1. General Information

Title:	**Medical Doctor Program**						
Qualification (according to major):	Medical Doctor (Certified physician)						
Number of Credits:	360 for native speaking and 372 for international students		QF Level (VI, VII or VIII)		VII		
Available Concentrations:	N/A						
Responsible School(s):	School of Medicine						
Program Leader(s):	Prof. Tamar Kvaratskhelia Prof. Nana Japaridze						
Language of Instruction:	English						
Enrolment Requirement provided by the Law on HE	Secondary School Certificate and Unified National Exam/MoES special Regulation		Other		In case of MoES special Regulation: Proof of Proficiency in English at B2 Level; MCAT (Chemical and Physical Foundations of Biological Systems) or Biology & Chemistry knowledge certification.		
Minor qualification:	N	Available for online enrolment	N	Available for exchange students:	Y	Work experience/ placement:	N
Available for Non-degree students:	N	Prior Registration Requirement	Y	Other	N	Other	N
Estimated student numbers:	150 per year		Program replaces: (if any)		03.11.2018		
Date of possible implementation:	Implemented since Fall 2014; with current amendments from Autumn 2023		Date of proposal:		20.10.2023		

2. Aims and Learning Outcomes

<table>
<tr><td colspan="3">Aims:</td><td colspan="2">✓ To develop caring, competent, confident medical doctors through outcome-based teaching approach ensuring high quality of health care and biomedical research in academic, in- and out-patient settings.
✓ To provide medical training, predominantly in a practical environment (where acquisition and organization of knowledge match with practical application of gained competencies), based on ethical values, respect for individual autonomy and on the premise of rational and efficient interference.
To meet global standards of medical education set by World Federation of Medical Education, and defined by TUNING/MEDINE learning outcomes for undergraduate medical education.</td></tr>
<tr><td>N</td><td colspan="2">Learning outcomes</td><td>N</td><td>Competency Description</td></tr>
<tr><td rowspan="3">1</td><td rowspan="3">Knowledge and Understanding</td><td>Fundamental Biomedical Sciences</td><td>1</td><td>Demonstrates the knowledge of relevant principles, concepts, and ideas of fundamental and applied biomedical sciences: human body structures and functioning, metabolic and hormonal functions, immune function and microbiology, cell and molecular biology and embryology.</td></tr>
<tr><td>Clinical Sciences</td><td>2</td><td>Describes the main aspects of: pathology, infectious disease and microbiology, clinical immunology, genetics and hereditary diseases; treatment of acute illnesses at the scene and emergency department; treatment of internal and surgical diseases at the emergency department; working at the primary healthcare unit; treatment of children, elderly, terminally ill, palliative and psychiatric patients; treatment of gynaecological diseases, management of physiological labour; treatment of critical conditions in the intensive care unit; treatment of various internal and surgical diseases; anaesthesiology and rehabilitation; prescribing different groups of medicine relevant to pathological conditions and diseases; pharmacokinetics, pharmacogenomics, side effects of medicine and drug interactions; peculiarities of prescribing drugs in children and elderly; use of antibiotics and resistance to antibiotics; blood and blood products transfusion.</td></tr>
<tr><td>Behavioural and Social Sciences</td><td>3</td><td>Defines the physician’s role in local and global communities, including psychological and sociological factors; human development at different stages; prevention of diseases; disease screening and surveillance; lifestyle factors; health promotion; promoting the health of the elderly; gender issues in health care; epidemiology; the influence of culture, ethical and legal factors of health care; resource allocation and health economics; global health and inequality.</td></tr>
<tr><td rowspan="3">2</td><td colspan="2" rowspan="3">Skills</td><td>4</td><td>Carries out a consultation with a patient; assesses the clinical presentation; orders investigations; makes differential diagnoses; critically analyses incomplete and controversial data; and negotiates a management plan.</td></tr>
<tr><td>5</td><td>Provides immediate care of medical emergencies, including recognition and evaluation of medical emergencies (DRSABCDE), conducting simulations of first aid, anaphylactic shock management, basic life support, and advanced life support of cardiac and trauma patients in measures of age characteristics according to guidelines.</td></tr>
<tr><td>6</td><td>Prescribes medicines and other treatments with clinical context, considering age characteristics, potential benefits and risks, drug compatibility, pain, and distress relief.</td></tr>
</table>

