick Wilkinson, Elena Nikiphorou, Deepak Jadon 2018; Kelley and Firestein's Textbook of Rheumatology. 10th edition. Firestein G, Budd R, Gabriel SE, McInnes IB, O'Dell J. Elsevier, 2017.

Physical Medicine and Rehabilitation: Braddom's Physical Medicine and Rehabilitation David X. Cifu, et al., Elsevier 2015

Introduction to Clinical Practice III

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition; Jane W. Ball, Joyce E. Dains, John A. Flynn, Barry S. Solomon, Rosalyn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018
8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

Scientific Research and Project Course III

1. Research skills in medical education

<https://www.mededpublish.org/manuscripts/1760>

2. Future of Scholarly Publishing and Scholarly Communication, Report of the Expert Group to the European Commission, 2019:

https://www.eosc-portal.eu/sites/default/files/KI0518070ENN.en_.pdf

3. Casie Gillette, 5 Ways to Improve Your Public Speaking Skills, SEJ, 2019

<https://www.searchenginejournal.com/improve-public-speaking-skills/290309/#close>

4. Scientific Skills as Core Competences in Medical Education: What do medical students think?

<https://www.tandfonline.com/doi/abs/10.1080/09500693.2015.1054919>

SYLLABUS

Semester VI

Patient Safety and Quality Improvement

1. **Course identification code: MEDC 3240**
2. **Credit Points: 7 ECTS, Contact Hours: 106; Independent Hours: 104; Sum: 210.**
3. **Person(s) responsible for course: Natia Landia**
Lecturers: Patient Safety, Quality Improvement - Nika Gambashidze; Eka Cherkezishvili; Hygiene-Robizon Tsiklauri; Pharmacovigilance – Elza Nikoleishvili
4. **Course goals:**
To convey:
 1. developing and continuously improving knowledge, skills and attitudes for patient safety, quality improvement and pharmacovigilance;
 2. concerns of patient safety, quality improvement and pharmacovigilance in professional boundaries in a multidisciplinary and multi-professional way;
 3. competences for patient safety, quality improvement and pharmacovigilance concerned with behaviors as well as knowledge and skills;
 4. premise the centrality and relevance of the workplace, recognizing patient safety, quality improvement and pharmacovigilance specific context and organizational responsibilities;
 5. Importance of patient safety, quality improvement, hygiene, pharmacovigilance and the need to improve it in today's complex healthcare system.
5. **Prerequisite:** *MEDC 3140 Medical Ethics and Medical Law; PHMC 3110 Public Health and Social Medicine*
6. **Co-requisite:** N/A
7. **Intended learning outcomes**
Knowledge and understanding
 - 1.0. **Defines and understands:**
 - 1.1. concept of safety culture;
 - 1.2. definition and concepts of safety culture;
 - 1.3. concept of a learning organization and the importance of learning in and by the organization to ensure patient safety;
 - 1.4. factors are largely responsible for a positive safety culture – resources, leadership, formal and informal structures;
 - 1.5. healthcare safety standards and safety rules;
 - 1.6. role and individual responsibility for patient's safety, quality improvement and pharmacovigilance;
 - 1.7. role of relationships for safe communication;
 - 1.8. main causes of critical incidents and patient harm in work environment and systems;

approach;

1.9. environment and own behavior as integral parts of a complex, networked healthcare system which influences patient safety, quality improvement and pharmacovigilance;

1.10. concept of safety culture and its importance for patient safety, quality improvement and Pharmacovigilance;

1.11. relevant measures to prevent adverse events and increase patient safety in their individual work environment;

2.0. Recalls:

2.1. knowledge on pharmacology of drugs that are effective at multi-system level, specifically on a body system or on clinical conditions involving a specific body system;

2.2. commonly causative medications;

2.3. types and modes of presentation of delayed hypersensitivity;

2.4. rare serious cutaneous drug reactions: most causative agents, time to onset, symptoms and Signs;

2.5. definition, concepts pharmacogenetic causes of drug-disposition variability metabolizing enzymes that can present with pharmacogenetic variants, and drugs metabolized;

2.6. pharmacogenetic basis of variability in drug response focused on pharmacodynamics; pharmacogenetic basis of hypersensitivity ADRs;

2.7. basic principles of causality assessment;

2.8. frequency of treatment control, proper surveillance of drug effects, suspected causative drug/s: withdrawal, dose reduction, deprescribing, substitution by alternative drugs.

2.9. principles and procedures of laboratory safety;

2.10. knowledge on phytotherapy (basic concepts and terms, uses in modern medicine, regulations, standardization and quality control);

2.11. early treatment and referral to intensive care units;

3.0. Recognizes:

3.1. patient safety and clinical risk management: risks involved in caring for patients and the vulnerability of patients;

3.2. the main patient safety problems involved in in-patient and out-patient healthcare, and the frequency with which they occur;

3.3. key patient safety terms and know the difference between preventable adverse events (PAEs), complications arising from a specific treatment and critical situations arising from illness;

3.4. the need for patient-centered healthcare and the responsibility of all healthcare professionals to ensure and provide for patient safety;

4.0. Describes:

4.1. basic knowledge, attitudes and skills required for patient safety;

4.2. main causes of and contributing factors to adverse events, patient-based factors, task and process-related factors, individual factors, team-based factors, factors relating to the workplace, organizational and management factors, Institutional factors;

4.3. causes of critical incidents;

4.4. systems approach and of risk management: difference between systems approach and the person approach;

4.5. methods and tools are available to help detect risks, i.e., to identify, assess, cope with and control risks as instruments of system management;

- 4.6. methods and tools that can improve safety (such as error reporting and learning systems, case analysis procedures, standards, quality management and safety management norms, medical guidelines, clinic-specific treatment paths, checklists;
- 4.7. relevant legal aspects, particularly liability, of clinical risk management, as well as aspects of patient rights and institutional liability;
- 5.0. Understands:**
 - 5.1. how adverse events can affect patients physically and mentally;
 - 5.2. patients' fears regarding safety in healthcare and that there are both healthy patients and sick patients, who have differing needs when it comes to autonomy and safety;
 - 5.3. importance of involving patients (and their relatives) and their competence in diagnostics, treatment and prevention (shared decision-making), along with the need to take account of individual, religious and cultural differences;
 - 5.4. possibilities for shared decision-making and can describe the procedure, opportunities and limitations in involving patients in the care process;
 - 5.5. role of patients and their relatives in identifying and preventing adverse events;
 - 5.6. awareness of especially vulnerable patient groups (e.g., dementia patients and non-native speaking patients);
- 6.0. Communicate in terms of the legal, liability and insurance aspects of disclosure of adverse events;
- 7.0. Offers information freely and informs patients about various steps in treatment;
- 8.0. Responds to complaints and worries in relation to an adverse event;
- 9.0. Transfer's safety-related rules to work environment.

Skills

1.0. Applies:

- 1.1. basic interventional and non-interventional processes for taking individual preventive measures, drug application and diagnosis or treatment;
- 1.2. rules of safe communication to written communication (e.g., patient chart documentation);
- 1.3. basic interventional and non-interventional processes for taking individual preventive measures, drug application and diagnosis or treatment;
- 1.4. control regulations when working in ward and outpatient clinics;
- 1.5. tools such as the Plan-Do-Study-Act (PDSA) cycle, flowcharting, cause and effect diagrams;

2.0. Measures to:

- 2.1. prevent typical errors in prescribing, preparing and administering/taking medication;
- 2.2. prevent medical product safety, medical devices and information technology;
- 2.3. prevent errors with medical-technical equipment;
- 3.0. Defines an adverse effect of medications and identify other problems related to the use of medications;
- 4.0. Takes accurate medication histories: these must include current prescription and over-the-counter drugs and significant past drugs (long periods of treatment and/or hazardous drugs, or potential for delayed ADRs);
- 5.0. Records and assesses current and past ADRs;
- 6.0. Evaluates of new symptoms and signs, patient factors that increase susceptibility to adverse reactions;
- 7.0. Updates information about medicinal products: drug package inserts, summary of product characteristics;
- 8.0. Reports defective medical products or information;
- 9.0. Prescribes cascade: concept and practical examples, early hypersensitivity reactions:

- treatment and prevention of future exposures, serious cutaneous adverse reactions, most common causative drugs recognition of early symptoms;
- 10.0. Explains basic terms and concepts about radiation biophysics, radiation safety and use of lasers;
 - 11.0. Displays a patient-centered and holistic (biopsychosocial) approach to patients and their problems;
 - 12.0. Evaluates own performance as open to criticism, realizes the qualifications and limitations;
 - 13.0. Distinguishes mechanisms of actions of drugs and explain toxicity of drugs.

Attitude

1.0. Values:

- 1.1. importance of quality of life
- 1.2. importance of listening person on the communication.

2.0. Embraces:

- 2.1. importance of lifelong self-learning and implements;
- 2.2. importance of updating knowledge and skills; searches current advancements and improves own knowledge and skills;
- 3.0. Takes responsibility for the development of patient safety and healthcare quality;
- 4.0. Respects patients, colleagues and all stakeholders in health care delivery.

8. Teaching method(s):

Lecture
Theoretical and practical learning - Seminars
Videos for learning
Videos for teaching
Role playing
Scenarios based simulation training
Practical studies
Participation in scientific studies
Case-based learning – CBL.
Recorded audio and video materials including public speeches presentations

9. Course content:

Patient safety and quality improvement: History and background of Quality Improvement in health care and public health; Most commonly used Quality Improvement models; QI tools: process mapping/flowcharting, cause and effect diagrams, PDSA, and group process techniques; Developing performance measures; Key steps to manage a QI project; Regulation and public reporting impact quality improvement. History of the medical error crisis. Informatics, electronic medical records, and health care technology. Error science, error management, and human factor science (communication skills). Understanding and managing clinical risk. Patient safety and invasive procedures. Introduction to quality improvement methods. Full-disclosure applications. Risk management and root cause analysis. Risk management and root cause

analysis. Outcome measures and continuous quality improvement. Error science, error management, and human factor science. Medication errors and reconciliation. Radiation Protection (Safety); Principles and Procedures of Laboratory Safety; Quality Improvement and International Patient Safety; Drug Safety; X-Ray Safety and Protection; Radiation Safety and Effects of Radiation; Environmental health and Ecology; Environmental health and Ecology. Monitoring standards for Environmental Pollution Control; norms; risk assessment; risk classification; risk categorization; ecosystems; biotic and abiotic factors; biosphere. Environment pollutions and impact on human health. Air pollution; Noise pollution; water pollution; Food pollution; Vector control. Habitat and environmental control; Limiting exposure; Chemical control; Biological control; Exposure science. Toxicity; dose response. Occupational health. Multidisciplinary field concerned with the safety, health, and welfare of people at work. Conditions & Diseases. Environmental agents; Diseases, disorders and conditions caused by exposure to environmental pollutants. Radiological health. Ionizing & non-ionizing radiation; impacts on organisms; acute radiation syndrome (ARS); radionuclides; regulation of radioactive materials; radiological emergency and incident response. Climate change. Its effects on human health and environment. Occupational and Environmental Hygiene in Health care sector. Personal Hygiene in the health care sector. Basic guidelines for proper personal hygiene; 4 tips for Infection Prevention; The importance of correct hand washing/Hand disinfection; protective Wear. Principles and standards for infection prevention in Health sector. Multidrug resistant organisms (MDRO); COVID-19, Infection prevention products. Prevention of nosocomial infections. Main routes of transmission; hygiene, sanitation; Occupational safety and health (OSH). Occupational hazards in medicine; multidisciplinary field concerned with the safety, health, and welfare of people working in health care sector. Biomedical waste management. Waste hierarchy; Life-cycle; Resource efficiency; incineration; recycling; Re-use. Social factors and health. Influence of social and cultural variables on health; Societal Factors That Influence Health: A Framework for Hospitals; Screening for Social Needs: Guiding Care Teams to Engage Patients; social determinants of health curriculum for clinicians. Safety of clinics: Clinical Safety Program; "Standard (Universal) Precautions"; Post-exposure medical evaluation; Hazard Management Program; Respiratory Infection Control: Respirators Versus Surgical Masks. Bloodborne Pathogens for Healthcare Personnel. Transmission routes and preventative strategies, and procedures to follow in cases of exposure; Hepatitis B vaccination. Introduction to drug development Process. History of Pharmacovigilance. Factors to be reported. Products to be reported. Reporting of adverse reactions and adverse events. Signal Management process. Methods of Signal Detection.

Pharmacovigilance: Drug Metabolism; Scope of Pharmacology and Passage of Drugs Across Membranes; Drug Application Routes and Pharmaceutical Forms of Drugs; Drug Excretion; Mechanism of Drug Action; Introduction to Drug Development; Drug Toxicity; Introduction to Rational Pharmacotherapy; Efficacy and Potency Concepts; Pharmacogenetics & Pharmacogenomics; Causality assessment and examples of adverse Drug reactions. Drug induced Liver Injury, Renal, skin and Major Adverse Cardiac events. Benefit -risk management. PSUR/PBRER. Role of Epidemiology in the Biopharmaceutical industry. Vaccine Pharmacovigilance. Pharmacovigilance in Special Populations: Pediatrics. Elderly. Risk Management Plan. Labeling. Definition of PV; History of PV; Goals of PV (rational medicine use, communication of risk and benefit of medicines, health worker and patient education); Widening scopes of PV— adverse drug reaction (ADR), medication error, product quality, therapeutic ineffectiveness; PV of herbal medicines. Need and importance of PV (burden of ADRs; morbidity and mortality, cost burden of ADRs, benefits of PV.; Clinical trials of medicines

and post marketing surveillance, and how PV fits in all these steps (life-cycle approach); PV information influencing medicines policy and regulation: recall, labeling changes, reschedule withdrawal, policy change. Definition: Adverse drug reactions (ADR), adverse drug event (ADE), Side effect, post- marketing surveillance (PMS), and other PV-related terminologies ; Classification of ADRs (e.g., Type A and B and others; immediate, delayed) ; Pre-disposing factors of adverse drug reactions: age, gender, pregnancy, previous history of allergy or reaction, multiple drug therapy, ethnic and genetic factors and concomitant disease processes; Brief overview of strategies that minimize the occurrence or early detection of ADRs; Method of assessing causality of ADRs.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination -	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	22
		Scenario based MCQs	Final Exam	20
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	10
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	PWPE: Project Writing and Presentation Evaluation	Presentation Checklist		10
	CBL-P: Evaluation of CBL Student's Performance	CBL Checklist		6

11. Recommended literature

NO	Subject	Textbook	Author	Publisher
2.	Patient safety and quality improvement;	Patient Safety and Quality Improvement in Healthcare: A Case-Based Approach	Rahul K. Shah (Editor), Sandip A. Godambe (Editor); ISBN-13: 978-3030558284 ISBN-10: 3030558282	Elsevier
		Quality Improvement and Patient Safety Competencies Across the Learning Continuum	Association of American Medical Colleges (Author). ISBN-10 : 1577541898 ISBN-13 : 978-1577541899	
		The memory jogger II: Tools for continuous improvement and effective planning.	Brassard, M., Ritter, D. (2010). F. Oddo ISBN-10 : :1576810798	
3.	Pharmacovigilance	Pharmacovigilance Practical Approach; Mind Maps of Pharmacovigilance Basics	Thao Doan, Fabio Lievano; ISBN-13: 978-0323581165 ISBN-10: 0323581161 Amrita Akhouri	Elsevier

SYLLABUS

Semester VII

Family Medicine

1. **Course identification code: MEDC 4110**
2. **Credit Points: 9 ECTS, Contact Hours: 140; Independent Hours: 130; Sum: 270.**
3. **Person(s) responsible for course: Tamar Goderidze, Nino Tskhvedadze**

Lecturers: Family Medicine - Marina Shikhashvili; Palliative care - Ioseb Abesadze;

Geriatrics I - Nato Shengelia; Rehabilitation - Tamar Chilingarashvili

4. Goals

1. Develop an appreciation of the unequivocal value of Primary Care as an integral part of any well-functioning health system;
2. Develop an understanding of caring for patients and patients' families in the context of the primary care clinic and community;
3. Develop and advance the knowledge, skills and attitudes necessary to provide Ambulatory (community-based) Clinical Care for common acute and chronic conditions;
4. Develop and advance the knowledge, skills and attitudes needed to conduct well-visits and age-appropriate clinical preventive services;
5. Develop and advance the knowledge, skills and attitudes necessary to provide health behavior change counseling and motivational interviewing;
6. Develop an appreciation for the importance of physician wellness and self-care;
7. Advance ability to communicate effectively with patients and inter-professional colleagues including oral presentation and written documentation of an adult outpatient encounter;
8. Develop knowledge, skills, and attitudes necessary to critically appraise the value of cancer screening within a population;
9. Develop the knowledge and skills to use telehealth technology in an appropriate and efficient way to provide patient-centered care.

5. Prerequisite: *MEDC 3110 Infectious Diseases & Hematopoietic System; MEDC 3120 Cardiovascular & Respiratory Systems; MEDC 3130 Gastrointestinal System; MEDC 3140 Medical Ethics and Medical Law; PHMC 3110 Public Health and Social Medicine; MEDC 3210 Endocrine, Reproductive & Urinary Systems; MEDC 3220 Nervous System and Psychiatry; MEDC 3230 Musculoskeletal System; MEDC 3240 Patient Safety and Quality Improvement*

6. Co-requisite: *PHMC 1130 Community Medicine and Health Promotion*

7. Intended learning outcomes

Knowledge and Understanding

Asthma and COPD Diagnosis and Management

- 1.0. Develops basic interpretation of pulmonary function tests;
- 2.0. Develops a differential diagnosis and diagnostic approach to cough and dyspnea;
- 3.0. Diagnoses, differentiates, and treats stable and exacerbations of COPD and asthma;
- 4.0. Describes the key historical features and physical exam findings associated with COPD and asthma;

Common Outpatient Infections

- 1.0. Identifies common infectious disease syndromes seen in primary care;
- 2.0. Generates specific differential diagnosis for common infectious syndromes;
- 3.0. Utilizes point of care resources to create evidence-based treatment plans for common outpatient infections;
- 4.0. Determines appropriate use of antibiotic medications to patient cases.

Community Health Assessment and Service-Learning Project

- 1.0. Explores the community and makes observations of available resources and environmental factors that may impact the health of the population you see in a clinical setting;
- 2.0. Utilizes existing data sources to assess a population's health and identify areas of concern;
- 3.0. Identifies and explores community resources available to your clinic's population;
- 4.0. Evaluates a community's strengths or areas of needs within the 5 domains of social determinants of health.

Developing and Defending a Differential Diagnosis

- 1.0. Practices developing an assessment and plans for common primary care concerns;
- 2.0. Refines your point-of-care knowledge gathering tools;
- 3.0. Practices presenting a full case with a differential and plan;
- 4.0. Practices creating PICO questions to focus your patient care learning.

Hypertension

- 1.0. Identifies critical aspects of the history and physical exam when evaluating a patient with new hypertension;
- 2.0. Formulates appropriate diagnostic work up plan for patients with a new diagnosis of hypertension;
- 3.0. Utilizes an evidence-based approach to treating hypertension using relevant guidelines;
- 4.0. Identifies the risks of treating hypertension in geriatric patients;
- 5.0. Demonstrates patient centered care when selecting hypertension treatment regimen;

6.0. Describes when to deviate from guideline directed management based on patient goals and preferences.

Introduction to Geriatric Assessment

- 1.0. Performs a comprehensive medication reconciliation and identify medications that should be avoided or used with caution in older adults;
- 2.0. Describes components of a fall risk assessment, uses results to identify underlying causative factors, and make recommendations for non-pharmacologic management;
- 3.0. Differentiates between normal changes in cognition with aging, mild cognitive impairment (mild neurocognitive disorder), and dementia (major neurocognitive disorder);
- 4.0. Develops a differential diagnosis for weight loss in an older adult patient.

Introduction to Motivational Interviewing and Health Behavior Change

- 1.0. Describes causes of death related to patient behavior;
- 2.0. Identifies 5 or more specific skills for facilitating health behavior change;
- 3.0. Practices skills for facilitating health behavior change with patients at clerkship sites;
- 4.0. Discusses experiences of attempting health behavior change counseling in the Family Medicine clerkships sites, identifying common challenges and barriers encountered at the clinical site;
- 5.0. Describes solutions to common challenges and barriers to motivational interviewing and health behavior change counseling;
- 6.0. Practices skills using role play for facilitating health behavior change utilizing tips and tricks for challenging situations.

Introduction to Population and Community Health

- 1.0. Describes how the determinants of health and health equity contribute to health;
- 2.0. Defines population health and how this is characterized at a clinic level and at a community level;
- 3.0. Practices accessing secondary data sources to describe the health of your clinic community;
- 4.0. Discusses how different stakeholders address population health.

Introduction to Primary Care

- 1.0. Describes primary care;
- 2.0. Describes importance of team-based primary care;
- 3.0. Identifies your role as a student in the primary care setting;
- 4.0. Identifies barriers to teamwork and solutions to those barriers.

Musculoskeletal Primer for Non-orthopedists

- 1.0. Evaluates a patient for basic musculoskeletal conditions associated with posture, ergonomics, and biomechanics;
- 2.0. Differentiates between common musculoskeletal conditions based on patient history and mechanism of injury to target the root cause of pain and dysfunction;
- 3.0. Recognizes when imaging is appropriate for musculoskeletal complaints;
- 4.0. Educates patients regarding exercise.

Palliative Care Module - An In-Depth Look at Palliative Care and its Services

- 1.0. Defines palliative care and the impact it has on patient quality of life;
- 2.0. Describes the characteristics of patients who can benefit from palliative care;
- 3.0. Locates resources to aid in your support of palliative care.

Palliative Care Module - Managing Pain in Patients at Risk for Substance Abuse Disorder

- 1.0 Identifies opportunities to introduce basic advance care planning in their clinical site for patients who have not started, or engaged in, the planning process;
- 2.0. Uses communication skills and motivational strategies to increase patient participation in basic advance care planning;
- 3.0. Creates a follow up plan for patients to have ongoing advance care planning conversations and complete their advance directive.

Palliative Care Module - Matching the Drug Class to the Pain

- 1.0. Describes how to select the minimum safe and effective medication for treating pain;
- 2.0. Selects a medication class that matches the patient's pain type and pattern;
- 3.0. Refines drug choice, accounting for benefits, side effects, and risks of each drug class.

Preventive Care and Cancer Screening Workshop

- 1.0. Recognizes the difference between screening and diagnostic tests;
- 2.0. Reviews typical screening modalities for a given cancer/disease;
- 3.0. Reviews USPSTF recommendations for various cancer screening tests;
- 4.0. Reflects on the quality of evidence supporting screening recommendations
- 5.0. Considers the trade-offs between benefits and harms of screening;
- 6.0. Describes two requirements of a successful screening program;
- 7.0. Uses point of care tools to suggest age-appropriate screening tests.

Primary Care Oral Presentations

- 1.0. Explains how primary care settings and inpatient settings are different;
- 2.0. Explains how this affects the way that you present a patient;
- 3.0. Demonstrates using a framework to present patients in the primary care setting.

Review of Common Musculoskeletal Complaints, Diagnosis, and Management

- 1.0. Describes what constitutes evidenced-based practice for musculoskeletal care, including the relative value of history, physical exam, and imaging studies for diagnosis;
- 2.0. Builds an initial framework for musculoskeletal differential diagnosis;
- 3.0. Explains the importance of secondary prevention whenever a musculoskeletal diagnosis is made;
- 4.0. Participates in answering clinically relevant questions pertaining to common hip, shoulder, spine, and knee, hand, and foot/ankle diagnoses.

Telehealth and Equity

- 1.0. Reviews the public layperson's perception about telehealth's utility and compare it to the medical perspective;
- 2.0. Identifies 3 vulnerable populations that could be marginalized by a shift from in-person care to telehealth services;
- 3.0. Identifies 3 vulnerable populations that could be better-served by a shift from in-person care to telehealth services.

Healthcare System/Practice Transformation

- 1.0. Summarizes how and where people seek healthcare;
- 2.0. Describes basic makeup of the healthcare workforce;
- 3.0. Compares healthcare workforce in urban and rural settings;
- 4.0. Discusses factors that impact the high cost of healthcare;
- 5.0. Compares cost and quality of two different countries;
- 6.0. Appreciates the role of primary care in the healthcare system.

Transitions in Care

- 1.0. Defines basic characteristics of common healthcare payer sources, including coverage of home care, rehabilitation, and long-term care services;
- 2.0. Applies understanding of the health care system to determine resources available to patients during transition of care;
- 3.0. Identifies potential hazards of hospitalization for older adult patients and identify potential prevention strategies.

Skills

- 1.0. Provides an oral presentation and written summary of an adult outpatient encounter that appropriately communicates the data acquired and the clinical reasoning that supports the differential diagnosis;
- 2.0. Identifies health behavior change language during a patient encounter and engage in health behavior change counseling, specifically using the skills of motivational interviewing;
- 3.0. Communicates effectively with patients, patients' families, health care team, and interprofessional colleagues including oral presentation and written documentation of an adult outpatient encounter;
- 4.0. Performs a focused or comprehensive physical exam on adult ambulatory patients as required by presenting complaint;
- 5.0. Develops a prioritized differential diagnosis, selects a working diagnosis, and develops initial treatment plan following an outpatient encounter of an adult patient presenting with common clinical concerns including: abdominal pain, cough, intimate partner violence, dysuria, failure to thrive, fatigue, headache, joint pain, sprains/strains, low back pain, male genitourinary symptoms, rhinitis, and skin lesions and rashes;
- 6.0. Orders appropriate diagnostic and screening tests and develops initial management plan for chronic conditions commonly seen in the adult ambulatory setting including asthma, COPD,

depression/anxiety, diabetes, dyslipidemia, hypertension, obesity, oral health, end of life care, and thyroid disease;

7.0. Gathers a comprehensive or focused history on adult ambulatory patients as required by presenting concern;

8.0. Recommends and counsels patients in an adult ambulatory setting on appropriate cancer screening tests based on the patients' age and risk factors;

9.0. Gathers data to perform well-visits and recommend age-appropriate clinical preventive services.

Attitudes & Responsibility

1.0. Shows behaviors and attitudes appropriate for family medicine physician;

2.0. Prefers evaluation of patient not only for major complaint but also as a whole;

3.0. Prefers detailed physical examination to search for main reason of illness;

4.0. For differential diagnosis:

4.1. Values importance of differential diagnosis based on frequencies and risks of illnesses;

4.2. Values using laboratory and clinical evaluations correctly and cost-efficiently;

5.0. Orders consultation when needed or mandatory;

6.0. Organizes appropriate interventions at primary care level, according to evidence based medical Practices;

7.0. Refers patient to appropriate center upon indication.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Teaching by using the simulations Scenarios based simulation training

Teaching through standardized patients

Bedside-teaching (Clinical rotations at University/teaching hospital)

Clinical rotation in Clinical skills training and simulation center

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients

9. Course content

WEEK	DAY	FamilyMedicine Content	Teaching Resources:	Teaching method(s)	Assessment Methods
Week 1	Day 1	Principles of family medicine: The biopsychosocial model of primary care, access to care; continuity of care; team-based, comprehensive care; coordination of services; community orientation; prevention focus; evidence-based practice; a biopsychosocial, life-cycle perspective; and family orientation. 12 central characteristics of family medicine.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 3-11	Lecture	
	Day 2	Overview of prevention and screening in Primary care: Lecture topics: (1) Define primary, secondary, and tertiary prevention; (2) Understand the elements that constitute a useful screening test; (3) Appreciate that not all available screening tools or prevention strategies improve health; (4) Access up-to-date resources on prevention.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 28-37; Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.83-101.		
	Day 3	Information mastery, basing care on best available evidence, principles of evidence based medicine in primary care Lecture topics: Interpreting the Medical Literature: Applying Evidence-Based Medicine in Practice	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 17 – 28; Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.110-115		
	Day 4	topics: Continuous, healing-oriented relationships as the foundation on which the medical home, or "health home," is built. Medical home as an interpersonal environment. The patient-centered medical home that brings together health professionals to work collectively toward the health needs of the community through the creation of health teams.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 17-25		
	Day 5	Lecture topics: Communicating with patients from all backgrounds, including collaborative co-production and shared decision-making - skills to facilitate the empowering of patients to be experts in their own circumstances, capable of making decisions and active contributors to their healthcare plans. Pendleton's model of consultation	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 102-108; 141-156		
	Day 6	Psychosocial influences on health: Lecture topic: Factors that influence health including age, gender, and sexual orientation. Religious, ethnic, and cultural groups that affect individual functioning. Family composition, structure, and functioning that affect individuals. Work and school status, social support network and significant others, financial resources, including health insurance status, personal and family history of major loss, trauma, or illness that should be integrated into the assessment of a patient's health status.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 25-33; "Case files in Family Medicine" by Eugene Toy, p.106		
Week 2	Day 1	Approach to common problems and clinical problem solving Lecture topic: Describe common decision-making approaches used by family physicians and give an example of when each is appropriate. Apply the threshold model of decision-making to a common problem seen in general practice. Explain how a family physician should approach the following issues: dealing with clinical uncertainty, identifying hidden agendas, and deciding how far to pursue rare diagnoses.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 120-125; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 88-97.	Lecture	
	Day 2	Principles of integrative medicine Lecture topics: How will relatively new and evolving areas of health care like complementary and alternative medicine (CAM) optimize and revitalize the practice of family medicine, the need for tools or frameworks to make decisions about which therapies should be provided or recommended, about which CAM providers to whom conventional medical providers might refer patients, and the organizational structure to be used for the delivery of integrated care.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 126-140; Case files in Family Medicine" by Eugene Toy, p.656		
	Day 3	Modification of behavioral risk factors: smoking addiction Lecture topics: Problem of tobacco smoking and dependence on nicotine that is indistinguishable from other forms of drug dependence. Problem of smoking and the fact that the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, (DSM-5) classifies "tobacco abuse disorder" in the Substance Abuse Disorder category. In such a dependency, the drug is needed to maintain an optimal state of well-being. Some believe that nicotine is more addictive than cocaine or alcohol. Smoking is responsible for 40% of all deaths from cancer and 21% of deaths from cardiovascular disease. Almost 10% of deaths attributable to smoking occur in nonsmokers exposed to secondhand smoke.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 1133-1150; Case files in Family Medicine" by Eugene Toy, p.42		
	Day 4	Modification of behavior risk factors: alcohol use disorders Lecture topics: Overview of problems related with alcohol use disorder: Patients with alcoholism use health care resources disproportionately compared with other populations. The report from the 2006 data analysis shows 360785 alcohol-attributable hospitalizations at community hospitals, 1.27 million emergency department (ED) visits, and 2.78 million physician office visits. Estimates of the extent of alcohol involvement in trauma include 39% of motor vehicle collision (MVC) fatalities (National Highway Traffic Safety Administration, 2006), 47% of homicides, 29% of suicides (Smith et al., 1999), 20% to 40% of fatal recreational injuries (Mayhew et al.,1986), and 10% to 25% of home injuries (CDC, 1983; Fell and Nash, 1989). Alcohol is involved in a substantial percentage of injuries caused by falls, drowning, and burns (Hingson and Howland, 1987, 1988). More than 5% of all hospital discharges other than childbirth include at least one alcohol-related diagnosis (Chen et al., 2005).	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 1119-1133; "Case files in Family Medicine" by Eugene Toy, p.116		
	Day 5	Modification of behavior risk factors: nutrition and weight management Lecture topics: 1. Describe how obesity and overweight are defined. 2. List factors that influence the nutritional status of people throughout the life-cycle. 3. Be able to perform a nutritional assessment on patients. 4. List factors contributing to overweight and obesity in children. 5. Describe different strategies for managing underweight, over weight, and obese patients.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp. 891-911; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 179-190; "Case files in Family Medicine" by Eugene Toy, p.364		
	Day 6	Modification of behavior risk factors: substance use disorder Lecture topics: Outline the scope of the problem of substance use disorder, screening, laboratory testing, intoxication and withdrawal, behavioral therapies for substance use disorders, special populations.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.1152-1162; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 558-564; "Case files in Family Medicine" by Eugene Toy, p.447		

Week 3	Day 1	Well-Adult care: Specific issues in prevention and screening for an adult population. Lecture topics: Identify which components of well-adult care are most evidence-based; Identify methods to implement well-adult care in a busy Practice; Describe how to customize population-based guidelines to individual adult patients	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 61-75; "Case files in Family Medicine" by Eugene Toy, p.34	Lecture	
	Day 2	Promoting quality of life in chronically ill and older patients Lecture topics: Describe the varying needs for preventing both mortality and morbidity of a heterogeneous elderly population; List primary, secondary, and tertiary disease preventive strategies in chronically ill people and older adults. Identify strategies for preventing geriatric syndromes and iatrogenic problems in chronically ill and older adults. Apply preventive services appropriately to different health and functional strata of older adults.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 77-86. "Case files in Family Medicine" by Eugene Toy, p.206		
	Day 3	Well child and adolescent care Lecture topics: Describe preventive care tailored to pediatric and adolescent patients. List which screening tests are most recommended for a child who comes for a well-child visit. Discuss what information should be provided to patients and parents when considering the risks and benefits of immunizations that are given to a child. Describe which health-related behaviors physicians can expect to influence most when seeing adolescent patients in the office.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 51-60. "Case files in Family Medicine" by Eugene Toy, p.328		
	Day 4	Prenatal Care in the context of family medicine Lecture topics: Prenatal care as a highly rewarding part of family medicine because of this special type of continuity. Describe the best means of accurately determining the gestational age of a pregnancy. Cite when prenatal vitamins or supplements are indicated during pregnancy. Summarize when and how you should screen a pregnant woman for neural tube defects, gestational diabetes, or Down syndrome. Demonstrate how a history of prior cesarean delivery influences delivery options.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 36-49. "Case files in Family Medicine" by Eugene Toy, p.61		
	Day 5	Interpreting laboratory tests; Clinical decision making using diagnostic laboratory testing in Family medicine Lecture topics: The use of the clinical laboratory to evaluate patients for the presence or absence of disease; need to understand the limitations of interpreting test results; The Concept of "Normal"; Evaluating a Test's performance characteristics; Considerations for ordering tests and introduction to basic laboratory tests.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.157-180; "Case files in Family Medicine" by Eugene Toy, p.192.		
	Day 6	Management of Cardiovascular diseases in Family medicine Lecture topics: Chest pain as the most common symptom of cardiovascular diseases seen in family medicine. Describe common decision-making approaches used by family physicians when meeting the patient with chest pain. Apply the threshold model of decision-making to a problem. Explain how a family physician should approach the following issues: dealing with clinical uncertainty, identifying hidden agendas, and deciding how far to go considering their competencies.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 99-110. "Case files in Family Medicine" by Eugene Toy, p. 228.		
Week 4	Day 1	Common chronic cardiac conditions in primary care: Coronary artery disease (CAD). Lecture topics: List the diagnostic criteria of common cardiac diseases in primary care; Assess and detect signs and symptoms indicating functional capacity, and acute exacerbation or worsening status at each encounter; Offer specific treatment interventions for patients whose clinical status has worsened; Describe the evidence-based interventions that prevent further disability or death; Describe how a continuity relationship between a family physician and a patient with a common cardiac condition leads to high-quality care and better clinical outcomes.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 113-123; Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.529-542; "Swanson's family medicine review – a problem oriented approach", 8th edition, pp.99-101.	Lecture	
	Day 2	Lecture: Common chronic cardiac conditions in primary care: Heart Failure (HF) and atrial fibrillation (AF) Lecture topics: Heart failure as a clinical syndrome resulting from the inability of the heart to meet the metabolic requirements of the body at normal filling pressures. Most important tasks in the clinical evaluation of HF patients: 1) establish HF as the patient's diagnosis, 2) determine the type of HF (systolic or diastolic), 3) manage HF symptoms and determine the severity of a patient's functional limitation, 4) optimize medication interventions to slow disease progression and delay mortality, and 5) identify patients who are at risk for developing HF or who have structural heart disease but without signs and symptoms of HF.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 117-122; Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.549-555;575-590; "Case files in Family Medicine" by Eugene Toy, p. 298 and p.466.		
	Day 3	Management of Hypertension in Family medicine practice Lecture topics: Define hypertension and discuss its epidemiology and clinical importance. Describe the initial approach to evaluating and managing a patient with elevated blood pressure. Name the major classes of medications used to reduce blood pressure and describe the approach to choosing antihypertensive therapies.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.514-525; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 125-134; "Case files in Family Medicine" by Eugene Toy, p. 338.		
	Day 4	atherosclerotic disease Lecture topics: Screening for dyslipidemia as a component of managing cardiovascular risk; Statin therapy for all patients in secondary prevention and patients with a 10-yr risk for atherosclerotic cardiovascular disease (ASCVD) of 7.5% or greater. The intensity of statin therapy based on risk level. Considering and ruling out secondary causes of dyslipidemia. Therapeutic lifestyle changes as an important component of any regimen designed to treat dyslipidemia. Definition of metabolic syndrome as an insulin-resistant state associated with visceral adiposity, HTN, hyperglycemia, dyslipidemia, and a pro-inflammatory and pro-oxidative state.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.504-514; 525-527; "Case files in Family Medicine" by Eugene Toy, p. 388.		
	Day 5	Management of venous thromboembolism in family medicine practice Lecture topics: Estimate the probability of deep vein thrombosis and pulmonary embolism based on the clinical signs and symptoms; Appropriately use imaging studies to confirm or rule out venous thromboembolism; Recommend the appropriate duration of anticoagulant therapy; Identify patients who might require long-term anticoagulation.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.262-263; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 135-147; Clinical case problem 1 from "Swanson's family medicine review – a problem oriented approach", 8th edition, pp.128 -129.		
	Day 6	Management of Diabetes mellitus in Family practice Lecture topics: Describe clinical situations that should prompt evaluation for possible diabetes. List the diagnostic criteria for diabetes. Discuss how to convey the diagnosis of diabetes to a patient. Describe the initial evaluation and management of a patient with diabetes. List the necessary components to manage diabetes over time.	Robert Rakel, "Textbook of Family Medicine, 9th edition", pp.782-815; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 149-164; "Case files in Family Medicine" by Eugene Toy, p. 568.		

