

**LM-41 Single-Cycle Master Degree Course in Medicine and Surgery**  
University of Catania – Academic Year 2024/2025

**Study Plan**

**First year**

**First semester**

<b>PRINCIPLES OF THE HUMAN MATTER</b>		<b>9</b>
Applied physics		4
Chemistry and biochemistry propaedeutics		5
<b>THE CELL: MOLECULES AND PROCESSES (annual course)</b>		<b>7</b>
Molecular biology I		2
Applied biology I		3
Medical genetics I		2
<b>BODY ARCHITECTURE (annual course)</b>		<b>5</b>
Histology, cytology, embryology and organogenesis		5
<b>TECH</b>	<b>HEALTH INFORMATICS</b>	<b>3</b>

**Second semester**

<b>THE CELL: FUNCTIONS AND REGULATIONS</b>		<b>9</b>
Cellular physiology		4
Biochemistry		5
<b>THE CELL: MOLECULES AND PROCESSES (annual course)</b>		<b>7</b>
Molecular biology II		1
Applied biology II		4
Medical genetics II		2
<b>BODY ARCHITECTURE (annual course)</b>		<b>7</b>
Regional anatomy and gross neuroanatomy		7
<b>FUTURE</b>	<b>HEALTH AND THE CLIMATE CHANGES</b>	<b>2</b>
<b>ADDITIONAL LANGUAGE KNOWLEDGE</b>		<b>3</b>
<b>PROFESSIONALIZING ACTIVITIES</b>		<b>2</b>

**Second year**

**First semester**

<b>BODY FUNCTIONS 1</b>		<b>11</b>
Human physiology		6
Biochemistry		2
Organ structure		3
<b>DISEASE ONSET 1</b>		<b>12</b>
General pathology and immunology		6
Microbiology		3
Principles of anatomopathology		3
<b>TECH</b>	<b>BIO-ENGINEERING</b>	<b>7</b>
<b>TECH</b>	Tissue engineering, bioprinting	3
<b>TECH</b>	Scaffolding and organoids	4

**Second semester**

<b>BODY FUNCTIONS 2</b>		<b>12</b>
Human physiology		6

	Biochemistry	3
	Organ structure	3
	<b>DISEASE ONSET 2</b>	<b>11</b>
	General pathology and immunology	5
	Microbiology	3
	Principles of anatomopathology	3
<b>FUTURE</b>	<b>WATER, FOOD AND SUSTAINABLE DIETS</b>	<b>3</b>
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>3</b>

<b>Third year</b>		
<b>First semester</b>		
	<b>BASICS OF DIAGNOSTICS AND PHARMACOLOGY</b>	<b>6</b>
	General pharmacology	3
	Introduction to diagnostic imaging	3
	<b>DISEASES OF THE CARDIOVASCULAR AND ENDOCRINE SYSTEMS</b>	<b>14</b>
	Applied pharmacology	2
	Anatomopathology	1
	Cardiovascular diseases	4
	Endocrinology	3
	Vascular surgery	2
	Cardiac surgery	1
	Applied diagnostics	1
<b>TECH</b>	<b>ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND BIG DATA</b>	<b>3</b>
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>6</b>
<b>Second semester</b>		
	<b>DISEASES OF THE RESPIRATORY AND URO-NEPHROLOGICAL SYSTEMS</b>	<b>10</b>
	Applied pharmacology	1
	Respiratory diseases	3
	Kidney diseases and transplantation	2
	Thoracic surgery	1
	Urology	2
	Applied diagnostics	1
	<b>DISEASES OF THE SKULL AND SENSE ORGANS</b>	<b>6</b>
	Odontostomatological Diseases	1
	Maxillofacial surgery	1
	Ophtalmological Diseases	2
	Otorhinolaryngological Diseases	2
	<b>BEING A MEDICAL DOCTOR</b>	<b>6</b>
	Clinical psychology	2
	History of medicine and bioethics	3
	Sociology and communication skills	1
<b>FUTURE</b>	<b>TELEMONITORING AND PROXIMITY MEDICINE</b>	<b>3</b>
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>6</b>

<b>Fourth year</b>		
<b>First semester</b>		
	<b>DISEASES OF THE GASTROENTERIC SYSTEM</b>	<b>9</b>