		7	Carries out relevant practical procedures: using and disposing of personal protective equipment; checking patients vital signs; performing peripheral vein procedures, intradermal, subcutaneous, and intramuscular injections, wound management, urethral catheterization, and taking a smear from the nasopharynx on the simulator; simulating the transportation and communication with patients; taking an ECG and giving oxygen therapy to the patient; conducting functional tests of the respiratory system
		8	Communicates effectively in a medical context verbally and in written form with colleagues, patients, and their relatives irrespective with social, cultural, religious, and ethnic belonging.
		9	Effectively uses the principles, skills, and knowledge of evidence-based medicine; the principles, methods, and knowledge of biomedical science, in medical practice and research; information and information technologies in a medical context; self-learning: acquisition and organization of medical knowledge matching its practical application and retrieval of medical information from different sources and its critical appraisal.
		10	Works in a multidisciplinary team as an ordinary member or leader; formulates tasks; coordinates with team members; adequately assesses the capacity of team members, capacity to deal with uncertainty and force majeure situations; listens, observes, and asks proper questions; plans effectively resources related to intended activities and is responsible for the work done.
3	Autonomy and Responsibility	11	Respects patients' rights by applying ethical and legal principles in medical practice and assessing psychological and social aspects of a patient's illness;

3. Modularized Components Referring to Student Workload and Learning Outcomes

Reference Code (Program-Module-Component	Modules & Components:	Status (core/elective)	ECTS	Semester suggestion	Lecture	WG/Tutorial/Couching Clinical Training	Total Contact hours	Exams and Assessment	Independent work	Total hours
Curriculum Spiral's First Loop (120 ECTS - all Core, additional 12 ECTS of Georgian Language for non-native speaking students)										
MD1101	Introduction to Medicine I - History of Medicine, Communication, Medical Terminology, Bioethics	C	4	I	24	12	36	3	81	120
MD1102	Introduction to Medicine II - Sociology, Psychology, Behavioral Science including Patient-doctor relationship	C	4	II	30	30	60	4	56	120

MD1201	Body Systems I - Musculoskeletal Systems Anatomy, Physiology, Histology, Embryology, Imaging, Medical Physics, Biophysics	C	10	I	72	78	150	4	146	300
MD1202	Body Systems II - Neurosciences Anatomy, Physiology, Histology, Imaging	C	14	II	90	150	240	4	176	420
MD1203	Body Systems III - Cardiovascular and Respiratory Systems Anatomy, Physiology, Histology, Imaging	C	8	III	60	72	132	4	104	240
MD1204	Body Systems IV - Gastrointestinal, Urinary, Endocrine and Reproductive Systems Anatomy, Physiology, Histology, Imaging	C	8	IV	60	72	132	4	104	240
MD1301	Life Sciences I - Cell Biology, Molecular Biology, Medical Chemistry, Biochemistry	C	12	I	90	90	180	8	172	360
MD1302	Life Sciences II - Cell Biology, Molecular Biology, Biochemistry	C	8	II	75	45	120	6	114	240
MD1303	Life Sciences III - Biochemistry, Microbiology, Immunology, Medical Genetics	C	14	III	120	94	214	6	200	420
MD1304	Life Sciences IV- Infection Science (microbiology and clinical microbiology), Immunology	C	14	IV	120	94	214	6	200	420
MD1401	Research Methodology I (including Biostatistics)	C	4	I	15	15	30	3	87	120
MD1402	Research Methodology II (including Evidence Based Medicine)	C	4	II	30	30	60	4	56	120
MD1501	Public Health I - Healthcare systems/models, Ecology, Epidemiology	C	4	III	30	30	60	5	55	120
MD1601	Pathology (including Forensic Medicine)	C	8	IV	60	60	120	5	115	240
MD1001	Clinical Skills I - Basics	C	4	III	0	90	90	5	25	120
MD1003	Georgian language I (Only for non-native speaking Students)	C	6	I	30	90	120	4	56	180