Week 5	Day 1	Management of thyroid disorders in primary care Lecture topics: List the common causes and classification schemes of hypo and hyperthyroidism. Outline the steps in the evaluation of hypo and hyperthyroidism and describe the role that anti-thyroid antibodies play in the diagnostic workup. Outline the recommended treatment strategy for hypo and hyperthyroidism and how management differs in certain high-risk groups.	Robert Raketel, "Textbook of Family Medicine, 9th edition", pp.828-839; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 164-177; "Case files in Family Medicine" by Eugene Toy, p. 172.	Lecture	
	Day 2	Management of bronchial asthma in primary care Lecture topics: Describe diagnostic criteria and clinical classification of asthma. Describe key differential diagnoses for common presenting asthma complaints. Discuss history and physical findings in patients with asthma. Discuss diagnostic tests used in evaluating patients with suspected asthma and tools used for ongoing monitoring. Describe clinically effective treatment interventions and long-term management for patients with asthma. Describe tertiary preventive measures for asthma management such as patient or family strategies for managing exacerbations.	Robert Raketel, "Textbook of Family Medicine, 9th edition", pp.243-247; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 607-623; "Case files in Family Medicine" by Eugene Toy, p. 622.		
	Day 3	Management of Chronic Obstructive Pulmonary Disease in Primary Care Lecture topics: Identify strategies to reduce the burden of chronic obstructive pulmonary disease (COPD). Describe objective measures for COPD diagnosis and how disease severity is classified. Describe clinical interventions used to achieve optimal patient-centered outcomes. Develop an appropriate treatment plan for patients with COPD to maximize patient function and reduce symptoms. Describe the management of an acute exacerbation of COPD.	Robert Raketel, "Textbook of Family Medicine, 9th edition", pp.247-252; Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 647-658; "Case files in Family Medicine" by Eugene Toy, p.42.		
	Day 4	Management of tuberculosis in Primary Care Lecture topics: Cite risk factors for tuberculosis (TB). Summarize an approach to a patient with a positive TB skin test (TST). Describe the evidence-based treatment recommendations for active and latent TB	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 659-667; "Swanson's family medicine review – a problem oriented approach", 8th edition, pp. 151-153.		
	Day 5	Managing of common skin problems in primary care Lecture topics: Describe skin rashes and lesions using the terms for primary and secondary morphologies. Describe how to choose a topical corticosteroid for inflammatory skin conditions based on the skin lesion, the location, the severity, and the age of the patient. Discuss diagnosis and treatment for the most common skin conditions.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp.467-476; "Case files in Family Medicine" by Eugene Toy, p. 152.		
	Day 6	Management of common allergic problems in primary care Lecture topics: Describe the common causes and manifestations of allergies in children and adults. Cite the most evidence-based treatment recommendations for allergies. Assess when a patient should be referred to an allergist, abnormalities described in allergic patients, cytokine production abnormalities and effects in allergic patients, manifestation, diagnosis and treatment	Robert Raketel, "Textbook of Family Medicine, 9th edition", pp. 351-355; "Case files in Family Medicine" by Eugene Toy, p.88		
Week 6	Day 1	Management of sore throat in primary care Lecture topics: Describe the differential diagnosis of sore throat for patients of different ages. Describe an evidence-based approach to diagnosis of strep throat and infectious mononucleosis that integrates the history and physical with judicious use of the laboratory. Choose appropriate treatment for various causes of sore throat	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 206-216; Case files in Family Medicine" by Eugene Toy, p.218.	Lecture	
	Day 2	Management of abdominal pain in primary care Lecture topics: Use clues from the history and physical examination to establish a presumptive diagnosis on which to base diagnostic testing. Determine when diagnostic testing is required and choose the most appropriate test to aid diagnosis of abdominal pain. Determine when it is safe to forego further testing and begin empiric treatment for abdominal pain based on a presumptive diagnosis.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 216-225; Case files in Family Medicine" by Eugene Toy, p.440.		
	Day 3	Management of Dyspepsia in Primary Care: Lecture topics: List common causes of dyspepsia; Discuss the pathophysiology of common causes of dyspepsia; Explain key diagnostic features of common causes of dyspepsia; Describe the evidence-based medicine approach to diagnosing and managing a patient with dyspepsia.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 241-252; Case files in Family Medicine" by Eugene Toy, p.526.		
Week 1	Day 1	Introducing core competencies of family medicine: first contact; continuity; gatekeeping; comprehensive care and focus on prevention. To illustrate how many of the principles of family medicine described previously can be applied to the care of patients, we will describe the real case of a woman who did not have a primary care physician, and how lack of application of these principles compromised her care.		Seminar	
	Day 2	Defining unique combination of primary, secondary, and possible tertiary prevention recommendations based on patient's risk factors and current diseases. In addition, patient preferences, time constraints, and variability in insurance coverage limit the ability to provide all recommended clinical prevention services for every patient. Discussing how to create an individualized health promotion plan using preventive medicine knowledge base and skills in negotiation and patient education.			
	Day 3	Discussing how to Using Evidence at the Point of Care: How to use freely available online resources: -Systematic reviews and meta-analyses from the Cochrane Database of Systematic Reviews, or by searching PubMed using their Clinical Queries tool. - Critically appraised topics and clinical guidelines from the National Guideline Clearinghouse. - The Trip database, a clinical search engine that draws on multiple sources for systematic reviews and guidelines.			
	Day 4	Discussing roles in Primary Healthcare teams, team members, and Traditional model versus new model of care showing multiple ways to access the health home (medical home), defining multidisciplinary team and primary care team models			
	Day 5	Discussing of the errors in medical practice and their relation to failure of communication. Discussing doctor's failure to understand the patient's meaning or to convey his or her own meaning. These misunderstandings as a cause of frustration for doctors and patients, with results that include lowered morale, patients' dissatisfaction, ineffective medicine, conflict, and litigation. Discussing different models of communication between doctor and patient in general practice. Motivational interview that can help the patient to make important changes			
	Day 6	Discussing the topic of patient's encounter to PHC when physician sees the person first, conceptualizing symptoms and behaviors in his social and psychological context and responding with sensitivity to the patient's experience and priorities. Discussing of importance when physician understands the interactive nature of multiple biopsychosocial variables and communicates this effectively to the patient. The physician fosters a supportive and empathic physician-patient relationship to provide the foundation for gathering information and intervening effectively			
					<p>Knowledge-based Assessment Written Examination: MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.</p> <p>Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;</p>

Week 2	Day 1	Outline systematic approach to problem solving commonly used by family physicians. Before presenting the model for clinical problem solving, reviewing the context of family medicine practice that shapes problem solving by family physicians. By taking a systematic approach to solve problems and using point-of-care information resources, the physician can minimize or at least control some of the uncertainty common in practice. Reviewing four primary tasks to solve clinical problems: (1) begin to understand the problem in clinical terms, (2) define and select the problem or problems to address, (3) discuss and create treatment and solution options and eventually selecting an agreed-on management plan, and (4) monitoring response to treatment. Using the model for clinical problem solving as a guide to improve the process and identify the challenges associated with the process to prevent errors.		Seminar	<p>Knowledge-based Assessment Written Examination; MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.</p> <p>Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;</p>
	Day 2	Discussing trends in complementary and alternative medicine use, core elements in integrative medicine, mind-body medicine, spirituality, commonly used movement therapies, precautions in CAM, Family physicians, specialists in caring for the whole person through a continuous, healing relationship, as an ideal discipline to advance the integration of safe and effective CAM into their repertoire to optimize the health of their patients			
	Day 3	Discussing health risks related with smoking, reviewing different strategies to counsel the patients for quitting smoking; Patients who smoke should receive advice and encouragement to stop at every visit. Take advantage of the teachable moment, when a patient who smokes is being treated for any medical condition. Multiple strategies and persistence that are usually needed for successful cessation because tobacco dependence is a chronic disease. Brief counseling, usually lasting less than 3 minutes, as an effective way to begin intervention.			
	Day 4	Discussing importance of screening and assessment of alcohol use disorders (AUD) at primary healthcare: Apply CAGE screening to all patients older than 18 years of age; Be aware of a "negative" drinking history; Closely follow up positive responses; The AUDIT-C questionnaire as a standard for quantifying AUDs in medical settings.			
	Day 5	Overview of Dietary Guidelines that emphasize following actions: Build a healthy plate; Cut back on foods high in solid fats, added sugars, and salt; Eat the right amount of calories for patient; Be physically active appropriate for the way of specific patient. Providing the 10 tips to help the public and professionals who educate the public, to improve the nutritional quality of diet to prevent the leading chronic diseases of obesity, heart disease, and type 2 diabetes. The 10 tips that go along with Choose My Plate: 1. Balance calories. 2. Enjoy your food but eat less. 3. Avoid oversized portions. 4. Foods to eat more often include vegetables, fruits, whole grains, and low-fat milk and dairy products. 5. Make half your plate fruits and vegetables. 6. Switch to fat-free or low-fat (1%) milk. 7. Make half your grains whole grains. 8. Foods to eat less often include foods high in solid fats, added sugars, and salt. 9. Compare sodium in foods. 10. Drink water instead of sugary drinks.			
	Day 6	Diagnostic Criteria for Substance Abuse and Dependence (DSM-IV); Common Drug Street Names, different screening tools for adolescents and adults (CRAFT, CASGE), intervention techniques (five "As", FRAMES), drug testing methods advantages and disadvantages, medical management, behavioral therapies, specific approach to special populations (pregnancy, breastfeeding, adolescents)			
Week 3	Day 1	The periodic health evaluation, well-adult recommended preventive services; The recommended screening tests for well adults based on the USPSTF guidelines, patient education, promoting dental and oral health, STDs, HIV and unintended pregnancy prevention; Importance to empower the patient and involve her or his preferences and values in shared decision-making particularly when making decisions about interventions lacking conclusive benefit.		Seminar	<p>Knowledge-based Assessment Written Examination; MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.</p> <p>Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;</p>
	Day 2	Describing special considerations for addressing preventive care in chronically ill and older adults; heterogeneity of the older population; Top 10 Causes of Mortality and Morbidity for People Age 65 and older. Conditions to be prevented, matching preventive strategies to patient's health and functional status. Importance of considering remaining life expectancy and active life expectancy into decision making about preventive activities, because there is often a time lag between the preventive activity and when its health benefit becomes realized.			
	Day 3	Discussing key points of the adolescent and well child care: - How to improve rates of providing well child and adolescent care in family medicine; - How systems developed within the health care medical home model can help improve the rates of children who are up to date with preventive interventions; - Importance of immunizations which remains most effective method of primary prevention in children; - Importance of discontinuing recommending interventions not supported by evidence; - Evidence-based resources to guide preventive services recommendations for children.			
	Day 4	Discussing issues that can be covered in a preconception visit: Minimizing occupational risks; Prescribing folic acid. Maximizing chronic illness care. Improving health habits; Review current medications and assess safety. Preconception screening recommendations for specific diseases; Immunizations during and before pregnancy; Routine laboratory tests performed during routine prenatal care; Indications for ultrasound during pregnancy; genetic testing; physical examination peculiarities according to gestational age; specific issues like early pregnancy loss and ectopic pregnancy; post-dates pregnancy. Discussing plans for delivery in women with a previous cesarean delivery			
	Day 5	Reviewing issues of test's ability to discriminate diseased from non-diseased persons by its sensitivity, specificity, and positive and negative predictive values. The optimal cutoff values of different tests and their application in the practice of family medicine; reviewing purpose of different specific tests, like albumin, blood biochemistry, complete blood count, coagulation tests, acute phase reactants and inflammatory markers, lipid profile and evaluation of cardiovascular risk, indications of ordering different tests in different clinical circumstances and interpretation of their results.			
	Day 6	Discussing and understanding process of primary care: Symptom→Clinical diagnosis→Diagnostic testing (optional) →Management. Understanding specific issues in the primary care when the family physician's initial diagnosis is provisional, and the management plan is designed to both treat the symptoms and confirm the diagnosis. Importance of providing an estimate of prognosis (i.e., what the patient should expect in the coming days or weeks) as the part of the care process. Evaluate chest pain in a primary care setting using a structured, evidence-based approach. Readily identify uncommon but life-threatening causes of chest pain in the primary treatment. Manage non-life threatening but important causes of chest pain.			

Week 4	Day 1	Discussing the role of atherosclerosis as the main contributing factor to develop CAD, discussing the role of variety of risk factors, including dyslipidemia, HTN, impairments in glycemic control, age, family history, cigarette smoking, obesity, and systemic inflammation in atherosclerosis. CAD as one of the top 20 diagnoses seen by family physicians. The primary tasks in the management of patients with known CAD during ambulatory visits: Identifying the type of angina and detecting changes in the pattern and severity of angina symptoms; Treating angina symptoms when they occur; Reducing and controlling risk factors to prevent progression of coronary artery disease and in turn, decrease the likelihood of MI and death.		Seminar	<p>Knowledge-based Assessment Written Examination: MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.</p> <p>Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;</p>
	Day 2	Importance of aggressive modification of cardiovascular risk factors in patients with HF. HTN as a condition that is strongly linked to the development of HF and should be aggressively treated. Discussion of the target BP that should be 130/85 mm Hg or less except in patients with diabetes in whom the target is lowered to 125/85 mm Hg or less. Control of dyslipidemia and diabetes as also very important in the management of patients with HF. Screening for sleep apnea and thyroid disease and aggressively treating these conditions if present needs to be done. The avoidance of alcohol, illicit drugs, and smoking that are strongly advised. Losing weight and establishing a routine exercise program are also important preventive measures. Patients with a history of heart palpitations need to be evaluated for tachycardia because this is a well-established risk factor for cardiomyopathy and HF. Main principles of identifying and management of patients with AF: Detecting underlying causes for AF and coexisting cardiovascular disease; Treating patients who are acutely symptomatic; Determining whether to attempt cardioversion to sinus rhythm			
	Day 3	Assessment and screening of hypertension in adults; discussing risk factors for hypertension, blood pressure classification, secondary hypertension, accurate measurement of blood pressure, clinical assessment and making the diagnosis, physical examination, initial laboratory tests, patient education, assessing global cardiovascular risk, algorithm of pharmacologic management of hypertension, lifestyle modifications, management of hypertension in patients with different specific conditions (diabetes etc.), Compelling Indications for antihypertensive medication selection.			
	Day 4	Discussing importance of identification and treatment of dyslipidemia to lower the risk for developing atherosclerotic disease and its various clinical manifestations. Definitions for high-, moderate-, and low-intensity statin therapies, treatment targets, primary and secondary prevention recommendations; Secondary causes of hyperlipidemia most commonly encountered in clinical practice; Dietary recommendations for therapeutic lifestyle change; pharmacologic treatment options: statins, fibrates, niacin, ω-3 fish oils, and bile acid sequestration, side effects and effective management strategies. Metabolic syndrome which is not a CAD risk equivalent but is associated with a heightened risk for CVD and DM. Importance of comprehensive risk factor evaluation in all of these patients. Methods of treatment metabolic syndrome: aggressive lifestyle modification, including weight loss, exercise, smoking cessation, and dietary modification. Lifestyle modification can reduce risk of developing DM by 58%. Importance of weight loss achieving through caloric restriction; exercise; and, when indicated, pharmacologic intervention or bariatric surgery. Need of pharmacologic treatment of dyslipidemia and HTN of metabolic syndrome if lifestyle modification does not help to normalize these risk factors.			
	Day 5	Effective diagnostic approach to patients with suspected DVT or PE, making the best possible use of the history and physical examination in validated clinical decision rules. Evidence-based and efficient approach to the treatment of VTE; diagnosis of deep vein thrombosis; differential diagnosis of leg pain and swelling; clinical decision rule; laboratory testing; approach to the patient; diagnosis of pulmonary embolism; An algorithm using clinical indicators, quantitative D-dimer test, and various imaging studies (spiral CT with contrast, MRA, venous Doppler ultrasonography) which can effectively rule in (>85% probability) or rule out (<5% probability) PE. Anticoagulation with low molecular weight heparin followed by at least 3 months of warfarin (Coumadin) as the standard of care for patients with uncomplicated VTE with a clear clinical presentation and differential diagnosis of diabetes; red flags: hyperglycemic crisis or hypoglycemic conditions; history and physical examination; diagnostic testing; referrals; task of the clinician who has made a diagnosis of diabetes to convey this news to the patient; controlling of risk factors: blood pressure, tobacco cessation, management of dyslipidemia, management of hyperglycemia; screening for and management of complications; hypoglycemic agents used for treatment of type 2 diabetes, insulin therapy options; long-term complications of diabetes.			
	Day 6				

Week 5	Day 1	Discussing role of thyroid hormones; The most common signs and symptoms of hypo and hyperthyroidism; symptoms consistent with a hypermetabolic state; common causes of hyper and hypothyroidism; chronic autoimmune thyroiditis (Hashimoto thyroiditis); drugs affecting thyroid function and testing; long-term follow-up of thyroid disorders; thyroid disease in pregnancy.		Seminar	<p>Knowledge-based Assessment Written Examination: MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.</p> <p>Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;</p>
	Day 2	Discussing topics of asthma etiology, epidemiology and risk factors, clinical presentation and diagnosis, classification of asthma severity and control, chronic care and disease management, management of exacerbations; asthma medications; patient education and develop asthma action plan.			
	Day 3	Epidemiology and risk factors of COPD, clinical presentation, diagnosis and severity assessment, chronic care management, treatment of exacerbations, prevention of COPD – importance of smoking cessation, pharmacotherapy of COPD, long-term monitoring			
	Day 4	Discussing problem of underdiagnose problem of tuberculosis in primary care, differential diagnosis, laboratory testing, history and physical examination, defining a positive tuberculosis skin test by risk status, imaging studies, treatment; Algorithm to guide duration of continuation-phase treatment for culture-positive tuberculosis patients. Extra pulmonary TB, outpatient infection control, treatment monitoring, cooperation with specialized TB services.			
	Day 5	Discussion of primary and secondary skin lesions, diagnostic testing, treatment, choosing topical corticosteroids, commonly used vehicles for steroids and other dermatologic preparations, viral, bacterial and fungal skin infections, seborrhea, psoriasis, acne, sun damage and pre-cancer, ABCDE guidelines for diagnosis of melanoma.			
	Day 6	Discussion of different allergic diseases: allergic rhinitis, allergy in the eye, non-specific measures, specific immunotherapy, second-generation oral antihistamines for treatment of allergic rhinitis, symptoms of eye allergy including pruritus, erythema, and lacrimation; treatment options including oral antihistamines plus topical medications such as mast cell stabilizers or H1 blockers; ophthalmic solutions useful in the treatment of allergic conjunctivitis			
Week 6	Day 1	Differential diagnosis of sore throat: infectious and non-infectious causes of sore throat, likelihood of group A b-hemolytic streptococcal (GABHS) pharyngitis and infectious mononucleosis in the primary care setting by age, clinical evaluation, history and physical examination, red flags suggesting progressive or life-threatening disease in patients with sore throat, clinical prediction rule for the diagnosis of group A b-hemolytic streptococcal (GABHS) pharyngitis, diagnostic testing and management, considering infectious mononucleosis in those with persistent sore throat, fatigue, and posterior cervical adenopathy (SORT-B). Being aware of Lemierre syndrome, a rare complication of infection with <i>F. necrophorum</i> in adolescents and young adults that typically presents with rigors and unilateral neck swelling (SORT-C).		Seminar	<p>Knowledge-based Assessment Written Examination: MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.</p> <p>Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;</p>
	Day 2	Clinical evaluation of the patient with abdominal pain, history and physical examination, differential diagnosis, causes of abdominal pain based on location and quality, diagnostic testing, suggested approach to the initial evaluation of the adult with acute abdominal pain, management of the problem considering underlying condition.			
	Day 3	Differential diagnosis and pathophysiology; gastroesophageal reflux disease; peptic ulcer disease; functional dyspepsia; history and physical examination; red flags for patients with dyspepsia indicating more serious or life-threatening disease; diagnostic testing; H. pylori infection; medications options for the treatment of dyspepsia.			
Week 1	Day 1	Study tour in Family medicine center, get to know structure and organization of the center, essential services delivered by the family doctors and primary care team.	FM Department at clinic	Clinical Practice	<p>Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist;</p> <p>Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise -Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.</p>
	Day 2	Case discussion: A 55-year-old Caucasian woman, new to your practice, presents for an "annual physical examination." Case 11 Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests.	"Case files, Family Medicine", 4th edition, Eugene C. et al, page 132.		
	Day 3	CASE EXAMPLE: A 40-year-old woman sees you because she is experiencing severe vasomotor symptoms (i.e., hot flashes). These symptoms are keeping her awake at night. She had a total abdominal hysterectomy and oophorectomy 6 months ago because of enlarging uterine fibroids. She has a family history of heart disease and she is concerned about cardiovascular risks associated with HRT. What is the current evidence regarding cardiovascular risks of HRT for this patient? How should you counsel this patient?	Textbook of Family Medicine, 9th edition", pp.110-115		
	Day 4	Patient-Centered Primary Care Collaborative site that includes a video to educate staff and colleagues about the PCMH	https://www.youtube.com/watch?v=AR9RMbZGgqo ; practicing in creation of health oriented team creation worksheet		
	Day 5	Mrs. Smith is 59 years old, is 20 pounds overweight and has an average blood pressure of 145/98 mm Hg and a fasting glucose of 135 mg/dL. Her hemoglobin A1c is 7.2%, indicating that she has previously undiagnosed diabetes mellitus. She complains of Bilateral knee pain, which makes it hard to exercise. Radiographs of the knees confirm the diagnosis of moderately severe osteoarthritis. She also has complained of hot flashes, insomnia, and depression.	Page 8 in "Textbook of Family Medicine, 9th edition", Rakel R.		
	Day 6	Discussing practical case scenarios: Case 8	"Case files in Family Medicine" by Eugene Toy, p.106		

Week 2	Day 1	Practical discussion of different case scenarios and real practice clinical cases. Case 52 <i>Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests</i>	"Case files in Family Medicine" by Eugene Toy, p.582	Clinical Practice	Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist; Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise -Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.
	Day 2	Discussing real cases of complementary and alternative medicine case scenario: Case 59	"Case files in Family Medicine" by Eugene Toy, p.656		
	Day 3	Discussing practical cases of the diseases related with cigarette smoking: COPD, CVD, chart review, case scenario: Case 2	"Case files in Family Medicine" by Eugene Toy, p.42		
	Day 4	Providing role playing in counseling for alcohol use disorder, case scenario: Case 9	"Case files in Family Medicine" by Eugene Toy, p.116		
	Day 5	Providing role play in counseling for healthy diet and weight management. Clinical case scenario 33	"Case files in Family Medicine" by Eugene Toy, p.364		
	Day 6	Practicing in counseling patients with substance use disorder: A 20-year-old female college student with no significant past medical history presents to the ED with symptoms of coronary ischemia and other symptoms that signify increased sympathetic activity after drinking alcohol and smoking and ingesting unknown substances; Clinical case 41	"Case files in Family Medicine" by Eugene Toy, p.447		
Week 3	Day 1	Practicing in prescribing different preventive interventions based on adult age groups. Case scenario: A 52-year-old man comes to your office for a routine physical examination. He is a new patient to your practice. Clinical case 1	"Case files in Family Medicine" by Eugene Toy, p.34.	Clinical Practice	Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist; Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise -Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.
	Day 2	Discussion of clinical case: A 75-year-old white man presents for a health maintenance checkup. The patient has stable hypertension but has not seen a physician in more than 2 years. Case 18 <i>Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests</i>	"Case files in Family Medicine" by Eugene Toy, p.206		
	Day 3	Role play: providing counseling for adolescent and well child healthcare. Case scenario: A 16-year-old adolescent girl presents for a routine well examination. She is a junior in high school and has no significant medical history. She plays on the school softball team and has a pre-participation clearance form for you to complete. She is accompanied by her mother who wants to know if her daughter should start having routine gynecologic examinations as part of her routine checkup; Case 29	"Case files in Family Medicine" by Eugene Toy, p.328.		
	Day 4	Practicing in gathering clinical information useful for diagnosing pregnancy: a detailed menstrual history, symptom review (most commonly amenorrhea, nausea, fatigue, and breast tenderness), physical signs (e.g., softening and bluish cervical discoloration), and a urine or serum pregnancy test. Transvaginal ultrasound is the best diagnostic choice for women with abnormal bleeding or abdominal pain and a positive pregnancy test and sonographic landmarks (e.g., gestational sac) assist in dating the pregnancy. Clinical case scenario: A 22-year-old woman who has never been pregnant before presents to you after having a positive home pregnancy test; Case 4	"Case files in Family Medicine" by Eugene Toy, p.61.		
	Day 5	Reviewing medical charts or the patients with different chronic diseases and interpreting results of laboratory tests: HbA1C, lipid profile, TSH, liver enzymes, electrolytes, complete blood count, CRP, coagulation tests. Role playing: Case scenario - A 58-year-old woman presents to your office for follow-up of an emergency department visit. She had several routine laboratory tests drawn in the emergency department, copies of which she brings with her. Clinical case 17	"Case files in Family Medicine" by Eugene Toy, p.192		
	Day 6	Role play: demonstrating consultation process with the standardized patient with chest pain, case scenario: A 56-year-old man is brought to the emergency department (ED) complaining of chest discomfort for about 90 minutes. He has had occasional symptoms for a month, but it is worse today. Clinical case 20	"Case files in Family Medicine" by Eugene Toy, p.228.		

Week 4	Day 1	<p>Reviewing the charts of patients with the diagnosis of CAD and discussing treatment prescribed. Role play: Clinical case scenario: A 55-year-old man presents for the first time to your office for assessment of left-sided shoulder pain. The pain comes on after any strenuous activity, including walking; Clinical case problem 1</p> <p><i>Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests</i></p>	"Swanson's family medicine review – a problem oriented approach", 8th edition, pp.99-101	Clinical Practice	<p>Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist;</p> <p>Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise - Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.</p>
	Day 2	<p>Discussing the charts of patients with the diagnosis of heart failure; role play: 1) case scenario: A 66-year-old woman presents to your office complaining of shortness of breath and bilateral leg edema that have been worsening for 3 months; Clinical case 27 from the "Case files in Family Medicine" by Eugene Toy, p. 298. 2) case scenario: A 35-year-old woman presents to your office complaining of skipped or "irregular heartbeats" for the past few weeks. Clinical case 42</p>	"Case files in Family Medicine" by Eugene Toy, p. 466		
	Day 3	<p>Practicing in accurate assessment of a person's blood pressure status by proper technique using calibrated equipment and repeated measurements. Conducting Initial evaluation of a person with hypertension aiming three underlying goals: (1) assess for other cardiovascular comorbidities, (2) assess for target organ damage, and (3) evaluate for common secondary causes of hypertension. Role play – clinical case scenario: A 47-year-old African-American man presents to your office for a follow-up visit. He was seen 3 weeks ago for an upper respiratory infection and noted incidentally to have a blood pressure of 164/98 mm Hg; Clinical case 30</p>	"Case files in Family Medicine" by Eugene Toy, p. 338.		
	Day 4	<p>Discussing clinical cases from the charts of the patients diagnosed with hyperlipidemia or metabolic syndrome. Role play – clinical case scenario: A 56-year-old white man comes in for a routine health maintenance visit. He is new to your practice and has no specific complaints today. You order a fasting lipid panel, which subsequently returns with the following results: total cholesterol 242 mg/dl; triglycerides 138 mg/dl; high-density lipoprotein (HDL) cholesterol 48 mg/dl; and low-density lipoprotein (LDL) cholesterol 155 mg/dl; Clinical case 35</p>	"Case files in Family Medicine" by Eugene Toy, p. 388.		
	Day 5	<p>practicing in counseling of patients with VTE, clinical case scenario: A 65-year-old woman is admitted to the emergency department with a 3-hour history of cyanosis, shortness of breath, and substernal chest pain. She had been discharged 5 days earlier after having a total hip replacement for severe osteoarthritis. The hip surgery was uneventful; Clinical case problem 1</p>	"Swanson's family medicine review – a problem oriented approach", 8th edition, pp.128 -129.		
	Day 6	<p>Practicing in counseling patients with diabetes. Five things patients must do to become successful diabetes self-managers: 1. Know your metabolic targets (A1C, BP, and lipids). 2. Know how to achieve your metabolic targets. a. Increase physical activity. b. Consume a healthy diet. c. Perform SMBG in a timely manner. 3. Stop smoking and alcohol use. 4. Take your prescribed medications. 5. Be certain your health care providers understand how to successfully and intensively manage diabetes. Role play – Clinical case scenario: A 30-year-old obese woman presents to your office with a chief complaint of recurrent yeast infections and increased thirst. She also has noticed increased urinary frequency, but believes this is related to her yeast infection; Clinical case 51</p>	"Case files in Family Medicine" by Eugene Toy, p. 568.		
Week 5	Day 1	<p>Practicing in counseling patients with different thyroid problems; Role play – clinical case scenario: A 27-year-old woman presents to your office complaining of progressing nervousness, fatigue, palpitations, and the recent development of a resting hand tremor; Clinical case 15</p>	"Case files in Family Medicine" by Eugene Toy, p. 172.	Clinical Practice	<p>Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist;</p> <p>Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise - Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.</p>
	Day 2	<p>Practicing counseling for asthma long-term management, educating patient about inhaler technique, providing asthma action plan. Role play – clinical case scenario: A 25-year-old man presents to your office complaining of a 3-month history of rhinorrhea, itchy eyes, and exertional cough and wheezing; Clinical case 56</p>	"Case files in Family Medicine" by Eugene Toy, p. 622.		
	Day 3	<p>Practicing in counseling patients with the symptoms relevant to COPD. Role play – clinical case scenario: A 52-year-old man presents to your office for an acute visit because of coughing and shortness of breath. He is well known to you because of multiple office visits in the past few years for similar reasons; Clinical case 2</p>	"Case files in Family Medicine" by Eugene Toy, p. 42.		
	Day 4	<p>Discussing issues of providing counseling to the patients with tuberculosis, role play – clinical case scenario: A 75-year-old alcoholic patient, with a history of congestive heart failure and suffering from fever, shortness of breath, chest pain, and cough productive of purulent sputum and blood, is admitted to the hospital. Clinical case problem 4</p> <p><i>Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Test</i></p>	"Swanson's family medicine review – a problem oriented approach", 8th edition, pp. 151-153.		
	Day 5	<p>Clinical case scenario: A 45-year-old white woman presents to your office concerned about a "mole" on her face. She says that it has been present for years but her husband has been urging her to have it checked. She denies any pain, itching, or bleeding from the site. Clinical case problem 13</p>	"Case files in Family Medicine" by Eugene Toy, p. 152.		
	Day 6	<p>Clinical case scenario: A 35-year-old woman with a history of asthma presents to your office with symptoms of nasal itching, sneezing, and rhinorrhea. She states she feels this way most days but her symptoms are worse in the spring and fall. She has had difficulty sleeping because she is always congested. Clinical case problem 6</p>	"Case files in Family Medicine" by Eugene Toy, p.88.		

Week 6	Day 1	Role play – clinical case scenario: A 45-year-old man presents to the clinic with a cough productive of purulent sputum of 3-week duration. He says that he had just gotten over a cold a few weeks prior to this episode. He occasionally has fevers and he coughs so much that he has chest pain. He reports having a mild sore throat and nasal congestion; Clinical case 19 <i>Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests</i>	"Case files in Family Medicine" by Eugene Toy, p.218.	Clinical Practice	Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist; Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise - Mini-CEX Rating Scale; Global Evaluation of Student's Performance: - With/Without Checklist.
	Day 2	Clinical case scenario: A 28-year-old white woman presents to your office with a chief complaint of constipation and abdominal pain. On further questioning, she reports she has had this problem since beginning college at the age of 18; clinical case 40	"Case files in Family Medicine" by Eugene Toy, p.440.		
	Day 3	Clinical case scenario: A 52-year-old man presents to the office with approximately 2 weeks of upper abdominal pain. His symptoms are difficult for him to describe, but include some "discomfort" in the epigastric region that comes and goes. He has had some "heartburn" and nausea, but no vomiting or diarrhea; Clinical case 47	"Case files in Family Medicine" by Eugene Toy, p.526.		

WEEK	DAY	Palliative Care Content	Teaching Resources:	Teaching method(s)	Assessment Methods
Week 6	Day 5	Palliative and end of life care in primary care I	Philip D. Sloane, "Essentials of Family Medicine", 6 th edition, pp. 283-288; Robert Rakel, "Textbook of Family Medicine, 9 th edition", pp.54-61; "Swanson's family medicine review – a problem oriented approach", 8 th edition, pp.72-74.	Lecture	
	Day 6	Palliative and end of life care in primary care II Lecture topics: Importance of physician's increased involvement when fewer therapeutic options are available. What could be still done to relieve pain and suffering even when no cure is possible? The family physician's role to help alleviate the fear, symptoms, and family stress that often make this a distressing time, keeping the patient as comfortable as possible and avoiding any impression of abandonment. A good death means being free of pain and unpleasant symptoms yet having the ability to make clear decisions and prepare for death	Philip D. Sloane, "Essentials of Family Medicine", 6 th edition, pp. 288-295; Robert Rakel, "Textbook of Family Medicine, 9 th edition", pp.61-72; "Swanson's family medicine review – a problem oriented approach", 8 th edition, pp.72-74.		
Week 6	Day 5	Goals of geriatric assessment, Focus on preventive medicine rather than acute medicine. Focus on improving or maintaining functional ability and not necessarily a "cure. Provide a long-term solution for "difficult to manage" patients with multiple physicians, recurrent emergency department visits, and hospital admissions with poor follow-up. Aid in the diagnosis of health-related problems. Develop plans for treatment and follow-up care. Establish plans for coordination of care. Determine the need and site of long-term care as appropriate. Determine optimal use of health care resources. Prevent readmission into the hospital. Assessment of falls, elder abuse.	FM Department at clinic	Seminar	Knowledge-based Assessment Written Examination: MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions.
	Day 6	Discussing topics of incidence of pressure ulcers in elderly patients, classification issues; risk factors for pressure sore development, risk factors modification, nutritional support and infection control, dressing selection, pain control, common prescribing issues for elderly patients; drugs to avoid or limit in the general elderly population, age-related changes in urinary system; medications that can cause or contribute to geriatric urinary incontinence, behavioral interventions, management with devices, pharmacologic therapies			
Week 6	Day 5	You are called to the home of a 75-year-old patient with progressive dementia. He has become increasingly depressed and agitated and is now unable to sleep at night. His family is concerned that he will wander away or perhaps set the house on fire. As you talk to the patient and review the criteria for depression, you realize that this patient has an agitated depression. Clinical case problem 1 <i>Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests</i>	"Swanson's family medicine review – a problem oriented approach", 8 th edition, pp.72-74	Clinical Practice	Competency– based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist; Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise -Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.
	Day 6	Clinical case scenario: A 51-year-old woman with advanced ovarian cancer has terminal disease. She is continuously nauseated, vomiting, and anorexic. You are called to see her at home. In addition to the symptoms mentioned, the patient complains of a "sore abdomen," and she is having significant difficulty breathing. She also has a "sore mouth." Clinical case problem 2	"Swanson's family medicine review – a problem oriented approach", 8 th edition, pp.72-74		

WEEK	DAY	Geriatrics Content	Teaching Resources:	Teaching method(s)	Assessment Methods
Week 7	Day 1	Description of common geriatric syndromes and outline a process by which family physicians can effectively and efficiently care for elderly patients. Assisting elderly persons to maintain function and quality of life with self-respect, preserving their lifestyle as much as possible. Functional assessment, falls, elder abuse, pressure ulcers, rational drug prescribing, and incontinence; geriatric conditions such as dementia, delirium, and depression which might cause disability of elderly patients.	Robert RakeI, "Textbook of Family Medicine, 9th edition", pp. 34-42; "Case files in Family Medicine" by Eugene Toy, p.116.	Lecture	
	Day 2	Care of the elderly patients in Primary Care: rational drug prescribing for elderly patients and caring for pressure ulcers and urinary incontinence Lecture topics: Adverse drug events as important contributors of geriatric morbidity and a high rate of hospital admissions. Need of adjustment of medications for the individual patient's renal function. Need of periodical review of medication lists of elderly patients, focusing on indications and side effects. The primary care physician's important role in addressing an array of pharmaceutical issues and concerns for elderly patients, including polypharmacy, adverse drug reactions, adherence, and under-treatment of certain conditions. Incidence of pressure ulcers in elderly, preventive measures and management considerations.	Robert RakeI, "Textbook of Family Medicine, 9th edition", pp. 42-53; "Case files in Family Medicine" by Eugene Toy, p. 206		
	Day 3	Care of the elderly patients in Primary Care: cognitive impairment Lecture topics: List the signs, symptoms, and diagnostic approach to the following common cognitive disorders of older people: delirium, Alzheimer disease (AD), vascular dementia, frontotemporal dementia (FTD), Lewy body dementia (LBD), and Parkinson dementia. Conduct and interpret a screening examination for cognitive impairment, using the Mini-Cog and the AD-8, on a patient. Conduct and interpret a diagnostic evaluation of a patient with cognitive impairment using cognitive testing, laboratory studies, and brain imaging. Implement basic principles of dementia management, including medication use, nonpharmacological management of behavioral symptoms, and working with community resources with a patient.	Philip D. Sloane, "Essentials of Family Medicine", 6th edition, pp. 269-282; Case files in Family Medicine" by Eugene Toy, p. 354.		
Week 7	Day 1	Goals of geriatric assessment, Focus on preventive medicine rather than acute medicine. Focus on improving or maintaining functional ability and not necessarily a "cure. Provide a long-term solution for "difficult to manage" patients with multiple physicians, recurrent emergency department visits, and hospital admissions with poor follow-up. Aid in the diagnosis of health-related problems. Develop plans for treatment and follow-up care. Establish plans for coordination of care. Determine the need and site of long-term care as appropriate. Determine optimal use of health care resources. Prevent readmission into the hospital. Assessment of falls, elder abuse.	FM Department at clinic	Seminar	Knowledge-based Assessment Written Examination: MCQ: Multiple Choice Questions; EMQ: Extended Matching Questions; KF: Key Features; EQ: Essay Questions; MEQ: Modified Essay Questions. Performance-based assessment Portfolio - PE Checklist; Logbook - Logbook Checklist; Case Presentation - With/Without Checklist; Evaluation of Preparation Skills of the Patient's File - With/Without Checklist;
	Day 2	Discussing topics of incidence of pressure ulcers in elderly patients, classification issues; risk factors for pressure sore development, risk factors modification, nutritional support and infection control, dressing selection, pain control, common prescribing issues for elderly patients; drugs to avoid or limit in the general elderly population, age-related changes in urinary system; medications that can cause or contribute to geriatric urinary incontinence, behavioral interventions, management with devices, pharmacologic therapies.			
	Day 3	Clinical evaluation of the patient with cognitive impairment, screening for cognitive impairment, mini-cog test; AD8 Dementia Screening Interview; Historical Features of a Dementia Evaluation; Red flags Suggesting Potentially Treatable and/or Reversible Causes of Cognitive Impairment, recommended diagnostic strategy, management of problem, behavior (nonpharmacological) treatment of symptoms in dementia, key treatment approaches for common symptoms in patients with dementia and related disorders, management of depression in dementia, working with families and community resources, tailoring treatment to the type of dementia; long-term monitoring and family support.			
Week 7	Day 1	Clinical case scenario: A 65-year-old African-American woman presented to the emergency room complaining of worsening shortness of breath and palpitations for about 1 week. She reports feeling "dizzy" on and off for the past year; the dizziness is associated with weakness that has been worsening for the past month. She has been feeling "too tired" to even walk to her backyard and water her flower bed that she used to do "all the time"	Clinical case 9 from the "Case files in Family Medicine" by Eugene Toy, p.116.	Clinical Practice	Competency-based assessment SOE: Structured Oral Exam - SOE Checklist; OSCE: Objective Structured Clinical Examination - OSCE Checklist; SP: Assessment with Simulated Patients - Evaluation Checklist; Performance-based assessment DOPS: Direct Observation of Procedural Skills - DOPS Rating Scale; Mini-CEX: Mini Clinical Evaluation Exercise - Mini-CEX Rating Scale; Global Evaluation of Student's Performance: -With/Without Checklist.
	Day 2	Case scenario: A 75-year-old white man presents for a health maintenance checkup. The patient has stable hypertension but has not seen a physician in more than 2 years. He denies any particular problem; Participate in History; Perform Physical Exam; Develop Differential Diagnosis; Recommend Treatment/Care Plan; Interpret Tests	Clinical case 18 from the "Case files in Family Medicine" by Eugene Toy, p.116.		
	Day 3	Clinical case scenario: An 83-year-old woman is brought to the clinic by her husband who was concerned with his wife's memory problems;	Clinical case 32 from the "Case files in Family Medicine" by Eugene Toy, p. 354.		

Week 1					
Family Medicine					
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Lecture	Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	Seminar	Seminar
Clinical Practice					
	Clinical Practice				

Week 2					
Family Medicine					
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Lecture	Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	Seminar	Seminar
Clinical Practice					
Clinical Practice					

Week 3					
Family Medicine					
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Lecture	Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	Seminar	Seminar
Clinical Practice					
	Clinical Practice				

Week 4					
Family Medicine					
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Lecture	Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	Seminar	Seminar
Clinical Practice					
Clinical Practice					

Week 5					
Family Medicine					
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Lecture	Lecture	Lecture	Lecture	Lecture	Lecture
Seminar	Seminar	Seminar	Seminar	Seminar	Seminar
Clinical Practice					
			Clinical Practice		

Week 6					
Family Medicine				Palliative care	
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Lecture	Lecture	Lecture	Mid-term Exam	Lecture	Lecture
Seminar	Seminar	Seminar		Seminar	Seminar
Clinical Practice	Clinical Practice	Clinical Practice		Clinical Practice	Clinical Practice
Clinical Practice					

Week 7							
Palliative care		Geriatrics I			Rehabilitation		
Day 1		Day 2	Day 3	Day 4		Day 5	Day 6
Mid-term Exam		Lecture	Lecture	Mid-term Exam		Lecture	Mid-term Exam
	Lecture	Seminar	Seminar		Lecture	Seminar	
	Seminar	Clinical Practice	Clinical Practice		Seminar	Seminar	
	Clinical Practice				Clinical Practice	Clinical Practice	

Type of Activity	Hour Distribution				Week 8
	Family Medicine	Palliative care	Geriatrics I	Rehabilitation	
Lecture	33	2	3	2	
Seminar	33	2	3	3	
Clinical Practice	39	2	3	2	
Mid-term Exam	3	1	1	1	
Final Exam					7
Sum	108	7	10	8	7
				Total	140

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores	
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	12	
		EMQ: Extended Matching Questions	Quiz	12	
		KF: Key Features	Final Exam	20	
		EQ: Essay Questions			
		MEQ: Modified Essay Questions			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	10	
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20	
	SP: Assessment with Simulated Patients	Evaluation Checklist		2	
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	6	
	Portfolio	PE Checklist			4
	Logbook	Logbook Checklist			3
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale			3
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale			3
	Case Presentation	With/Without Checklist			2
	Evaluation of Preparation Skills of the Patient's File	With/Without Checklist			3

Assessment Methods	Weighed score per subject				Weighed score per unit	Total
	Family Medicine	Palliative care	Geriatrics I	Rehabilitation		
Knowledge-based Assessment						24
Quiz	10	0.6	0.9	0.9		12
Mid-term Exam	10	0.6	0.9	0.9		12
Competency– based assessment	10	0.5	0.8	0.5		12
SOE: Structured Oral Exam						5
OSCE: Objective Structured Clinical Examination						5
SP: Assessment with Simulated Patients						2
Performance-based assessment	20	1.1	1.7	1.4		24
Global Evaluation of Student's Performance:						6
Portfolio						4
Logbook						3
DOPS: Direct Observation of Procedural Skills						3
Mini-CEX: Mini Clinical Evaluation Exercise						3
Case Presentation						2
Evaluation of Preparation Skills of the Patient's File						3
Final Exam - Written Examination						20
Final Exam: OSCE: Objective Structured Clinical Examination; SOE: Structured Oral Exam						20
					Sum	100

12. Recommended literature:

Family Medicine

1. Philip D. Sloane, "Essentials of Family Medicine", 6th edition
2. Robert Rakel, "Textbook of Family Medicine", 9th edition
3. Eugene Toy, "Case files in Family Medicine", 4th edition
4. "Swanson's family medicine review – a problem oriented approach", 8th edition

Palliative care

1. Philip D. Sloane, "Essentials of Family Medicine", 6th edition
2. Robert Rakel, "Textbook of Family Medicine", 9th edition
3. "Swanson's family medicine review – a problem oriented approach", 8th edition

Geriatrics

1. Philip D. Sloane, "Essentials of Family Medicine", 6th edition
2. Robert Rakel, "Textbook of Family Medicine", 9th edition
3. Eugene Toy, "Case files in Family Medicine", 4th edition

Rehabilitation

Braddom's Physical Medicine & Rehabilitation Fifth Edition; Elsevier, 2016.

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester VII

Emergency Care

1. **Course identification code:** MEDC 4120
2. **Credit Points:** 6 ECTS, **Contact Hours:** 94; **Independent Hours:** 86; **Sum:** 180.
3. **Person(s) responsible for course:** Teimuraz Vasilidze , Nino Tskhvedadze
Lecturers: Emergency care – Irina Tsirkvadze

4. Goals

The goal of Emergency Medicine program is:

1. to educate doctors who can manage the diseases of cardiovascular system, respiratory system in primary health care settings, when necessary can also consult the patient with other branches and organize the therapy and/or follow-up,
2. to refer the patient to upper healthcare facilities providing appropriate transporting conditions.
3. to manage with all types of critical patients including arrest patients and who have chest pain, shortness of breath, any kind of trauma, stroke and hypotension

5. **Prerequisite:** *MEDC 3110 Infectious Diseases & Hematopoietic System; MEDC 3120 Cardiovascular & Respiratory Systems; MEDC 3131 Gastrointestinal System; MEDC 3141 Medical Ethics and Medical Law; MEDC 3210 Endocrine, Reproductive & Urinary Systems; MEDC 3220 Nervous System and Psychiatry; MEDC 3230 Musculoskeletal System; MEDC 3240 Patient Safety and Quality Improvement*

6. **Co-requisite:** N/A

7. Intended learning outcomes

Knowledge and understanding

- 1.0. Synthesizes chief complaint, history, physical examination, and available medical information to develop a differential diagnosis;
- 2.0. Prioritizes the list of weighted differential diagnoses to determine appropriate management, based on all of the available data;
- 3.0. Demonstrates clear and concise documentation that describes medical decision- making, ED course, and supports the development of the clinical impression and management plan;
- 4.0. Uses diagnostic testing based on the pre-test probability of disease and the likelihood of test results altering management.

Skills

- 1.0. Performs basic and advanced airway procedures, basic life support;
- 2.0. Performs advanced cardiac and trauma life support for adults and children;
- 3.0. Manages with a polytrauma patient;
- 4.0. Differentiates the reasons of chest pain and treat acute coronary syndromes;

- 5.0. Explains the types of shock, manage with a shock patient, define the differentials, select the proper treatment;
- 6.0. Defines the rhythm on ECG, approach to a patient with tachycardia/bradycardia;
- 7.0. Explains the toxidromes and approach to an intoxicated patient;
- 8.0. Explains the basic principles of disaster management;
- 9.0. Arranges necessary consultation with physicians and other professionals when needed.

Attitudes & Responsibility

- 1.0. Considers the expectations of those who provide or receive care in the ED and use communication methods that minimize the potential for stress, conflict, and miscommunication;
- 2.0. Establishes rapport with and demonstrate empathy toward patients and their families;
- 3.0. Recognizes and resolve interpersonal conflict in the emergency department including conflicts with patients and family;
- 4.0. Communicates information to patients and families using verbal, nonverbal, written, and technological skills, and confirm understanding;
- 5.0. Communicates risks, benefits, and alternatives to therapeutic interventions to patients and/or appropriate surrogates, and obtain consent when indicated.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working with resuscitative patient

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course content

Neurology: General and symptom-based history taking; Mental status evaluation; Abdominal physical examination; Consciousness assessment and mood state examination; General condition and vital signs assessment; Cardiovascular system examination; Musculoskeletal system examination; Respiratory system examination; Taking and assessing ECG; “Airway” manipulation; Bandaging and tourniquet application; Defibrillation; Restriction and stopping external bleeding; Intubation; Glasgow-coma-scale assessment; Disease / Trauma level scoring assessment; Appropriate patient transportation; Giving patient recovery position; Removal of foreign body with appropriate maneuver; Providing advanced life support; Cervical collar application; Providing basic life support; Transporting detached limb after trauma; Airway Management; Approach to Chest Pain; Management of ACS; Disaster Preparedness; ECG (Case Based); ACLS/PALS; Approach to Trauma Patient; Approach to Dyspnea; Stroke;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCO: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency–based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

11. Recommended literature:

Emergency Care: Tintinalli's Emergency Medicine, A Comprehensive Study Guide 8th Edition;
Kevin J. Knoop The atlas of Emergency Medicine 3rd edition; Anthony F.T Brown Emergency
Medicine 6th edition

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester VII

Hospitalized Adult Care I (Internal Medicine I)

- 1. Course identification code: MEDC 4130**
- 2. Credit Points: 9 ECTS, Contact Hours: 140; Independent Hours: 130; Sum: 270.**
- 3. Person(s) responsible for course: Nikoloz Pruidze, Nino Tskhvedadze**
Internal Medicine - Nino Rachvelishvili; Cardiology - Tamar Vakhtangadze, Nino Gafrindashvili,
Pulmonology - Nino Natadze-Berulava;
- 4. Goals**
Aim of this clerkship is to:
 1. Remind necessary knowledge, related to body systems, on prevention of clinical conditions' emergence, protection and improvement of health in healthy conditions;
 2. At multi-system level or related to a body system, for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;
 - 2.1. remind necessary knowledge on risk factors, etiopathogenesis, physiopathology, and pathology;
 - 2.2. remind knowledge on epidemiology;
 - 2.3. remind knowledge on frequently encountered clinical complaints, symptoms, signs and findings;
 3. Remind necessary knowledge on health care processes, clinical decision making process, clinical decisions and clinical practices, with performance measures, for managing at the level of primary health care service;
 4. Remind knowledge on pharmacology of drugs that are effective at multi-system level, specifically on a body system or on clinical conditions involving a specific body system;
 5. Equip students with necessary knowledge, skills and attitudes required for an appropriate Approach to healthy and sick adults;
 6. Convey necessary knowledge on preventive healthcare measures;
 7. Equip students with necessary knowledge, skills and attitudes required to achieve diagnosis and differential diagnosis of adults;
 8. Equip students with necessary knowledge, skills and attitudes required to perform primary care prophylaxis and treatment;
 9. Equip students with necessary knowledge, skills and attitudes to refer Patient to advanced healthcare units upon indication.

Cardiology

Aim of this clerkship is to:

1. equip students with necessary knowledge, skills and attitudes required to Approach t cardiac Patient;
2. equip students with necessary knowledge, skills and attitudes required to deliver preventive healthcare measures;
3. equip students with necessary knowledge, skills and attitudes required to achieve diagnosis. and differential diagnosis of cardiac diseases;
4. equip students with necessary knowledge, skills and attitudes required to apply primary care

prophylaxis and treatment to cardiac Patients;

5. equip students with necessary knowledge, skills and attitudes required to refer cardiac Patients to advanced healthcare units upon indication.

5. **Prerequisite:** *MEDC 3110 Infectious Diseases & Hematopoietic System; MEDC 3120 Cardiovascular & Respiratory Systems; MEDC 3132 Gastrointestinal System; MEDC 3142 Medical Ethics and Medical Law; MEDC 3210 Endocrine, Reproductive & Urinary Systems; MEDC 3220 Nervous System and Psychiatry; MEDC 3230 Musculoskeletal System;*

6. **Co-requisite:** N/A

7. **Intended learning outcomes**

Knowledge and understanding

Internal Medicine / Acute and Chronic Conditions

1.0. Recalls necessary knowledge, related to body systems, on prevention of clinical conditions' emergence, protection and improvement of health in healthy conditions;

2.0. At multi-system level or related to a body system, for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency:

2.1. recalls necessary knowledge on risk factors, etiopathogenesis, physiopathology, and pathology;

2.2. recalls knowledge on epidemiology;

2.3. recalls knowledge on frequently encountered clinical complaints, symptoms, signs and findings;

2.4. recalls necessary knowledge on health care processes, clinical decision making process, clinical decisions and clinical practices, with performance measures, for managing at the level of primary health care service;

2.5. recalls knowledge on pharmacology of drugs that are effective at multi-system level, specifically on a body system or on clinical conditions involving a specific body system.

Cardiology

1.0. **Observes and explains;**

1.1. cardiac echocardiography;

1.2. pericardiocentesis;

1.3. cardiac catheterization and coronary angiography;

1.4. Holter ECG monitoring;

1.5. cardiac exercise test;

1.6. ambulatory blood pressure monitoring;

1.7. electrophysiological study and pacemaker implantation.

Skills

Internal Medicine / Acute and Chronic Conditions

1.0. Does detailed questioning intended to explicate reasons of complaints;

2.0. Makes Physical Examination including all organ systems;

3.0. Uses diagnostic methods (laboratory and imaging techniques, other invasive or non-invasive methods) correctly and cost-efficiently;

- 4.0. Performs minor medical interventions and applications (blood collection, i.v. or i.m. injection; catheterization, capillary blood glucose testing, ECG, etc.);
- 5.0. Takes detailed and relevant history of adult Patient by good communication techniques;
- 6.0. Performs complete Physical Examination that includes all of organ systems;
- 7.0. for diagnosis 7.1. orders probable diagnoses 7.2. makes differential diagnosis;
- 8.0. Assesses results of laboratory or imaging tests (laboratory and imaging techniques, other invasive or non-invasive methods);
- 9.0. Assesses diagnosis, differential diagnosis and emergency treatment requirements and methods;
- 10.0. For emergency conditions 10.1. distinguishes emergency conditions 10.2. gives emergency treatment;
- 11.0. Informs Patients and Patient's relatives on legal responsibility to take informed consent;
- 12.0. Applies evidence based medicine in internal medicine.

Cardiology

- 1.0. Takes detailed, relevant history of cardiac Patient;
- 2.0. Performs detailed Physical Examination of cardiac Patient;
- 3.0. Supplies basic life support to cardiac Patient;
- 4.0. Evaluates peripheral pulses;
- 5.0. Evaluates blood pressure of Patient;
- 6.0. Assesses and diagnose electrocardiographic findings;
- 7.0. Evaluates serum electrolytes, renal function tests, hepatic function tests and thyroid function tests, cardiac biomarkers;
- 8.0. Assesses chest x-rays;
- 9.0. Performs and evaluates results of 9.1. diagnosis of acute cardiac disorders 9.2 cardiac auscultation; 9.3 measurement of blood pressure by sphygmomanometry 9.4 cardiac monitorization and ECG.

Attitudes

Internal Medicine / Acute and Chronic Conditions

- 1.0. Shows behaviors and attitudes appropriate for physician;
- 2.0. Prefers evaluation of Patient not only for major complaint but also as a whole;
- 3.0. Prefers detailed Physical Examination to search for main reason of illness;
- 4.0. For differential diagnosis:
 - 4.1. values importance of differential diagnosis based on frequencies and risks of illnesses;
 - 4.2. values using laboratory and clinical evaluations correctly and cost-efficiently;
- 5.0. Orders consultation when needed or mandatory;
- 6.0. Organizes appropriate interventions at primary care level, according to evidence based medical practices;
- 7.0. Refers Patient to appropriate center upon indication.

Cardiology

- 1.0. Takes detailed, relevant history of cardiac Patient;

- 2.0. Performs detailed Physical Examination of cardiac Patient;
- 3.0. Supplies basic life support to cardiac Patient;
- 4.0. Evaluates peripheral pulses;
- 5.0. Evaluates blood pressure of Patient.

8. Teaching method(s)

- Lecture
- Theoretical Interactive learning - Seminars
- Practical Work
- Team working
- Case Based Learning (CBL)
- Teaching by using the simulations
- Scenarios based simulation training
- Teaching through standardized patients
- Practice (with Outpatients and Hospitalized Patients)
- Bedside-teaching (Clinical rotations at University/teaching hospital)
- Teaching in clinical and simulation environment
- Clinical rotation in Clinical skills training and simulation center
- Clinical rotations in University and teaching clinics
- Practical task under the supervision
- Practical task without supervision
- Maintaining medical documentation (Including by the means of information technologies)
- Communication with patients (outpatients and inpatients)

9. Course content

Internal Medicine / Acute and Chronic Conditions

Non-Cardiac Causes of Chest Pain; Management of Elderly Patients; Acute Respiratory Distress Syndrome; Taking History; fever of Unknown Origin; Sepsis and Septic Shock; Examination of Head and Neck; Management of Hyperlipidemia; Drug Interaction and Examples of Prescriptions; General and symptom-based history taking; Assessing mental status; Anthropometric measurements; Head-Neck and ENT examination; Abdominal physical examination, Skin examination; General condition and vital signs assessment; Musculoskeletal system examination; Respiratory system examination; Cardiovascular system examination; Urologic examination; Preparing medical reports and notice; Preparing forensic report; Preparing epicrisis; Preparing patient file; Obtaining informed consent; Writing prescription; Reading and evaluating direct radiographs; Taking and evaluating ECG; Measuring blood glucose level with glucometry; Filling laboratory request form; Preparation and evaluation of peripheral blood smear; Performing full urine analysis (including microscopic examination) and evaluation; Interpretation of screening and diagnostic examination results; Rational drug use; Performing IM, IV, SC, ID injection; Urinary catheterization; Taking sample for culture; Nasogastric catheterization; Evaluating pulmonary function tests; Establishing IV line; Measuring blood

pressure; Performing and assessing pulse oximetry; Providing basic life support; Using and evaluating peak-flow meter;

Cardiology

Pulmonary vascular disease; Hypertension; Infective Endocarditis; Pericardial Diseases; History taking; Mitral Valve Diseases; Cardiovascular Examination; Aortic Valve Diseases; Basic Electrocardiography; Tricuspid and Pulmonary Valve Diseases; History taking; Approach to the Patient with Chest Pain; Percutaneous Coronary and Valvular Interventions; Introduction to Cardiology Training Program; Heart Failure I; Heart Failure II; Dilated, Restrictive and Hypertrophic Cardiomyopathies; Non-ST Elevation Myocardial Infarction/Unstable Angina; ST Elevation Myocardial Infarction I; Chronic Coronary Artery Disease; ST Elevation Myocardial Infarction I; Tachyarrhythmias; Syncope; Sudden Cardiac Death; Bradyarrhythmias and Heart Blocks; Cardiac Pacemakers and Implantable Cardiac Defibrillators; General and symptom-based history taking; Assessing mental status; General condition and vital signs assessment; Musculoskeletal system examination; Respiratory system examination; Cardiovascular system examination; Taking and evaluating ECG; Establishing IV line; Measuring blood pressure; Performing defibrillation; Performing pericardiosynthesis.

Respiratory system

Chronic Obstructive Lung Disease and Cor pulmonale; Asthma; Pulmonary Thromboembolism; Tuberculosis; Environmental Lung Diseases; Evidence Based Approach to Pneumonia; Non-Cardiac Causes of Chest Pain; Examination of Respiratory System; Approach to the Patient with Pulmonary System Symptoms and Signs;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient's File	With/Without Checklist		

11. Recommended literature:

Internal Medicine / Acute and Chronic Conditions

1. Harrison's Principles of Internal Medicine Edited by Dan L. Longo, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, J. Larry Jameson, Joseph Loscalzo,
2. The Merck Manual of Diagnosis and Therapy. Edited by Porter RS, Kaplan JL
3. Current Opinion in Internal Medicine. Edited by: H David Humes
4. Cecil Medicine. Edited by Lee Goldman, MD and Andrew I. Schafer
5. Handbook of Nephrology & Hypertension Edited by Christopher S. Wilcox, C. Craig Tisher
6. Netter's Gastroenterology. Edited by M Floch

Cardiology

1. Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, 2-Volume Set, 10th Edition
2. Marriott's Practical Electrocardiography

Respiratory system

Essentials of Clinical Pulmonology Criner, Gerard J., Herth, Felix JF, Lee, YC Gary YC, Shah, Pallav
2018

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester VII

Community Medicine and Health Promotion

1. Course identification code: PHMC 1130

2. Credit Points: 6 ECTS, Contact Hours: 84; Independent Hours: 96; Sum: 180.

3. Person(s) responsible for course: Anano Kiria

Lecturers: George Bakhturidze; Natia Skhvitaridze.

4. Goals

To convey

1. awareness of the local and global health issues
2. competence in knowledge, skills and attitudes to manage and provide primary health care service
3. knowledge of applying and caring for ethical principles of the medical profession at national and international level
4. capability of systematic, investigative and questioning thinking
5. continually renovate and self-improvement
6. teamwork capability
7. competently usage of information technology in medicine and related areas
8. effective communication and leadership qualifications

5. Prerequisite: PHMC3110 Public Health and Social Medicine

6. Co-requisite: MEDC4110 Family Medicine

7. Intended learning Outcomes:

Knowledge and understanding

- 1.0. Recognizes:
 - 1.1. the health status of the individual and the community and the factors affecting the health, implements the necessary measures to prevent effects of these factors on the health;
 - 1.2. and manages the health determinants including conditions that prevent access to health care;
 - 1.3. the individual's behavior and attitudes and factors that determine the social dynamics of the community;
 - 1.4. necessary knowledge at multi-system level or related to a body system, for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency.
 - 1.5. recognizes the protection and privacy policy for health care beneficiaries, co-workers, accompanying persons and visitors;
- 4.0. Leads community with sense of responsibility, behavior and attitudes in consideration of individual behaviors and social dynamics of the community, and if there is a necessity, develops

projects directed towards health care services;

5.0. Evaluates own performance as open to criticism, realizes the qualifications and limitations;

6.0. Explains:

6.1. clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency;

6.2. and clarifies the communication concept;

6.3. name and samples the nonverbal communication skills.

Skills

1.0. Prepares a resume, and recognizes job interview methods;

2.0. Implements the rules of healthy living;

3.0. Communicates:

3.1. effectively with health care beneficiaries, co-workers, accompanying persons, visitors, patient's relatives, care givers, colleagues, other individuals, organizations and institutions;

3.2. with all stakeholders taking into consideration the socio-cultural diversity;

4.0. Collaborates as a team member with related organizations and institutions, with other professionals and health care workers, on issues related to health;

5.0. Provides consultancy services and organizes health education for the community to sustain and promote the health of individual and community;

6.0. Displays:

6.1. a patient-centered and holistic (biopsychosocial) approach to patients and their problems;

6.2. the proper behavior in case of disadvantaged groups and situations in the community;

7.0. Develops, prepares and presents research projects;

8.0. Pays importance to the rights of patient, patient's relatives and physicians, and provides services in this context;

9.0. Uses English language at least at a level adequate to follow the international literature and to establish communication related to the profession.

10.0. Displays appropriate behavior specific to work under stressful conditions;

11.0. Uses self-motivation factors;

12.0. Plans any requirement for further training and work experience;

13.0. Takes responsibility for the development of patient safety and healthcare quality;

14.0. Participates fully and timely in activities carried out during training;

Attitudes

1.0. Responds:

1.1. competencies related to lifelong learning;

1.2. competencies related to career management;

2.0. Values the importance of lifelong self-learning and implements;

3.0. Organizes:

3.1. and investigates postgraduate work domains and job opportunities;

- 3.2. the application requirements to postgraduate work/job domains, and distinguishes;
- 4.0. Values the application requirements to postgraduate work/job domains, and distinguishes and plans any requirement for further training and work experience;
- 5.0. Values the importance of updating knowledge and skills;
- 6.0. Respects patients, colleagues and all stakeholders in health care delivery.

8. Teaching method(s)

Lecture
 Theoretical Interactive learning – Seminars
 CBL: Case-Based Learning
 Workshops
 Role plays

9. Course Content

Concepts of health; Maurice Hilleman: Creator of Vaccines That Changed the World; visiting a family medicine center and on-site work of community oriented health promotional activities; Influences on health; Measuring health; Defining health promotion; Marc Lalonde, the Health Field Concept and Health Promotion; Models and approaches to health promotion; Ethical issues in health promotion; An Outbreak of Yellow Fever in Paraguay: Health Risk Communication in a Crisis, Essential Case Studies in Public Health; Strategies and methods of health promotion; Ottawa charter; Media channels for health promotion; Using media in health promotion; Healthy Cities concept; Understanding population health from multilevel and community-based models; European Green Capital Award; Developmental influences on behavior change: children, adolescents, emerging adults, and the elderly; The implementation of health promotion in primary and community care: a qualitative analysis of the 'Prescribe Vida Saludable' strategy; Dietary behavior change; Robert Guthrie and Nicholas Wald: Screening and Preventing Birth Defects; visit to a local, multi-profile hospital and on-site work of community oriented health promotional activities ; Physical activity behavior; Social media for health promotion in diabetes: study protocol for a participatory public health intervention design; Addressing tobacco use and dependence; Alcohol prevention and treatment; Physical Activity, Inactivity, and Sedentary Behaviors: Definitions and Implications in Occupational Health; Chronic disease management interventions; Anti-tobacco control industry strategies; Chronic infectious disease management interventions; Framingham and North Karelia: Studies that Changed the Cardiovascular Disease Pandemic; Obesity; Edward Jenner, Vaccination and Eradication of Smallpox; Health promotion in schools; Elmer McCollum and Edward Mellanby: Vitamin D and Cod Liver Oil for Prevention of Rickets and Osteoporosis; Workplace health promotion; Building on Strengths: A School-Based Mental Health Program, Essential Case Studies in Public Health; Healthcare providers promoting health; The Strategies to Overcome and Prevent (STOP) Obesity Alliance, Essential Case Studies in Public Health; Role of technology in behavioral change; A Feasibility Study of Routine Screening for HIV in an Urban Emergency Department, Essential Case Studies in Public Health

10. Form(s) of assessment and details explaining how the module mark is calculated.

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		FSAQ: Fill-in-the Blank Short Answer Questions	Final Exam	40
		T/F Questions, mostly based on case studies		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	Essay	Essay Checklist		
	Report	Report Checklist		
	PWPE: Project Writing and Presentation Evaluation	Presentation Checklist		12
	CBL-P: Evaluation of CBL Student’s Performance	CBL Checklist		6

11. Recommended literature:

1. Foundations for Health Promotion, Jane Wills Jennie Naidoo, 4th edition, 2016
2. The Handbook of Health Behavior Change, Marisa E. Hilliard, Kristin A. Riekert, Judith K. Ockene, Lori Pbert, 5th edition, 2018
3. Essential Case Studies in Public Health, Katherine Hunting, PhD, MPH; Brenda L. Gleason, 1st Edition

SYLLABUS

Semester VIII

Hospitalized Adult Care II (Internal Medicine II)

1. **Course identification code: MEDC 4210**
2. **Credit Points: 30 ECTS, Contact Hours: 468; Independent Hours: 432; Sum: 900.**
3. **Person(s) responsible for course: Nino Rachvelishvili; Nino Tskhvedadze;**

Lecturers: Gastroenterology – Rusudan Tsulaia; Endocrinology – Lali Javashvili; Nephrology – Sopo Gongadze; Allergology and Clinical Immunology. Rheumatology – Lali Kilasonia; Hematology. Transfusiology – Elene Tsartsidze; Oncology – Davit Giorgadze; Radiology, Nuclear Medicine – Tamar Dundua. Radiotherapy – Irakli Zumbadze; Dermatology, Venereology (sexually transmitted diseases) – Giorgi Durglishvili; Geriatrics II – Nino Rachvelishvili; Infectious diseases – Lali Sharvadze.

4. Goals

Internal Medicine

1. To remind necessary knowledge, related to body systems, on prevention of clinical conditions' emergence, protection and improvement of health in healthy conditions;
2. At multi-system level or related to a body system, for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, remind knowledge on:
 - 2.1. risk factors, etiopathogenesis, physiopathology, and pathology;
 - 2.2. epidemiology;
 - 2.2. frequently encountered clinical complaints, symptoms, signs and findings;
3. To remind necessary knowledge on:
 - 3.1. health care processes, clinical decision making process, clinical decisions and clinical practices, with performance measures, for managing at the level of primary health care service;
 - 3.2. pharmacology of drugs that are effective at multi-system level, specifically on a body system or on clinical conditions involving a specific body system;
4. To equip students with necessary knowledge, skills and attitudes:
 - 4.1. required for an appropriate approach to healthy and sick adults;
 - 4.2. necessary knowledge, skills and attitudes required to achieve diagnosis and differential diagnosis of adults;
 - 4.3. necessary knowledge, skills and attitudes required to perform primary care prophylaxis and treatment;
 - 4.4. necessary knowledge, skills and attitudes to refer Patient to advanced healthcare units upon indication;
5. To convey necessary knowledge on preventive healthcare measures.

Radiology

1. To equip students with necessary knowledge and skills to recognize indications of basic and most commonly used radiological modalities;
3. To equip students with necessary knowledge and skills to evaluate results of basic and most commonly used radiological modalities.

Nuclear Medicine

To convey necessary knowledge on nuclear medicine, working principles, nuclear physics, radiopharmacy, besides where, when and which survey is suitable or needed.

Dermatology/Venereology (sexually transmitted diseases):

To equip students with necessary knowledge, skills and attitudes required for diagnosis, treatment and prevention of frequently observed dermatologic and sexually transmitted diseases.

Infectious diseases and clinical microbiology

To equip students with necessary knowledge, skills and attitudes to manage infectious diseases including diagnosis and evaluation of pathology and clinical manifestations, treatment and prevention methods.

5. **Prerequisite:** *MEDC 4130 Hospitalized Adult Care I (Internal Medicine I)*

6. **Co-requisite:** N/A

7. Intended learning outcomes***Knowledge and understanding***

- 1.0. Recalls necessary knowledge, related to body systems, on prevention of clinical conditions' emergence, protection and improvement of health in healthy conditions;
- 2.0. At multi-system level or related to a body system, for clinical conditions which are frequent in community and/or pose high risk for individual or community health, and/or life-threatening or constitute an emergency, recalls knowledge on:
 - 2.1. risk factors, etiopathogenesis, physiopathology, and pathology;
 - 2.2. epidemiology;
 - 2.3. frequently encountered clinical complaints, symptoms, signs and findings;
 - 2.4. health care processes, clinical decision making process, clinical decisions and clinical practices, with performance measures, for managing at the level of primary health care service;
 - 2.5. pharmacology of drugs that are effective at multi-system level, specifically on a body system or on clinical conditions involving a specific body system.

Radiology

- 1.0. Outlines basic knowledge on physical principles and mechanisms of basic radiological modalities (direct roentgenogram, ultrasound, computed tomography, magnetic resonance imaging);
- 2.0. Recognizes unwanted effects of X-ray radiation;
- 3.0. Explains ways of protection.

Nuclear Medicine

Describes:

- 1.0. PET/CT for status follow-up of patients;
- 2.0. diagnostic imaging of infection or tumor;
- 3.0. radionuclide therapy and its application areas;
- 4.0. physics of nuclear medicine and methods of projection;
- 5.0. gamma probe and its application method;
- 6.0. scintigraphy reading techniques.

Dermatology/Venereology

- 1.0. Evaluates patient and dermatovenereological examination methods;
- 2.0. Makes diagnosis and differential diagnosis of dermatologic diseases;
- 3.0. Performs basic diagnostic methods (search of fungal infection with KOH, wood light);
- 4.0. Tells dermatologic emergencies and to choose patients who should be sent to a specialist;
- 5.0. Makes diagnosis and treatment of frequently seen cutaneous infections (bacterial, fungal, viral) and infestations;
- 6.0. Describes frequently observed sexually transmitted diseases.

Infectious diseases and clinical microbiology

- 1.0. Describes required approach to patients with infectious diseases including evaluation of microbiological test results;
- 2.0. Recognizes epidemiology, diagnosis and differential diagnosis of infectious diseases endemic in our country and/or in world;
- 3.0. Explains infectious disease emergencies, diagnosis and approach to treatment modalities, antibiotic usage rationale, and basic antibiotic usage guidelines.

Skills

- 1.0. Does detailed questioning intended to explicate reasons of complaints;
- 2.0. Makes Physical Examination including all organ systems;
- 3.0. Uses diagnostic methods (laboratory and imaging techniques, other invasive or non-invasive methods) correctly and cost-efficiently;
- 4.0. Performs minor medical interventions and applications (blood collection, i.v. or i.m. injection, catheterization, capillary blood glucose testing, ECG, etc.);
- 5.0. Takes detailed and relevant history of adult Patient by good communication techniques;
- 6.0. Performs complete Physical Examination that includes all of organ systems for diagnosis;
6.1. orders probable diagnoses; 6.2. makes differential diagnosis;
- 7.0. Assesses results of laboratory or imaging tests (laboratory and imaging techniques, other invasive or non-invasive methods);
- 8.0. Assesses diagnosis, differential diagnosis and emergency treatment requirements and methods for emergency conditions; 8.1. distinguish emergency conditions; 8.2. give emergency treatment;
- 9.0. Informs Patients and Patient's relatives on legal responsibility to take informed consent;
- 10.0. Applies evidence based medicine in internal medicine.

Radiology

- 1.0. Chooses optimal radiological modality in most commonly encountered pathologies and in emergency medical conditions;
- 2.0. Identifies basic emergency conditions on radiological images;
- 3.0. Informs responsible clinician.

Nuclear Medicine

- 1.0. Prepares radiopharmaceuticals;
- 2.0. Does radiopharmaceutical injections to patients;
- 3.0. Makes examination of thyroid gland;
- 4.0. Uses monitor, shows imaging of patient on monitor differentiate normal, pathological and phantoms of images.

Dermatology/Venerology

- 1.0. Performs a relevant dermatovenereologic history taking;
- 2.0. Performs superficial wound care.

Infectious diseases and clinical microbiology

- 1.0. Records clinical history from infectious disease patients;
- 2.0. Performs physical examination, following-up, requesting and analyzing diagnostic tests in light of signs and symptoms of patients; both on inpatient and outpatient clinical settings;
- 3.0. Performs nonspecific tests used in diagnosis of infectious diseases (white blood cell counting, blood smear examination, urine sample microscopy, etc.);
- 4.0. Evaluates patient samples microbiologically (for presence of bacteria, parasites, blood cells, etc.)
- 5.0. Plans treatment of patients;
- 6.0. Practices active and passive vaccination;
- 7.0. Plans regulations to solve patient's problems along with treatment.

Attitudes & Responsibility

- 1.0. Shows behaviors and attitudes appropriate for physician;
- 2.0. Refers evaluation of Patient not only for major complaint but also as a whole;
- 3.0. Prefers detailed Physical Examination to search for main reason of illness
- 4.0. For differential diagnosis:
 - 4.1. values importance of differential diagnosis based on frequencies and risks of illnesses;
 - 4.2. values using laboratory and clinical evaluations correctly and cost-efficiently;
- 5.0. Orders consultation when needed or mandatory;
- 6.0. Organizes appropriate interventions at primary care level, according to evidence based medical practices;
- 7.0. Refers Patient to appropriate center upon indication.

Dermatology/Venereology

- 1.0. Makes identification of elementary lesions successfully;
- 2.0. Differentiates dermatologic lesions which are related to systemic diseases and send patient to a dermatologist.

Infectious Disease and Medical Microbiology

- 1.0. Holds confidentiality of patients;
- 2.0. Diagnoses infectious diseases;
- 3.0. Analyzes laboratory test results;
- 4.0. Plans treatment of infections;
- 5.0. Monitors patients' clinical progress.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations
Scenarios based simulation training
Teaching through standardized patients
Practice (with Outpatients and Hospitalized Patients)
Bedside-teaching (Clinical rotations at University/teaching hospital)
Teaching in clinical and simulation environment
Clinical rotation in Clinical skills training and simulation center
Clinical rotations in University and teaching clinics
Practical task under the supervision
Practical task without supervision
Maintaining medical documentation (Including by the means of information technologies)
Communication with patients (outpatients and inpatients)

9. Course content

Gastroenterology: Approach to Abdominal Pain; Approach to the Patient with Diarrhea; Non-Cardiac Causes of Chest Pain; Examination of the Abdomen; Ascites; Evidence Based Approach to the Patient Cirrhosis and Complications of Cirrhosis; Liver Enzyme Disorder; Dysphagia; Gastrointestinal Bleeding; Chronic Hepatitis.

Endocrinology: Chronic Complications of Diabetes Mellitus; Cushing's Syndrome; Treatment of Diabetes Mellitus; Male Gonadal Diseases; Adrenal Insufficiency; Metabolic Bone Disease; Hypoparathyroidism; Metabolic Syndrome; Hyperthyroidism; Hyperparathyroidism; Goiter and Thyroid Cancer; Hypothyroidism; Acute Complications of Diabetes Mellitus; Treatment of Diabetes Mellitus.

Nephrology: Introduction to Internal Medicine Clerkship; evidence Based Approach to the Patient with Hypertensive Disorders; Hypertensive Disorders in Pregnancy; Evidence Based Approach to the Patient with Chronic Kidney Disease; Approach to the Patient with Glomerular Diseases; Approach to the Patient with Acid-Base Disorders; Evidence-based Approach to the Patient with Acute Kidney injury; Approach to the Patient with Acid-Base Disorders; Approach to the Patient with Electrolyte Disorders.

Rheumatology: Examination of Extremities; Approach to the Patient with Chronic Arthritis; Approach to the Patient with Connective Tissue Diseases; Approach to the Patient with Acute Arthritis (Mono-oligo and Polyarthritis); Approach to the Patient with Vasculitis; Non-Cardiac Causes of Chest Pain.

Medical Oncology; Evidence Based Screening and Early Diagnosis in Oncology; Colorectal Cancer; Lung Cancer; Principles of Chemotherapy and Complications; Immunotherapy and targeted Therapies in Oncology.

Hematology: Nutritional Anemia and Interpretation of Peripheral Blood Smear; Bone Marrow Failure; Plasma Cell Dyscrasias; Acute and Chronic Leukemias; Diagnosis and Management of Hypercoagulopathy; Approach to the Patients with Lymphoproliferative Disorders Lymphomas; Stem Cell Transplantation.

Radiology: Introduction to Radiology; Radiation Physics; X-Ray Safety and Protection; Imaging of Musculoskeletal System; Imaging of Musculoskeletal System; Vascular Imaging; Breast Imaging; Genitourinary Imaging; Neuroradiology; Spinal Imaging; Vascular Interventions; Nonvascular Interventions; PA Chest Radiography; Chest Imaging; Cardiac Imaging; Imaging of Head & Neck; Gastrointestinal and Hepatobiliary Imaging.

Nuclear Medicine: Thyroid and Parathyroid Scintigraphy; NM In Hyperthyroidism; NM In Thyroid Cancer; Radiological PET Application; Lung Perfusion and Ventilation Scintigraphy (V/Q Scan); Radionuclide Therapy; FDG-PET in Lung Cancer; Brain Imaging and Neurological PET Application; DG-PET in Head and Neck Cancer; Hepatobiliary Scan and GIS Bleeding Scan; FDG-PET in Lymphoma; FDG-PET in GIS and Gynecologic Cancers; Bone Scintigraphy and Other Tumor Agents; Dynamic and Static Renal Scintigraphy; Infection Imaging Part 1: FDG-PET; Captopril Renography and Transplant Scan; Infection Imaging Part 2: Leucocyte and Ga- 67 Scintigraphies; Basic Radiation Physics and Radiation Detectors in NM; Introduction to NM; Radiation Safety and Effects of Radiation.

Dermatology/Venereology; Basic Structure & Function of the Skin and Cutaneous Signs; Principles of Dermatologic Diagnosis; Contact Dermatitis; Urticaria and Angioedema; Atopic Dermatitis; Adverse Cutaneous Reactions to Drugs; Connective Tissue Diseases; Bacterial Skin Infections; Parasitic Skin Diseases; Viral Skin Diseases; Fungal Skin Diseases; Chronic Autoimmune Blistering Dermatoses; Melanocytic Naevi and Neoplasms; Cutaneous Tuberculosis and Leprosy; Precancerous Skin Disorders; Non-Melanoma Skin Cancers; Behçet's Syndrome; Alopecias; Papulosquamous Skin Disorders; acne Vulgaris; Treatment Modalities in Dermatology.

Infectious diseases and clinical microbiology: Introduction to Idcm; Sepsis; Crimean Congo Hemorrhagic Fever; Central Nervous System Infections; Skin and Soft Tissue Infections; Acute Viral Hepatitis; HIV Infection and AIDS; Infective Endocarditis; Sterilization; Disinfection and Antisepsis; Brucellosis; Viral Exanthems; Tuberculosis; Direct and Indirect Test Methods in Clinical Microbiology; Antimicrobial Resistance; Antibiotics and Rational Use of Antibiotics; Gastrointestinal Tract Infections; Health Care Associated Infections; Fever of Unknown Origin; Upper Respiratory Tract Infections; Lower Respiratory Tract Infections; Immunization and Prophylaxis; Parasitic Infections; Urinary Tract Infections; Infections in Elderly; Infections in immunocompromised.