MD1004	Georgian language II (Only for non-native speaking Students)	C	6	II	30	90	120	4	56	180
Curriculum Spiral's Second Loop (60 ECTS – Core 48 ECTS & Free Elective 12 ECTS)										
MD2011	Bridging PBL	C	4	V	0	90	90	0	30	120
MD2021	Systemic Pathology (including Forensic Medicine)	C	8	V	60	60	120	7	113	240
MD2031	Pharmacology	C	6	V	60	60	120	4	56	180
MD2041	Physical Diagnosis	C	8	V	30	150	180	6	54	240
MD2051	Public Health II - Health Care Management, Community Medicine	C	4	V	30	30	60	5	55	120
MD2071	General Surgery	C	6	VI	30	90	120	4	56	180
MD2081	Medical Law & Ethics	C	6	VI	30	60	90	6	84	180
MD1002	Clinical Skills II - Advanced	C	6	VI	30	120	150	5	25	180
Curriculum Spiral's Third Loop (120 ECTS – Core 114 ECTS & Free Elective 6 ECTS)										
MD3011	Internal Medicine I - Cardiology, Pulmonology, Gastroenterology	C	12	VII	60	240	300	6	54	360
MD3012	Internal Medicine II - Stroke Medicine and Neurology, Psychiatry	C	12	VIII	60	240	300	6	54	360
MD3013	Internal Medicine III - Nephrology, Rheumatology, Infectious diseases	C	12	IX	60	240	300	6	54	360
MD3014	Internal Medicine IV - Diabetes & Endocrinology, Hematology, Dermatology	C	12	X	60	240	300	6	54	360
MD3021	Surgery I - Trauma & Orthopedics, Gastrointestinal Surgery, Urology	C	12	VII	60	240	300	6	54	360
MD3022	Surgery II - ENT, Ophthalmology, Maxillofacial-Vascular-Neurosurgery	C	12	VIII	60	240	300	6	54	360

MD3031	Clinical Pharmacology	C	6	X	30	90	120	6	54	180
MD3041	Obstetrics & Gynecology	C	12	X	60	240	300	6	54	360
MD3051	Pediatrics	C	12	IX	60	240	300	6	54	360
MD3061	Family Medicine I	C	6	VII	30	90	120	4	56	180
MD3062	Family Medicine II	C	6	VIII	30	90	120	6	54	180
Curriculum Spiral's Fourth Loop (60 ECTS – Core 42 ECTS & Surgery Electives 18 ECTS)										
MD4011	Internal Medicine V Differential Diagnosis	C	6	XI	30	90	120	4	56	180
MD4021	Surgery Capstone	C	6	XI	30	90	120	4	56	180
MD4031	Medical Ethics and Leadership	C	6	XII	30	30	60	5	115	180
MD4041	Geriatrics	C	6	XI	45	90	135	5	40	180
MD4061	Emergency Medicine	C	6	XII	30	90	120	5	55	180
MD4071	Oncology, Palliative Care	C	6	XII	30	90	120	5	55	180
MD4081	Physical Therapy and Rehabilitation	C	6	XII	30	90	120	4	56	180
ELECTIVE COMPONENTS										
MD5001	Advanced Neurology	E	6	V	30	30	60	5	115	180
MD5002	Advanced Communication Skills in Medicine	E	6	V	30	60	90	5	85	180
MD5003	Applied Molecular Genetics in Medicine	E	6	V	24	24	48	4	128	180
MD5004	Advanced Medical Biophysics	E	4	V	12	24	36	6	78	120
MD5005	End of Life Care	E	4	V	30	0	30	4	86	120
MD5006	Cell Membranes	E	4	V	30	0	30	4	86	120
MD5007	Medical Parasitology	E	4	V	30	0	30	4	86	120