Allergology and Clinical Immunology: The Immune System in Health and Disease, Allergic and Atopic Diseases: Overview of immune System, Overview of Hypersensitivity reactions; Common allergic diseases - Urticaria, Angioedema, Allergic Rhinitis, Bronchial Asthma, Food Allergies, Drug, Hypersensitivity; Common Allergic Diseases; Skin allergy tests and recognize differences between prick and intradermal tests, patch tests; Anaphylaxis, Anaphylactoid Reaction, Anaphylactic Shock – Pathophysiology, Clinical Manifestation, Diagnosis and Management; Emergency Care of a Patient with Anaphylaxis; Mastocytosis – pathophysiology, clinical manifestations, diagnosis and management. Immunodeficiency Disorders; Approach to the Patient with Suspected Immunodeficiency; Common primary immunodeficiencies – epidemiology, differential diagnosis, genetic and environmental factors, management; B lymphocyte deficiencies; T lymphocyte deficiencies; Severe combined immunodeficiencies – epidemiology, differential diagnosis, genetic and environmental factors, management.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency -based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient's File	With/Without Checklist		

11. Recommended literature:

Internal Medicine / Acute and Chronic Conditions

1. Harrison's Principles of Internal Medicine Edited by Dan L. Longo, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, J. Larry Jameson, Joseph Loscalzo,
2. The Merck Manual of Diagnosis and Therapy. Edited by Porter RS, Kaplan JL
3. Current Opinion in Internal Medicine. Edited by: H David Humes
4. Cecil Medicine. Edited by Lee Goldman, MD and Andrew I. Schafer
5. Handbook of Nephrology & Hypertension Edited by Christopher S. Wilcox, C. Craig Tisher
6. Netter's Gastroenterology. Edited by M Floch

Radiology

Walter and Miller's Textbook of Radiotherapy: Radiation Physics, Therapy and Oncology, Paul Symonds, John Mills, Angela Duxbury, Elsevier 2019

Nuclear Medicine

Principles of Nuclear Medicine: Self-Assessment and Board Review, Majid Assadi, Hojjat Ahmadzadehfar, Hans-Jürgen Biersack 2018

Dermatology

Dermatology Jean L. Bologna, Julie V. Schaffer, Lorenzo Cerroni, elsevier 2017

Venerology

Hand Book of Dermatology and Venereology Hossain 2009

Allergology and Clinical Immunology

Oxford Handbook of Clinical Immunology and Allergy Gavin Spickett 2019

Transfusiology

Transfusion medicine, Wiley-Blackwell 2017

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester IX

Infant, Child & Adolescent Care

1. **Course identification code: MEDC 5110**
2. **Credit Points: 11 ECTS, Contact Hours: 172; Independent Hours: 158; Sum: 330.**
3. **Person(s) responsible for course: Temur Mikeladze, Nino Tskhvedadze**
Lecturers: Pediatrics – Leila Beitrishvili

4. Goals

Pediatrics

Aim of this clerkship is to:

1. equip students with necessary knowledge, skills and attitudes required for an appropriate Approach to healthy child and pediatric Patient;
2. convey necessary knowledge on preventive healthcare measures;
3. equip students with necessary knowledge, skills and attitudes required for achieving diagnosis and differential diagnosis in basic childhood diseases;
4. equip students with necessary knowledge, skills and attitudes required to perform primary care prophylaxis and treatment;
5. equip students with necessary knowledge, skills and attitudes to refer Patient to advanced healthcare units upon indication.

Hereditary Diseases & Genetic Disorders

1. convey necessary knowledge on genetic disorders, patterns of inheritance and process of syndrome diagnosis;
2. equip the students with knowledge, skills and attitudes required to refer patient to genetic clinic.

5. Prerequisite: *MEDC4210 Hospitalized Adult Care II*

6. Co-requisite: N/A

7. Intended learning outcomes

Knowledge and Understanding

Adolescent

- 1.0. Demonstrates core knowledge of pediatric medicine in the nursery, outpatient clinic, and input
- 2.0. Names and describes the components of the HEADSSS interview;
- 3.0. Identifies a specific individual learning goal for interviewing an adolescent using the HEADSSS interview format;
- 4.0. Observes a peer doing a HEADSSS interview and provide feedback about the interview.

Cardiology

- 1.0. Describes normal cardiac physiology;
- 2.0. Interprets a pediatric ECG;
- 3.0. Describes normal cardiac anatomy and understand the most common congenital anomalies;
- 4.0. Recognizes shock in pediatric patients and understand the initial management;
- 5.0. Discusses the differential diagnosis of cyanosis and describe the initial evaluation;
- 6.0. Differentiates between benign and pathologic murmurs.

Child Abuse

- 1.0. Lists characteristics of the history and physical examination that should trigger concern for possible physical, sexual and psychological abuse and neglect;
- 2.0. Describes the medical-legal importance of a full, detailed, carefully documented medical and social history and physical examination;
- 3.0. Explains mandatory reporting requirements.

Child Development

- 1.0. Discusses normal and abnormal development;
- 2.0. Recognizes the normal progression of developmental milestones in multiple domains (fine motor, gross motor, verbal, social).

Child with Limp

- 1.0. Defines limp;
- 2.0. Classifies the different types of limp and Outline an appropriate diagnostic work-up.

Endocrine

- 1.0. Defines short stature and outline the evaluation;
- 2.0. Describes normal growth patterns;
- 3.0. Recognizes the presentation of diabetes;
- 4.0. Describes the initial management of diabetic ketoacidosis (DKA);
- 5.0. Outlines the evaluation for precocious puberty;
- 6.0. Defines obesity and understand complications.

Fluid Talk

- 1.0. Understands differences between children and adults in assessing hydration and electrolyte status;
- 2.0. Writes a bolus of intravenous fluids with the proper fluid type and amount of fluid for different-sized pediatric patients;
- 3.0. Calculates the rate of maintenance fluids for different-sized pediatric patients.

Infectious Disease

- 1.0. Outlines the diagnostic work-up and initial antimicrobial treatment for neonates with suspected sepsis;

- 2.0. Recognizes common signs of congenital infections;
- 3.0. Appreciates the role of the childhood vaccination schedule in the prevention of infectious diseases at various ages;
- 4.0. Discusses the common causes of fever and rash in children and adolescents;
- 5.0. Identifies infectious disease emergencies which require prompt intervention.

Nutrition

- 1.0. Discusses normal and abnormal growth including growth curves and BMI;
- 2.0. Explains caloric needs at different stages of growth;
- 3.0. Defines obesity;
- 4.0. Discusses risk factors for obesity, including family, cultural and psychosocial factors;
- 5.0. Explains endocrine and cardiovascular consequences of obesity;
- 6.0. Recognizes failure to thrive in the pediatric patient;
- 7.0. Outlines differential diagnosis and initial evaluation of failure to thrive in a child.

Pulmonary

- 1.0. Describes the pediatric airway;
- 2.0. Recognizes upper airway issues and describe treatment and management options;
- 3.0. Recognizes lower airway issues and describe treatment and management options.

Telehealth and Telephone Triage

- 1.0. Lists the objectives of the telephone visit;
- 2.0. Lists the capabilities and limitations to telehealth visits.

Skills

Pediatrics

- 1.0. Takes detailed, relevant history of child and his/her family;
 - 1.1. performs intravenous/intramuscular/subcutaneous injections;
 - 1.2. collects venous blood sample;
 - 1.3. vaccinates children;
- 2.0. Performs detailed Physical Examination of child and neonate, considering special features related to age of Patient;
- 3.0. Assess physical-motor-mental development of healthy child;
- 4.0. Assess anthropometric evaluation in proper techniques, including percentile charts;
- 5.0. Supplies basic life support to neonates and children;
- 6.0. Collects pharyngeal swab, fecal and urine cultures;
- 7.0. Evaluates results of:
 - 7.1. peripheral blood smear;
 - 7.2. urine test and sediment;
 - 7.3. arterial blood gas;
 - 7.4. completes blood count;
 - 7.5. pediatric ECG;
 - 7.6. serum electrolytes, renal function tests, hepatic function tests and thyroid function tests;

- 7.7. chest X-rays;
- 8.0. Cares umbilicus in newborn;
- 9.0. Evaluates results of:
 - 9.1. cerebrospinal fluid analysis;
 - 9.2. otoscope and ophthalmoscopy;
 - 9.3. nebulizer use for Patient;
 - 9.4. pulse oximetry;
 - 9.5. cardiac monitoring and ECG, 54;
 - 9.6. measurement of blood glucose with a glucometer;
 - 9.7. application and follow up of phototherapy;
 - 9.8. pedigree construction;
- 10.0. Observes and explains:
 - 10.1. lumbar puncture;
 - 10.2. bone marrow aspiration;
 - 10.3. paracentesis;
 - 10.4. exchange transfusion;
 - 10.5. pulmonary function tests;
 - 10.6. diagnostic and therapeutic endoscopy;
 - 10.7. echocardiography;
 - 10.8. application of prick test;
 - 10.9. endocrinological provocation and inhibition tests;

Attitudes & Responsibility

Pediatrics

- 1.0. Assimilates principles of:
 - 1.1. respects Patient rights and establishing well-balanced relations with Patients' relatives;
 - 1.2. maintains good relations with colleagues and teaching staff, and being analytical and research orientated;
 - 1.3. maintains good relations with health staff;
 - 1.4. asks for consultation;
 - 1.5. uses written and on-line sources correctly;
 - 1.6. gives clear and concise information about Patient's condition to Patient and family;
 - 1.7. obeys infection control regulations when working in ward and outpatient clinics.

Hereditary Diseases & Genetic Disorders

Knowledge

- 1.0. Identifies the most likely mode of inheritance given a straightforward pedigree;
- 2.0. Describes the common pediatric and adult indications for referral to a genetic clinic;
- 3.0. Describes briefly the principles of methods by which a person's DNA can be checked for a mutation;
- 4.0. Describes the methods of prenatal diagnosis their uses and risks;
- 5.0. Distinguishes between screening and diagnosis;

- 6.0. Describes carcinogenesis as an evolutionary process within an individual;
- 7.0. Defines oncogenes and tumor suppressor genes giving examples

Skills

- 1.0. Takes a family history
- 2.0. Draws a pedigree using correct symbols
- 3.0. Identifies normal and simple abnormal karyotypes
- 4.0. Awares of importance of consanguinity
- 5.0. Values genetic diagnosis and counseling for patients and parents
- 6.0. Distinguishes signs and symptoms of genetic disorder
- 7.0. Refers patient to genetic clinic who suspected genetic disorder

Attitudes & Responsibility

- 1.0. Awares of importance of major and minor congenital anomalies of a patient

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course content

Pediatrics: Introduction to Pediatrics; Respiratory System Examination; Pediatric Basic and Advanced Life Support; Perinatal Asphyxia, Cerebral Palsy, Neonatal Resuscitation, and Neonatal Transport Renal and Liver Function Tests, Electrolytes and AcidBase balance; History Taking; Neurological Examination; Pediatric Assessment in Pediatric Emergency Department; Perinatal Asphyxia, Cerebral

Palsy, Neonatal Resuscitation, and Neonatal Transport-2; Fluid and Electrolyte Disorders; Newborn Examination; Neonatal Hyperbilirubinemia; Atopic Dermatitis and Allergic Rhinitis; Urinalysis and Other Body Fluids; Fluid and Electrolyte Disorders; Gastrointestinal and Genitourinary System Examination; Prematurity, Postmaturity; Approach to Nutrition; Growth, Development, and Growth Retardation-1; Sepsis and Meningococemia; Cardiovascular System Examination & Electrocardiographic Principles¹; Neonatal Respiratory Distress-1; Malnutrition & Obesity; Growth, Development, and Growth Retardation-2; Shock; Cardiovascular System Examination & Electrocardiographic Principles²; Neonatal Respiratory Distress-2; Practice G1-G2 Cardiopulmonary Resuscitation; Practice-G1 (Growth and Development); Practice G3-G4 (Vital Signs);

Essential Medical Procedures (Pediatrics): General and symptom-based history taking; Anthropometric measurements; Head-Neck and ENT examination; Abdominal physical examination; Consciousness assessment and mood state examination; Child and newborn examination; Skin examination; General condition and vital signs assessment; Cardiovascular system examination; Musculoskeletal system examination; Breast and axillary region examination; Neurological examination; Respiratory system examination; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing death certificate; Preparing medical reports and notice; Writing prescription; Preparing treatment refusal form; Application of principles of working with biologic material; Preparing stool smear and microscopic examination; Reading direct radiographs and assessment; Taking and evaluating ECG; Fecal occult blood examination; Measuring blood glucose level with glucometry; Performing bleeding time measurement assessment; Filling laboratory request paper; Obtaining and transfer laboratory specimens in appropriate conditions; Using microscope; Performing peripheral smear and assessment; Performing full urine analysis (including microscopic examination) and assessment; Measuring transcutaneous bilirubin and its assessment; Rational drug use; Following child growth and development (Percentile graphics, Tanner classification); Establishing IV line; Performing newborn care after delivery; Hand washing; Obtaining biological samples from patient; Performing IM, IV, SC, ID injection; Urinary catheterization; Measuring blood pressure; Performing blood transfusion; Capillary blood sampling; Obtaining sample for culture; Performing lumbar puncture; Nasogastric catheterization; Delivering oxygen and administering nebulizer-inhaler treatment; Administering oral, rectal, vaginal and topical medicines; Performing paracentesis; Performing PPD test; Performing and assessing pulse oxymetry; Providing appropriate cold chain protection and transportation; Assessing respiratory function tests; Drawing a family tree and referring the patient for genetic counseling when necessary; Performing suprapubic bladder aspiration; Providing basic life support; Solving ethical issues in medical practice; Taking heel blood sample.

Hereditary Diseases & Genetic Disorders; Making a family tree and referring the patient for genetic counseling when necessary; Introduction to Clinical Genetics; What Can We Learn From a Family History?; Pedigree Drawing and Pedigree Analysis; Single Gene Disorders I; Single Gene Disorders II; Approach to the Patient with Dysmorphic Features; Chromosomal Disorders I; Chromosomal Disorders II; Staying Ahead of the Game: Genetic Testing; Prenatal and Preimplantation Genetic Diagnosis; Genetic Counseling; Bad News I; Bad News II; Current Possibilities for Treatment of Genetic Disorders;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient's File	With/Without Checklist		

11. Recommended literature:

Pediatrics:

1. Nelson Textbook of Pediatrics Robert M. Kliegman, MD, Bonita M.D. Stanton, MD, Joseph St. Geme, Nina Schor, MD, PhD and Richard E. Behrman, MD.
2. Current Diagnosis Treatment: (William W. Hay Jr, Myron J. Levin, Robin R. Deterding, Mark J. Abzug, Judith M. Sondheimer).

Hereditary Diseases & Genetic Disorders:

Turnpenny, Peter D, Ellard, Sian. Emery's Elements of Medical Genetics. 14th Edition. Churchill Livingstone, 2012, ISBN: 9780702040436.

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester IX

Neurologic Care

1. **Course identification code: MEDC 5120**
2. **Credit Points: 10 ECTS, Contact Hours: 156; Independent Hours: 144; Sum: 300.**
3. **Person(s) responsible for course: Otar Toidze, Nino Tskhvedadze**
Lecturers: Neurology – Maia Alkhidze, Gvantsa Arveladze

4. Goals

Neurology

To equip students with necessary knowledge, skills and attitudes required to:

1. recognize pathology, symptomatology and clinical properties of clinical conditions related to neurology,
2. initiate neurologic medical treatment in emergency cases, and to refer patients to specialized medical departments

5. Prerequisite: *MEDC4210 Hospitalized Adult Care II*

6. Co-requisite: N/A

7. Intended learning outcomes

Knowledge and understanding

- 1.0. Describes clinical presentations of clinical conditions related to neurology (headache, demyelinating diseases, movement disorders, dementia, epilepsy, sleep disorders, cerebrovascular diseases, muscle disorders, peripheral nerve and spinal cord diseases);
- 2.0. Explains early interventions in clinical conditions related to neurology;
- 3.0. Explains prognosis of clinical conditions related to neurology;
- 4.0. Recognizes drugs which should not be used in neurological diseases.

Skills

- 1.0. Takes relevant medical history of clinical conditions related to neurology;
- 2.0. Makes neurological examination;
- 3.0. Applies examinations to make differential diagnosis (to exclude cardiac and metabolic pathologies);
- 4.0. Designs initial interventions to keep blood pressure in normal limits or to stop drugs in use in stroke patients with hypertension;
- 5.0. Evaluates Glasgow coma scoring of unconscious patients;
- 6.0. Plans and requests medical tests to investigate etiology of unconsciousness;
- 7.0. Starts urgent medical interventions in neurological emergencies (epileptic seizure, status epilepticus, ischemic and hemorrhagic stroke, myasthenia crisis, CNS infections, acute autoimmune polyneuropathies, headaches with secondary etiologies and/or with primer etiologies which need early intervention);

- 8.0. Makes patient referrals to appropriate specialized medical departments;
- 9.0. Makes basic treatment of patients with chronic neurological conditions (following hydration situation of immobile patients, nourishment of patients, preventing of decubitus, checking drug convergence of patients and giving information).

Attitudes & Responsibility

- 1.0. Awares of importance of differentiation of neurological complaints;
- 2.0. Prioritizes urgent examinations;
- 3.0. Values early invention;
- 4.0. Supports patients with information for protective measures;
- 5.0. Warns patients for drugs which should not be used in neurological diseases.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course content

Neurology: Introduction to Neurology; Motor Neuron Disorders; Semiology; Coma; Multiple Sclerosis; Dementia; Headache; Infections of CNS; Infections of Nervous Systems; Movement Disorders; Epilepsy; EEG; Spinal Cord Diseases; NMJ Diseases; Sleep Disorders; Muscle Diseases; Cerebro -Vascular Diseases; Disorders of Peripheral Nerves; Mental status evaluation; Consciousness assessment and psychiatric examination; Eye, fundus examination; Neurological examination; Performing lumbar puncture; Minimental status examination;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
OE: Oral Exam				
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

11. Recommended literature:

Neurology:

1. Neurointensive Care Unit: Clinical Practice and Organization (Current Clinical Neurology) 1st ed. 2020 Edition.
2. Neuroscience Dale Purves, George J. Augustine, David Fitzpatrick, William C. Hall, Anthony-Samuel LaMantia, Richard D. Mooney, Michael L. Platt, Leonard E. White, 2018.
3. Adams And Victor's Principles Of Neurology, Allan H. Ropper, Martin A. Samuels, Joshua Klein, Sashank Prasad, McGraw-Hill Education, 2019.

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester IX

Psychiatric Care

1. **Course identification code: MEDC 5130**
2. **Credit Points: 9 ECTS, Contact Hours: 140; Independent Hours: 130; Sum: 270.**
3. **Person(s) responsible for course: Otar Toidze, Nino Tskhvedadze**
Lecturers: Psychiatry – Nana Zavrashvili

4. Goals

Psychiatry

Aim of this clerkship is :

1. To convey necessary knowledge on psychiatric disorders, diagnosis and differential diagnosis;
2. To equip students with necessary knowledge, skills and attitudes required to:
 - 2.1. start treatment of diseases;
 - 2.2. perform follow- up in primary health care service;
 - 2.3. inform patient and their relatives about disorder.

Child and Adolescent Psychiatry

Aim of this clerkship is :

1. To convey necessary knowledge on psychiatric disorders, diagnosis and differential diagnosis;
2. To equip students with knowledge, skills and attitudes required to:
 - 2.1. start treatment of diseases;
 - 2.2. perform follow-up in primary health care services;
 - 2.3. inform patient and their relatives about disorder;
 - 2.4. direct patient to specialist when necessary.

5. Prerequisite: *MEDC4210 Hospitalized Adult Care II (Internal Medicine II)*

6. Co-requisite: N/A

7. Intended learning outcomes

Knowledge and understanding

Psychiatry

Describes organic, physiological and psychological causes:

1. of depression, anxiety;
2. related with bipolar disorder, phobias, substance use disorders, psychosomatic disorders;
3. personality disorders.

Child and Adolescent Psychiatry

Describes organic, physiological and psychological causes:

1. of depression, anxiety and panic attacks;
2. related with bipolar disorder, phobias, substance use disorders, psychosomatic disorders;
3. personality disorders.

Skills

Psychiatry

- 1.0. Assesses mental status;
- 2.0. Takes psychiatric history;
- 3.0. Makes psychiatric examination;
- 4.0. Makes neutral, extra-judicial and indiscriminate approaches to patient;
- 5.0. Arranges appropriate initial treatment;
- 6.0. Informs patients and care givers on personality disorders ;
- 7.0. Schedules follow-up process;
- 8.0. Handles self protection from a violent patient.

Child and Adolescent Psychiatry

- 1.0. Assesses mental status;
- 2.0. Takes psychiatric history;
- 3.0. Makes psychiatric examination;
- 4.0. Distinguishes symptoms and signs of psychiatric conditions;
- 5.0. Arranges appropriate order for laboratory tests and consultations ;
- 6.0. Diagnoses psychiatric conditions;
- 7.0. Does preliminary interventions;
- 8.0. Makes stabilization of psychiatric emergency cases in emergency conditions like suicide, conversion disorder, manic episode, substance-related emergencies;
- 9.0. Arranges appropriate initial treatment;
- 10.0. Informs patients and care givers on personality disorders;
- 11.0. Schedules follow-up process;
- 12.0. Refers to specialist when necessary;
- 13.0. Handles self protection from a violent patient.

Attitudes & Responsibility

Psychiatry

- 1.0. Makes neutral, extra-judicial and indiscriminate approaches to patient;
- 1.1. Values privacy of patients;
- 1.2. Gives patients confidence;
- 1.3. Maintains empathy and effective communication with patient and accompanying persons or care givers ;
- 1.4. Distinguishes symptoms and signs of psychiatric conditions;
- 1.5. Arranges appropriate order for laboratory tests and consultations;
- 1.6. Diagnoses psychiatric conditions;
- 1.7. Does preliminary interventions;
- 1.8. Makes stabilization of psychiatric emergency cases in emergency conditions like suicide, conversion disorder, manic episode, substance-related emergencies .

Child and Adolescent Psychiatry

- 1.0. Makes neutral, extra-judicial and indiscriminate approaches to patient;
- 2.0. Values privacy of patients;
- 3.0. Gives patients confidence;
- 4.0. Maintains empathy and effective communication with patient and accompanying persons or care givers.

8. Teaching method(s)

Lecture
Theoretical Interactive learning - Seminars
Practical Work
Team working
Case Based Learning (CBL)
Teaching by using the simulations
Scenarios based simulation training
Teaching through standardized patients
Practice (with Outpatients and Hospitalized Patients)
Bedside-teaching (Clinical rotations at University/teaching hospital)
Teaching in clinical and simulation environment
Clinical rotation in Clinical skills training and simulation center
Clinical rotations in University and teaching clinics
Practical task under the supervision
Practical task without supervision
Maintaining medical documentation (Including by the means of information technologies)
Communication with patients (outpatients and inpatients)

9. Course content

Psychiatry: Clinical Experience (Outpatient); Psychiatric Emergencies; Psychiatry Dep. Journal Club; Introductory Session (Introduction to Psychiatry); Psychiatric Assessment of a Patient; Clinical Experience (Outpatient); Major Depressive Disorder; Delirium and Other Cognitive Disorders; Signs and Symptoms in Psychiatry; Personality Disorders; Bipolar Disorders; Anxiety Disorders; Substance Related Disorders; Eating Disorders; Schizophrenia and Other Psychoses; Treatment in Psychiatry; Somatic Symptom Disorders; Obsessive Compulsive Disorder; Sexual Dysfunctions.

Essential Medical Procedures (Psychiatry): General and symptom-based patient interview; Assessing mental status ; Psychiatric history taking; Consciousness assessment and mood state examination; General condition and vital signs assessment; Preparing forensic report ; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing medical reports and notice; Writing prescription ; Preparing treatment

refusal form; Filling laboratory recuse form; Interpretation of screening and diagnostic examination results; Stabilization of psychiatric emergency patient; Assessing suicidal risk; Suicide intervention; Minimental state examination ; Defining concept capacity.

Child and Adolescent Psychiatry:

Introduction to Child and Adolescent Psychiatry; Normal Development In Adolescence; Anxiety Disorders; Child Abuse and Neglect; Assessing Families; Attention Deficit Hyperactivity Disorder; Autism Spectrum Disorders; Pharmacologic Treatments; Understanding Normal and Deviant Mental Development; Mood Disorders in Childhood and Adolescence; Intellectual Disability; Psychotherapies; Clinical Experience (Outpatient); Clinical Experience (Outpatient); Program Evaluation Session Review of the Exam Questions, Evaluation of the Program; Assessment Session; Independent Learning.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
OE: Oral Exam				
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient's File	With/Without Checklist		

11. Recommended literature:

Psychiatry, 2nd ed., Vol 1, Tasman A, Kay J, Lieberman JA, eds., John Wiley & Sons, 2003. Introduction to clinical psychology-8th ed. Kramer, Geoffrey P. others. 2014

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester X

Operative/Perioperative care I

1. **Course identification code: MEDC 5210**
2. **Credit Points: 10 ECTS, Contact Hours: 156; Independent Hours: 144; Sum: 300.**
3. **Person(s) responsible for course: Nikoloz Pruidze, Nino Tskhvedadze;**
Lecturers: General Surgery – Nikoloz Pruidze; Traumatology and Orthopedic Surgery – Gia Chelidze; Sport Medicine and Physiotherapy - Tamar Chilingarashvili.

4. Goals

General Surgery

To equip students with necessary knowledge, skills and attitudes required to:

1. make diagnoses and differential diagnoses of digestive system, endocrine, mammary and emergency surgery diseases, traumatized patients;
2. order laboratory and imaging tests available in primary care;
3. decide treatment modality;
4. refer Patient to advanced healthcare units upon indication.

Traumatology and Orthopedic Surgery

1. to convey necessary knowledge on symptoms of congenital, acquired or traumatic clinical conditions related to musculoskeletal system;
2. to equip students with knowledge, skills and attitudes required to:
 - 2.1. detect clinical sings in clinical conditions related to musculoskeletal system;
 - 2.2. employ diagnostic tools and treatment modalities in clinical conditions related to musculoskeletal system.

Sport Medicine and Physiotherapy

1. to convey necessary knowledge on pathology, symptomatology, clinical findings and treatment of musculoskeletal system diseases;
2. to equip students with:
 - 2.1. basic knowledge, skills and attitudes on rehabilitation medicine;
 - 2.2. general approach to patients with physical disabilities.

5. **Prerequisite:** *MEDC 4120 Emergency Care; MEDC 4210; Hospitalized Adult Care II (Internal Medicine II).*
6. **Co-requisite:** N/A

7. Intended learning outcomes

Knowledge and understanding

General Surgery

- 1.0. Discusses basics of blood transfusion, hemostasis and coagulation;
- 2.0. Discusses shock types and treatments;
- 3.0. Summarize stages of systemic response to trauma.

Traumatology and Orthopedic Surgery

- 1.0. Explains anatomy and physiology of musculoskeletal system, besides pathology of clinical conditions related to musculoskeletal system;
- 2.0. Describes diagnosis of traumatic, skeletal and soft tissue pathologies, and their management in emergency states;
- 3.0. Describes congenital pediatric orthopedic problems and general treatment strategies;
- 4.0. Describes physio pathological causes of degenerative disorders and optimal managements;
- 5.0. Describes degenerative spinal disorders, spine deformities and traumatic spine disorders;
- 6.0. Explains diagnostic and therapeutic modalities in sports injury;
- 7.0. Describes classification, diagnosis and treatment modalities in musculoskeletal tumors;

Sport Medicine and Physiotherapy

- 1.0. Explains etiopathogenesis of degenerative joint diseases; 1.1. Describes general treatment approaches;
- 2.0. Explains etiopathogenesis of inflammatory joint diseases; 2.1. Describes general treatment approaches;
- 3.0. Explains etiopathogenesis of osteoporosis and metabolic bone disease, osteoporosis risk factors, prevention and treatment of osteoporosis;
- 4.0. Explains pathophysiology of pain, pain assessment, and medical treatment or physiotherapy of different types of pain;
- 5.0. Describes approach to patients with physical disabilities;
- 6.0. Classifies etiology and principles of general rehabilitation of stroke and other neurologic disorders;
- 7.0. Discriminates early and late period complications of spinal cord injuries; 7.1. Describes treatment;
- 8.0. Evaluates radiology of spine and joints in musculoskeletal system diseases;
- 9.0. Describes physical therapy agents used in rehabilitation and their indications and contraindications;
- 10.0. Describes symptoms and signs of peripheral nerve injuries, polyneuropathies; 10.1. Explains rehabilitation principles of peripheral nerve injuries and treatment approaches.

Skills

General Surgery

- 1.0. Assesses signs and symptoms, differential diagnoses and treatments options of surgical diseases of digestive system;
- 2.0. Assesses signs and symptoms, differential diagnoses and treatments of surgical diseases of breast, breast examination; ordering necessary tests for breast cancer and other mammary diseases;
- 3.0. Assesses signs and symptoms, differential diagnoses and treatments of surgical diseases of endocrine system, thyroid examination; ordering necessary tests for differential diagnosis;

- 4.0. Assesses signs and symptoms, differential diagnoses and treatments of surgical diseases of hepatobiliary system;
- 5.0. Assesses existing signs and symptoms of emergency patients; 5.1. Does Physical Examination; 5.2. Performs or order laboratory and imaging tests; 5.3. Evaluates pre-diagnosis and differential diagnosis, treatment steps;
- 6.0. Manages fluid-electrolyte balance;
- 7.0. Does prophylaxis and treatments of surgical site infections;
- 8.0. Plans nutrition of surgical patients;
- 9.0. Discusses feasibility and criteria of liver, kidney, pancreas transplant; 9.1. Does follow-up and treatments of these patients;
- 10.0. Manages wound care and dressing; 10.1. Does basic suturing; 10.2. Diagnoses and drain simply localized abscess or hematoma;
- 11.0. Differentiates abdominal trauma (blunt/penetrant); 11.1. Decides treatment;
- 12.0. Decides how to Approach surgical diseases in primary care; 12.1. Makes initial diagnosis and treatment;
- 13.0. Assesses intervention to traumatized Patient;
- 14.0. Discusses basic principles of medical oncology;
- 15.0. Recognizes abdominal hernias; 15.1. Conducts for treatment;
- 16.0. Discusses etiopathogenesis, differential diagnosis and treatment of acute abdomen; 16.1. Diagnoses acute abdomen;
- 17.0. Determines diagnoses of surgical diseases and treatment options that can applied at primary health care centers;
- 18.0. Determines appropriate transport conditions and transporting criteria.

Traumatology and Orthopedic Surgery

- 1.0. Perform orthopedic examination of musculoskeletal system;
- 2.0. Perform first aid, wound care, bandaging, and management of temporary fracture stabilization, in case of fracture;

Sport Medicine and Physiotherapy

- 1.0. Performs relevant history taking from patient with musculoskeletal system disorder; 1.1. Does musculoskeletal system and neurologic examination;
- 2.0. Evaluates muscle strength and spasticity; 2.1. Does detailed neurologic examination in patients with stroke and spinal cord injury;
- 3.0. Handles patient immobilization regarding complications; 3.1. Gives correct bed position; 3.2. Follow up decubitus; 3.3. Apply range of motion exercises.
- 4.0. Does differential diagnosis in degenerative joint diseases;
- 5.0. Does differential diagnosis in inflammatory joint diseases;
- 6.0. Does differential diagnosis and treatment of cervical and upper extremity, back and lower extremity pain;
- 7.0. Requests correct laboratory and radiological examinations;
- 8.0. Arranges exercise types, kind of exercise given according to patient's diagnosis;
- 9.0. Refers patient to convenient centers when necessary.

Attitudes & Responsibility

General Surgery

- 1.0. Respects privacy of patient-doctor communication and patient privacy;
- 2.0. Values taking history in good communication manner towards Patient and Patient's relatives;
- 3.0. Values importance of informing patient and patient's relatives;
- 4.0. Values importance of patient transport in compliance with regulations;

Traumatology and Orthopedic Surgery

- 1.0. Awaros of importance of differentiation of musculoskeletal diseases and fractures;
- 2.0. Makes guidance to patient about treatment;
- 3.0. Has good communication with patient and accompanying persons or care givers;

Sport Medicine and Physiotherapy

- 1.0. Prioritizes conservative treatments and preventions in patients with musculoskeletal system disease;
- 2.0. Has good relationship with patients and patient's companions;
- 3.0. Values importance of quality of life;

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course content:

General Surgery: Periapillary Malignancies; Evidence Based Medicine: Acute Appendicitis, Intestinal Obstruction; Disease of the Gallbladder and Biliary Tree; Disease of the Adrenal Glands and Spleen; Disease of the Breast; Evidence Based Medicine: Shock and its Treatment; Evidence Based Medicine: Colorectal carcinoma Anorectal Disease; Disease of Thyroid Gland and Parathyroid Glands; Wound Healing and Surgical Infections Surgical Nutrition; The Systemic Response to Injury; Hemostasis, Surgical Bleeding and Transfusion Gastrointestinal Bleeding and Disorders of Coagulation; Benign and Malignant Disease of the Stomach; Abdominal Trauma Inflammatory Bowel Disease; Hernias; Pancreatitis, Liver Transplantation, Renal and Pancreas Transplantation; Hydatid Disease of Liver-Abscess and Tumors; Fluid and Electrolyte Therapy; Benign and Malignant Diseases of the Esophagus; Acute Abdomen – Peritonitis Physical Examination of Surgery.

Essential Medical Procedures (General Surgery): General and symptom-based patient interview; Assessing mental status; Head-Neck and ENT examination; Abdominal physical examination; Digital rectal examination; General condition and vital signs assessment; Cardiovascular system examination; Musculoskeletal system examination; Breast and axillar region examination; Respiratory system examination; Urological examination; Preparing forensic report; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing death certificate; Preparing medical reports and notice; Writing prescription; Preparing treatment refusal form; Reading direct radiographs and assessment; Measuring and assessing bleeding time; Filling laboratory request form; Interpretation of screening and diagnostic examination results; Definition and management of forensic cases; Bandaging and tourniquet application; Establishing IV line; Incision and drainage of skin and soft tissue abscess; Restriction and stopping external bleeding; Hand washing; Appropriate patient transportation; Performing IM, IV, SC, ID injection; Urinary catheterization; Assessing disease / trauma severity score; Measuring blood pressure; Performing blood transfusion; Obtaining sample for culture; Enema administration; Nasogastric catheterization; Oral, rectal, vaginal and topical drug administration; Providing basic life support; Transferring amputated limb appropriate; Care for burns; Superficial suturing and removal of sutures.

Traumatology and Orthopedic Surgery: Introduction to Orthopedics and Traumatology; Pelvic Fractures Open Fractures; Dislocations and Fractures of the Lower Extremity, Pediatric Fractures; Basic Principles of Fractures and Fracture Healing; Osteomyelitis and Septic Arthritis; Benign and Malignant Tumors of the Bone; Spinal Trauma and Fractures Degenerative Diseases of the Spine; Developmental Dysplasia of the Hip, Perthes Disease; Osteoporosis, Avascular Necrosis of the Bone; Osteoarthritis and Arthroplasty; Knee Problems in Sports Medicine and Arthroscopy, Cartilage Biology and Injuries; Scoliosis Cerebral palsy; Congenital Anomalies of the Lower Extremity PEV; Disorders of the Foot and Ankle; Dislocations and Fractures of the Upper Extremity; Hand surgery, Cerebral Palsy;

Essential Medical Procedures (Traumatology and Orthopedic Surgery): General and symptom-based history taking; General condition and vital signs assessment; Musculoskeletal system examination; Preparing patient file; Reading direct radiographs and assessment; Preparing and applying splints; Applying bandage and tourniquet; Incision and drainage of skin and soft tissue abscess; Appropriate patient transportation; Cervical collar application; Transportation of amputated limb after trauma; Superficial suturing and removal of sutures.

Sport Medicine and Physiotherapy: Introduction to PMR; Musculoskeletal (Locomotor) System Symptoms and Signs; Musculoskeletal (Locomotor) System Examination; Drug Use in Musculoskeletal System Disorders; Diagnosis and Treatment of Cervical and Upper Extremity Pain; Radiologic Evaluation of Musculoskeletal Disorders; Differential Diagnosis and Treatment of Lowback and Lower Extremity Pain; Degenerative Arthritis; Osteoporosis and Metabolic Diseases; Inflammatory Joint Diseases; Disease of Spine and Spinal Cord; Pain Pathophysiology, Classification and Treatment; Seronegative Spondyloarthropathies; Peripheral Nerve Diseases; Physical Agents, Orthotic and Prosthetic Use in Rehabilitation; Rehabilitation of Neurologic Disease; Therapeutic Exercises;

Essential Medical Procedures (Physical Medicine and Rehabilitation): Musculoskeletal system examination.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
OE: Oral Exam				
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
Evaluation of Preparation Skills of the Patient's File	With/Without Checklist			

Recommended literature:

General Surgery:

1. Schwartz's Principles of Surgery, 10th edition;
2. Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice, 19th edition

Traumatology and Orthopedic Surgery

1. Orthopedic Fizik Muayane, çeviri ed. Uğur Şaylı, Güneş Tıp Kitapevi
2. Review of Orthopedics, 6th edition (ed. Mark D. Miller)
3. AAOS Comprehensive Orthopedic Review, 2nd edition (ed. Martin I. Boyer)

Sport Medicine and Physiotherapy

1. Netter's Sports Medicine, Elsevier, Christopher Madden, Margot Putukian, Eric McCarty, Craig Young. 2018.
2. Advanced Techniques in Musculoskeletal Medicine & Physiotherapy: using minimally invasive therapies in practice, Elsevier, Fermín Valera Garrido, Francisco Minaya Muñoz, 2015.

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester X

Obstetrics/ Gynecology

1. **Course identification code: MEDC 5220**
2. **Credit Points: 11 ECTS, Contact Hours: 172; Independent Hours: 158; Sum: 330.**
3. **Person(s) responsible for course: Apolon Meskhi; Nino Tskhvedadze;**
Lecturers: Obstetrics/Gynecology – Apolon Meskhi; Teona Salukvadze;
4. **Goals**

Obstetrics/ Gynecology

1. To equip students with necessary knowledge, skills and attitudes required to do:
 - 1.1. genital examination;
 - 1.2. follow up of pregnancy period;
 2. To convey necessary knowledge on antenatal tests, normal spontaneous delivery, pathological situations about birth, high risk pregnancy, teratogenicity effects, ectopic pregnancy, contraception and contraceptive methods, gynecological cancers, breast and cervix cancer screening, menopause, osteoporosis, gynecological and obstetric operations;
 3. To equip students with necessary knowledge, skills and attitudes required to perform primary care medical practice in gynecology and obstetrics.
5. **Prerequisite:** *MEDC 5210 Operative/Perioperative care I (OPC I)*
 6. **Co-requisite:** N/A
 7. **Intended learning outcomes**

Knowledge and understanding

Obstetrics/ Gynecology

- 1.0. Explains antenatal tests, normal spontaneous delivery, pathological situations about birth, high risk pregnancy, teratogenicity effects, ectopic pregnancy, contraception and contraceptive methods, gynecological cancers, breast and cervix cancer screening, menopause, osteoporosis, gynecological and obstetric operations.

Skills

Obstetrics/ Gynecology

- 1.0. Takes medical history about female genital system;
- 2.0. Does: 2.1. systemic Physical Examination including female genital system; 2.2. PAP smear tests; 2.3. breast and cervix cancer screening tests; 2.4. menopause and osteoporosis screening tests; 2.5. follow up of normal pregnancy period;
- 3.0. Orders necessary medical tests in pregnancy;
- 4.0. Detects fetal cardiac activity (FCA);
- 5.0. Performs antenatal tests like non-stress test (NST) and CST;
- 6.0. Evaluates results;
- 7.0. Follows and examines normal spontaneous vaginal birth;
- 8.0. Detects: 8.1. complications of birth; 8.2. high risk pregnancies; 8.3. ectopic pregnancies;
- 9.0. Makes differential diagnosis in acute abdominal pain;
- 10.0. Guides Patients about appropriate usage of family planning and contraception methods;

- 11.0. Provides consultancy to Patients about family planning and contraception methods, usage;
- 12.0. Recognizes emergency Patients' referral conditions;
- 13.0. Refers: 13.1. Patient safely to appropriate center upon indication; 13.2. high-risk pregnancies to secondary or tertiary reference centers; 13.3. Patients with menopause or osteoporosis to appropriate center upon indication;
- 14.0. Provides: 14.1. consultancy to patients about teratogenicity effects in pregnancy; 14.2. Provides consultancy to Patients about breast and cervix cancer screening.

Attitudes & Responsibility

Obstetrics/ Gynecology

- 1.0. Approaches with right attitude to patients and their relatives;
- 2.0. Values doctor-patient communication and patient privacy;
- 3.0. Informs patient and patients' relatives with respect.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course content

Obstetrics/ Gynecology

Gynecology: and Overview Including Related Anatomy; Normal Labor; Abnormal Labor; Multiple Pregnancies; Hematological Disorders and Pregnancy; Obstetric Ultrasound Examination; Perinatal Infections; Hypertensive Disorders and Pregnancy; Hormonal Disorders and Pregnancy; Obstetrics: an Overview Including Related Anatomy; Operative Labor and Cesarean Section; Rh Isoimmunization; Cardiovascular Diseases and Pregnancy; High-risk Pregnancy: an Overview; Benign Disorders of Uterus, Fallopian Tubes and Ovaries; Ovarian Functions and its Neuro-Endocrine Control; Evaluation of Infertile Couple; Evidence Based Medicine: Approaching to Endometriosis; Clinical Embryology; Benign Disorders of Vulva and Vagina; Evidence Based Medicine: Ovulation Induction; Assisted Reproductive Technologies; Hirsutisms; Nutrition In Pregnancy and Pre-Gestational and Gestational Diabetes; Vulvo-Vaginitis;

Anovulation; Developmental Defects of the Female Reproductive Tract; Gestational Trophoblastic Diseases; Perinatal Follow-Ups; Pre-invasive Cervical Neoplasm; Preterm Premature Rupture of Membranes; Gynecological Malignancies and Pregnancy; Antenatal Screening Tests and Prenatal Diagnosis; Cervix Carcinoma; Bleeding in the Third Trimester; Malignant Ovarian Tumors and Malignant Disorders of Fallopian Tubes; Thrombophilia and Pregnancy; Vulvovaginal Carcinoma; Evidence Based Approaching to the Postmenopausal Hormone Treatment; Malignant Disorders of Uterus, Endometrium Carcinoma; Puerperium and Puerperal Infections; Complications of Early Pregnancy; Pelvic Relaxation; Pediatric Gynecology, Puberty and Gynecological Disorders in Children and Adolescents; Clinical Experience; Intrauterine Growth Restriction; Postpartum Bleeding; Uro-Gynecology; Menstrual Disorders, Amenorrhea; Evidence Based Assessment of Fetal Well-Being; Ectopic Pregnancy; A Gynecological Case Interactive Discussion; Abnormal Uterine Bleeding.

Essential Medical Procedures (Obstetrics/ Gynecology): Examination of pregnant woman; Gynecologic examination; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Writing prescription; Providing care to mother after delivery; Performing episiotomy and suturing; Following pregnant and puerperant woman; Managing spontaneous delivery; Obtaining cervical and vaginal smear sample.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient's File	With/Without Checklist		

11. Recommended literature:

1. Current Obstetrics and Gynecology, Elsevier Publishing 2015
2. The Reproductive System (The Human Body) Kara Rogers 2010

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester X

Global Health and Healthcare Management

1. **Course identification code: PHMC 1140**
2. **Credit Points: 6 ECTS, Contact Hours: 84; Independent Hours: 96; Sum: 180.**
3. **Person(s) responsible for course: Nana Ubilava; Anano Kiria.**
Lecturers: Otar vasazde; Natia Skhvitaridze.

4. Goals

To convey:

1. global health and public health - promotion, prevention, treatment and rehabilitation;
 - 1.1. health and development - the world seen from a perspective of change;
 - 1.2. measures of health and disease in populations;
 - 1.3. the importance of poverty for global health; Role of technologies and innovations in global health; Gender and global health;
 - 1.4. global health governance and diplomacy;
 - 1.5. access to medicines;
 - 1.6. mobility of people and migration;
 - 1.7. complex emergencies: War, conflicts, disasters and humanitarian action;
 - 1.8. planetary health incl. climate change;
 - 1.9. universal Health Coverage and national health systems: structure, governance, financing and functions;
 - 1.10. ethics, core values and human rights related to global health;
 - 1.11. principles of critical reading of a scientific paper;
 - 1.12. literature search using the Internet and library;
 - 1.13. global burden of disease and mortality in multiple dimensions (by geography, social class, race, and gender);
 - 1.14. examine patterns of health and welfare disparity among all of these dimensions);
 - 1.15. determinants of health and origin of disease with special reference to the role of gender, vulnerable groups, and the interrelationship with poverty and in the context of war, disaster and refugee situations;
 - 1.16. disparities in acute and chronic disease patterns over time are also addressed, exploring the associated role of global social, political, and economic changes;
 - 1.17. social, political and economic determinants of health disparities;
 - 1.18. health risks and diseases from an epidemiological perspective, perform simple surveys and establishing reporting systems for disease surveillance and control;
 - 1.19. different systems for health care delivery provision of pharmaceutical drugs, and logistic issues in health care delivery, and identification international actors and their roles in health care and humanitarian action;
 - 1.20. role of the main infectious diseases such as diarrheal diseases, pneumonia, malaria, tuberculosis and HIV, emerging infections and epidemic outbreaks, and to organize primary and secondary prevention on different levels in the health care organization and

- in collaboration with other sectors in the society;
- 1.21. globally important macro- and micronutrient deficiencies;
- 1.22. global child mortality patterns and global commitments for children, apply principles of management of neonates where resources are scarce, of common childhood infections, explain the interactions between nutrition and infections;
- 1.23. main elements of human and reproductive rights, describing globally important sexual and reproductive health problems in a life cycle perspective, in a low-resource setting perform a situation analysis and organize antenatal and perinatal care, appropriate family planning services;
- 1.24. leadership and manage resources for efficient use in a multidisciplinary health team in health care work or humanitarian action, including project planning, information seeking, human resource management, health promotion, staff training and evaluation of interventions;
- 1.25. acquired competence in knowledge, skills and attitudes to manage and provide primary health care service.

5. Prerequisite: *PHMC 1130 Community Medicine and Health Promotion*

6. Co-requisite: N/A

7. Intended learning outcomes

Knowledge and understanding:

- 1.0. Understands and has knowledge about:
 - 1.1. factors that influence global health;
 - 1.2. health indicators and be able to use them for analysis and assessment of the health situation in countries with different economic conditions;
 - 1.3. the role of technologies and innovations in global health;
 - 1.4. importance of health care systems developing to achieve adequate quality, including the staff's competence and development, assesses priorities resource-poor conditions;
 - 1.5. activities of international organizations, assesses their importance for global health, governance and security;
 - 1.6. preventive health services, offers primary prevention (i.e. prevention of diseases for the protection of health), secondary prevention (i.e. early diagnosis and treatment) tertiary prevention (i.e. rehabilitation) and quaternary prevention (i.e. prevention of excessive and unnecessary diagnosis and treatment) services, provides consultancy on these issues;
- 2.0. Understands and applies best practices in human resources management and organizational culture as a managerial lever;
- 3.0. Describes:
 - 3.1. social and environmental determinants of health and understand their contribution to equity in health;
 - 3.2. the burden of disease at a global level and in countries with different economic conditions, and assesses how these are influenced by social and political circumstances;
 - 3.3. history of global health priorities and the current development goals;
 - 3.4. basic principles and apply them in critical evaluation of research articles;

- 3.5. and understands the governance and management structure of healthcare delivery organizations;
- 3.6. and understands the medical staff, nursing services, clinical support services, and community health functions of healthcare delivery organizations;
- 4.0. Formulates, in general, and assesses strategies and interventions that are of highest importance for improving global health;
- 5.0. Apprehends and assesses the basic principles underlying different study designs, their use, strengths and limitations;
- 6.0. Explains key concepts and assesses the relevance of ethics in global health research;
- 7.0. Structures activities, units, and teams so that they are more productive;
- 8.0. Synthesizes alternative mental frames to analyze and manage organizational behavior;

Skills

- 1.0. Lists the administrative units in hospitals (consultant, hospital director, nursing director, quality management, patient safety unit) and function;
- 2.0. Applies and cares for ethical principles of the medical profession;
- 3.0. Expresses systematic thinking;
- 4.0. Uses technology competently in medicine and related areas;
- 5.0. Communicates in medical field effectively;
- 6.0. Expresses community leadership qualifications;
- 7.0. Employs a patient-centered approach in patient management;
- 8.0. Selects tests that have evidence-based high efficacy at the primary health care level and interprets results;
- 9.0. Makes clinical decisions using evidence-based systematic data in health care service;
- 10.0. Manages and leads within the health care team in primary health care organization;
- 11.0. Summarizes:
 - 11.1. principles of health management and health sector economy, models of organization and financing of health care services;
 - 11.2. resources in the health care service, the principles for cost-effective use;
 - 11.3. and manages the health determinants including conditions that prevent access to health care;
 - 11.4. individual's behavior and attitudes and factors that determine the social dynamics of the community;
 - 11.5. most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions;
- 12.0. Develops, prepares and presents research projects;
- 13.0. Performs medical practices in accordance with the legal framework which regulates the health care service;
- 14.0. Integrates health care management theory with real world situations;
- 15.0. Acquires and uses theoretical and practical knowledge in the field of health management;
- 16.0. Creates and uses new information by integrating information in the field of health management with information from different disciplines;
- 17.0. Solves the problems that require expertise by using scientific research methods;
- 18.0. Solves a problem in the field of health management;
- 19.0. Transfers the current developments in the field of health management with the data and

- to transfers them systematically to the groups in and out of the field in written, oral and visual form;
- 20.0. Examines the norms governing corporate culture and organizational communication, to develop them and to take action to change them when necessary;
- 21.0. Develops implementation plans in health management field and to evaluate the results within the framework of health services management quality processes;
- 22.0. Acts by considering social, scientific, cultural and ethical values in the stages of data collection, interpretation and announcement while managing health institutions;
- 23.0. Relates the knowledge accumulated throughout the human history to their field of Expertise;
- 24.0. Collects data in the areas of “Health Management” and communicate with colleagues’ in a foreign language;
- 25.0. Communicates clearly and concisely in writing and in verbal presentations.

Attitudes and responsibilities:

- 1.0. Appreciates:
 - 1.1. values unique to the healthcare administration profession and the healthcare delivery sector;
 - 1.2. effective participation on team work;
 - 1.3. rules of healthy living;
- 3.0. Renovates and improves him/herself continually;
- 4.0. Takes responsibility as an individual and a team member in the problems encountered in the related field applications.

8. Teaching method(s):

Lecture
 Theoretical and practical learning - Seminars
 Videos for learning
 Videos for teaching
 Role playing
 Scenarios based simulation training
 Practical studies
 Participation in scientific studies
 Case-based learning – CBL.
 Recorded audio and video materials including public speeches presentations

9. Course content:

Global public health: Global burden of diseases; Demographic, epidemiological and nutritional transition; Social determinants of health, gender and health; Inequity in health and health care utilization; Chronic diseases and mental health; Climate change and health. An introduction to health systems; Intersectoral approaches to enabling better health.

Basic research methods in global health

Basic bio-statistical principles; Basic epidemiological concepts, measures and designs; Survey techniques, health and surveillance systems; Basic principles in qualitative research, qualitative

interviewing; Library and on-line resources for global health and research; Literature review in a selected area of global health.

Health systems and management: Health care systems, health care in different societies and cultures; International and national politics and actors; Public and private service providers; Pharmaceutical drugs, policies, distribution and access; Health promotion and communication; Basic concepts in public health management; Health information systems; Health project management.

Infectious diseases and epidemics: Current trends and occurrence of global infectious diseases; Social and environmental determinants of infections; Basic principles and policies for prevention and control; Prevention and management of respiratory infections and diarrheal diseases; HIV, malaria and tuberculosis; Emerging and re-emerging infections, epidemic outbreaks, monitoring, evaluation and control. Policy disparities in response of COVID-19 between China and Germany”

Global nutrition: Occurrence of main nutritional problems in a global perspective; Causes of malnutrition; Assessment of nutritional status; Policies and programs for prevention and control of main nutritional problems.

Child health: Global commitments for child rights and health; Current trends in child health and survival; Global and national strategies for prevention of mortality in children; Integrated management of common childhood diseases; Management of the severely malnourished child; Interaction infection-nutrition; Prevention and management of perinatal health problems.

Sexual and reproductive health: International policies and conventions regarding sexual and reproductive health and rights; Gender inequalities and sexual and reproductive health and rights; Antenatal, perinatal and postnatal care in a global perspective; Family planning, safe abortion, effective STD programs;

Humanitarian assistance: Health problems in catastrophes and post-conflict situations; Analysis and interpretation of demographic and health data in emergencies; Priority interventions in different disaster situations; Opportunities and challenges facing the emergency health worker; International codes and standards in emergency situations.

Healthcare management: leadership and Management, Leadership Theories, Types and characteristics of health, ethical responsibility; The importance of motivation in employees' needs, motivation theories and strategies; Organizational behavior concept and its importance in the management of staff, individual perception and thinking, correct understanding of the importance of communication and problem solving; The purpose and importance of strategic planning, situation assessment, strategy development, implementation, monitoring and control. Quality of medical services and the achievement of its features, using the concept of continuous quality improvement in healthcare; Information and information systems. The forms and types of information technology in health care facilities. Health care costs, health insurance and a history of its development, financial management characteristics of health care organizations. The essence of financial management, health care organizations, taxation, pricing and budgeting. Factors affecting the demand for human resources, the organization's achievements in the role of mercenaries, staff scheduling, hiring, development, installation, and evaluation

Details of the types and stages of its formation. Roles in the team, team communication, team management features of health care Professionals Biomedical ethics and health jurisdictions, the rights and responsibilities of patients and medical staff, medical error, fraud and wrongful Action A brief history of the legislation, internal controls and compliance programs.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		FSAQ: Fill-in-the Blank Short Answer Questions	Final Exam	40
		T/F Questions, mostly based on case studies		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	Essay	Essay Checklist		
	Report	Report Checklist		
	PWPE: Project Writing and Presentation Evaluation	Presentation Checklist		12
	CBL-P: Evaluation of CBL Student’s Performance	CBL Checklist		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1.	Global Health	Global Health 101	Richard Skolnik, 4 th edition, 2021	Jones & Bartlett Learning;
	Global Health	The New Public Health	Theodore H. Tulchinsky & Elena A. Varavikoba, 2012	Elsevier
	Global Health	Introduction to Global Health,	Kathryn H. Jacobsen, 2 nd edition, 2014	Jones & Bartlett Learning;
	Global Health	International Public Health	Merson, M.H., Black, R. E., Mills, A.J., 2 nd edition, 2006	Jones & Bartlett Learning;
2.	Healthcare Management	Introduction to health care management (3 ed)	Buchbinder, B.S. & Shanks, H.N.	Jones & Bartlett Learning;

SYLLABUS

Semester IX

Operative/Perioperative care II

1. **Course identification code: MEDC 6110**
2. **Credit Points: 20 ECTS, Contact Hours: 343; Independent Hours: 317; Sum: 660.**
3. **Person(s) responsible for course: Nikoloz Pruidze, Nino Tskhvedadze**

Lecturers: Thoracic Surgery, Plastic and Reconstructive Surgery and Pediatric Surgery – Nikoloz Pruidze; Cardiac Surgery – Nugzar Fargalava; Anesthetic Care and Anesthesiology – Teimuraz Vasilidze; Ophthalmology – Nino Tkhelidze; Otorhinolaryngology – Nino Besiashvili; Neurosurgery – Ivane Avazashvili; Urology – Archil Chkhotua;

4. Goals

Thoracic Surgery

To equip students with necessary knowledge, skills and attitudes required to:

1. recognize emergencies of major airways, pulmonary vascular structures, lungs, chest wall, esophagus and other frequent pathologies;
2. complete initial workup to confirm diagnosis;
3. organize initial treatment as well as arranging quick transfer to a next level health center when needed;
4. provide students with necessary theoretical and practical training.

Pediatric Surgery

To equip students with necessary knowledge, skills and attitudes to:

1. become familiar with the recognition, natural history, and general and specific treatment of those pediatric surgical conditions that one would expect to encounter in general medical practice in a community lacking the immediate availability of a pediatric surgeon;
2. familiarize oneself with the pathophysiology of pediatric surgical conditions, and the response of a child to surgery and trauma.

Anesthetic Care and Anesthesiology:

1. Convey necessary knowledge on anesthesia and anesthesia methods, pharmacologic properties of anesthetic agents and their clinical practice;
2. Equip students with skills and attitudes required to manage patients in intensive care unit.

Ophthalmology:

To convey necessary knowledge on pathology, symptomatology, clinics and pharmacology of eye diseases.

Otorhinolaryngology:

To convey necessary knowledge on:

1. historical development of otorhinolaryngology, current and future applications of diagnostic and treatment methods;
2. clinical conditions related to otorhinolaryngology (head and neck oncology, rhinology, laryngology, otology, facial plastic and reconstructive surgery, voice and speech disorders, neuro-

otology, audiology and hearing sciences, vestibular system, congenital and genetic diseases, head and neck cancers, allergic and immunologic diseases);

3. To equip students with knowledge, skills and attitudes required to manage clinical conditions related to otorhinolaryngology at primary care setting.

Urology:

1. To convey necessary knowledge on symptomatology, clinical features and pathology of urinary and genital system disorders;

2. To equip students with knowledge, skills and attitudes required to manage clinical conditions related to urology at primary care setting.

Cardiovascular Surgery:

Aim of this clerkship is to;

1. convey necessary knowledge on the Approach to evaluation of Patients undergoing cardiovascular surgery, surgical methods of treatment, surgical indications and optimal timing for treatment;

2. equip students with necessary knowledge, skills and attitudes required to evaluate possibilities of morbidity and mortality that may occur with these methods, to do interventions to distinguish emergency cases.

Neurosurgery:

To convey necessary knowledge on common neurosurgical diseases including pathology, symptomatology and clinical findings of neurosurgical diseases required to organize early treatment and referral of patients to appropriate center upon indication.

Plastic and Reconstructive Surgery:

Aim of this clerkship is to;

1. convey necessary knowledge on diagnosis differential diagnosis and surgical treatment options of congenital anomalies, skin lesions, oncologic surgery and reconstruction, burns, hand surgery, facial and oral surgery and trauma;

2. equip students with necessary knowledge, skills and attitudes required to recognize clinical conditions in primary care and decide treatment, refer Patient to advanced healthcare units upon indication.

5. **Prerequisite:** *MEDC 5210 Operative/Perioperative care I (OPC I)*

6. **Co-requisite:** N/A

7. Intended learning outcomes

Knowledge and understanding

Thoracic Surgery

1.0. Defines anatomy of structures related to thoracic surgery including lungs, thoracic wall, mediastinum, major airways and esophagus;

2.0. Defines necessary workup and invasive procedures in accordance with preliminary diagnosis;

3.1. Evaluates treatment options for patient according to preliminary diagnosis;

- 3.2. Selects appropriate treatment option for patient;
- 4.0. Defines findings of shock in patients with tension pneumothorax, hemothysis, or trauma interpret basic concepts regarding blood transfusion, hemostasis, and coagulation;
- 5.0. Recognizes contemporary techniques and technologies used in thoracic surgery;
- 6.0. Interprets basic principles of surgical oncology.

Pediatric Surgery:

1. Demonstrates a fundamental knowledge and understanding of the following general areas and disease processes. The student's knowledge base must be adequate to permit appropriate assessment, investigation, diagnosis, and treatment:

- 1.1. common pediatric surgical and urological problems in the emergency department;
- 1.2. the "Acute Abdomen" in children (acute appendicitis, acute gastroenteritis, bowel obstruction, intussusception, malrotation and volvulus etc.);
- 1.3. hernias and common surgical problems of inguinal region inguinal;
- 1.4. rectal bleeding in children (fissure-in-ano, juvenile polyp, Meckel's diverticulum, medical conditions that may cause rectal bleeding);
- 1.5. common anorectal problems;
- 1.6. the constipated child;
- 1.7. non-bilious and bilious vomiting in children (pyloric stenosis, gastroesophageal reflux and intestinal obstructions);
- 1.8. the abdominal mass and solid tumors in childhood (Wilms tumor, neuroblastoma, etc.);
- 1.9. common neonatal surgical conditions (neonatal intestinal obstruction, & gastroschisis, necrotizing enterocolitis, imperforate anus, abdominal masses);
- 1.10. trauma (general approach to the multiply injured child);
- 1.11. prenatal diagnosed disease related to pediatric general and urological conditions;
- 1.12. common pediatric urological conditions;
- 1.13. surgical aspects in urinary tract infections in childhood;
- 1.14. surgical fluid and electrolyte hemostasis;
- 1.15. congenital anomalies of genito-urinary tract.

Anesthetic Care and Anesthesiology:

- 1.0. Defines anesthesia and explain theories of anesthesia;
- 2.0. Defines anesthetic agents and their pharmacologic properties;
- 3.0. Describes anesthesia methods and practices;
- 4.0. Evaluates anatomy of airway;
- 5.0. Lists airway management equipment.

Ophthalmology:

- 1.0. Describes anatomy of eye and appendages and orbit;
- 2.0. Classifies refractive errors and different methods of treatment;
- 3.0. Describes pathologies of the cornea, conjunctiva, lacrimal system, eyelids and the orbit, mechanisms of occurrence, signs and symptoms, methods of examination and ancillary tests, and treatment options of these pathologies;

- 4.0. Describes signs and symptoms of different lenticular diseases including cataracts, indications and methods of surgical treatments;
- 5.0. Explains mechanisms of occurrence, diagnostic and treatment methods and pharmacology of various glaucoma types;
- 6.0. Classifies uveitis syndromes with respect to affected anatomical sites, signs and symptoms and describe different treatment options;
- 7.0. Describes mechanisms of occurrence, signs and symptoms, methods of examination and ancillary tests, and treatment options of vascular and age related diseases of retina;
- 8.0. Describes pathophysiology, risk factors, signs and symptoms, preventive measures and different treatment methods of retinal detachment;
- 9.0. Describes signs, symptoms and examination methods of neuroophthalmological diseases, interpret relationship with neurological diseases and anatomical locations of lesions;
- 10.0. Describes signs, symptoms and examination methods of pediatric ophthalmological diseases and strabismus types and classify the treatment options.

Otorhinolaryngology:

- 1.0. Describes external, middle and inner ear diseases;
- 2.0. Explains tinnitus, hearing loss and balance problems, basics of inner and external implant application and purpose;
- 3.0. Distinguishes between benign and malignant tumors at basic level in oropharyngeal and nasopharyngeal diseases;
- 4.0. Describes diagnosis and medical treatment of paranasal sinus diseases, diseases related to adenoid and tonsillar tissue;
- 5.0. Explains interventions to otorhinolaryngological emergencies;
- 6.0. Describes diagnosis and treatment of salivary gland diseases;
- 7.0. Explains assessment of laryngeal diseases at basic level, basics of temporomandibular joint diseases;
- 8.0. Distinguishes between benign and malignant laryngeal diseases;
- 9.0. Explains basics of maxillofacial traumas and orthognathic surgery;
- 10.0. Outlines basics of genetic disorders related to otorhinolaryngology;
- 11.0. Describes interpretation of audiological and early screening tests at basic level, acoustic and psychoacoustic assessments;
- 12.0. Outlines diseases related to smelling and tasting;
- 13.0. Explains basics of conventional hearing devices and their indications for use;
- 14.0. Describes basics and medical treatment of laryngopharyngeal reflux and swallowing disorders;
- 15.0. Describe sleep apnea and snoring problem and surgical treatment of those diseases;
- 16.0. Tells surgical techniques of incision in tracheostomy, tracheotomy, coniotomy;
- 17.0. Describes voice and speech disorders and treatments of those diseases;
- 18.0. Tells basics of head-neck tumors and skull base diseases;

Urology:

- 1.0. Explains mechanisms for urine formation and renal hemodynamics;
- 2.0. Describes: urgent urological disorders; disorders of kidney, ureter and bladder; genital system disorders of male; male sexual and reproductive system disorders;
- 3.0. Explains underlying reasons and pathologies of female incontinence;

4.0. Evaluates urinary system pathologies.

Cardiovascular Surgery:

- 1.0. Defines anatomy of cardiovascular system;
- 2.0. Explains physiology of extracorporeal circulation, techniques and protection of myocardium, brain and spinal cord;
- 3.0. Assesses signs and symptoms, differential diagnoses and treatments of coronary and valvular heart diseases, aortic aneurysm and aortic dissection;
- 4.0. Explains signs and symptoms of large vessel injuries, peripheral arterial diseases, carotid occlusive disease, venous lymphatic system, and congenital (cyanotic and non-cyanotic) heart diseases;
- 5.0. Lists surgical options for cardiac insufficiency;
- 6.0. Explains cardiac tumors and pericardial disease;
- 7.0. Assesses sign and symptoms of VTE and explain treatment and prophylaxis of VTE.

Neurosurgery:

- 1.0. Recognizes general clinical presentation in neurosurgical patients;
- 2.0. Recognizes neurosurgical emergencies (head and spinal trauma, intracerebral hemorrhage and peripheral nerve injuries); 2.1 recognize intracranial hypertension and brain herniation syndromes; 2.2 skull base fractures and cerebrospinal fluid fistulas;
- 3.0. Recognizes clinical findings in common brain tumors to refer patients to appropriate centers.
- 4.0. Describes spinal trauma and spinal cord injury in early period and transfer of patient to appropriate center based on knowledge of immobilization status; 4.1. recognizes non-traumatic neck, dorsal and low back pain;
- 5.0. Describe differential diagnosis of metastatic spinal tumors and primary spinal tumors with other spinal disorders;
- 6.0. Defines peripheral nerve compression syndromes and nerve injuries;
- 7.0. Describes hydrocephalus, craniosynostosis and spinal dysraphism;
- 8.0. Recognizes infections meningitis, brain abscess, tuberculosis, brucellosis;
- 9.0. Describes management of plegic patients to prevent bedsores, encourage mobilization and hygiene.

Plastic and Reconstructive Surgery:

- 1.0. Summarizes stages of systemic response to trauma;
- 2.0. Assesses intervention to traumatized patient;
- 3.0. Explains: 3.1. theoretical knowledge in detail about wound healing, treatment options of open wounds; 3.2. types of burns, classification, diagnosis and initial interventions for treatment 3.3. fluid electrolyte balance;
- 4.0. Discusses basics of blood transfusion, hemostasis and coagulation;

- 5.0. Defines prophylaxis and treatment options of surgical site infections: 5.1. assesses existing signs and symptoms of emergency patients; 5.2. evaluates pre. diagnosis and differential diagnosis and treatment steps; 5.3. selects available laboratory or imaging tests;
- 6.0. Explains etiopathogenesis, signs and symptoms, differential diagnosis and surgical treatment options of congenital anomalies;
- 7.0. Assesses signs and symptoms, differential diagnosis and treatment options of surgical diseases of breast;
- 8.0. Selects necessary tests for breast cancer and other mammary diseases;
- 9.0. Assesses signs and symptoms, differential diagnoses and surgical treatments of face and jaw diseases: 9.1. signs and symptoms, differential diagnosis and surgical treatment options of extremity diseases;
- 10.0. Distinguishes need for emergency surgery;
- 11.0. Comments on basic principles of surgical oncology and oncologic reconstruction

Skills

Thoracic Surgery:

- 1.0. Performs Physical Examination of a normal respiratory system and upper digestive system;
- 2.0. Performs needle decompression of tension pneumothorax;
- 3.0. Assesses mallampathi level of patient for a safe airway;
- 4.0. Locates appropriate point of drainage on patient, according to chest x-ray findings;
- 5.0. Plans basic approach and treatment to traumatized patient;
- 6.0. Plans initial management and workup tests of patient presented with respiratory insufficiency;
- 7.0. Does preliminary diagnosis in thoracic pathologies by going over differential diagnosis;
- 8.0. Realizes importance of providing necessary information to patient or patient's relatives;
- 9.0. Manages postoperative wound care and dressing;
- 10.0. Does follow-up postoperative patients according to vital parameters, fluid and electrolyte balance, and surgical drain outputs;
- 11.0. Interprets correctly postoperative chest x-rays in order to plan appropriate management;
- 12.0. Refers patient to further health care centers upon indication.

Pediatric Surgery:

- 1.0. Takes a relevant history;
- 2.0. Performs an acceptable physical exam concentrating on the relevant areas;
- 3.0. Makes an appropriate differential diagnosis;
- 4.0. Starts emergency and early treatment in pediatric surgical and urological cases;
- 5.0. Organizes referral of patients.

Anesthetic Care and Anesthesiology:

- 1.0. Use transport ventilator;

- 2.0. Manages airway (face mask ventilation, mayo tube -guide airway- insertion, laryngeal mask airway insertion);
- 3.0. Does endotracheal intubation on proper patient or on training model;
- 4.0. Performs cardiopulmonary resuscitation;
- 5.0. Practices hemodynamic monitoring;
- 6.0. Analyzes hemodynamic monitoring;
- 7.0. Practices basic life support.

Ophthalmology

- 1.0. Differentiate eye diseases;
- 2.0. Judges systemic conditions to refer patients to ophthalmologists;
- 3.0. Schedules intervals for routine eye examinations for different age groups;
- 4.0. Directs patients to ophthalmologist;
- 5.0. Manages and performs urgent interventions in cases of eye trauma and chemical burns.

Otorhinolaryngology:

- 1.0. Makes rhinolaryngological examination;
- 2.0. Uses laryngoscope and otoscope;
- 3.0. Designs medical treatments in ear, nose and throat infections:
 - 3.1. does diagnosis of ear, nose and throat diseases;
 - 3.2. transfers patient to specialized center upon indication;
- 4.0. Prepares nasal packages; 4.1. removes foreign body from ear and nose in emergency situations.

Urology:

- 1.0. Makes physical examination of male urogenital system, female urinary system and female continence;
- 2.0. Interprets results of laboratory and radiological examinations related to urologic disorders;
- 3.0. Performs attachment of urethral catheter for male and female;
- 4.0. Manages urgent urological and urogenital diseases.

Cardiovascular Surgery:

- 1.0. Does Physical Examination and laboratory studies available;
- 2.0. Evaluates pre-diagnosis and differential diagnosis, current treatment steps.

Neurosurgery:

- 1.0. Does patient history taking; 1.1. makes neurological examination in neurosurgical patients;
- 2.0. Performs resuscitation, intravenous catheter placement, wound cleaning and closure in neurosurgical emergencies; 2.1 makes immobilization, apply corset in spinal trauma and knows how to transfer patient in penetrating head trauma to start early emergent treatment;
- 3.0. Plans initial treatment of increased intracranial pressure;
- 4.0. Does initial treatment of neurogenic, spinal and hemorrhagic shock;

5.0; Does wound cleaning in meningomyelocele for protection of sac; 5.1. makes advices for protective precautions in degenerative spinal diseases;
6.1. Starts emergency and early treatment in neurosurgical emergencies; 6.2. Organizes referral of patients.

Plastic and Reconstructive Surgery:

1.0. Does physical examination of emergency Patients, neurological examination of cranial nerves, breast examination;
2.0. Uses proper suture techniques;
3.0. Manages open wounds in accordance with principles of wound care and dressing;
4.0. Does basic suture up;
5.0. Diagnoses and drains simply localized abscess or hematoma;
6.0. Distinguishes and diagnoses surgical diseases;
7.0. Distinguishes treatment options applicable at primary health care centers;
8.0. Assesses indications for transport of Patient to further health care centers;
9.0. Determines appropriate transport conditions.

Attitudes & Responsibility

Thoracic Surgery

1.0. Realizes physician's responsibilities to provide counseling and education to patient and patient's relatives regarding general health screening and surveillances (such as smoking cessation, colonoscopy, mammography, etc.) according to patient's sex, age and race if appropriate;
2.0. Respects patient-doctor communication and patient privacy;
3.0. Obtains complete history with appropriate communication skills and behaving in a good manner towards patient and patient's relatives;
4.0. Values providing appropriate transport conditions in accordance with regulations.

Pediatric Surgery

Aware of importance of emergency cases and congenital malformations related to pediatric surgery and urology and to refer the cases in appropriate condition.

Anesthetic Care and Anesthesiology

1.0. Prepares cardiopulmonary resuscitation process;
2.0. Follows clinical reflections of anesthetic drugs;
3.0. Analyzes which situations and patients require intensive care unit;
4.0. Holds confidentiality of patients.

Ophthalmology

1.0. Values impact of eyes diseases on personal health.

Cardiovascular Surgery:

- 1.0. Respects Patient-doctor communication and Patient privacy;
- 2.0. Takes history with good communication and behaving in a good manner towards Patient and Patients' relatives;
- 3.0. Values importance of informing patient and patients' relatives.

Neurosurgery:

- 1.0. Awares of importance of early treatment in neurosurgical emergencies and referral of patients to appropriate center when necessary;
- 2.0. Takes protective precautions in neurosurgical patients in addition to referral.

Plastic and Reconstructive Surgery:

- 1.0. Manages open wounds in accordance with principles of wound care and dressing;
- 2.0. Does basic suture up;
- 3.0. Diagnoses and drain simply localized abscess or hematoma;
- 4.0. Distinguishes and diagnose surgical diseases;
- 5.0. Distinguishes treatment options applicable at primary health care centers;
- 6.0. Assesses indications for transport of Patient to further health care centers;
- 7.0. Determines appropriate transport conditions.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working with resuscitative patient

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course content

Thoracic Surgery: Interventional Procedures in Thoracic Surgery; Diaphragmatic Diseases and Surgical Treatment; Esophageal Diseases and Surgical Treatment; Topographical Anatomy of the Thorax and Thoracic Incisions; Mediastinal Diseases and Surgical Treatment; Lung Cancers and Other Tumors of Lung; Surgical Pathologies of Trachea and their Treatment; Preoperative Evaluation and Diagnostic Procedures in Thoracic Surgery; Surgical Treatment of the Pathologies of Pleural Spaces; Radiological Evaluation in Thoracic Surgery; Benign Lung Diseases & Hydatid Cyst of the Lung; Minimal Invasive Surgical Approaches in Thoracic Diseases; Tracheobronchial & Esophageal Foreign Bodies; Thoracic Trauma I; Thoracic Trauma II; Spontaneous Pneumothorax and Bullous Disorders; Hemoptysis; Chest Wall Diseases and Surgical Treatment;

Essential Medical Procedures (Thoracic Surgery): Respiratory system examination; Reading and evaluating direct radiographs; Performing pleural puncture; Evaluating pulmonary function tests

Pediatric Surgery: Child and Surgery; Newborn as a Surgical Patient; Abdominal Wall Defects and Umbilical Pathologies; Fetal Surgery; Head and Neck Pathologies; Inguinal Pathologies of Children; Scrotal Pathologies of Children; Acute Abdomen in Children; Surgical Pathologies of Lungs, Pleura and Diaphragm; Burns in Children; General Case Study and Approach to Pediatric Surgical and Urological Cases; Nonobstructive Pediatric Urological Pathologies; Trauma in Children; Obstructive Pediatric Urological Pathologies; GI Obstruction of Newborn; Caustic Ingestions and Foreign Body Ingestions in Children; Biliary Atresia and Obstr. Jaundice; Surgical GI Bleeding in Children; Hirschsprung's Disease and Constipation; Solid Tumors in Children; Solid Tumors in Children;

Essential Medical Procedures (Pediatric Surgery): General and symptom-based history taking; Abdominal physical examination; Consciousness assessment and psychiatric examination; Child and newborn examination; Digital rectal examination; Respiratory system examination; Urological examination; Starting IV line; Hand washing; Urinary catheterization; Administration of enema; Nasogastric catheterization; Superficial suturing and removal of sutures; Providing medical service in extraordinary situations.

Anesthetic Care and Anesthesiology: Introduction to General Anesthesia; Fluid-Electrolyte Balance; Acute Respiratory Insufficiency; Intoxications-I; Intoxications-II; Sepsis I; Sepsis II; Acid-Base Disorders and Arterial Blood Gas Evaluation-I; Acid-Base Disorders and Arterial Blood Gas Evaluation-II; Basic Life Support; Advanced Life Support; Drowning and Near Drowning; Thermoregulation; Shock; Coma / Brain Death; Anaphylaxis; Pain;

Essential Medical Procedures: (Anesthesiology and Reanimation): Preparing medicines appropriately; Providing basic life support; Providing advanced life support; Giving recovery position to patient; Removal of foreign body with appropriate maneuver; Performing IM, IV injection; Providing oxygen and nebulae-inhaler treatment; Application and assessment of

pulse-oximeter; Intubation; Starting IV line; "Airway" application; General condition and vital signs assessment; Respiratory system examination; Cardiovascular system examination

Ophthalmology: Anatomy 1; Anatomy 2; Refractive Errors; Methods of Examination; Conjunctiva; Cornea; Tear Film and Lacrimal Apparatus; Glaucoma; Lids and Orbit; Retinal Detachment and Intraocular Tumors; Retinal Vascular Diseases; Case Based Learning Red Eye; Pediatric Ophthalmology; Diseases of the Lens; Ocular Manifestations of Systemic Diseases; Uveal Tract; Macular Degeneration and Hereditary Retinal Dystrophies; Strabismus; Neuro-Ophthalmology; Case Based Learning in Trauma and Emergency; Contact Lens and Refractive Surgery;

Essential Medical Procedures (Ophthalmology): Eye, fundus examination.

Ophthalmology; Visual Acuity; Student understands principles of visual acuity measurement and is able to measure and record far and near visual acuity in adults and children; Pupillary Reaction Testing; Student is able to measure the pupillary size and assesses the direct, consensual pupillary reaction and relative afferent pupillary defect (RAPD); Ocular Motility Testing; Student is able to assess ocular motility in the six primary directions; Direct Ophthalmoscopy; Student is able to perform direct ophthalmoscopy by testing the patient's right eye with the ophthalmoscope held in the examiner's right hand, left eye with the examiner's left hand. The student is able to identify the difference between retinal arterioles and retinal venules, the normal appearance of the optic nerve head and macula; Putting in Eye Drops and Pupillary Dilatation Putting In Eye Drops and Pupillary Dilatation: Student is able to follow the steps for putting in eye drops either for treatment or for pharmacologically dilating the pupils in order to facilitate the examination of the fundus; Confrontation Field Testing; Student should be able to perform the technique for determination of confrontation of visual field; Upper Lid Eversion; Student is able to evert the upper lid to examine for foreign bodies. Irrigation of eyes; Student is able to perform copious irrigation of eyes, fornices as an emergent treatment in case of chemical burns.

Otorhinolaryngology: Anatomy and Physiology of the Ear; Acute Otitis Media; Chronic Otitis Media; Hearing Loss; Vertigo; Tinnitus; Diseases of the Oral Cavity; Diseases of the Oropharynx; Rhinitis and Sinusitis; Salivary Gland Diseases; Sleep Apnea, Snoring and their Treatments; Anatomy and Physiology of the Larynx; Malignant Tumors of the Larynx; Essential Audiology and Newborn Hearing Screen; Lymph Nodes Pathologies and Neck Masses; ENT Emergencies; Facial Paralysis; Maxillofacial Trauma; Congenital Laryngeal and Voice Disorders; Deep Neck Infection.

Essential Medical Procedures (Otorhinolaryngology): General and symptom-based history taking; Mental status evaluation; Head-Neck and ENT examination; Respiratory system examination; Placement of anterior buffer and removal; Removal of foreign body with appropriate maneuver; Taking sample for culture; Performing Rinne-Weber and Schwabach tests; Superficial suturing and removal of sutures.

Urology: Urolithiasis Etiology and Pathophysiology; Urological Emergency; Benign Prostatic Hyperplasia; Testis Cancer; Bladder Cancer; Prostate Cancer; Kidney Cancer;

Cardiovascular Surgery: Introductory Course History of Cardiovascular Surgery; Anatomy of Heart and Great Vessels; Extracorporeal Circulation and Organ Protection; Surgical Treatment of Coronary Artery Disease; Surgical Treatment of Valvular Heart Disease; Aortic Aneurysm and Aortic Dissection; Heart and Great Vessels Injuries; Surgical Treatment of Heart Failure; Cardiac Neoplasms and Pericardial Disease; Congenital Heart Disease Acyanotic; Congenital Heart Disease Cyanotic; Peripheral Arterial Disease and Carotid Occlusive Disease; Venous and Lymphatic System Disease; Prophylaxis Diagnosis and Treatment of VTE;

Essential Medical Procedures (Cardiovascular Surgery): Cardiovascular system examination; Neurological examination; Reading and assessing direct radiographs; Performing pericardiocentesis.

Neurosurgery: Introduction to Neurosurgery Neurological Examination 1; Introduction to Neurosurgery Neurological Examination 2; Functional Neurosurgery 1; Functional Neurosurgery 2; Pediatric Neurosurgery and Hydrocephalus 1; Pediatric Neurosurgery and Hydrocephalus 2; Vascular Neurosurgery 1; Vascular Neurosurgery 2; Intracranial Tumors 1; Intracranial Tumors 2; Spinal Trauma and Spinal Cord Injury; Head Trauma; Spinal Neurosurgery 1; Spinal Neurosurgery 2; Peripheral Neurosurgery;

Essential Medical Procedures (Neurosurgery): General and symptom-based history taking; Mental status evaluation; Consciousness assessment and psychiatric examination; Musculoskeletal system examination; Neurological examination; Preparing patient file; Ability to prescription; Glasgow-coma-scale assessment; Appropriate patient transportation; Giving patient recovery position; Performing lumbar puncture; Minimal status examination; Cervical collar application; Superficial suturing and removal of sutures.