MD5008	Mycology	E	4	V	30	0	30	6	84	120
MD5009	Foodborne and Waterborne Pathogens	E	4	V	10	20	30	6	84	120
MD5010	Everyday Life and Extreme Conditions Pathophysiology	E	4	V	30	0	30	4	86	120
MD5011	Advanced Physiology of Vision	E	4	V	11	28	39	4	77	120
MD5012	Radiology Advances	E	4	V	20	20	40	3	77	120
MD5013	Laboratory Medicine	E	4	V	30	30	60	5	55	120
MD5014	Stem Cells	E	4	V	26	26	52	4	64	120
MD5015	Nutrition	E	4	V	15	30	45	5	70	120
MD5016	Science Review of Maxillofacial Region	E	4	V	24	0	24	4	92	120
MD5017	Advanced Toxicology	E	6	V	24	24	48	4	128	180
MD5018	Seminar on Behavioral Science	E	4	V	26	0	26	6	88	120
MD5019	Neuroscience: Retrospective Guide	E	6	V	24	0	24	4	152	180
MD5020	Advanced Personalized Medicine	E	4	V	26	0	26	4	90	120
MD5021	Clinical Radiobiology and Radiation Protection	E	4	V	24	0	24	4	92	120
MD5022	Advanced Electrocardiography	E	4	V	0	20	20	5	95	120
MD5023	Advances in Primary Care	E	6	V	30	30	60	6	114	180
MD5024	Advances in Inpatient Care	E	4	V	0	20	20	5	95	120
MD5025	Seminar on Patient Safety	E	1	V	6	6	12	2	16	30
MD5026	Seminar on Social Responsibility and Neurorehabilitation	E	1	V	4	6	10	2	18	30
MD5027	Health Economics	E	6	V	26	0	26	4	150	180
MD5028	Managing Information in Healthcare	E	4	IX	30	0	30	4	86	120

MD5029	Strategic Marketing for Healthcare Organizations	E	4	IX	15	30	45	5	70	120
MD5030	Managing and Improving Quality	E	4	IX	30	0	30	4	86	120
MD5031	Development of Medicine	E	4	IX	40	30	70	7	43	120
MD5032	Sexual Dysfunction	E	4	IX	24	12	36	4	80	120
MD5033	Recent Advances in Basic and Clinical Nanomedicine	E	4	IX	18	27	45	5	70	120
MD5034	Advanced Techniques in Dermatologic Surgery	E	4	X	30	30	60	5	55	120
MD5035	Surgical Oncology	E	4	XII	30	30	60	5	55	120
MD5036	Medicine and the Power of Ideas	E	6	V	30	30	60	5	115	180
MD5037	Socioeconomic impact onartificial intelligence	E	2	V	4	12	16	20	24	60
MD5038	Medical informatics– Sustainable Health Ecosystems	E	1	V	2	6	8	10	12	30
MD5039	Intelligent Images: IntroducingModern Microscopy	E	2	V	4	12	16	20	24	60
MD5040	Emotional Leadership and Artof Communication	E	1	V	2	6	8	10	12	30
MD5041	Mental Health and ClinicalPsychology	E	4	IX	30	0	30	4	86	120
MD5042	Holistic Health-Sport-Wellness-Retail Science and Sustainability	E	6	IX	30	30	60	6	114	180
MD5043	The Future of Jobs	E	2	VI	12	10	22	4	34	60
MD5044	Personalized Medicine (German Perspective to care)	E	1	VI	8	0	8	4	18	30
MD5045	Health promotion	E	4	VI	30	0	30	4	86	120
MD5046	Aging Medicine	E	2	VI	12	10	22	4	34	60

MD5047	Occupational Diseases	E	6	VI	30	30	60	6	114	180
MD5048	Smoking Cessation	E	1	VI	8	0	8	4	18	30
MD5049	Reproductive Health/SexualHealth and Wellbeing	E	4	VI	30	0	30	4	86	120
MD5050	New Challenge: Covid-19	E	4	VI	30	0	30	4	86	120
MD5051	Basic principles of Medicalmarketing	E	2	VI	12	10	22	4	34	60
MD5052	Regenerative Medicine	E	6	VI	30	30	60	6	114	180
MD5053	Advanced Methods in Orthopedics	E	1	VII	8	0	8	4	18	30
MD5054	Peculiarities of CardiovascularDiseases	E	2	VI	12	10	22	4	34	60
MD5055	SimPeds Crash Course	E	2	VI	12	10	22	4	34	60
MD5056	Eye and Systematic Diseases	E	4	VI	30	0	30	4	86	120
MD5057	Functional-Aesthetic, Rhino surgery	E	4	VI	30	0	30	4	86	120
MD5058	Advances in Evidence-Based Medicine	E	6	VI	30	30	60	6	114	180
MD5059	Digital Microscopy – New Ideas	E	2	VI	12	10	22	4	34	60
MD5060	Pain Management	E	6	VI	30	30	60	6	114	180
MD5061	Clinical Practice in Community Medicine	E	1	VII	8	0	8	4	18	30
MD5062	Clinical Practice in Ocular Surgery	E	6	XI	30	144	180	6	0	180
MD5063	Clinical Practice in Oncological Surgery	E	6	XI	30	144	180	6	0	180
MD5064	Clinical Practice in ENT	E	6	XI	30	144	180	6	0	180
MD5065	Clinical Practice in Neurosurgery	E	6	XI	30	144	180	6	0	180
MD5066	Clinical Practice in Maxillofacial Surgery	E	6	XI	30	144	180	6	0	180