Plastic and Reconstructive Surgery: Scope of Plastic Surgery; Cosmetic Surgery; Breast Cancer, Treatment Options & Breast Reconstruction; Principles of Hand Surgery; Principles of Hand Surgery; Maxillofacial Trauma; Wound Healing; Burn and Reconstructive Surgery; Skin Graft and Flap; Skin Cancer; Cleft Lip and Palate;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
Evaluation of Preparation Skills of the Patient's File	With/Without Checklist			

11. Recommended literature:

General Surgery

1. Schwartz's Principles of Surgery, 10th edition;
2. Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice, 19th edition

Thoracic Surgery

Thoracic Surgery, Editors: Prof. Dr. Mustafa Yüksel, Prof. Dr. Akin Eraslan, Nobel Tıp Kitapevleri, ISBN:978-605-335-122-1

Cardiovascular Surgery

1. Cardiac Surgery in the Adult Cohn L.H., et al Mc Graw Hill
2. Cardiac Surgery Kouchoukos N.T., et al Churchill Livingstone
3. Haimovici's Vascular Surgery Ascher E., et al. Wiley-Blackwell

Plastic and Reconstructive Surgery

Grabb and Smith's Plastic Surgery Charles H. Thorne MD., et al LWW

Pediatric surgery

Holcomb and Ashcraft's Pediatric Surgery 2018, Elsevier

Ophthalmology

Ophthalmology Myron Yanoff, Jay S Duker, Elsevier 2018; Kanski's Clinical Ophthalmology John F. Salmon, Elsevier 2020

Otorharyngology

Diagnosis in Otorhinolaryngology: An Illustrated Guide, T. Metin Önerci, Zeynep Önerci Altunay 2021

Urology

Campbell-Walsh Urology, 11th Edition 4-Volume Set. By Alan J. Wein, MD, FACS, PhD (hon), Louis R. Kavoussi, MD, Alan W. Partin, MD, PhD and Craig A. Peters, MD, FACS, FAAP. Imprint: Elsevier. ISBN: 978-1-4557-7567-5. Copyright: 2016

Neurosurgery:

1. Microneurosurgery, Volume I to Volume V, Thieme Kindle Edition by Mahmut Gazi Yasargil (Author)
2. Neurology and Neurosurgery Illustrated, 5th Edition by Kenneth W. Lindsay PhD FRCS (Author), Ian Bone FRCP FACP (Author), Geraint Fuller MD FRCP (Author)
3. Handbook of Neurosurgery Feb 22, 2010 by Mark S. Greenberg

Internet Links:

1. www.uptodate.com
2. <http://bestpractice.bmj.com/best-practice/evidence>
3. <http://www.medicinenet.com/script/main/hp.asp>
4. www.accessmedicine.com

SYLLABUS

Semester XI

Medical Law and Forensic Medicine

1. **Course identification code: MEDC 6120**
2. **Credit Points: 4 ECTS, Contact Hours: 56; Independent Hours: 64; Sum: 120.**
3. **Person(s) responsible for course: Natia Landia**
Lecturers: Medical Law – Marina Darakhvelidze; Judicial Medicine - Davit Grigolia.

4. Description

The course involves general basics and modern approaches of Medical Law, Ethics, and Forensic Medicine. The study process discusses what is medical law and medical ethics, the link between law and ethics, ethical and moral aspects of communications with patients, family members and legal representatives. The course covers general rules of doctor's behavior during the health care service, among them, transplanting of organs, selling organs, the living body as property, mental health legislation, informal treatment and problems in mental health practice, legal regulation of research. **Forensic Medicine and Legal Aspects of Medical Practice** studies all medical and biological questions that arise to legal organs in the process of legal investigations and get under the criminal or civil law cases. The course provides the students with understanding of main aspects of forensic medicine. Students discuss and analyze real life and fictional cases; After completing the course students have basic knowledge regarding requirements, principles and methods of forensic medicine, that are necessary for clinical practice.

5. Goals

Medical Law

To convey necessary knowledge on:

1. doctor-patient communication: obtaining patient consent;
2. consent to medical treatment: Adult patients who lack decision-making capacity;
3. Negligent act and omission in clinical practice;
4. introduction to law;
5. Legal aspects of organ and tissue donation, storage and use;

Forensic Medicine

Convey necessary knowledge on evaluation and reporting of forensic cases.

6. **Prerequisite:** *MEDC 3142 Medical Ethics and Medical Law; MEDC 5210 Operative/Perioperative care I*
7. **Co-requisite:** N/A

8. Intended learning outcomes

Medical Law

- 1.0. Promotes awareness of common law principles and statutory obligations as an intrinsic part of clinical practice decision-making;
- 2.0. Assists students in identifying and understanding professional legal obligations and responsibilities in areas of law relevant to clinical practice;
- 3.0. Familiarizes students with the role of regulatory agencies, courts and tribunals
- 4.0. Fosters an awareness of how these institutions may be accessed to provide support for clinical decision-making, or to satisfy mandatory reporting requirements.

Forensic Medicine

Knowledge and understanding

- 1.0. Evaluates forensic cases and to report cases.
- 2.0. Describes fundamentals of forensic autopsy.
- 3.0. Defines cause, origin and mechanism of death in forensic cases.
- 4.0. Outlines legal responsibilities in medical practice.
- 5.0. Explains fundamentals of crime scene investigation and identification

Skills:

- 6.0. Makes physical examination of forensic deaths.
- 7.0. Manages forensic death examination document filling.
- 8.0. Evaluates traumatized patients.
- 9.0. Arranges forensic reports.
- 10.0. Evaluates and report sexual crimes.

Attitudes & Responsibility

- 11.0. Does definition and management of forensic cases.

9. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Scenarios based simulation training

Teaching in laboratory and simulation environment

Practical task under the supervision

Maintaining medical documentation (Including by the means of information technologies)

10. Course content

Medical Law

An introduction to Law: The main types of Law: The place of precedent in English law Statute Law (Acts of Parliament); The Tort of Negligence: Is there a duty of care? What is the standard of care? – The

Bolam test and the aftermath, Did the breach of duty of care cause the patient harm? Reform of the law of negligence; Trespass to the person; European Courts and the Human Rights Act 1998: The European Court of Justice, The European Court of Human Rights, The Human Rights Act 1998 (HRA);

Forensic Medicine

The Differences Between Forensic Medicine and Forensic Sciences: Description of Death; Early and Late Postmortem Changes; Crime Scene Investigation Identification; Family Violence; Child Abuse and Neglect; Sexual Abuse of Child; Reporting the Autopsy Cases; Sexual Violence and Medico-Legal Approach; Mobbing; Human Rights Violation and Torture; Forensic Aspects of Wounding; Wounds Caused by Pointed and Sharp-Edged Weapons; Gunshot Wounds; The Origins of Death; Homicides; Suicides; Asphyxia 1 (Suffocation, Strangulation, Suffocation Gases); Asphyxia 2 (Chemical Asphyciants); Forensic Psychiatry; Legal Responsibilities of Physicians; Classification of Medical Malpractice; Difference Between Complication and Medical Malpractice; Description and Classification of Accidents; Transportation and Childhood Accidents; Differentiation Between Natural and Unnatural Deaths; Poisoning; Drug Related Deaths; Forensic Aspects of Alcohol; Forensic Cases Legal Procedure; Reporting the Forensic Cases I; Reporting the Forensic Cases II

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	26
		Scenario based MCQs	Final Exam	20
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	10
	OSPE: Objective Structured Practical Examination	OSPE Checklist	Final Exam	20
	LPE: Laboratory Practical Exam	LPE Checklist		
Performance-based assessment	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		10
	Assignments (Homework)	Assignment Checklist		4
	CBL-P: Evaluation of CBL Student’s Performance	CBL Student Evaluation Form		6

12. Recommended literature:

Medical Law

1. Dominic Wilkinson, Jonathan Herring, Julian Savulescu, *Medical Ethics and Law: A curriculum for the 21st Century*, Third Edition, 2020;
2. *Medical Law and Ethics*, 6th edition, Herring, Jonathan, Oxford, 2016

Forensic Medicine

1. *Simpson's forensic medicine*, Payne-James, Jason and other, 2011
2. *Atlas of forensic Pathology*, Shetty, Suresh Kumar; 2014
3. *Monitoring detention, custody, torture and ill-treatment: a practical approach to prevention and documentation*; Beynon, Jonathan, Payne-James, Jason, Vieira, Duarte Nuno; 2018;
4. *Radiology in Forensic Medicine: From Identification to Post-mortem Imaging*; Giuseppe Lo Re, Antonina Argo, Massimo Midiri, Cristina Cattaneo; 2020

SYLLABUS

Semester XI

Research Project in Health Sciences

1. Course identification code: MEDC 6140

2. Credit Points: 6 ECTS, Contact Hours: 88; Independent Hours: 92; Sum: 180.

3. Person(s) responsible for course: Natia Landia

Mentors: Laboratory (Basic) Science Research - Marina Tediashvili, Clinical Science Research Thematic Area – Nino Rachvelishvili, Public Health and Epidemiology: Populations as Patients Thematic Area - Leila Beitrishvili;

4. Description

The MD Programme's curriculum includes a six -year longitudinal course requirement for all undergraduate medical students to pursue and complete the research project. This course is also the last stage for the longitudinal learning of scientific skills. (Scientific Research and Project Course I, II and III) and culminates with a presentation in semester XI prior to graduation.

To the best support students, three thematic areas of scholarship have been defined in semester VI (Scientific Research and Project Course III). These thematic areas are: Laboratory (Basic) Science Research, Clinical Science Research Thematic Area, Public Health and Epidemiology: Populations as Patients Thematic Area. Students create their research project throughout the whole longitudinal learning process under supervision of course mentor and at 4th and 5th years – under individual mentor. Research Project have to be submitted as a Paper, Poster and Presentation.

1. Paper summary - 10-25 pages depending on thematic areas with the best paper publishing in a journal;
2. Poster - For most projects, the poster summarizes the paper. The poster includes a brief description on the project dates and location of presentation;
3. Presentation - For most projects, the presentation is of the poster, including a brief project summary and Q & A

5. Goals

The research project is aimed at fostering self-directed, life-long learning. This project requires students to identify and work with a mentor to complete their project(s), which also prepares them for working with mentors in their careers and serving as mentors to others in the medical profession. Students do an in-depth research project in an academic area of interest related to medicine or health care with the mentorship of a Health Sciences school's member.

6. Prerequisite: *MEDC 1260 Scientific Research and Project Course I; MEDC 2260 Scientific Research and Project Course II; MEDC 3110 Infectious Diseases & Hematopoietic System; MEDC 3120 Cardiovascular & Respiratory Systems; MEDC 3130 Gastrointestinal System; MEDC 3210 Endocrine, Reproductive & Urinary Systems; MEDC 3220 Nervous System and Psychiatry; MEDC 3230 Musculoskeletal System*

7. Co-requisite: N/A

8. Intended learning outcomes

1. Demonstrates ability to work effectively with a mentor;
2. Demonstrates progress through the stages for the longitudinal learning of scientific skills and display independence and collaboration;

3. Demonstrates ability to formulate a specific problem statement, question, hypothesis or aim;
4. Demonstrates ability to critically review and analyze literature on an important research topic;
5. Demonstrates ability to prepare a research project with appropriate methods and develop a plan to complete the project;
6. Demonstrates ability to synthesize and present results of a research project.

9. Teaching method(s)

Theoretical Teaching (Interactive Seminars and Lectures)
Teaching research skills

10. Course content: Literature review, critical analysis, problem identification and prove of actuality; definition of research protocol, aims, goals and methods of research, possible structure of the study; preparation of questionnaire or registration form considering ethical aspects; design of research protocol, conducting the clinical study; data collection, forming databases, statistical analysis using software, analysis and description of results, illustrate results with table and graphs, formulation of conclusions, writing recommendations
Grading will be pass/fail - The Research Project grade will be determined by the Head of Medicine Department, Mentor and a team of Medicine Department.

Research Project Checklist

1. Selection of an appropriate problem statement/ question/ hypothesis/ aim
2. Selection of an appropriate methodology to answer problem statement/ question/ hypothesis/ aim
3. Background literature search
4. Application of an appropriate methodology
5. Clarity of poster
6. Clarity of presentation

11. Form(s) of assessment and details explaining how the module mark is calculate

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Knowledge-based Assessment	Written Examination -	Questions with one or multiple answers	Quiz	20
	Oral examination		Final Exam	10
Performance-based assessment	Scientific work	Work Checklist	Mid-term Exam	30
	Progress Report	Report Checklist		
	Scientific Paper	Paper Checklist	Final Exam	15
	Poster	Poster Checklist		10
	Scientific Presentation	Presentation Checklist		15
Sum				100

12. Recommended literature:

1. Anu Atluru, et al., OSR Medical Education Committee (2015) Research in Medical Education, A Primer for Medical Students
<https://www.aamc.org/media/24771/download>
2. An integrated model for developing research skills in an undergraduate medical curriculum: appraisal of an approach using student selected components
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3792228/>
3. HINARI library: Finding specific literature related to study subject.

SYLLABUS

Semester XII

Advances Experiences in Clinical Medicine

1. **Course identification code: MEDC 6210**
2. **Credit Points: 15 ECTS, Contact Hours: 234; Independent Hours: 216; Sum: 450.**
3. **Person(s) responsible for course: Natia Landia**

Lecturers: Internal Medicine - Nino Rachvelishvili; Pediatrics – Leila Beirishvili; Obstetrics and Gynecology – Apolon Meskhi; General Surgery & Emergency Medicine – Nikoloz Pruidze , Teimuraz Vasilidze, Family Medicine –Tamar Goderidze; Psychiatry –Nana Zavrashvili; Clinical Pharmacology – Tamar Kezeli; Portfolio in Clinical Skills – Nino Rachvelishvili, Marina Jimukhadze.

4. Description

This course integrates student-centered and symptom-based learning in different clinical fields (Internal Medicine, Pediatrics, Obstetrics and Gynecology, General Surgery & Emergency Medicine, Family Medicine, Psychiatry and others), Clinical pharmacology and Portfolio in Clinical Skills.

Portfolio in Clinical Skills

The course is organized into small groups (8-10 students), which meets the preceptor every week. The preceptor ensures student involvement and assists their progress through the last stages for the longitudinal learning of Clinical Skills. During the course, students understand clinical competences needed for modern physicians and evaluate their achievements. After completing the course, students prepare their own clinical portfolios, which will demonstrate their learning achievements.

Clinical reasoning

Clinical reasoning or “how to think like a physician” is a complex skill that is learned and developed throughout a physician’s medical career. Although medical students have historically learned clinical reasoning through the process of going through medical school and refined these skills once in residency and out into practice, there is a push in undergraduate medical education to teach clinical reasoning more explicitly. Within communication, physical examination, preceptor, and didactic sessions, fundamental concepts of clinical reasoning will be introduced and reinforced through opportunities to practice clinical reasoning skills using both application and reflective exercises. Sessions focusing on the creation of written notes and oral presentations will highlight the importance of using clinical reasoning skills to create hypothesis-driven histories and physicals that support prioritized assessments and diagnostic and

therapeutic plans for patients. Supplemental readings for these educational sessions is used to help reinforce clinical reasoning concepts and skills. Clinical reasoning knowledge, behaviors, and techniques are used and applied in problem based learning sessions, preceptor sessions, and other clinical experiences to develop one's abilities to "think like a doctor."

5. Goals

The aim of the course is to improve skills before medical licensing and under the condition of supervision such as clinical problem solving, evidence based approach in a framework of professional ethical principles and rules, as well as basic medical knowledge and skills.

Clinical Pharmacology

Convey necessary knowledge on rational drug use in medical practice;

Equip students with necessary skills and attitudes required for pharmacotherapy.

Portfolio in Clinical Skills

1. Continue to build basic communication, physical exam and clinical reasoning knowledge, skills and behaviors developed in the first three years within a continuity clinic experience (Introduction to Clinical Practice I, II and III)
2. Set individualized learning goals for preceptorship
3. Further explore specialty-based career options
5. Practice interprofessional teamwork and collaboration skills
6. Practice compassionate treatment of patients, and respect for their privacy and dignity.
7. Uphold and promote the ideals of medical professionalism in all interactions with patients, colleagues, staff and faculty.
8. Recognize and accept limitations in one's knowledge and clinical skills, and commit to continuously improve one's knowledge and ability.

6. **Prerequisite:** *MEDC 4110 Family Medicine; MEDC 4120 Emergency Care; MEDC 4210 Hospitalized Adult Care II (Internal Medicine II); MEDC 5110 Infant, Child & Adolescent Care; MEDC 5120 Neurologic Care; MEDC 5130 Psychiatric Care; MEDC 5220 Obstetrics & Gynecology; MEDC 6110 Operative & Perioperative care II MEDC 6120 Medical Law and Forensic Medicine; MEDC 6140 Research Project in Health Sciences*

7. **Co-requisite:** N/A

8. Intended Learning Outcomes

Knowledge and Understanding

- 1.0. Determines medical problems accurately and develop solutions using his/her general medical knowledge;

Clinical Pharmacology

- 1.0. Defines patient's problem;
- 2.0. Lists aims of therapy;
- 3.0. Lists effective drug groups;
- 4.0. Lists personal drugs;
- 5.0. Identifies "proper" drug according to certain criteria.

Skills

- 1.0. Obtains comprehensive medical history from the patient;
- 2.0. Performs comprehensive physical examination;
- 3.0. Prepares a seminar in accordance with the evidence based medicine principles and using the current scientific data;
- 4.0. Uses the presentation skills effectively;
- 5.0. Evaluates scientific texts;
- 6.0. Designs scientific studies which conducted in primary care circumstances;
- 7.0. Conducts scientific studies which can be carried out in primary care circumstances;
- 8.0. Chooses appropriate laboratory tests and imaging methods according to clinical condition and appropriate to primary care level;
- 9.0. Develops laboratory results report;
- 10.0. Interprets the results of the laboratory tests and imaging methods;

Clinical Pharmacology

- 1.0. Does preparation of personal formulary;
- 2.0. Enhances prescription writing skills

Attitude & Responsibility

- 1.0. Shows effective communication skills in patient doctor relations;
- 2.0. Shows an attitude respectful to ethical principles;
- 3.0. Adopts team work mentality in his/her relations with colleagues and other health staff;
- 4.0. Shows motivation and interest in profession;

Clinical Pharmacology

- 1.0. Uses the right drug at the right dose at appropriate intervals with a special attention to economic aspects of therapy

Portfolio in Clinical Skills

Learning outcomes

- 2.0. Practices physical exam, communication and clinical reasoning skills;
- 3.0. Continues or develop new preceptorship relationships;
- 4.0. Explores career options;
- 5.0. Practices compassionate and respectful patient care;
- 6.0. Improves and broaden clinical knowledge and skills;
- 7.0. Builds reflective skills to promote empathetic, humanistic practice;
- 8.0. Cultivates strategies to aid in career exploration and satisfaction and professional identity formation;
- 9.0. Recognizes the potential for burnout and moral distress, and use peer support to develop and maintain resiliency and coping skills;
- 10.0. Develops skills in peer communication and support that contribute to a positive medical culture;
- 11.0. Demonstrates effective team communication skills utilizing appropriate communication tools and processes;
- 12.0. Fulfills appropriate team and professional roles and responsibilities;
- 13.0. Recognizes and discuss ethical issues in the context of interprofessional care;
- 14.0. Identifies and act upon opportunities to improve quality and safety of patient care;
- 15.0. Engages patient and family member to deliver patient-centered care.

9. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

10. Course content

Student-centered, Symptom-based learning sessions

The main aim of these sessions is to practice an approach to differential diagnosis in a multidisciplinary manner. In each sessions a series of real cases presenting with the same symptom (usually 6-7 different cases for each symptom) are discussed. The cases are presented in each sessions from different specialty (Internal Medicine, Surgery, Pediatrics, Obstetrics & Gynecology and others). Thus, the students are able to see all possible causes/mechanisms for the related symptom in a multidisciplinary format.

The students are expected to find and present cases according to the yearly schedule. Each student prepares and presents at least one case during the whole course of program. Students are expected to present the case with all relevant data, diagnostic tests, procedures and differential diagnosis. The students are encouraged to see, take histories from, examine the patients and review the hospital files in preparation of the cases. The management/treatment of the cases also are presented and discussed, although the main focus are on differential diagnosis.

CASES	DISEASES	Specialty
CASE 1 Abdominal Distention	Ileus	General Surgery
	Irritable Bowel Syndrome	Internal Medicine
	Pelvic Mass	Obstetrics and Gynecology
	Ascites	Gastroenterology
	Abdominal Mass	Internal Medicine
	Obesity	Endocrinology
	Newborn Enterocolitis	Pediatrics
CASE 2 Anemia	Megaloblastic Anemia	Hematology
	Iron Deficiency Anemia	Internal Medicine
	Anemia of Chronic Disease	Internal Medicine
	Hemolytic Anemia	Hematology
	Hemoglobinopathy	Hematology
	Aplastic Anemia	Hematology
	Lower Gastrointestinal System Bleeding	Gastroenterology

	Upper Gastrointestinal System Bleeding	Gastroenterology
Case 3 Fever	Pneumonia	Chest Diseases
	Upper Respiratory Tract Infection	Ear, Nose and Throat
	Sepsis	Infectious Diseases
	Lymphoma	Hematology
	Temporal Arteritis	Internal Medicine
	Viral Diseases, Influenza	Infectious diseases
	Febrile Neutropenia	Oncology
	Salmonella Infection	Infectious diseases
	Urinary Tract Infection	Infectious diseases
Case 4 Headache	Hypertension	Nephrology
	Migraine	Neurology
	Glaucoma	Eye Diseases
	Increased Intracranial Pressure	Neurology
	Sinusitis	Ear, Nose and Throat
	Tension Type Headache	Psychiatry
	Refractive Errors	Eye Diseases
	Subarachnoid Hemorrhage	Neurology
Case 5 Palpitation	Generalized Anxiety Disorder	Psychiatry
	Thyrotoxicosis	Endocrine
	Cardiac Arrhythmia	Cardiology
	Hear Failure	Cardiology
	Hypoglisemia	Endocrine
	Pheochromocytoma	Endocrine
	Myocarditis	Cardiology
Case 6 Dyspnea	Pulmonary Embolism	Chest Diseases
	Pulmonary Edema	Internal Medicine
	Chronic Obstructive Pulmonary Disease	Chest Diseases

	Asthma	Chest Diseases
	Pneumothorax	Chest Diseases
	Acute Respiratory Distress Syndrome	Intensive Care
	Oncologic Emergency	Oncology
	Respiratory Distress in Newborn	Pediatrics
Case 7 Palliative Medicine	Principles of Palliative Care	Internal Medicine
	Pain	Internal Medicine
Case 8 Ankle Pain	Osteoarthritis	Orthopedics
	Gout	Internal Medicine
	Rheumatoid Arthritis	Rheumatology
	Septic Arthritis	Orthopedics
	Spondylopathy	Rheumatology
	Lupus Disease	Rheumatology
	Tenosynovitis	Orthopedics
	Acute Rheumatic Fever	Internal Medicine
Case 7 Palliative Medicine	Nutrition	Internal Medicine
	Respiratory Support	Internal Medicine
Case 9 Chest Pain	Reflux	Gastroenterology
	Acute Coronary Syndrome	Cardiology
	Pneumothorax	Thoracic Surgery
	Ties Syndrome	Rheumatology
	Fibromyalgia	Internal Medicine
	Aorta Dissection	Cardiovascular Surgery
	Pericardial Effusion	
	Skin and Soft Tissue Infection / Zona	Dermatology
Case 10 Comprehensive Geriatric	Principles of CGA	Internal Medicine
	Incontinence	Internal Medicine

Assessment		
Case 11 Abdominal Pain	Acute Appendicitis	General Surgery
	Acute Cholecystitis	Gastroenterology
	Acute Pancreatitis	Gastroenterology
	Peptic Ulcer	Gastroenterology
	Acute Gastroenteritis	Infection Diseases
	Mediterranean Fever	Internal Medicine
	Diverticulitis	Gastroenterology
Case 10 Comprehensive Geriatric Assessment	Decubitus Ulcer	Internal Medicine
	Sarcopenia	Internal Medicine
Case 12 Convulsion Epilepsy	Febrile Convulsion	Pediatrics
	Cerebrovascular Accident	Neurology
	Fluid Electrolyte Abnormality	Internal Medicine
	Central Nervous System Infection	Infectious Diseases
	Head Trauma	Neurosurgery
	Cerebral Edema	Neurology
	Metabolic Disturbances in Newborn	Pediatrics
Case 13 Edema	Nephrotic Syndrome	Nephrology
	Cirrhosis	Gastroenterology
	Lymphedema	Internal Medicine
	Chronic Venous Insufficiency	Cardiovascular Surgery
	Hypoalbuminemia	Internal Medicine
	Angioedema	Dermatology
	Heart Failure	Cardiology
Case 14 Icterus	Neonatal Jaundice	Pediatrics
	Acute Hepatitis	Infection Diseases
	Obstructive Jaundice (Stone)	Gastroenterology
	Hemolysis	Hematology

	Pancreatic Cancer	Oncology
	Gilbert Syndrome	Internal Medicine
	Drug Side Effects	Internal Medicine

Symptom-based Learning sessions

Learning Outcomes

Abdominal Distention:

- 1.0. Describes the abdominal organs;
- 1.1. Describes abdominal distention;
- 1.2. Explains the Etiology; Assesses the risks in untreated cases. (Abdominal compartment syndrome) is able to inquire the symptoms and perform the abdominal examination (ascites, peristalsis, percussion, organomegaly, murphy, rebound, guarding ...)
- 1.3. Counts the alarming signs and symptoms.

Anemia:

- 1.0. Describes Anemia;
- 1.1. Evaluates the symptoms and physical examination findings;
- 1.2. Explains the causes and can make differential diagnosis Interpret the CBC (Complete Blood Count);
- 1.3. Explains how to perform a Blood Smear and describe the morphology of the erythrocytes;
- 1.4. Interprets the cause-oriented follow-up tests;
- 1.5. Manages the treatments for Iron, vitamin B12 and folic acid deficiency Anemia;
- 1.6. Defines Hemolytic Anemia;
- 1.7. Counts the signs and symptoms related to Hemorrhage;
- 1.8. Counts the indications for erythrocyte suspension;
- 1.9. Distinguishes when to refer the patient to a specialist.

Fever:

- 1.0. Defines Fever in different age group
- 1.1. Explains different methods of measuring body temperature;
- 1.2. Lists the infectious and non-infectious causes of Fever;
- 1.3. Describes how to take the history of a patient with fever Interpret the physical examination signs in a patient with fever;
- 1.4. Explains differential diagnosis to the etiology of Fever Choose necessary follow-up

tests;

- 1.5. Explains the concepts of nosocomial fever and fever of unknown origin Manage the infectious emergencies;
- 1.6. Evaluates in which patients with fever empiric antibiotics are require

Headache:

- 1.0. Lists the causes of headache;
- 1.1. Distinguishes between primary and secondary headaches;
- 1.2. Chooses etiology oriented tests that should be performed;
- 1.3. Evaluates when to ask for further scanning (X-ray, CT, MR);
- 1.4. Discriminates the cases in which history taking is enough Interpret the Pain Scale;
- 1.5. Diagnosis and recognizes the life-threatening headaches;
- 1.6. Explains the treatment options for headache;
- 1.7. After the first assessment differentiate the patient who needs to be referred to a specialist for further investigation (ENT specialist, Neurology specialist, Neurosurgeon, Internal medicine specialist, Infectious disease specialist).

Palpitation:

- 1.0. Defines Palpitation; assesses the risks of Palpitation;
- 1.1. Explains the causes of Palpitation;
- 1.2. Defines regular and irregular rhythm palpitations List diagnostic studies and tests;
- 1.3. Interprets an ECG; Treats life-threatening Tachycardia; Refers the patient to a specialist when necessary.

Dyspnea:

- 1.0. Defines Dyspnea;
- 1.1. Describes Cardiovascular and Respiratory physical examination;
- 1.2. Explains causes of Dyspnea;
- 1.3. Makes differential diagnosis;
- 1.4. Performs and interpret the case –oriented tests ;
- 1.5. Interprets a Chest X-ray;
- 1.6. Interprets a Blood Gas Analysis; Interprets a Respiratory function test;
- 1.7. Explains priorities of an emergency treatment;
- 1.8. Decides when to refer a patient to a specialist.

Ankle Pain:

- 1.0. Defines Arthritis;
- 1.1. Describes Musculoskeletal physical examination;
- 1.2. Lists diseases with involvement of one joint and those with involvement of multiple joints;
- 1.3. Makes differential diagnosis List diagnostic tests;
- 1.4. Evaluates findings of the joint aspirate sample to make a differential diagnosis;

1.5. Refers a patient to a specialist.

Chest Pain:

- 1.0. Defines Chest pain;
- 1.1. Explains the causes of Chest Pain;
- 1.2. Makes differential diagnosis;
- 1.3. Performs diagnostic studies and tests;
- 1.4. Recognizes and manage life-threatening Chest Pains Interpret an ECG;
- 1.5. Performs risk analysis of Chest Pain;
- 1.6. Recognizes and takes precaution in cases that require emergency treatment;
- 1.7. Refers a patient to a specialist in time.

Abdominal Pain:

- 1.0. Defines abdominal pain;
- 1.1. Distinguishes between somatic pain and functional pain;
- 1.2. Explains the causes of abdominal pain ;
- 1.3. Makes differential diagnosis ;
- 1.4. Performs the diagnostic tests and screenings;
- 1.5. Recognizes the life-threatening abdominal pains;
- 1.6. Asks for a surgery consultation in time ;
- 1.7. Interprets a PA erect Abdominal Radiograph;
- 1.8. Recognizes and take precaution of the cases that require emergency treatment.

Epilepsy:

- 1.0. Defines Epilepsy;
- 1.1. Explains the causes of Epilepsy Make differential diagnosis;
- 1.2. Evaluates the diagnostic tests and screenings ;
- 1.3. Explains the first intervention in a life-threatening epilepsy attack Ask for a neurology consultation in time ;
- 1.4. Assesses the mental status of a patient.

Edema:

- 1.0. Defines Edema;
- 1.1. Distinguishes between localized edema and systemic edema
- 1.2. Explains causes of Edema;
- 1.3. Makes differential diagnosis Perform diagnostic studies and tests;
- 1.4. Explains the first medical intervention in life-threatening edema Refer the patient in time to a specialist;
- 1.5. Recognizes and take precaution in cases that require emergency treatment.

Jaundice:

- 1.0. Defines Jaundice;

- 1.1. Differentiates between obstructive icterus and non-obstructive icterus
- 1.2. Explains the causes of Jaundice;
- 1.3. Makes differential diagnosis Interpret diagnostic studies and tests;
- 1.4. Explains the first medical intervention in life-threatening jaundice cases Refer the patient in time to a specialist;
- 1.5. Recognizes and take precaution in cases that require emergency treatment.

Clinical Pharmacology

Introduction to the course OSCE and its Specifications; Principles of Rational Pharmacotherapy; Good Prescribing Guide; Personal Drugs Introduction to the MAUA Forms; Clinical Pharmacology of Antihypertensive Drugs; Antihypertensive Drugs; Personal Drugs for Hypertension; Solving Case Studies for Hypertension; Urinary Tract Infections, Treatment Goals and Non-Pharmacological Treatment Methods; Urinary Tract Infections, Treatment Goals and Non-Pharmacological Treatment, Methods, Student Presentations; Personal Drugs for Urinary Tract Infections; Solving Case Studies for Urinary Tract Infections; Antimicrobial Chemotherapy of Acute Sinusitis; Antimicrobial Chemotherapy of Acute Sinusitis; Student Presentations; Personal Drugs for Treatment of Acute Sinusitis; Solving Case Studies for Acute Sinusitis.

Essential Medical Procedures (Clinical Pharmacology): Rational Drug Use

Portfolio in Clinical Skills

Physical examination sessions, Communication coaching sessions, Continuity clinic with a physician preceptor (preceptorship), Professional development sessions and activities, Clinical reasoning, Complete History and Physical write-up, Oral presentation skill sessions, Assessment of clinical skills.

The physical exam teaches students the fundamental skills needed to perform a complete physical exam on patients of all ages. This portion was designed to complement the other skills taught in the Portfolio in Clinical Skills. As students learn to do focused physicals, they learn to incorporate their history taking skills, preceptor experiences and clinical reasoning skills to choose and perform relevant physical exam maneuvers.

1. Learn how to perform a complete physical exam on children and adults;
2. Identify and perform the physical exam elements as it relates to a specific chief complaint;
3. Ascertain the correct information from each physical exam test;
4. Learn how to incorporate the physical exam into your understanding, diagnosis and treatment of patients

The course assesses the following competencies: patient care including clinical skills and clinical reasoning, professionalism, practice based learning and improvement.

For the small groups' session, attendance is required to pass the course.

Students must also pass an annual Observed Structured Clinical Examination (OSCE).

Physical Exam – I involves learning how to perform a physical exam on a healthy adult.

The sessions are held at the state of the simulation center, where the class is divided into small groups to work with standardized physical exam teaching assistants (SPETAs), under the supervision of the simulation center professionals and member of Department

Normal Physical Exam

The physical exam sessions are divided by organ systems and are taught in conjunction with the musculoskeletal block. Students are provided checklists, study guides, learning objectives and a reading assignment from Bates' Guide to Physical Exam and History Taking for each session.

Normal Exam: Vital Sign; Lower Extremity Musculoskeletal Exam; Upper Extremity Musculoskeletal Exam; Cardiac; Pulmonary; Abdomen; Head and Neck;

Abnormal Physical Exam

Once the physical exam is mastered on the healthy adult, student begin learning how to identify and describe abnormal findings. The abnormal physical exam sessions are designed to demonstrate the abnormal physical exam findings associated with the disease and pathophysiology that the students are learning about in their didactic and small group sessions. Most of the sessions are taught in small groups, facilitated by attending mentor and preceptors. Most of these sessions are performed on real patients, and students are encouraged to use their clinical reasoning skills to perform an appropriate and focused exam.

Abnormal Exam: Cardiac; Pulmonary; Skin, Hair and Nails.

Physical Exam - II medical students begin how to perform more complex and advanced physical exam skills.

Ophthalmologic & Neurological Physical Exams

In small groups, ophthalmology's mentor and preceptors teach students to perform the ophthalmologic exam with the indirect, coaxial and panoptic ophthalmoscopes, as well as the slit lamp. Likewise, in small groups, neurology faculty teach the students how to use a bag full of diagnostic equipment to elicit all components of the neurological exam.

Students are provided checklists, study guides, learning objectives and a reading assignment from Bates' Guide to Physical Exam and History Taking for each session.

Normal Exam: Ophthalmologic Exam; Neurological Exam

Abnormal Physical Exam

The students also complete the abnormal physical exam sessions. The abnormal physical exam sessions are designed to demonstrate the abnormal physical exam findings associated with the disease and pathophysiology that the students are learning about in their didactic and small group sessions. Most of the sessions are taught in small groups, facilitated by attending mentor and preceptors. Most of these sessions are performed on real patients, and students are encouraged to use their clinical reasoning skills to perform an appropriate and focused exam.

Abnormal Exam: Abdomen (Digestive and Endocrine); Breast and Pelvic Exams

In preparation for the preceptor experience and clinical clerkships, students learn how to perform breast and pelvic exams, including PAP smears on standardized physical exam teaching assistants (SPETAs). They also learn the urologic and prostate exams on SPETAs. Students are provided checklists, learning objectives and a reading assignment from Bates' Guide to Physical Exam and History Taking for each session.

Normal Exam: Breast and Pelvic Exam; Male Genital and Rectal Exam; Pediatric and Geriatric Physical Exams;

After learning all aspects of the adult exam, students then translate and adapt their skills to patients at both ends of the age spectrum. In small groups, students learn the toddler and child exams on real patient under the supervision of pediatric and family medicine mentor and preceptors. Geriatrician mentor demonstrate the unique components involved in the assessment of an elderly patient and students get the opportunity to practice these skills on real patients. Students are provided learning objectives and a reading assignment from Bates' Guide to Physical Exam and History Taking for each session.

Normal and Abnormal Exams: Pediatric Exam; **Geriatric** Adult Exam.

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

12. Recommended literature

Internal Medicine

Harrison's Principles of Internal Medicine

Pediatrics

1. Nelson Textbook of Pediatrics
2. Temel Pediatric

General Surgery and Emergency Medicine

1. Schwartz's Principles of Surgery, 10th edition
2. Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice, 19th edition
3. Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 8th Edition Rosen's Emergency Medicine: Concepts and Clinical Practice, 9th Edition

Obstetrics & Gynecology

Current Obstetrics and Gynecology, Elsevier Publishing 2015

Clinical Pharmacology

Basic and clinical pharmacology, Bertram G. Katsung

Psychiatry

1. Sadock BJ, Sadock VA, Ruiz P. Kaplan & Sadock's Comprehensive Textbook of Psychiatry, 9. Ed. 2009, Lippincott Williams & Wilkins,
2. Purves D, Augustine GJ. Fitzpatrick D. Et al. Neuroscience. 5. Ed. 2012.

Portfolio

1. Portfolios as a method of student assessment; AMEE Medical Education Guide No 24;
2. N. Reynolds, E. Davis, "Portfolio Keeping: A Guide for Students," Third Edition, 2014.
3. Medical Student Portfolios
<https://www.aamc.org/system/files/c/2/490258-medicalstudentportfolios.pdf>

Clinical Skills

1. Practical skills and procedures; General Medical Council; GMC.
2. Bates' Guide to Physical Examination and History Taking; 2020
3. Medical Student Survival Skills: Clinical Examination; Philip Jevon, Elliot Epstein, Sarah Mensforth, Caroline MacMahon; Wiley Blackwell; 2020;
4. Seidel's Guide to Physical Examination, An Interprofessional Approach; 9th Edition; Jane W.Ball, Joyce E.Dains, John A. Flynn, Barry S.Solomon, Rosaliyn W. Stewart; 2019
5. Medical Student Survival Skills: History taking and Communication skills; Philip Jevon and Steve Odogwu; Wiley Blackwell; 2020;
6. Medical Student Survival Skills: Procedural Skills; Philip Jevon, Ruchi Joshi; 2019
7. Essential Clinical Skills in Pediatrics: A Practical Guide to History Taking and Clinical Examination; Anwar Qais Saadoon; 2018
8. ACLS – Advanced Cardiac Life Support; Provider Handbook by Dr. Karl Discue; Presented by the Save a Life; 2015 -2020 Guidelines and Standards; 2016

SYLLABUS

Semester XII

Preparatory course for Entering Residency (EPAs) - Clinical Elective Course

1. **Course identification code: MEDC 6220**
2. **Credit Points: 3 ECTS, Contact Hours: 47; Independent Hours: 43; Sum: 90.**
3. **Person(s) responsible for course: Natia Landia**

Lecturers: Nino Rachvelishvili

4. Description

Entrustable Professional Activities - EPAs are intended to drive the education toward the core competencies, and provide a means to translate these competencies into clinical proficiency. EPAs is a useful framework for directing all levels of Medical Education and the application of the EPAs has resulted in better preparation for clinical rotation and residency performance.

5. Goals

The goal consists of using EPAs, tagged as developmental core skill sets, to better prepare students for clinical training and residency

6. **Prerequisite:** *MEDC 6210 Advances Experiences in Clinical Medicine*

7. **Co-requisite:** N/A

8. Intended learning outcomes

Knowledge and Understanding

Medical Knowledge

EPA 2: Prioritizes a differential diagnosis following a clinical encounter;

EPA 3: Recommends and interprets common diagnostic and screening tests.

Skills

Patient Care

EPA 1: Gathers a history and perform a physical examination;

EPA 10: Recognizes a patient requiring urgent or emergent care and initiates evaluation and management;

EPA 12: Performs general procedures of a physician.

Interpersonal Communication Skills

EPA 4: Enters and discusses orders and prescriptions;

EPA 5: Documents a clinical encounter in the patient's medical record;

EPA 6: Provides an oral presentation of a clinical encounter;

EPA 8: Gives or receives a patient handover to transition care responsibility.

Practice Based Learning and Improvement

EPA 7: Forms clinical questions and retrieves evidence to advance patient care

System-based Practice

EPA 13: Identifies system failures and contribute to a culture of safety and Improvement

Attitude & Responsibility

Professionalism

EPA 9: Collaborates as a member of an inter-professional team;

EPA 11: Obtains informed consent for tests and/or procedures

9. Teaching method(s)

Theoretical and practical learning – Interactive Lecture and Seminars

Clinical thinking (CBCR)

Workshops

Practical studies

Playing patient/doctor roles

Teaching by using the simulators

Learning with usage of simulators

Practical task under the supervision

Communication with patients (outpatients and inpatients)

Teaching in clinical and simulation environment

Team working with resuscitative patient

Clinical rotation in Clinical skills training and simulation center

Practice (with Outpatients and Hospitalized Patients)

(Bedside-teaching) Clinical rotations at University/teaching hospital

Clinical Skills Training Simulation Centers or at the relevantly equipped learning environment

Maintaining medical documentation (Including by the means of information technologies)

- 10. Course content:**
- 1. Information gathering:** Gather information from a medically stable patient with a common chief complaint;
 - 2. Information sharing with providers:** Integrate information gathered about a patient to construct a reasoned and prioritized differential diagnosis as well as a preliminary plan for common chief complaints; Communicate information relevant to a patient's care with other members of the health care team;
 - 3. Information sharing with patients:** Share information about the patient's care, including diagnosis and management plan, with a patient in no significant physical or emotional distress;
 - 4. Patient advocacy and quality improvement** and
 - 5. Information management for lifelong learning:** Provide the health care team with resources to improve an individual patient's care or collective patient care.

The 13 Core Entrustable Professional Activities for Entering Residency

1. Gather a history and perform a physical examination

Key Functions with Related Competencies: Obtain a complete and accurate history in an organized fashion; Demonstrate patient-centered interview skills; Demonstrate clinical reasoning in gathering focused information relevant to a patient's care; Perform a clinically relevant, appropriately thorough physical exam pertinent to the setting and purpose of the patient visit.

2. Prioritize a differential diagnosis following a clinical encounter

Key Functions with Related Competencies: Synthesize essential information from previous records, history, physical exam, and initial diagnostic evaluations to propose a scientifically supported differential diagnosis; Prioritize and continue to integrate information as it emerges to update differential diagnosis, while managing ambiguity; Engage and communicate with team members for endorsement and verification of the working diagnosis that will inform management plans.

3. Recommend and interpret common diagnostic and screening tests

Key Functions with Related Competencies: Recommend first-line cost-effective screening and diagnostic tests for routine health maintenance and common disorders; Provide rationale for decision to order tests, taking into account pre and posttest probability and patient preference; Interpret results of basic studies and understand the implication and urgency of the results; Demonstrate an understanding of the patient's condition that underpin; Recognize and avoid errors by attending to patient-specific factors, using resources, and appropriately responding to safety alerts; Discuss planned orders and prescriptions with team, patients, and families.

4. Enter and discuss orders/prescriptions

Key Functions with Related Competencies: Compose orders efficiently and effectively verbally, on paper, and electronically; Demonstrate an understanding of the patient's condition that underpins the provided orders; Recognize and avoid errors by attending to patient-specific factors, using resources, and appropriately responding to safety alerts; Discuss planned orders and prescriptions with team, patients, and families.

5. Document a clinical encounter in the patient record

Key Functions with Related Competencies: Prioritize and synthesize information into a cogent narrative for a variety of clinical encounters (e.g., admission, progress, pre and post-op, and procedure notes; informed consent; discharge summary); Follow documentation requirements to meet regulations and professional expectations; Document a problem list, differential diagnosis, and plan supported through clinical reasoning that reflects patient's preferences;

6. Provide an oral presentation of a clinical encounter

Key Functions with Related Competencies: Present personally gathered and verified information, acknowledging areas of uncertainty; Provide an accurate, concise, well-organized oral presentation; Adjust the oral presentation to meet the needs of the receiver; Demonstrate respect for patient's privacy and autonomy;

7. Form clinical questions and retrieve evidence to advance patient care

Key Functions with Related Competencies: Combine curiosity, objectivity, and scientific reasoning to develop a well-formed, focused, pertinent clinical question; Demonstrate awareness and skill in using information technology to access accurate and reliable medical information; Demonstrate skill in appraising sources, content, and applicability of evidence; Apply findings to individuals and/or patient panels; communicate findings to the patient and team, reflecting on process and outcomes;

8. Give or receive a patient handover to transition care responsibility

Key Functions with Related Competencies: Document and update an electronic handover tool and apply this to deliver a structured verbal handover; Conduct handover using communication strategies known to minimize threats to transition of care; Provide succinct verbal communication conveying illness severity, situational awareness, action planning, and contingency planning; Give or elicit feedback about handover communication and ensure closed-loop communication. Demonstrate respect for patient's privacy and confidentiality.

9. Collaborate as a member of an inter professional team

Key Functions with Related Competencies: Identify team members' roles and responsibilities and seek help from other members of the team to optimize health care delivery; Include team members, listen attentively, and adjust communication content and style to align with team-member needs; Establish and maintain a climate of mutual respect, dignity, integrity, and trust; Prioritize team needs over personal needs to optimize delivery of care; Help team members in need.

10. Recognize a patient requiring urgent or emergent care and initiate evaluation and management.

Key Functions with Related Competencies: Recognize normal and abnormal vital signs as they relate to patient- and disease-specific factors as potential etiologies of a patient's decompensation; Recognize severity of a patient's illness and indications for escalating care and initiate interventions and management; Initiate and participate in a code response and apply basic and advanced life support; Upon recognition of a patient's deterioration, communicate situation, clarify patient's goals of care, and update family members.

11. Obtain informed consent for tests and/or procedures

Key Functions with Related Competencies: Describe the key elements of informed consent: indications, contraindications, risks, benefits, alternatives, and potential complications of

the intervention; Communicate with the patient and family to ensure that they understand the intervention; Display an appropriate balance of confidence and skill to put the patient and family at ease, seeking help when needed.

12. Perform general procedures of a physician

Key Functions with Related Competencies: Demonstrate technical skills required for the procedure; Understand and explain the anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of the procedure; Communicate with the patient and family to ensure they understand pre- and post-procedural activities; Demonstrate confidence that puts patients and families at ease.

13. Identify system failures and contribute to a culture of safety and improvement

Key Functions with Related Competencies: Identify and report actual and potential ("near miss") errors in care using system reporting structure (e.g., event reporting systems, chain of command policies); Participate in system improvement activities in the context of rotations or learning experiences (e.g., rapid cycle change using plan–do–study– act cycles, root cause analyses, morbidity and mortality conference, failure modes and effects analyses, improvement projects); Engage in daily safety habits (e.g., accurate and complete documentation, including allergies and adverse reactions, medicine reconciliation, patient education, universal precautions, hand washing, isolation protocols, falls and other risk assessments, standard prophylaxis, time-outs; Admit one's own errors, reflect on one's contribution, and develop an individual improvement plan

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
	MEQ: Modified Essay Questions			
	OE: Oral Exam			
Competency-based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student's Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
Evaluation of Preparation Skills of the Patient's File	With/Without Checklist			

11. Recommended literature

1. <https://www.aamc.org/media/20211/download>
2. Chen, C., McNamara, M., Teherani, A., Olle ten C., and O'Sullivan, P. Developing Entrustable Professional Activities for Entry into Clerkship. Acad Med. 2016; (91):247–255.
Developing Entrustable Professional Activities for Entry into Clerkship
https://journals.lww.com/academicmedicine/Fulltext/2016/02000/Developing_Entrustable_Professional_Activities_for.31.aspx
3. Lomis, K, Amiel, JM, Ryan, MS, Esposito, K, Green, M, Stagnaro-Green, A, Bull, J, Mejicano, GC & for the AAMC Core EPAs for Entering Residency Pilot Team 2017;
'Implementing an Entrustable Professional Activities Framework in Undergraduate Medical Education: Early Lessons From the AAMC Core Entrustable Professional Activities for Entering Residency Pilot' Acad Med.
https://journals.lww.com/academicmedicine/Fulltext/2017/06000/Implementing_an_Entrustable_Professional.32.aspx
4. Scoping Review of Entrustable Professional Activities in Undergraduate Medical Education
https://journals.lww.com/academicmedicine/Fulltext/2019/07000/Scoping_Review_of_Entrustable_Professional.40.aspx
5. Osteopathic Considerations for Core Entrustable Professional Activities (EPAs) for Entering Residency. AACOM.org. <https://www.aacom.org/docs/default-source/med-ed-presentations/core-epas.pdf?sfvrsn=10>. Published April 2016. Accessed April 6, 2017
<https://www.aacom.org/docs/default-source/med-ed-presentations/core-epas.pdf?sfvrsn=10>

SYLLABUS

Semester XII

Family Medicine Internship Program - Clinical Elective Course

1. **Course identification code: MEDC 6270**
2. **Credit Points: 12 ECTS, Contact Hours: 166; Independent Hours: 194; Sum: 360.**
3. **Person(s) responsible for course: Tamar Goderidze , Nino Tskhvedadze**
Lecturers: Tamar Goderidze, Nato Shengelia

4. Goals

To understand the nature of the preventive, curative and promotive health care services as part of the primary health care system of the country and learn how to manage health and disease within natural settlements of the individuals.

5. **Prerequisite:** *MEDC6220 Preparatory course for Entering Residency (EPAs)*

6. **Co-requisite:** N/A

7. Intended learning outcomes

Knowledge and understanding

- 1.0. Explains principles of preventive and promotive medicine;
- 2.0. Explains health care delivery systems and facilities;
- 3.0. Compares the primary health care system of the country with others;
- 4.0. Tells types and methods of epidemiological studies;
- 5.0. Tells biostatistically analyzing methods;
- 6.0. Defines meaning and importance of the health information systems for assessment of the public health status;
- 7.0. Evaluates social, cultural and economic determinants of health and diseases.

Skills

- 1.0. Evaluates and manages health and disease within the social and physical environmental conditions of the individuals;
- 2.0. Organizes and manages preventive and promotive health services within primary health care facilities;
- 3.0. Plans an epidemiological study under field conditions - presents a research project critics a medical manuscript;
- 4.0. Produces information and makes conclusions by using the health information systems of the community;
- 5.0. Develops skills for delivery and management of primary health care services;

6.0. Collaborates with other sectors for the success of various school health, occupational health and environmental health programs;

7.0. Conducts in-service training and continuing education of the health personnel.

Attitude

1.0. Values the meaning and importance of teamwork for public health.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

9. Course Content

Essential Medical Procedures: Examination of forensic cases; Crime scene investigation; Death examination; Preparing forensic report; Obtaining informed consent; Preparing death certificate; Preparing treatment refusal form; Leading immunization services; Preparing medical reports and notice; Referring patient appropriately; Defining and finding solution for health associated problems in community using epidemiological methods; Water disinfection; Obtaining water sample; Defining and evaluating chlorine level in water; Organizational of emergency services; Providing health services under extraordinary condition; Fighting against communicable diseases in community.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
OE: Oral Exam				
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

11. Recommended literature:

1. Fred F. Ferri et al. Ferri's Clinical Advisor 2020, 1st Edition; Skills for Communicating with Patient By Jonathan Silverman, Suzanne Kurtz, Juliet Draper;
2. Jill C. Cash, Cheryl A. Glass, Family Practice Guidelines, Fifth Edition –
3. Complete Family Practice Primary Care Resource Book; Meghan M. Kiefer et al. Pocket Primary Care (Pocket Notebook Series) 2nd Edition;
4. Adam Peter Staten & Paul Staten; Practical General Practice, 7th Edition

SYLLABUS

Semester XII

General Surgery / Emergency Intership Program - Clinical Elective Course

1. **Course identification code:** MEDC 6240
2. **Credit Points:** 12 ECTS, **Contact Hours:** 166; **Independent Hours:** 194; **Sum:** 360.
3. **Person(s) responsible for course:** Nikoloz Pruidze, Nino Tskhvedadze
Lecturers: Nikoloz Pruidze ,Teimuraz Vasilidze

4. Description

The students who are sent for rotation, work in outpatient, inpatient clinics. Operation room and in other related services under the responsibility of a surgeon. They also take responsibility of patient care and work actively like the residents of the related clinic.

During the rotation the students perform the following skills; taking history from the patient, analyzing laboratory tests, pre- and postoperative patient care, patient hospitalization/discharge, follow up. Each student follows a definite number of beds. They are obligated to take care of their patients during the rotation.

The students attend to case presentations, seminars which are held in clinic.

5. Goals

The aim of the General Surgery and Emergency Medicine clerkship is to graduate doctors who can manage the diseases of digestive system, endocrine system, mammary and emergency surgery as well as wound care in primary health care settings, when necessary can also consult the patient with other branches and organize the therapy and/or follow-up, can refer the patient to upper healthcare facilities providing appropriate transporting conditions. And also who can manage with all types of critical patients including arrest patients and who have chest pain, shortness of breath, any kind of trauma and hypotension.

6. **Prerequisite:** *MEDC6220 Preparatory course for Entering Residency (EPAs)*
7. **Co-requisite:** N/A

8. Intended learning outcomes

Knowledge and understanding

- 1.0. Considers the expectations of those who provide or receive care in the ED and use communication methods that minimize the potential for stress, conflict, and miscommunication;
- 1.1. Synthesizes chief complaint, history, physical examination, and available medical information to develop a differential diagnosis based on all of the available data, narrow and prioritize the list of weighted differential diagnoses to determine appropriate management;
- 1.2. Demonstrates clear and concise documentation that describes medical decision making, ED course, and supports the development of the clinical impression and management plan;

1.3. Uses diagnostic testing based on the pre-test probability of disease and the likelihood of test results altering management.

Skills

- 1.0. Performs basic and advanced airway procedures, basic life support;
- 1.1. Performs advanced cardiac and trauma life support for adults and children;
- 2.0. Approaches to a patient with chest pain/ abdominal pain /shortness of breath; manages with a polytrauma patient;
- 3.0. Differentiates the reasons of chest pain and treat acute coronary syndromes;
- 4.0. Explains the types of shock, manage with a shock patient, define the differentials, select the proper treatment;
- 5.0. Defines the rhythm on ECG, approach to a patient with tachycardia/bradycardia;
- 6.1. Explains the toxidromes and approach to an intoxicated patient;
- 6.2. Explains the basic principles of disaster management;
- 7.0. Arranges necessary consultation with physicians and other professionals when needed.

Attitude

- 1.0. Considers the expectations of those who provide or receive care in the ED and use communication methods that minimize the potential for stress, conflict, and miscommunication;
- 1.1. Establishes rapport with and demonstrate empathy toward patients and their families; recognizes and resolve interpersonal conflict in the emergency department including conflicts with patients and family;
- 1.2. Communicates information to patients and families using verbal, nonverbal, written, and technological skills, and confirm understanding;
- 1.3. Communicates risks, benefits, and alternatives to therapeutic interventions to patients and/or appropriate surrogates, and obtain consent when indicated.

9. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working with resuscitative patient

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients).

10. Course Content

Essential Medical Procedures(Surgery): General and symptom-based patient interview; Assessing mental status ;Head-Neck and ENT examination; Abdominal physical examination; Digital rectal examination; General condition and vital signs assessment; Cardiovascular system examination; Musculoskeletal system examination; Breast and axillar region examination; Respiratory system examination; Urological examination; Preparing forensic report; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing death certificate; Preparing medical reports and notice; Writing prescription; Preparing treatment refusal form; Reading direct radiographs and assessment; Measuring and assessing bleeding time; Filling laboratory request form; Interpretation of screening and diagnostic examination results; Definition and management of forensic cases; Bandaging and tourniquet application; Establishing IV line; Incision and drainage of skin and soft tissue abscess; Restriction and stopping external bleeding; Hand washing; Appropriate patient transportation; Performing IM, IV, SC, ID injection; Urinary catheterization; Assessing disease / trauma severity score; Measuring blood pressure ; Performing blood transfusion; Obtaining sample for culture ;Enema administration; Nasogastric catheterization; Oral, rectal, vaginal and topical drug administration; Providing basic life support; Transferring amputated limb appropriate; Care for burns ;Superficial suturing and removal of sutures.

Essential Medical Procedures (Emergency Medicine): General and symptom-based patient interview; Assessing mental status ;Psychiatric history taking; Examination of forensic cases; Anthropometric measurements; Head-Neck and ENT examination; Abdominal physical examination; Consciousness assessment and mood state examination; Child and newborn examination; Skin examination; Digital rectal examination; Obstetric examination; General condition and vital signs assessment; Eye, fundus examination; Gynecologic examination; Cardiovascular system examination; Musculoskeletal system examination; Breast and axillar region examination; Neurological examination; Respiratory system examination; Urological examination; Preparing forensic report; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing death certificate; Preparing medical reports and notice; Writing prescription; Preparing treatment refusal form; Providing decontamination, disinfection, sterilization, antisepsis; Reading direct radiographs and assessment; Taking and evaluating ECG ;Measuring blood glucose level with glucometer; Stabilization of psychiatric emergency patient; Definition and management of forensic cases; ‘Airway’ manipulation; Rational drug use; Preparing and applying splints; Bandaging and tourniquet application; Placement of anterior buffer and removal; Following child growth and development (Percentile graphics, Tanner classification);Establishing IV line; Defibrillation ;Incision and drainage of skin and soft tissue abscess; Restriction and stopping external bleeding; Hand washing; Intubation; Glasgow-coma-scale assessment; Appropriate patient transportation;

Giving patient recovery position; Removal of foreign body from airway with appropriate maneuver; Performing IM, IV, SC, ID injection; Urinary catheterization; Providing advanced life support; Suicide intervention; Measuring blood pressure ;Performing blood transfusion; Thick removal; Enema administration; Performing lumbar puncture; Gastric lavage; Mini-mental state examination; Nasogastric catheterization; Delivering oxygen and administering nebulizer treatment; Cervical collar application; Providing basic life support; Neonatal resuscitation; Superficial suturing and removal of sutures.

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

12. Recommended literature:

General Surgery and Emergency Medicine:

1. Schwartz's Principles of Surgery, 10th edition
2. Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice, 19th edition
3. Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 8th Edition Rosen's Emergency Medicine: Concepts and Clinical Practice, 9th Edition

SYLLABUS

Semester XII

Internal Medicine Internship Program - Clinical Elective Course

1. **Course identification code: MEDC 6250**
2. **Credit Points: 12 ECTS, Contact Hours: 166; Independent Hours: 194; Sum: 360.**
3. **Person(s) responsible for course: Nino Rachvelishvili, Nino Tskhvedadze**
Teachers: Nino Rachvelishvili

4. **Goals:**

The aim of the Internal Medicine Program is to graduate medical doctors who have sufficient knowledge about the branches of internal medicine; cardiology, pulmonology, gastroenterology, infectious diseases, hematology, oncology and rheumatology; can manage internal medicine related health problems and perform the necessary preventive health care implementations in a primary care setting; display good communication skills, practice their profession following ethical principles, using up-to-date and evidence based scientific knowledge.

5. **Prerequisite:** *MEDC6220 Preparatory course for Entering Residency (EPAs)*

6. **Co-requisite:** N/A

7. **Intended learning outcomes**

Knowledge and understanding

- 1.0. Describes the complete physical examination of all organ systems; analyze routine laboratory tests;
- 1.1. explains the characteristics of more specific tests (e.g. PET CT, ERCP, Capsule endoscopy..) and their usages;
- 1.2. decides about when to give the patient a sick leave report and the appropriate report duration.

Skills

- 1.0. Takes an adequate patient history;
- 1.1. performs masterly physical examination;
- 1.2. guides the patient for diagnose, treatment and follow up according to history, physical examination and laboratory tests;
- 1.3. performs successfully minimal invasive procedures like venepuncture, taking blood, paracentesis etc. used in diagnosis and treatment;
- 1.4. fills the patient records;
- 1.5. goes through procedures of admitting and discharging patients;
- 1.6. reaches and uses medical literature other than classical textbooks;
- 1.7. treats the diseases that are commonly seen among adult in primary health care;

- 1.8. refers the patients whose diagnosis, treatment and follow-up cannot be managed by primary health Care;
- 1.9. asks for consultation from other medical specialties;
- 2.0. Manages well adult follow-up and vaccination:
 - 2.1. counsels preventive health care issues; work in accordance with the law and ethics;
 - 2.2. communicates effectively with patients, patient's relatives, colleagues and other healthcare personnel;
- 3.0. Manages adult emergency cases:
 - 3.1. performs anthropometric measures;
 - 3.2. follows-up patients with chronic diseases;
 - 3.3. guides the patients with chronic diseases;
 - 3.4. performs resuscitation of adult;
- 4.0. Keeps records in regard to primary care according the official and legal requirements:
 - 4.1. uses the data processing system in the patient records;
 - 4.2. searches the literature; use at least one foreign language to communicate with both the adult and families that do not speak Georgian;
 - 4.3. knows at least one foreign language to follow medical literature; make presentations to his/her colleagues about the patients he/she has followed;
 - 4.4. contributes scientific studies on medical literature;
 - 4.5. refers the patients that cannot be managed in a primary healthcare unit to an upper healthcare center;
- 5.0. Communicates with the patients' parents during examination, laboratory testing, consultation and treatment steps of the sick adult:
 - 5.1. takes informed consent from patients' parents and/or the patient;
 - 5.2. communicates with his/her colleagues, patients and patients' parents.

Attitude

- 1.0. Dress and looks physically appropriate as a medical doctor:
 - 1.1. works in cooperation with other doctors, assisting health personnel in the hospital within certain limits and ethical principles;
 - 1.2. displays sufficient social skills when forming a patient-doctor relationship;
 - 1.3. adopts a symptom-focused approach in history taking;
 - 1.4. adopts an organ system focused approach in physical examination.

8. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations
Scenarios based simulation training
Teaching through standardized patients
Practice (with Outpatients and Hospitalized Patients)
Bedside-teaching (Clinical rotations at University/teaching hospital)
Teaching in clinical and simulation environment
Clinical rotation in Clinical skills training and simulation center
Clinical rotations in University and teaching clinics
Practical task under the supervision
Practical task without supervision
Maintaining medical documentation (Including by the means of information technologies)
Communication with patients (outpatients and inpatients)

9. Course content

Essential Medical Procedures: General and symptom-based history taking; Assessing mental status; Anthropometric measurements; Head-Neck and ENT examination; Abdominal physical examination; Skin examination; General condition and vital signs assessment; Musculoskeletal system examination; Respiratory system examination; Cardiovascular system examination; Urologic examination; Preparing medical reports and notice ;Preparing forensic report; Preparing epicrisis; Preparing patient file; Obtaining informed consent; Writing prescription; Preparing treatment refusal form; Reading and evaluating direct radiographs; Taking and evaluating ECG ;Measuring blood glucose level with glucometry; Measuring and assessing of bleeding time; Filling laboratory request form; Preparation and evaluation of peripheral blood smear ;Performing full urine analysis (including microscopic examination) and evaluation; Interpretation of screening and diagnostic examination results; Rational drug use; Performing IM,IV,SC, ID injection; Urinary catheterization; Taking sample for culture; Nasogastric catheterization; Delivering oxygen and administering nebulizer-inhaler treatment; Performing gastric lavage; Enema administration; Evaluating pulmonary function tests; Establishing IV line; Measuring blood pressure; Performing paracentesis; Performing and assessing pulse oximetry; Providing basic life support; Providing immunization services; Periodical examination, check-up (Cardiac risk assessment, adolescence counseling, tobacco counselling, cancer screening etc.);Using and evaluating peak-flow meter.

9. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

10. Recommended literature:

Harrison’s Principles of Internal Medicine

SYLLABUS

Semester XII

Obstetrics and Gynecology Internship Program - Clinical Elective Course

1. **Course identification code: MEDC 6260**
2. **Credit Points: 12 ECTS, Contact Hours: 166; Independent Hours: 194; Sum: 360.**
3. **Person(s) responsible for course: Apolon Meskhi, Nino Tskhvedadze**
Lecturers: Apolon Meskhi ,Teona Salukvadze

4. Description

The students build upon knowledge and abilities for the following skills acquired during the rotation; in addition to the general medical history, the students demonstrate an ability to obtain and understand the basic elements of reproductive history taking, in addition to the general medical physical examination, the students demonstrate the appropriate sensitivity and skills necessary to perform a physical examination in pregnant or non-pregnant patients. At the end of the program the students are able to; coordinate normal delivery situation, and perform episiotomy, pre-, peri-, and post-natal care. Because of the importance of the sensitivity and intimal nature of the gynecologic patient's history and physical examination, the students gain specific skills at the end of the rotation.

At the end of their course the students are evaluated and graded according to their antenatal, prenatal, delivery numbers, laboratory, and patient-care skills along with their theoretical knowledge.

5. Goals:

The aim of the 6th Course Obstetrics and Gynecology Program is to graduate doctors who are aware of the obstetric and gynecological health priorities; can manage obstetric and gynecological health problems and perform the necessary preventive health care implementations in a primary care setting; practice their profession following ethical principles, using up-to-date and evidence based scientific knowledge, show good communication skills.

6. Prerequisite: *MEDC6220 Preparatory course for Entering Residency (EPAs)*

7. Co-requisite: N/A

8. Intended learning outcomes

- 1.0. Lists contraceptive methods, helps the patient for appropriate method selection;
 - 1.1. performs the right method in the direction of patient's will and necessity;
 - 1.2. diagnoses pregnancy, follow-up until birth; in routine pregnancy controls orders the right tests and evaluate the results;
 - 1.3. performs Non-stress test (NST) and evaluates the result; do differential diagnosis of Hyperemesis Gravidarum and diagnose;

- 1.4. diagnoses the high-risk situations during pregnancy like gestational diabetes, multiple pregnancy, ectopic pregnancy;
- 1.5. explains the emergency and importance of the situation to patients' relatives; organize and refer the patient;
- 1.6. lists the risk factors of obstetric emergencies like pre-eclampsia, eclampsia, antenatal bleeding, postpartum bleeding; in these situations, he/she should be able to performs the first aid and transport the patient diagnose, lists the causes and leads the patient for gynecological situations like amenorrhea, menopause, abnormal uterine bleeding, postmenopausal bleeding;
- 2.0. Lists the causes of sexually transmitted diseases (STD); informs the patient about protection and prophylaxis methods for STD's, orders diagnostic tests and perform the appropriate treatment;
- 3.0. Lists the risk factors of gynecological cancers;
- 4.0. Performs cervical smear, evaluates the result and leads the patient for treatment;
- 5.0. Communicates effectively with patients, patients' relatives, colleagues and other health staff;
- 5.1. Obtains informed consent when necessary.

9. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients

Practice (with Outpatients and Hospitalized Patients)

Bedside-teaching (Clinical rotations at University/teaching hospital)

Teaching in clinical and simulation environment

Clinical rotation in Clinical skills training and simulation center

Clinical rotations in University and teaching clinics

Practical task under the supervision

Practical task without supervision

Maintaining medical documentation (Including by the means of information technologies)

Communication with patients (outpatients and inpatients)

10. Course Content

Essential Medical Procedures: Examination of pregnant woman; Gynecologic examination; Obtaining informed consent; Preparing epicrises; Preparing patient file; Writing prescription; Preparing treatment refusal form; Providing care to mother after delivery; Performing

episiotomy and suturing; Following pregnant and puerperant woman; Managing spontaneous delivery; Obtaining cervical and vaginal smear sample;

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

12. Recommended literature:

Current Obstetrics and Gynecology, Elsevier Publishing 2015

SYLLABUS

Semester XII

Child Health and Pediatrics Internship Program - Clinical Elective Course

1. **Course identification code:** MEDC 6270
2. **Credit Points:** 12 ECTS, **Contact Hours:** 166; **Independent Hours:** 194; **Sum:** 360.
3. **Person(s) responsible for course:** Temur Mikeladze, Nino Tskhvedadze
Lecturers: Temur Mikeladze, Leila Beirishvili

4. Description

Every student is responsible to take part in each task of 3 or 5 of patients assigned to him/her. Obtaining an accurate history of the patient (anamnesis), physical examination, preparing the patient's file, organization of the laboratory and radiological examinations, preparing the schedule of treatment, presentation of the patients during case studies and lectures, and to summarize the important aspects of the history, physical exam and supporting lab tests and formulate a differential diagnosis as well as a plan of action that addresses both the diagnostic and therapeutic approach to the patient's problems are the important mile-stones of the daily tasks. The students working in the outpatient clinics have clinical responsibilities, including medication and follow-up the patients. Each student prepares and presents at least one seminar during his/her internship.

5. Goals:

The aim of the Course 6 Pediatrics Program is to graduate medical doctors who are aware of the pediatric health priorities; can manage pediatric health problems and perform the necessary preventive health care implementations in a primary care setting; practice their profession following ethical principles, using up-to-date and evidence based scientific knowledge.

6. Prerequisite: *MEDC6220 Preparatory course for Entering Residency (EPAs)*

7. Co-requisite: N/A

8. Intended learning outcomes

Knowledge and understanding

- 1.0. Plans the diagnostic process and treatment for childhood diseases;
 - 1.1. treats the diseases that are commonly seen among children in primary health care;
 - 1.2. refers the patients whose diagnosis, treatment and follow-up cannot be managed by primary health care;
 - 1.4. asks for consultation from other medical specialties;
 - 1.5. manages well child follow-up and vaccination;
- 2.0. Counsels preventive health care issues;
 - 2.1. keeps up-to-date about the improvements in the field of Pediatrics work in accordance with the law and ethics;

- 2.2. communicates effectively with patients, patient's relatives, colleagues and other healthcare personnel;
- 3.0. Manages pediatric emergency cases; take history from healthy and sick children;
- 3.1. performs physical examination;
- 3.2. makes tests when necessary;
- 3.4. evaluates the results of laboratory and imaging tests make differential diagnosis and therapeutic approach;
- 4.0. Follows up growth and development in all age groups of pediatric patients:
- 4.1. performs anthropometric measures;
- 4.2. evaluates the results of the measurements comparing with the percentiles on growth charts;
- 5.0. Counsels the family about nutrition and vaccination;
- 6.0. Follows up patients with chronic diseases;
- 6.1. guides the patients with chronic diseases;
- 7.0. Performs resuscitation of newborn, infant and children;
- 8.0. Keeps records in regard to primary care according the official and legal requirements;
- 8.1. uses the data processing system in the patient records;
- 8.2. follows up to-date knowledge on Pediatrics;
- 8.3. searches the literature; use at least one foreign language to communicate with both the child and families that do not speak Georgian;
- 8.4. knows at least one foreign language to follow medical literature;
- 8.5. makes presentations to his/her colleagues about the patients he/she has followed;
- 8.6. contributes scientific studies on medical literature;
- 8.7. refers the patients that cannot be managed in a primary healthcare unit to an upper healthcare center;
- 9.0. Communicates with the patients' parents during examination, laboratory testing, consultation and treatment steps of the sick child:
- 9.1. takes informed consent from patients' parents and/or the patient;
- 9.2. communicates with his/her colleagues, patients and patients' parents;
- 9.3. counsels about all the preventive health services about children vaccination and nutrition being the utmost importance among them.

Attitude

- 1.0. Be conscious about importance of multidisciplinary working;
- 1.1. prices the ethical and legal principles.

9. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)
Teaching by using the simulations
Scenarios based simulation training
Teaching through standardized patients
Practice (with Outpatients and Hospitalized Patients)
Bedside-teaching (Clinical rotations at University/teaching hospital)
Teaching in clinical and simulation environment
Clinical rotation in Clinical skills training and simulation center
Clinical rotations in University and teaching clinics
Practical task under the supervision
Practical task without supervision
Maintaining medical documentation (Including by the means of information technologies)
Communication with patients (outpatients and inpatients)

10. Course Content

Essential Medical Procedures: General and symptom-based history taking; Anthropometric measurements; Head-Neck and ENT examination; Abdominal physical examination; Consciousness assessment and mood state examination; Child and newborn examination; Skin examination; General condition and vital signs assessment; Cardiovascular system examination; Musculoskeletal system examination; Breast and axillar region examination; Neurological examination; Respiratory system examination; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing death report; Preparing medical reports and notice; Writing prescription; Preparing treatment rejection paper; Application of principles of working with biologic material; Preparing stool smear and microscopic examination; Reading direct radiographs and assessment; Ability to take ECG and assessment; Fecal occult blood examination; Measuring blood glucose level with glucometer; Performing bleeding time measurement assessment; Filling laboratory request paper; Obtaining and transfer laboratory specimens in appropriate conditions; Using microscope; Performing peripheral smear and assessment; Performing full urine analysis (including microscopic examination) and assessment; Measuring transcutaneous bilirubin and its assessment; Rational drug use; Following child growth and development (Percentile graphics, Tanner classification); Establishing IV line; Performing newborn care after delivery; Hand washing; Obtaining biological samples from patient; Performing IM, IV, SC, ID injection; Urinary catheterization; Measuring blood pressure; Performing blood transfusion; Capillary blood sampling; Obtaining sample for culture; Performing lumbar puncture; Nasogastric catheterization; Delivering oxygen and administering nebulizer treatment; Administering oral, rectal, vaginal and topical medicines; Performing paracentesis; Performing PPD test; Performing and assessing pulse oximetry; Providing appropriate cold chain protection and transportation; Assessing respiratory function tests; Drawing a family tree and referring the patient for genetic counseling when necessary; Performing suprapubic bladder aspiration; Providing basic life support; Solving ethical issues in medical practice; Taking heel blood sample.

11. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

12. Recommended literature:

Nelson Textbook of Pediatrics Kliegman, Robert, Marc dante, Karen J, Elsevier 2018

SYLLABUS

Semester XII

Psychiatry Internship Program- Clinical Elective Course

1. **Course identification code: MEDC 6280**
2. **Credit Points: 12 ECTS, Contact Hours: 166; Independent Hours: 194; Sum: 360.**
3. **Person(s) responsible for course: Nana Zavrashvili, Nino Tskhvedadze**
Lecturers: Nana Zavrashvili

4. Description

Students at their 6th year of medical schools are nearly considered as physicians, and they are expected to evaluate the patients based on the highest levels of personal skills and the most updated medical knowledge available worldwide. They also be expected to make (differential) diagnose(s) among individuals with many different disorders, disturbances, as well as healthy ones. To do this, students learn to view each of the patients as a whole person along with psychological, social and biological aspects. This course in psychiatry is aimed at getting the students these qualities together with a comprehensive approach toward not only psychiatric patients, but also all of the patients evaluated. In addition, the main goal of the psychiatry clerkship in practice is essentially to familiarize the student with the fundamentals of the psychiatric assessment and the diagnosis and treatment of psychiatric illnesses, including the common medical and neurological disorders related to the practice of psychiatry.

During Psychiatry internship program students have the opportunity to interact with and care for patients with a variety of psychiatric problems and in a variety of settings (inpatient units, outpatient clinics, emergency department and substance use disorders). In the outpatient clinic medical students are expected to learn to assess ambulatory patients with new onset, as well as, chronic psychotic, substance use, mood and anxiety disorders, PTSD, somatoform disorders, and personality disorders. To gain the ability to make a differential diagnosis between psychiatric disorders proper and those disorders with psychiatric symptoms due to the various medical conditions such as trauma, substance use, medical diseases, etc. is of prime importance throughout their clinical practice.

5. Goals:

The aim of the 6th Course Psychiatry Program is to graduate doctors who have knowledge about psychiatric disorders; can make diagnosis and differential diagnosis, initiate the treatment of diseases he/she is competent about and follow them up in primary health care settings; can inform the patients and their relatives about the disorder and refer them to the specialist in cases where he/she is not competent.

6. **Prerequisite: MEDC6220 Preparatory course for Entering Residency (EPAs)**

7. Co-requisite: N/A

8. Intended learning outcomes

Knowledge and understanding

1.0. Has information on the neuroscientific and psychological bases of major psychiatric disorders, including schizophrenia, mood disorders, and anxiety disorders:

1.1. has information sufficient to make differential diagnoses between psychiatric and medical problems,

1.2. has a basic information on the psychopharmacology and psychotherapies.

Skills

1.0. Evaluates psychiatric patients by assessing mental status, taking psychiatric history and performing psychiatric examination:

1.1. requests the appropriate laboratory tests and consultations, when necessary;

1.2. stabilizes the psychiatric emergency cases;

1.3. protects him/herself from a violent patient;

1.4. distinguishes the symptoms, make diagnosis, and differential diagnosis, initiate the appropriate treatment and perform follow-ups of the diseases like depression, anxiety and panic attacks;

1.5. distinguishes the symptoms, makes diagnosis, makes the preliminary interventions and refers to the specialist in psychiatric diseases like schizophrenia, bipolar disorder, phobias, substance use disorders, psychosomatic disorders, attention deficit hyperactivity disorder;

1.6. gives the necessary information and refers to the specialist in personality disorders;

2.0. Makes the necessary interventions in emergency conditions like suicide, conversion disorder, manic episode, and substance-related emergencies;

3.0. Communicates effectively with the patients' relatives.

Attitude

1.0. Approaches the patient in a neutral, extra-judicial and indiscriminate manner:

1.1. cares about the privacy of patients, gives patients confidence;

1.2. establishes empathy with the patients.

9. Teaching method(s)

Lecture

Theoretical Interactive learning - Seminars

Practical Work

Team working

Case Based Learning (CBL)

Teaching by using the simulations

Scenarios based simulation training

Teaching through standardized patients
Practice (with Outpatients and Hospitalized Patients)
Bedside-teaching (Clinical rotations at University/teaching hospital)
Teaching in clinical and simulation environment
Clinical rotation in Clinical skills training and simulation center
Clinical rotations in University and teaching clinics
Practical task under the supervision
Practical task without supervision
Maintaining medical documentation (Including by the means of information technologies)
Communication with patients (outpatients and inpatients)

10. Course content

Essential Medical Procedures: General and symptom-based patient interview; Assessing mental status ;Psychiatric history taking; Consciousness assessment and mood state examination; General condition and vital signs assessment; Preparing forensic report; Obtaining informed consent; Preparing epicrisis; Preparing patient file; Referring patient appropriately; Preparing medical reports and notice; Writing prescription; Preparing treatment refusal form; Filling laboratory recuse form; Interpretation of screening and diagnostic examination results; Stabilization of psychiatric emergency patient; Assessing suicidal risk; Suicide intervention; Minimental state examination; Defining consent capacity.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam	20
		EMQ: Extended Matching Questions	Final Exam	20
		KF: Key Features		
		EQ: Essay Questions		
		MEQ: Modified Essay Questions		
	OE: Oral Exam			
Competency– based assessment	SOE: Structured Oral Exam	SOE Checklist	Mid-term Exam	12
	OSCE: Objective Structured Clinical Examination	OSCE Checklist	Final Exam	20
	SP: Assessment with Simulated Patients	Evaluation Checklist		
Performance-based assessment	Global Evaluation of Student’s Performance:	With/Without Checklist	Mid-term Exam	24
	Portfolio	PE Checklist		
	Logbook	Logbook Checklist		
	DOPS: Direct Observation of Procedural Skills	DOPS Rating Scale		
	Mini-CEX: Mini Clinical Evaluation Exercise	Mini-CEX Rating Scale		
	Case Presentation	With/Without Checklist		
	Evaluation of Preparation Skills of the Patient’s File	With/Without Checklist		

Recommended literature:

1. Sadock BJ, Sadock VA, Ruiz P. Kaplan & Sadock's Comprehensive Textbook of Psychiatry, 9. Ed. 2009, Lippincott Williams & Wilkins
2. Purves D, Augustine GJ. Fitzpatrick D. Et al. Neuroscience. 5. Ed. 2012

SYLLABUS

Semester

Age Psychology

1. **Course identification code:** PSYC4111E - Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Ana Zhorzholiani; Gumberidze Nona
Lecturer: Gumberidze Nona

4. **Goals:**

To convey major theories and conceptual opinions about children's age development and introduces the interdisciplinary attitude of acknowledging adult age; To introduce the biological, cognitive, social and personal aspects of age development, which are in tight connection with pedagogic practice. The course also refers to the issues connected to adult age like ethnic identity formation, gender issues, internet influence, imperfect families' problem, drug addiction and etc.