MD5067	Clinical Practice in Orthopedic Surgery	E	6	XI	30	144	180	6	0	180
MD5068	Personal Data Protection in Healthcare	E	6	IV	30	30	60	6	114	180
MD5069	Clinical Practice in Forensic Medicine	E	4	IX	15	15	30	4	86	120
MD5070	Obesity Medicine	E	6	VI	30	30	60	4	116	180
MD5071	Methods in Modern Microscopy	E	4	V	24	24	48	4	68	120
MD5072	Digital 3D/4D Imaging for Bio-structural and Bio-medical Application	E	6	V	30	30	60	4	116	180
MD5073	Clinical Practice in Cardiovascular Diseases	E	6	XI	30	144	180	6	0	180
MD5074	Cardiac Electrophysiology	E	6	V	30	30	60	4	116	180
MD5075	Health Needs Assessment and Priority Settings	E	4	V	30	0	30	4	86	120
MD5076	Modern Approach in Abdominal Surgery	E	2	IX	30	26	60	4	0	60
MD5077	Primary Specialized Health Care	E	6	IX	30	30	60	4	116	180
MD5078	Low Back Pain and its Management	E	4	V	30	0	30	4	86	120
MD5079	Clinical Practice in Surgical Gynecology	E	6	XI	30	144	180	6	0	180
MD5080	Clinical Practice in Endoscopy	E	6	XI	30	144	180	6	0	180
MD5081	Clinical Practice in Breast Health	E	6	XI	30	144	180	6	0	180

4. Program Description

Employed teaching and assessment methodologies enable the acquisition and organization of knowledge match with practical application of gained competencies. Every graduate must complete at least 5500 hours of medical training as required by the European Directive 2005/36/EC of the European Parliament and of the European Council of 7 September 2005 on the recognition of professional qualifications. Principles of outcome-based education imply that teaching, learning and assessment are conducted on the basis of predefied competencies of graduates in accordance with the "top-bottom" principle.

The MD curriculum is comprised of four loops referring to knowledge, skills and values, where every consecutive loop builds on previous one and sets more complex learning objectives.

- ✓ The Curriculum Spiral's First Loop (120 ECTS) is comprised of the widely integrated core modules of Body Systems (Anatomy, Physiology, Histology, Imaging) and Life Sciences (Biochemistry, Molecular Biology, Cell Biology, Medical Genetics, Microbiology, Immunology and Infection Science), which are vertically linked to summative pathology course and accompanied by teaching core values of medicine, clinical skills and research methods. Also additional 12 ECTS are applied for Georgian language only for non-native speaking students.
- ✓ The Curriculum Spiral's Second Loop (60 ECTS) containing bridging courses (Bridging PBL, Pharmacology and Systemic Pathology) and synergy courses (Physical Diagnosis, General Surgery, etc) links the study of pathological changes and disease symptoms with the practical comprehension of modern principles and methods facilitating the diagnostic process.
- ✓ The Curriculum Spiral's Third Loop (120 ECTS) is bound to the study of the treatment of diseases and syndromes in accordance with the latest clinical guidelines and protocols constructed by the evidence-based medicine. It builds on the previous loop revisiting and deepening knowledge, mastering skills and developing values simultaneously setting higher-level complex objectives.
- ✓ The Curriculum Spiral's Fourth Loop (60 ECTS) builds on and rounds up previously acquired competences reinforcing trans- disciplinary understanding of real-world challenges. Thus, final and highest level of learning objectives are met through hands on practice applying gained knowledge, skills and values independent of discipline specific understanding.

To complete the MD program, students are required to earn 324 core credits (plus 12 credits in the Georgian language for non-native-speaking students) and 36 elective credits, amounting to a total of 372 credits for non-native-speaking students and 360 credits for native-speaking students.

5. Methods of Achieving Learning Outcomes and Assessment: Rationale between employed methods and achievement of learning outcomes:

Program Learning Outcomes are best achieved through:

- ✓ interactive lectures, working group sessions and tutorials, TBL- Team Based Learning
- ✓ problem-based learning (PBL)
- ✓ case-based learning (CBL)
- ✓ role-plays,
- ✓ CBCR – Case-based Clinical Reasoning
- ✓ bedside learning and night shift,
- ✓ individual-, peer- and group coaching,
- ✓ e-, simulation- and 3D-based learning,
- ✓ Laboratory teaching,
- ✓ Practice in inpatient and outpatient care
- ✓ Teaching documenting and use of medical history in Electronic Health Record Systems in outpatient and inpatient departments
- ✓ Mentoring and feedback teaching

Assessment Methods:

- ✓ MCQ
- ✓ Case based discussion (CBD)
- ✓ Mini Clinical Evaluation Exercise (Mini-Cex),
- ✓ Direct Observation of Procedural Skills (DOPS),
- ✓ Objective Structured Practical Examination (OSPE)
- ✓ Open Book,
- ✓ Concept Map,
- ✓ Portfolio,
- ✓ Practical Spot Exam
- ✓ Objectively Structured Clinical Examination (OSCE)
- ✓ Role-plays
- ✓ Scientific presentation

6. Grading System:

Number of points	Mark/grade (short description)	Average performance percentage ratio of successfulstudents (may be used for monitoring assessment adequacy)
91-100	A (excellent)	the best 10 %
81-90	B (very good)	exceeding average 25 %
71-80	C (good)	average 30 %
61-70	D (satisfactory)	close to average 25%
51-60	E (sufficient)	the worst passing 10%
41-50	FX (resit in the same semester)	
0-40	F (Fail)	

The minimal level of competence for individual components is determined by the syllabus of the relevant course.

7. Field of Employment

A graduate of the program can be employed as a junior doctor who performs the function of a doctor under the guidance and responsibility of a subject with the right to independent medical activity and can also be engaged in pedagogical and/or scientific activities in accordance with the law. A graduate can continue studies at the next levels of education in residency or doctorate, in accordance with the legislation of Georgia, by meeting the specified prerequisites.

8. Resource needs essential for program delivery:

Name:	Description:
E-resources	Computer based training resources, educational videos and study aids, E-Library. • Scopus • Science Direct • Elsevier Database • Hein Online • PubMed
Clinical Setting	Predominantly New Vision University Hospital & New Vision University Clinical, Research & Teaching Centers; NVU Affiliated Clinics
Material and Technical Resources	• Auditoriums, conference hall, workspaces fully equipped with appropriate educational resources • Material resources owned by the university • Library
Human Resource	The program is implemented by academic staff with appropriate qualifications, competence, and professional experience to deliver teaching and produce the learning outcomes of the Master programme. See Appendix 1

Attachment: Modularized Components Referring to Pre-requisite Components and Learning Outcomes

Reference Code (Program-Module-Component indication)	Modules & Components:	Pre-requisite Component(s): (Component code(s))	Knowledge and Understanding	Skills	Autonomy and Responsibility
Curriculum Spiral's First Loop (120 ECTS– All Core / additional 12 ECTS of Georgian Language for non-native speaking students)					
MD1101	Introduction to Medicine I	NA	√	√	√
MD1102	Introduction to Medicine II	MD1101	√	√	√
MD1201	Body Systems I	NA	√	√	
MD1202	Body Systems II	MD1201	√	√	
MD1203	Body Systems III	MD1202	√	√	
MD1204	Body Systems IV	MD1203	√	√	
MD1301	Life Sciences I	NA	√	√	
MD1302	Life Sciences II	MD1301	√	√	
MD1303	Life Sciences III	MD1302	√	√	
MD1304	Life Sciences IV	MD1303	√	√	
MD1401	Research Methodology I	NA	√	√	
MD1402	Research Methodology II	MD1401	√	√	√
MD1501	Public Health I	NA	√	√	
MD1601	Pathology	MD1203 MD1303	√	√	
MD1001	Clinical Skills I - Basics	MD1202	√	√	
MD1003	Georgian language I (Only for Foreign Students)	NA	√	√	
MD1004	Georgian language II (Only for Foreign Students)	MD1003	√	√	