5. **Prerequisite:** *MEDC 2130 Introduction to Clinical Practice II*
6. **Co-requisite:** *N/A*

7. **Intended learning outcomes**

Knowledge and understanding

- 1.0. Defines biological, cognitive, social and personal developments of different age;
- 2.0. Describes theories and attitudes of adults' plurilateral development;
- 3.0. Characterizes of forming appropriate environment for the development of different age;
- 4.0. Describes demands of children with special needs and defines the essential conditions for forming the appropriate environment for them;

Skills

- 1.0. Applies specific terminology of age psychology;
- 2.0. Critically appraises different data related to the age psychology;
- 3.0. Makes conclusions and appraisal about the practical aspects of pedagogical relations connected to the different stages of age development;
- 4.0. Conducts a comprehensive literature review of a selected topic;
- 5.0. Contributes responsively and constructively during group discussions;

Attitudes & Responsibility

- 1.0. Values interpersonal communication principles;
- 2.0. Independently collects sources with consideration of their reliability and validity;

8. Teaching method(s)

- Interactive lecture-seminars
- Discussions
- Critical analysis
- Demonstration
- Workbook
- Teamwork

9. Course content: Introduction to Developmental Psychology and its Research Strategies; Hereditary Influences on Development; Prenatal Development and Birth; Infancy; Physical Development: The Brain, Body, Motor Skills, and Sexual Development; Cognitive Development: Information-Processing Perspectives; Development of Language and Communication Skills; Development of the Self and Social Cognition; Aggression, Altruism, and Moral Development;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCO: Multiple Choice Questions	Mid-term Exam	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student’s Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
	Developmental psychology: Childhood and Adolescence.	Shaffer, D.; Kipp, K.	Cengage, 2013

SYLLABUS

Semester

Social Psychology

1. **Course identification code:** PSYC1275E, Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Ana Zhorzholiani; Despotashvili Medea
Lecturer: Despotashvili Medea

4. **Goals:**
To convey major concepts, theoretical perspectives, and historical trends in social psychology; Encourage the critical examination and application of social psychological principles to specific situations; Develop oral and written communication skills.

5. **Prerequisite:** *MEDC 2130 Introduction to Clinical Practice II*
6. **Co-requisite:** *N/A*

7. **Intended learning outcomes**
Knowledge and understanding
 - 1.0. Demonstrates knowledge of major concepts, theories, and important historical research in social psychology;
 - 2.0. Discuss Social Psychology applications;
 - 3.0. Explains how basic social psychological findings can be used to bring about desired changes;
 - 4.0. Describes the available evidence for selected practical problems.
Skills
 - 1.0. Applies social psychological principles to social situations either in their own lives or to current events;
 - 2.0. Critically evaluates research related to social psychology;
 - 3.0. Demonstrates standard writing & public speaking abilities.
Attitudes & Responsibility
 - 1.0. Considers rational and positive attitudes;
 - 2.0. Gathers reliable information from academic literature as well as from internet resources.

8. **Teaching method(s)**
Interactive lecture-seminars
Discussions
Critical analysis
Demonstration
Workbook

Teamwork
Mini research

9. **Course content:** Introduction to Social Psychology; Social Cognition; Social Perception; The Self; Attitudes; Stereotypes and Prejudice; Social Influence; Prosocial Behavior; Social Groups; Applying Social Psychology to Law and Health; Applying Social Psychology to Business;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
	Social psychology-12 th ed	Baron, R.; Byrne, D. Branscombe, N.	Pearson, 2008
	Social psychology-12 th ed	Taylor, Sh.	Pearson, 2006

SYLLABUS

Semester

Leadership

1. **Course identification code:** MGMT2121E - Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Ana Zhorzholiani; Burduli Giorgi
Lecturers: Burduli Giorgi
4. **Goals:**

To give knowledge to the student about the main theories of leadership, the importance of leadership and to use leader skills in various aspects and to develop correct verbal and nonverbal communication, efficient listening, time management, conflict resolution in terms of leadership, proper use of power and influence, formation of values and confidence building skills. The course aims to guide the gender and cross-cultural problems correctly and efficiently.
5. **Prerequisite:** *MEDC 2130 Introduction to Clinical Practice II*
6. **Co-requisite:** *N/A*
7. **Intended learning outcomes**
Knowledge and understanding
 - 1.0. Defines the importance of interpersonal skills in conscious leadership, differentiates listening and hearing;
 - 2.0. Defines non-verbal communication channels, recognizes the role of confidence in communication;
 - 3.0. Determines Self-Concept and Self-Esteem concepts;
 - 4.0. Recognizes theory of values;
 - 5.0. Identifies the impact of stress and its causes;
 - 6.0. Identifies realized gender problems and stereotypes in career;
Skills
 - 1.0. Applies modern information technologies;
 - 2.0. Discuss gender issues and present their opinions;
 - 3.0. Applies effective verbal and non-verbal communication channels in the communication process;
 - 4.0. Analyzes conflicts warning signs and formulate conclusions about conflicts levels;
 - 5.0. Analyzes the importance of rumors in the process of conflicts;
 - 6.0. Analyzes the personal results of misuse of power and formulate grounded conclusions;
 - 7.0. Discloses its own values;
 - 8.0. Manages situations related to conflicts in accordance with predetermined directions.

Attitudes & Responsibility

1.0. Respects diversity.

8. Teaching method(s)

Interactive lecture-seminars

Discussions

Critical analysis

Demonstration

Workbook

Teamwork

9. **Course content:** Interpersonal Skills of leadership; Active listening; Non-verbal communication; Self-esteem and self-concepts; Values; Time management; Management of stress; levels of communication; Trust is an important ingredient of leadership; Conflict resolution and conflict management; Power and influence; Cross-cultural communication; Gender problems.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCO: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	Interpersonal skills for leadership: 2 nd ed	Fritz, Susan	Pearson, 2005

SYLLABUS

Semester

Sociology

1. **Course identification code: MGMT5797E - Elective**
2. **Credit Points: 3 ECTS, Contact Hours: 42; Independent Hours: 48; Sum: 90.**
3. **Person(s) responsible for course: Ana Zhorzholiani; Rcheulishvili Nino**
Lecturers: Rcheulishvili Nino

4. **Goals:**

To convey basic terms, concepts and theoretical approaches of sociology; Social interaction in everyday life; The social construction of race and ethnicity, examples of pluralism, assimilation, segregation and genocide; Importance of gender and age to socialization and develop skills to apply the sociological perspective to show how society shapes our individual lives; Sexuality as a both biological and a cultural issue; Common elements of culture. Sociology empowers students to see the world around them through a sociological lens, helping them better understand their own environment and the world we all share. The course takes students step by step through the theories and research that make up the discipline of sociology, helping them to use the science of social behavior in everyday life.

5. **Prerequisite: MEDC 2130 Introduction to Clinical Practice II**
6. **Co-requisite: N/A**

7. **Intended learning outcomes**
Knowledge and understanding
 - 1.0. Defines sociology as a discipline and how it is distinct from and related to other disciplines;
 - 2.0. Determines the sociological perspective, broadly defined;
 - 3.0. Explains how sociology is a science and become familiar with the research methods used by sociologists;
 - 4.0. Demonstrates an understanding of the subject matter of the field of sociology, including the major theoretical approaches, vocabulary, and research findings of sociology;
 - 5.0. Demonstrates an understanding of how social inequality, stratification, and the social constructions of race, ethnicity and gender operate within society;
 - 6.0. Explains how social structures, groups, and institutions influence and constrain individuals;
 - 7.0. Defines culture, cultural relativism, and demonstrates how cultures vary across time, place, and social context.
Skills
 - 1.0. Applies sociological theory to explain social problems and issues;
 - 2.0. Applies critical thinking skills to the field of sociology by seeking out and challenging common assumptions, identifying and weighing appropriate evidence, evaluating empirically-grounded arguments, and reaching reasoned conclusions;

- 3.0. Analyzes various social phenomena through the lens of different sociological theoretical perspectives;
- 4.0. Debates how societal and structural factors influence individual behavior;
- 5.0. Applies modern information technologies.

Attitudes & Responsibility

- 1.0. Respects values related to race, age, ethnicity and gender equality in the thoughtful socialization process and willingness to pursue them;
- 2.0. Understands the importance of the role of society in our individual lives and culture as limiting or expanding human freedom.

8. Teaching method(s)

Interactive lecture-seminars

Discussions

Critical analysis

Workbook

Teamwork

Literature Overview

Relevant material search out from various electronic and paper-based resources

Written work

- 9. Course content:** The Sociological Perspective; Sociological Investigation; Culture; Society; Socialization; Social Interaction in Everyday Life; Groups and Organizations; Sexuality and Society; Deviance; Social Stratification; Global Stratification; Gender Stratification; Race and Ethnicity; Aging and the Elderly;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	Sociology-16th Ed.	Macionis, John J.	Pearson, 2017

SYLLABUS

Semester

Social Media Marketing

1. **Course identification code:** MKTG4550E - Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Ana Zhorzholiani; Meparishvili Ketevan
Lecturer: Meparishvili Ketevan

4. **Goals:**

To convey basic terms and concepts of media marketing to planning and implementing related strategies and be able to use it successfully on local and global markets. The course covers learning of main social technologies and their impact on the business, the fundamental aspects of social business, the importance of social media, and the perception of various social networks as a powerful marketing tool.

5. **Prerequisite:** *MEDC 2130 Introduction to Clinical Practice II*
6. **Co-requisite:** *N/A*

7. **Intended learning outcomes**

Knowledge and understanding

- 1.0. Describes and explains the meaning and nature of social marketing, the social feedback cycle structure;
- 2.0. Recognizes the range of stakeholders involved in social marketing programs and their role as target markets;
- 3.0. Recognizes Social Customer Relationship Management (Social CRM) as one of the strongest marketing tools;
- 4.0. Analyses social marketing problems and suggest ways of solving these;
- 5.0. Determines concept of social analytics;
- 6.0. Defines social media strategy and content strategy.

Skills

- 1.0. Analyzes the impact of social media marketing in business activities and establish reasoning conclusions;
- 2.0. Establishes conclusions about bilateral connection with customer;
- 3.0. Analyzes the results of advertisements and formulate conclusions by social networks
Connects the indicators required for social media marketing with business analysis;
- 4.0. Communicates using social platforms (self, Facebook, YouTube) with customer;
- 5.0. Formulates and solves marketing problem using social media marketing capabilities in accordance with predetermined directions;
- 6.0. Develops social media strategy and perform all the steps necessary for implementing it, based on preliminary information;

- 7.0. Applies different social platforms (Twitter, Facebook, Youtube) for success in business and to develop appropriate content strategy;
- 8.0. Effectively uses marketing with social customers in business.

Attitudes & Responsibility

- 1.0. Searches and studies information related to business processes and social marketing;
- 2.0. Respects values related to social media marketing aspects, as well as physical and intellectual property;
- 3.0. Reveals honest attitude towards the work.

8. Teaching method(s)

Interactive lecture-seminars

Discussions

Critical analysis

Demonstration

Workbook

Teamwork

News analysis

Literature Overview

Relevant material search out from various electronic and paper-based resources

Written work

9. **Course content:** Social media marketing and user access; The user's new role; Building a social business; Social Business Ecosystem; Social technology and business solutions Innovative cycle, innovations and social attachment; Social analytics; Five essential issues for social media marketing; Attachment in the social space as a user's activity; Social CRM (Customer Relationship Management); Social goals; Social graph; Social applications;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	Social media marketing: The next generation of business engagement	Evans, Dave; Mckee, Jako	Sybex, 2010
2.	Social Media Marketing: A Strategic Approach-2nd ed	Barker, Melissa; Barker, Donald I.; Bormann, Nicholas F.; Zahay, Debra	Cengage, 2008

SYLLABUS

Semester

Technique of Public Speaking

1. **Course identification code:** COMM4135E - Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Ana Zhorzholiani; Darsavelidze Maka
Lecturers: Darsavelidze Maka

4. **Goals:**
To acquire students with skills of making interesting and effective presentations for broad audience during meetings, briefings and conferences. This course teaches students how to hold interesting and effective presentations and conferences. Also, helps to analyze the interest of audience and to overcome nervousness related to public speaking. Teaches how to use different techniques of public speaking (e.g. eye contact, body language, gesture, rhythm and tone of voice) and how to structure public speech and present it in the best manner to audience.

5. **Prerequisite:** *MEDC 2130 Introduction to Clinical Practice II*
6. **Co-requisite:** *N/A*

7. **Intended learning outcomes**
Knowledge and understanding
 - 1.0. Analyzes audience centered presentation process and its characteristics;
 - 2.0. Describes peculiarities of interaction between communication process and public speaking.***Skills***
 - 3.0. Analyzes interest of members of audience;
 - 4.0. Evaluates and analyzes own speech;
 - 5.0. Determines relevant information about target audience;
 - 6.0. Defines supportive materials and information for public speaking;
 - 7.0. Ensures effective presentation in English language;
 - 8.0. Uses different non-verbal techniques (e.g. eye contact, body language, gesture, tone of voice);
 - 9.0. Controls level of emotion during public speech making;
 - 10.0. Update basic theoretical and practical knowledge of public speaking constantly;***Attitudes & Responsibility***
 - 11.0. Values ethical communication principals.

8. **Teaching method(s)**
Interactive / Visual Lectures
Discussions
Critical analysis

Demonstration
 Workbook
 Teamwork
 Case Study

9. Course content: Introduction to Public Speaking Techniques; Characterization of Audience Types; 4 Basic Principles of Public Speaking; Planning a presentation; Defining a topic; Studying the audience; Organizing a presentation; Arousing interest in the audience with a successful preface; Prepare a presentation; Determining the main idea, setting goals; ethical speech; Types of presentations: presentations for information delivery, presentations for persuasion, and presentations that serve many other purposes; Presentations for a positive, neutral and negative audience; Architecture of a presentation: introduction, main part, conclusion, supporting the main idea with different data, technical use of "transitions"; How to gain audience trust and how to reduce nervous background.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	Public Speaking Handbook–2nd ed.	Beebe, A; Beebe,J	Allyn & Bacon, 2007
2.	Every day Public speaking	Redmond, M.Vrchota, D	Pearson College Div;
3.	Essential elements of public speaking-3rd ed.	Devito,J.	Pearson
4.	Public speaking: strategies for success	Zarefsky,D.	Pearson

SYLLABUS

Semester

Introduction to Cyber Security

1. **Course identification code:** INFO3253E - Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Ana Zhorzholiani; Iashvili Giorgi
Lecturers: Iashvili Giorgi

4. **Goals:**

To provide students with foundation knowledge of information/cyber security, particularly, to give them understanding of the basic concepts of information security (confidentiality, integrity, and availability), main techniques of hacking, threat analysis and risk assessment. The course contains the issues of information/cyber security, cryptography, risk identification/assessment and other security techniques. The basic security objectives such as data confidentiality, integrity, availability, authentication, authorization and access control are examined and also, cryptographic techniques to realize these objectives are introduced. The basic philosophy of secure development is also examined. In addition, the ideas behind hacking, cracking and social engineering will be discussed in the context of ethics and their place in Information/Cyber Security.

5. **Prerequisite:** MEDC 2130 Introduction to Clinical Practice II

6. **Co-requisite:** N/A

7. **Intended learning outcomes**

Knowledge and understanding

- 1.0. Defines and analyzes the importance of security;
- 2.0. Defines the data encryption methods and the importance of its use;
- 3.0. Determines currently actual threats, which are the basis of information/cyber security and what are the basic principles and methods that should be taken into account when building a secure system;
- 4.0. outlines how the attacks and protection methods contradict each other, how to evaluate the threats by its importance and how to measure the security mechanisms in modern technology;
- 5.0. Defines methods of attacks and the types of malicious software (Viruses, Worms, Backdoors, Logic bombs, BotNet);
- 6.0. Recognizes of the legal framework regulating the cyber security;

Skills

- 7.0. Analyzes and establishes conclusions about the specific methods of solving security related tasks;
- 8.0. Compares various types and methods of hacking and establish appropriate conclusion

- 9.0. Takes into account the security issues while developing a software product or configuring IT infrastructure;
- 10.0. Presents various principles and methods in the field of information security, that have been studied and processed by him;
- 11.0. Participates in discussions with information/cyber security professionals;

Attitudes & Responsibility

12.0. Increases knowledge independently, by finding and using literature in the field of information/cyber security.

8. Teaching method(s)

Interactive lecture-seminars
Discussions
Critical analysis
Demonstration
Workbook
Teamwork

- 9. Course content:** Main concepts of Information/Cyber Security; Information Security vs Cyber Security; Terminology: Asset, Threat, Vulnerability, Risk; CIA; •Risk identification and assessment; Cryptography; Importance of cryptography; Symmetric VS Asymmetric encryption; Attacks on Cryptography; Reconnaissance; Information gathering; Vulnerability research; Foot printing; Scanning and Enumeration; Scanning for targets; Enumeration techniques; OSI model & TCP vs UDP; Hacking through the network; Sniffing – the art of packet capturing; Flooding, spoofing and etc.; Sniffing countermeasures; Attacking a system; Methods of authentication; Types of password guessing and cracking techniques; Phishing attacks and countermeasures; Types of Threats; Types of Malware: Viruses, Worms, Backdoors, Logic bombs, BotNet; Importance of patching; Impact of global factors on security; Secure Development; Security as a quality of software; SD3 principle; Defense in depth; Digital Identity and categorization of threats to Digital Identity: OI & MI; DoS, DDoS and Web-based attacks; Attacks on availability – DoS, DDoS; SQL injection, XSS, Buffer Overflow and etc.; Cookie attacks; Threat Modelling; Phases of threat modelling and decomposing the application; Determine, identify and assess risks; Respond to risk; Legal and ethical issues in Information Security; Review of legislation on information security; Privacy issues; Cyber Crime.

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	CEH: certified ethical hacker practice exams, 3rd ed. [+CD]	Walker, Matt	McGraw-Hill Education, 2017
2.	Identity Management: Concepts, Technologies and Systems	Bertino Elisa, Takahashi Kenji	Artech House Publishers, 2011
3.	The Security Development Lifecycle	Howard Michael, Lipner Steve	Microsoft Press, 2006
4.	Experiences Threat Modeling at Microsoft	Shostack Adam	Published in MODSEC@MoDELS 2008
5.	Legal Ethical and professional issues in Information Security	https://www.cengage.com/resources/uploads/downloads/1111138214_259148.pdf	

SYLLABUS

Semester

SPSS: Data Analysis and Formation in healthcare

1. **Course identification code:** HELM4150E - Elective
2. **Credit Points:** 3 ECTS, **Contact Hours:** 42; **Independent Hours:** 48; **Sum:** 90.
3. **Person(s) responsible for course:** Anano Kiria; Gogiberidze Ketevan
Lecturers: Gogiberidze Ketevan, Miranda Nonikashvili

4. **Goals:**

to give students a basic knowledge of empirical statistical data processing and analysis methods (descriptive and regression analysis), to develop a computer software package SPSS data (including health) bases formation, analysis, and presentation skills.

5. **Prerequisite:** *MEDC 2130 Introduction to Clinical Practice II*
6. **Co-requisite:** *N/A*

7. **Intended learning outcomes**

Knowledge and understanding

- 1.0. Describes data input process and the bases formation rules, processing and analysis (descriptive analysis, regression analysis, data correlation) methods;
- 2.0. Defines computer software package (SPSS) structure;
- 3.0. Describes conscious decision-making process, including the health sector, Multidimensional methods revealed through latent (hidden) regularities, taking into account the importance.

Skills

- 1.0. Selects relevant statistical methods for research objectives;
- 2.0. Applies classical statistical methods to process data in SPSS according to pre-defined instructions;
- 3.0. Applies SPSS- Presentation capabilities for presenting data processing results in a graphical manner;
- 4.0. Applies knowledge to analyze empirical or statistical data processing results and prepare proper conclusions;
- 5.0. Constructs results of empirical research or statistical data analysis in structured and consistent manner in both, written and oral form;
- 6.0. Applies knowledge to demonstrate data processing results (written or oral) report preparation and presentation skills for specialists and non-specialists;
- 7.0. Relates SPSS computer program using to the learning process, comprehensive evaluation of follow-up studies and determine needs of further studies;

8.0. Applies knowledge to demonstrate predefined reference accordance processing skill with the multidimensional data SPSS- methods (dispersion, analysis, -regresion analysis).

Attitudes & Responsibility

1.0. Demonstrates awareness about professional ethics in data forgery, falsification, plagiarism, and participate in establishing these standards.

8. Teaching method(s)

Interactive / Visual Lectures

Discussions

Critical analysis

Demonstration

Workbook

Teamwork

Practical work

Laboratory work

9. Course content: Data, data formed, the research design; Prepare the computer data input. Encoding. A spreadsheet (database) creation; IBM SPSS system. Naming scale data processing: Computer software package - SPSS- load in the computer, data base. Naming scale data processing through SPSS; Data file preparation and administration the program; Data selection and base cleanup, Correction; Descriptive Statistics; Using graphs for data study and description; Working with databases. Syntax (command, parametria, etc.) for use in the manufacture of the procedures and manipulations. Calculations the total scales; Action groups, continuous variables and the Transformation of variables. Check the reliability of the scale; The selection of appropriate statistical methods for data; Study of the relationship between variables / setting, the statistical methods; Correlation, Multiple regression;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	36
		OEQ: Open ended questions	Final Exam	40
		FSAQ: Fill-in-the Blank Short Answer Questions		
		T/F Questions		
	OE: Oral Exam			
Performance-based assessment	Essay	Essay Checklist		10
	Presentation Evaluation	Presentation Checklist		4
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature:

NO	Textbook	Author	Publisher
1.	SPSS survival manual: A step by step guide to data analysis using IBM SPSS-5th ed.	Pallant, Julie	Open Univ Pr, 2013

SYLLABUS

Semester I

Medical Tourism and Telemedicine – Elective Course

1. **Course identification code: MEDC 1111**
2. **Credit Points: 6 ECTS, Contact Hours: 84; Independent Hours: 96; Sum: 180.**
3. **Person(s) responsible for course:** Nikoloz Fruidze, Anano Kiria
Lecturers: Vakho Kalandia; Salome Janelidze

4. **Goals:**

To convey:

1. Definition, importance and characteristics of medical tourism.
2. Modern technologies to apply telemedicine's developments and services in practice.
3. Differentiating and applying telemedicine technologies and practices in a variety of health care environments.
4. Commitment as a public awareness tool to promote and advocate the use of advanced communication technology to expand health care outreach and overcome geographic barriers to deliver patient care and education.
5. Factors that affect the demand for medical tourism, marketing and logistics in medical tourism, policies of medical tourism.
6. Importance of elderly age and disability tourism.

5. **Prerequisite:** N/A

6. **Co-requisite:** N/A

7. **Intended learning outcomes**

Knowledge and understanding –

- 1.0. Recognizes:
 - 1.1. fundamental knowledge of medical tourism, strategies and marketing concepts, theoretical and practical aspects of managing medical tourism and telemedicine in practice;
 - 1.2. basic knowledge in areas of technology applied to healthcare including computer sciences and telecommunication technologies to facilitate the deployment of telemedicine;
 - 1.3. basic knowledge of the Telemedicine Standards;
 - 1.4. basic knowledge about medical tourism, its place and importance in tourism, types of medical tourism; Development of medical tourism and factors that form the supply of medical tourism;
 - 1.5. managerial skills and obtain knowledge of health tourism developments, advantages and perspectives;
 - 1.6. knowledge about applications of medical tourism;

2.0. Understands:

- 2.1. the basic requirements for the delivery of telemedicine services;
- 2.2. the measurement of tourism and impact of tourism;
- 2.3. the nature of different tourism products;
- 2.4. social and cultural set up in Georgia and its contribution to tourism;
- 2.5. multi-form character of travel and medical tourism business;
- 2.6. forms of medical tourism;

3.0. Explains:

- 3.1. how the history of telemedicine has contributed to the current application of this technology in telemedicine;
- 3.2. the communication standards, ethical and legal issues involved in telemedicine system;
- 3.3. the diverse nature of medical tourism, including culture and place, global/local perspectives, and experience design and provision;
- 3.3. the system, elements and motivational factors of tourism.

4.0. Describes:

- 4.1. the various types of telemedicine modalities and potential clinical implications;
- 4.2. theoretical and practical aspects of health tourism and telemedicine;

5.0. Demonstrates:

- 5.1. how telemedicine increases cost efficiency, reduces transportation expenses, improves patient access to specialists and mental health providers, and improves quality of care and communication among providers;
- 5.2. use of telemedicine tools in clinical, research and educational settings;
- 5.3. types of communication and network systems used in telemedicine technology;
- 5.4. systematic knowledge of medical service quality and standards;

6.0. Applies:

- 6.1. telemedicine services in professional field;
- 6.2. principles of sustainability to the practice of medical tourism in the local and global context;

7.0. Identifies:

- 7.1. conditions for successful implementation of telemedicine service;
- 7.2. benefits, barriers and challenges of health tourism and telemedicine;

8.0. Promotes and introduces telemedicine services and programs;

9.0. Defines:

- 9.1. global medical tourism developments and services in healthcare system;
- 9.2. health tourism developmental strategies, marketing concepts and future perspectives;
- 9.3. understanding Medical Tourism's basic concepts of medical tourism;
- 9.4. characteristics of businesses operating in the field of medical tourism;
- 9.5. concept of tourism product;
- 9.6. the importance of disabled tourism;

10.0. Interprets legal and ethical norms in health tourism and telemedicine;

11.0. Outline's importance of health tourism and telemedicine for reshaping healthcare;

12.0. Discusses importance of medical tourism nationally and internationally;

13.0. Compares elderly age tourism within the scope of medical tourism.

Skills

- 1.0. Organizes patients' medical treatment abroad, plan overseas visit to hospital, make appointments, find accommodation and modes of transportation for the patients and their family members;
- 2.0. Uses internet resources and modern technologies to organize tele-consultation.
- 3.0. Conducts patient care and disease management distantly; Minimize risks related to medical travel;
- 4.0. Analysis health tourism's positive and negative impact on the environment and identify best possibilities for sustainable development;

Attitude

- 1.0. Demonstrate accountability and the safely practice, to improve the quality and safety of patient care in accordance of medical tourism standards;
- 2.0. Demonstrates professional responsibility and ethics to protect patients' moral, religious and social feelings in accordance with the laws and ethical norms.

8. Teaching method(s)

Lecture
Theoretical interactive learning- Seminars
Case study
Case Based Learning (CBL)

9. Course content

Introduction of Telemedicine: History and development of health, wellness and medical tourism; Definitions and concepts; A historical overview of health protection; Geographical and regional analysis of medical tourism; Social and cultural traditions, development of regional initiatives; Modern trends in leisure, lifestyle and society; Need for medical and wellness products and trips; Definitions of telemedicine, telehealth and telecare; History and development of telemedicine; Types of telemedicine; Modern telemedicine services; How telehealth transforms healthcare; History; Terminology; Types of Telemedicine Systems; Examples of Telemedicine in Clinical Practice; Values to the Patient, Clinician, and Health Care Organization; Challenges to Successful Implementation; Internet in Medicine.

Healthcare Delivery in Settings by using Advanced Technologies: Healthcare distributions in settings and corresponding problems; Definition of telemedicine; Telehealth; Telecare; Teleradiology; Teleoncology; Telesurgery; Telecatriology; Benefits. Potential and limitations of Telemedicine; Practical Examples of Telemedicine development: Teleconferencing, Teleconsultation. Telemonitoring; Telelearning; Telerobotics.

Legal and ethical issues: Definition of Confidentiality; Definition of Patient privacy; Understanding of Ethical and Legal Considerations; Data security; Data transmission; Understanding of the need for data and information security; Key Functions of Security implementation, Confidentiality and law, patient rights and consent, patient-doctor relationship, access to medical records, consent treatment, data protection and security, jurisdictional issues, intellectual property rights.

Clinical Issues: Focuses on the application of telemedicine for patient care in a clinical setting; Services provided through telemedicine; Routine and Follow up examinations; Urgent or Emergent Care; Clinical Research; Administrative Meetings; Clinical Support Services; Medical Education; Medical images; Capture; Manipulation /Compression; Storage; Retrieval; Electronic Medical Records; Applications of Telemedicine: Teleradiology, teleaudiology, telepathology, telecardiology, teleoncology, teledermatology, telesurgery, e-health and cyber medicine, acute care and monitoring for elderly care; Virtual doctor systems for medical practices.

Technical Issues: Health informatics in a global perspective; Data – information – knowledge; Computers, databases and telecommunication; Radiology information systems, Radiology, MRI, Ultrasound; Medical Imaging and Multi-Imaging Modalities; Imaging Informatics across all scales from organ level, cellular and molecular image processing and transmission.

Administrative Issues: Human Resources; Organizational Structure; Scheduling; Health care administration; Medical records management; Liability; Legal aspects; Quality of Service; Health economics: Cost-benefits, strategic planning; Sustainability and Funding; Clinical Acceptance; Patient Satisfaction.

Standards in Telemedicine: Requirement; Application prerequisites; Study; Implementation.

Hands-On Training: Practical training with telemedicine equipment required for potential TM sites: computers, cameras, video cameras, videoconferencing units, peripherals, etc. Observation of clinical telemedicine in practice; Emphasis on equipment use and application.

Medical Tourism Significance: Medical Tourism as Industry; Medical Tourism Destinations; Types and flow of Medical Tourists; Factors Influencing Choice of Medical Tourism Destinations; Concept, typology Genesis and growth of Medical Tourism; Benefits of medical tourism; Factors responsible for growth of health and medical tourism; Medical Tourism Business; Global medical tourism scenario, stakeholders, countries promoting medical tourism; Health and Medical Tourism markets at global level; Future trends and predictions of wellness sector; Traditional and destination spas; Spa offerings and services; Revenue management; Sleep disorders and the role of spa in sleep therapy; History, traditions and the recent trends in the spa industry; Horse milk therapy in Kirgizstan, wellness tourism in Finland, traditions of recovery treatments in the Himalayan Region, thermal springs in New Zealand, health tourism in Dead Sea region; Healthy cuisine and diet; Mobile health (mHealth); mHealth in supporting health worker; Developing apps for mobile devices; mHealth evaluation; International and domestic medical tourism; Global medical tourism offerings, advantages and challenges. Cases of India, UK, Thailand, Malaysia, South Korea, Germany, United States.

Medical tourism product and package: Factors and Steps for designing product and tour package, development, issues and considerations; Approvals and formalities; Pre-tour arrangements; Tour operations and post-tour management; Health Insurance; Claiming Health Insurance.

Macro Perspective: Effects of Medical Tourism in Nation's Economy; Development of Supporting Services for Medical Tourism; Role of Government, private Sector and voluntary Agencies in promotion of Medical Tourism.

Marketing Strategy: Strategy formulation to attract and retain National and Global Medical Tourists; Positioning of Medical Services; Traditional and Nontraditional; Pricing of Medical Services.

Communication: Integrated Communication for Medical Tourists; Online and Offline Communications; Relationship Management with Medical Tourists.

Emerging Trends: Understanding Medical Tourist Satisfaction; Protecting Stakeholder's interests in Medical Tourism; Emerging Trends.

Legal Aspects of Medical Tourism: Certification and Accreditation in health and medical tourism; Ethical, legal, economic and environmental issues in health and medical tourism; An Introduction to National Accreditation Board for Hospitals & Healthcare (NABH) and Joint Commission International (JCI).

Medical tourism in Georgia: Centers/Destinations, Current trends, Potentials, Issues and Challenges, Tackling the challenges, Government Support

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz Final Exam	34
		Scenario based MCQs		40
Performance-based assessment	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		10
	Assignments (Homework)	Assignment Checklist		6
	CBL-P: Evaluation of CBL Student's Performance	CBL Student Evaluation Form		6

11. Recommended literature

Subject	Textbook	Author	Publisher
Medical tourism	The Routledge Handbook of Health Tourism	Melanie Kay Smith and László Puczkó ISBN-13: 978-1138909830 ISBN-10: 1138909831	Elsevier
	Medical Tourism Facilitator's Handbook 1st Edition,	Maria Todd, 2012. ISBN-13: 978-1439812839 ISBN-10: 1439812837	
	Medical Tourism	John Connell ISBN-13: 978-1780643694 ISBN-10: 1780643691	Elsevier
	A Textbook of Neuroanatomy	Frederick J. DeMicco ISBN-10: 1774636808	Elsevier
Telemedicine	Telemedicine and Electronic Medicine	Halit Eren ; John G. Webster ISBN-13: 978-1138893597 ISBN-10: 1138893595	Elsevier
	Essentials of telemedicine and telecare; 2002.	A.C. Norris, 2002. ISBN-13: 978-0471531517 ISBN-10: 0471531510	
	Fundamentals of Telemedicine and Telehealth, 2019.	S. Gogia, ISBN-13: 978-0128143094 ISBN-10: 0128143096	
	Telehealth in the developing world,	Richard Wootton, 2009 ISBN-13: 978-1853157844 ISBN-10: 1853157848	
	Health, Tourism and Hospitality: Spas, Wellness and Medical Travel 2nd Edition, 2014.	M. Smith and L. Puczkó, ISBN-13: 978-0415638647 ISBN-10: 041563864X	
	Handbook of medical tourism program development: Developing globally integrated health systems,2011.	Maria Todd, ISBN-13: 978-1138426238 ISBN-10: 1138426237	

SYLLABUS

Semester I

English for Medical Education – Elective Course

1. **Course identification code: ENGM 1110**
2. **Credit Points: 6 ECTS, Contact Hours: 84; Independent Hours: 96; Sum: 180.**
3. **Person(s) responsible for course: Anano Kiria, Ana Zhorzholiani**
Lecturers: Mzia Iobashvili

4. **Goals:**

To convey:

1. Listening, speaking, reading and writing skills in English;
2. Specialized vocabulary and expressions activating passive vocabulary, to learn the English pronunciation of medical terms;
3. Awareness in using medical English among colleagues for more effective communication;
4. Presentation at national and international conferences and trainings in English;
5. Self-study techniques to help study independently outside the classroom;
6. Producing clearer written documents;
7. Introducing students with the required language related to discussing treatments, presenting opinions and assessments;

5. **Prerequisite:** N/A

6. **Co-requisite:** N/A

7. **Intended learning outcomes**

Knowledge and understanding:

- 1.0. Recognizes:
 - 1.1. basic medical vocabulary, terminology and idioms and using them effectively and appropriately in the right context;
 - 1.2. vocabulary in a wide range of topics;
 - 1.3. writing medical articles in English;
 - 1.4. Medical English as an aid to patient-doctor communication;
 - 1.5. reading and analyzing medical histories and case studies;
- 2.0. Understands:
 - 2.1. and compiles patient histories;
 - 2.2. importance of avoiding jargon in doctor-patient communication;
 - 2.3. basic components of medical reports and case studies and write their own;
 - 2.4. all medical terminology (prefixes, suffixes, roots), medical vocabulary needed for their jobs, idioms daily used by the doctors.
- 3.0. Identifies writer's attitudes and viewpoints in authentic texts related to medical areas (medical blogs, professional/scientific books, articles and abstracts);
- 4.0. Writes referral letters, case reports and medical articles for journals

Skills:

- 1.0. Generates listening skills to help understand and respond to real-life situations;
- 2.0. Listens to academic lectures and take notes by extracting both main information and details;
- 3.0. Communicates effectively with patients and professional colleagues.
- 4.0. Takes patient history
- 5.0. Discusses treatments with patients
- 6.0. Presents opinions on medical conditions
- 7.0. Analyses and interprets medical tests, assessments.
- 8.0. Gives directions when examining the patients avoiding jargon;
- 9.0. Uses the correct wording when communicating with a patient.
- 10.0. Searches for and selects relevant information from academic textbooks, internet sources for academic paper and presentations;
- 11.0. Takes part in academic and professional discussions, seminars, talks;
- 12.0. Write clear detailed texts in his/her field of interest, describing, comparing-contrasting and evaluating information;

Attitude

- 1.0. Embraces the importance of updating knowledge and skills;
- 2.0. Values current advancements and improves English language knowledge and skills.

8. Teaching method(s):

Lecture

Theoretical interactive learning- Seminars

Case study

Role playing

Recorded audio and video materials including public speeches presentations

9. Course content:

Functional English: Basics of Grammar; Parts of speech and use of articles; Sentence structure, active and passive voice; Practice in unified sentence; Analysis of phrase, clause and sentence structure; Transitive and intransitive verbs; Punctuation and spelling.

Communication: Introduction; CV and job application; Paragraph writing; Translation skills; inviting; Clarifying; Answering and responding questions; Describing some situations; Starting and ending conversations; Interpreting to someone.

Academic: Letter writing; Paper writing; Summary writing and comprehension; Use of library and internet.

Presentation: Personality development (emphasis on content, style and pronunciation). Task presentation.

Around the Hospital: On the ward; Hospital staff, Introducing yourself to patients; The body: anterior, posterior; Glossary of body terms.

Patient Admission: Clerking a patient; Non-verbal communication; Therapeutic listening; Wounds and burns; Hospital charts: patient admission form; Writing a patient file note.

Interviewing a Patient: The language used in healthcare; Conducting patient interviews; Asking different types of questions; Cardiovascular conditions; Respiratory symptoms and conditions; Describing strokes; The body: the nose, head, face;

Taking Observations: Blood pressure and pulse; Temperature; Neurological changes; Hospital charts: Early Warning Score; The body: the arm, hands; The body: skin, nails, hair.

Past Medical History: Patient centered care; Allergies and adverse drug reactions; Taking a sexual history; Substance misuse; Describing dementia; Challenging behaviors in the elderly; The body: the chest.

Talking about Pain: Types of pain; Pain severity; Pain location; Using pain scales; Chronic back pain; The body: muscles, tendons, bones, ligaments.

Examining a Patient: Patient confidentiality; Putting a patient at ease; The female reproductive system; Doing an internal examination; Protecting vulnerable patients; Writing GP letters.

Explaining Tests: Blood tests, taking a blood sample; Radiological tests; Testing for tuberculosis; Cervical smear tests; Taking a urine specimen; Diabetes tests; Hospital forms: pathology forms; The body: the ears.

Discussing a Diagnosis: Discussing different diagnoses; Discussing injuries; Infectious diseases and conditions; Answering a bleep; The body: intestines, abdomen; The body: feet, ankles
Explaining Treatment; Managing diabetes; Managing constipation; Managing urinary incontinence; Managing asthma; Administering medications, Hospital charts: controlled drugs, oxygen therapy; Writing a discharge letter.

Discussing Surgery: Surgical procedures; Cosmetic surgery; Arthritis; The body: hips, thighs, legs; The body: shoulders;

Pre-operative Care: infection control; pre-operative investigations; Assessing level of risk: anesthesia; Healthcare acquired infections; The kidneys, fluid loss, dehydration;

Post-operative Care: Giving a post-operative handover; Endocrine disorders: subtotal thyroidectomy; Wound infections; Hospital charts: sepsis screening tool; Suggesting lifestyle changes; The body: mouth, eyes, the senses; Writing a discharge letter.

Oncology and End-of-Life Care: Types of cancers; Oncology and chemotherapy; Radiotherapy; The breast and breast cancer; Cancer of the cervix; Lung cancer; Palliative care; End-of-life care;

10. Form(s) of assessment and details explaining how the module mark is calculated

Assessment Approaches	Assessment Methods	Question Types /Assessment Tools	Exams	Scores
Attendance – Activity: Showing interest to classes - 1; Performance during discussion times – 1.5; Performance during pair works – 1.5.				4
Knowledge-based Assessment	Written Examination	MCQ: Multiple Choice Questions	Mid-term Exam Quiz	30
		FSAQ: Fill-in-the Blank Short Answer Questions	Final Exam	40
		T/F Questions, mostly based on case studies		
	OE: Oral Exam			
Performance-based assessment	Assignments (Homework)	Assignment Checklist		8
	PWPE: Paper Writing and Presentation Evaluation	Presentation Checklist		12
	CBL-P: Evaluation of CBL Student's Performance	CBL Checklist		6

11. Recommended literature:

NO	Subject	Textbook	Author	Publisher
1.	English for Medical Education	Text File for General English II	Chkheidze,Maka	
		Oxford English Grammar Course	Swan, Michael.,Walter,Catherine	Oxford University Press
		Headstart	Workbook Falla, Beginner: Students` book Beaven,B. and others.	Oxford University Press
		Grammar time	Jervis,S.	Longman
		English for Medical Purposes: Doctors Paperback	Virginia Allum (Author)	Lulu.com.
		Professional English in Use Medicine 1st Edition	Eric Glendinning (Author)	Cambridge University Press