Curriculum Spiral's Second Loop (60 ECTS – Core 48 & Free Elective 12)					
MD2011	Bridging PBL	MD1204	√	√	
MD2021	Systemic Pathology	MD1601 MD1204	√	√	
MD2031	Pharmacology	MD1204 MD1304 MD1601	√	√	
MD2041	Physical Diagnosis	MD1204 MD1304 MD1601	√	√	
MD2051	Public Health II	MD1402 MD1501	√	√	
MD2071	General Surgery	MD1601 MD1204	√	√	
MD2081	Medical Law & Ethics	MD2051	√	√	√
MD1002	Clinical Skills II - Advanced	MD1001 MD1204	√	√	√
Curriculum Spiral's Third Loop (120 ECTS – Core 114 & Free Elective 6)					
MD3011	Internal Medicine I	MD2021 MD2031 MD2041	√	√	√
MD3012	Internal Medicine II	MD3011	√	√	√
MD3013	Internal Medicine III	MD3012	√	√	√
MD3014	Internal Medicine IV	MD3013	√	√	√
MD3021	Surgery I	MD2071 MD2021 MD2031 MD2041	√	√	√
MD3022	Surgery II	MD3021	√	√	√
MD3031	Clinical Pharmacology	MD2021 MD2031 MD3012	√	√	
MD3041	Obstetrics & Gynecology	MD2071 MD2041 MD3022	√	√	√
MD3051	Pediatrics	MD2021 MD2031 MD2041	√	√	√
MD3061	Family Medicine I	MD2021 MD2031 MD1204 MD2041	√	√	√

MD3062	Family Medicine II	MD3061	√	√	√
Curriculum Spiral's Fourth Loop (60 ECTS –Core 42 ECTS & Surgery Electives 18 ECTS)					
MD4011	Internal Medicine V	MD3014 MD3031	√	√	√
MD4021	Surgery Capstone	MD3022 MD3041	√	√	√
MD4031	Medical Ethics and Leadership	MD3014 MD2081	√	√	√
MD4041	Geriatrics	MD3014	√	√	√
MD4061	Emergency Medicine	MD2031 MD3013	√	√	√
MD4071	Oncology, Palliative Care	MD3014	√	√	√
MD4081	Physical Therapy and Rehabilitation	MD3013 MD3022 MD3051	√	√	√
ELECTIVE COMPONENTS					
MD5001	Advanced Neurology	MD1202	√	√	
MD5002	Communication Skills in Medicine	MD1102	√	√	
MD5003	Applied Molecular Genetics in Medicine	MD1303	√	√	
MD5004	Advanced Medical Biophysics	MD1204	√	√	
MD5005	End of Life Care	MD1001	√	√	√
MD5006	Cell Membranes	MD1302	√	√	
MD5007	Advanced Parasitology	MD1304	√	√	
MD5008	Mycology	MD1303	√	√	
MD5009	Foodborne and Waterborne Pathogens	MD1303	√	√	
MD5010	Everyday Life and Extreme Conditions Pathophysiology	MD1601	√	√	
MD5011	Physiology of Vision	MD1202	√	√	
MD5012	Radiology Advances	MD1204	√	√	
MD5013	Laboratory Medicine	MD1304	√	√	
MD5014	Stem Cells	MD1302	√	√	
MD5015	Nutrition	MD1204	√	√	

MD5016	Science Review of Maxillofacial Region	MD1201	√	√	
MD5017	Advanced Toxicology	MD1304	√	√	
MD5018	Seminar on Behavioral Science	MD1202	√	√	
MD5019	Neuroscience: Retrospective Guide	MD1202	√	√	
MD5020	Personalized Medicine	MD1304	√	√	
MD5021	Clinical Radiobiology and Radiation Protection	N/A	√	√	
MD5022	Electrocardiography	MD1203	√	√	
MD5023	Primary Care	N/A	√	√	
MD5024	Inpatient Care	N/A	√	√	
MD5025	Seminar on Patient Safety	N/A	√	√	
MD5026	Seminar on Social Responsibility and Neurorehabilitation	MD1202	√	√	
MD5027	Health Economics	N/A	√	√	
MD5028	Managing Information in Healthcare	N/A	√	√	
MD5029	Strategic Marketing for Healthcare Organizations	N/A	√	√	
MD5030	Managing and Improving Quality	N/A	√	√	
MD5031	Development Medicine	N/A	√	√	
MD5032	Sexual Dysfunction	MD3022 MD3061	√	√	√
MD5033	Recent Advances in Basic and Clinical Nanomedicine	MD2031	√	√	
MD5034	Advanced Techniques in Dermatologic Surgery	MD3023	√	√	
MD5035	Surgical Oncology	MD3023	√	√	√
MD5036	Medicine and the Power of Ideas	N/A	√	√	
MD5037	Socioeconomic impact on artificial intelligence	N/A	√	√	
MD5038	Medical informatics – Sustainable HealthEcosystems	N/A	√	√	
MD5039	Intelligent Images: IntroducingModern Microscopy	N/A	√	√	
MD5040	Emotional Leadership and Art of Communication	MD1102	√	√	
MD5041	Mental Health and Clinical Psychology	N/A	√	√	

MD5042	Holistic Health-Sport-Wellness Science and Sustainability	N/A	√	√	
MD5043	The Future of Jobs	N/A	√	√	
MD5044	Personalized Medicine (German Perspective to care)	N/A	√	√	
MD5045	Health promotion	N/A	√	√	
MD5046	Aging Medicine	N/A	√	√	
MD5047	Occupational Diseases	N/A	√	√	
MD5048	Smoking Cessation	N/A	√	√	
MD5049	Reproductive Health/Sexual Healthand Wellbeing	MD1204	√	√	
MD5050	New Challenge: Covid-19	N/A	√	√	
MD5051	Basic principles of Medical Marketing	N/A	√	√	
D5052	Regenerative Medicine	N/A	√	√	
MD5053	Advanced Methods in Orthopedics	N/A	√	√	
MD5054	Peculiarities of Cardiovascular Diseases	N/A	√	√	
MD5055	SimPeds Crash Course	N/A	√	√	
MD5056	Eye and Systematic Diseases	MD2021	√	√	
MD5057	Functional-Aesthetic Rhino surgery	MD3022	√	√	
MD5058	Evidence-Based Medicine	N/A	√	√	
MD5059	Digital Microscopy - New Ideas	MD1202 MD1302	√	√	
MD5060	Pain Management	MD2031	√	√	
MD5061	Clinical Practice in Community Medicine	MD2051	√	√	√
MD5062	Clinical Practice in Ocular Surgery	MD3014 MD3041 MD3051	√	√	√
MD5063	Clinical Practice in Oncological Surgery	MD3014 MD3041 MD3051	√	√	√
MD5064	Clinical Practice in ENT	MD3014 MD3041 MD3051	√	√	√
MD5065	Clinical Practice in Neurosurgery	MD3014 MD3041 MD3051	√	√	√

MD5066	Clinical Practice in Maxillofacial Surgery	MD3014 MD3041 MD3051	√	√	√
MD5067	Clinical Practice in Orthopedic Surgery	MD3014 MD3041 MD3051	√	√	√
MD5068	Personal Data Protection in Healthcare	N/A	√	√	√
MD5069	Forensic Medicine	MD3012 MD3022	√	√	√
MD5070	Obesity Medicine	N/A	√	√	√
MD5071	Methods in Modern Microscopy	N/A	√	√	
MD5072	Digital 3D/4D Imaging for Bio-structural and Bio-medical Application	MD1204 MD1304	√	√	
MD5073	Clinical Practice in Cardiovascular Diseases	MD3011	√	√	√
MD5074	Cardiac Electrophysiology	MD1203 MD1601	√	√	
MD5075	Health Needs Assessment and Priority Settings	N/A	√	√	
MD5076	Modern Approach in Abdominal Surgery	MD3014 MD3022	√	√	√
MD5077	Primary Specialized Health Care	N/A	√	√	
MD5078	Low Back Pain and its Management	MD1202 MD3012	√	√	
MD5079	Clinical Practice in Surgical Gynecology	MD3041	√	√	√
MD5080	Clinical Practice in Endoscopy	MD3022	√	√	√
MD5081	Clinical Practice in Breast Health	MD3041 MD3014 MD4071	√	√	√