	Applied pharmacology	2
	Anatomopathology	1
	Gastroenterology	3
	General surgery	2
	Applied diagnostics	1
	<b>DISEASES OF THE BONES AND JOINTS</b>	<b>4</b>
	Orthopedics	3
	Radiology	1
	<b>LAB WORKS</b>	<b>5</b>
	Clinical biochemistry and clinical molecular biology	1
	Clinical pathology	1
	Microbiology and clinical microbiology	2
	Technical and laboratory medical sciences	1
<b>TECH</b>	<b>MEDICAL AND SURGICAL ROBOTICS</b>	<b>3</b>
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>6</b>
	<b>Second semester</b>	
	<b>RHEUMATOLOGICAL, INFECTIOUS AND SKIN DISEASES</b>	<b>8</b>
	Applied pharmacology	1
	Rheumatology	1
	Infectious diseases	4
	Dermatology	2
	<b>GLOBAL HEALTH, PUBLIC HEALTH AND COMMUNITY MEDICINE</b>	<b>8</b>
	General and applied hygiene	4
	Wellness and exercise medicine	1
	Biostatistics	3
<b>FUTURE</b>	<b>VACCINE PREVENTABLE INFECTIOUS DISEASES AND EPIDEMICS</b>	<b>4</b>
	Epidemic intelligence and outbreak response	1
	Advanced medical therapy products (AMTPs) 1	1
	Advanced medical therapy products (AMTPs) 2	1
	Advanced medical therapy products (AMTPs) 3	1
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>7</b>

<b>Fifth year</b>		
<b>First semester</b>		
	<b>BRAIN AND NERVOUS SYSTEM DISEASES</b>	<b>14</b>
	Neuro-psychopharmacology	2
	Anatomopathology	1
	Psychiatry	4
	Neurology	4
	Neurosurgery	2
	Neuroradiology	1
	<b>PATIENT MANAGEMENT 1</b>	<b>8</b>
	Internal medicine	4
	General surgery	4
<b>TECH</b>	<b>DIGITAL HEALTH AND TECHNOLOGICAL INNOVATION</b>	<b>3</b>
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>5</b>
	<b>Second semester</b>	
	<b>OBSTETRICS, GYNECOLOGY AND PEDIATRIC DISEASES</b>	<b>11</b>

	Anatomopathology	1
	Pediatric and child surgery	1
	Pediatrics	4
	Infant neuropsychiatry	1
	Applied diagnostics	1
	Obstetrics and gynecology	3
	<b>CLINICAL AND MOLECULAR PRINCIPLES OF CANCER MEDICINE</b>	<b>12</b>
	Applied pharmacology	2
	Molecular diagnostics	2
	Medical oncology	4
	Blood diseases	4
<b>FUTURE</b>	<b>HEALTH IN COUNTRIES WITH PROTRACTED CONFLICTS, REFUGEES AND MIGRANTS</b>	<b>4</b>
	Health in countries with protracted conflicts	2
	Refugees and migrants' health	2
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>5</b>

<b>Sixth year</b>		
	<b>First semester</b>	
	<b>EMERGENCIES</b>	<b>11</b>
	Emergency medicine	3
	Emergency surgery	3
	Plastic surgery	1
	Anesthesiology and life support	4
	<b>FORENSIC AND OCCUPATIONAL MEDICINE</b>	<b>5</b>
	Forensic medicine	3
	Occupational medicine	2
	<b>PATIENT MANAGEMENT 2</b>	<b>6</b>
	Internal Medicine	3
	General surgery	3
<b>TECH</b>	<b>FROM IDEAS TO PATENTS</b>	<b>6</b>
	Health technology assessment	1
	Health technology assessment on drug development	1
	Clinical research and development	2
	Technology transfer and patents	2
	<b>PROFESSIONALIZING ACTIVITIES</b>	<b>5</b>
	<b>Second semester</b>	
	<b>ELECTIVE ACTIVITIES</b>	<b>8</b>
	<b>PROFESSIONALIZING ACTIVITIES - CLINICAL FIELD</b>	<b>5</b>
	<b>PROFESSIONALIZING ACTIVITIES - SURGICAL FIELD</b>	<b>5</b>
	<b>PROFESSIONALIZING ACTIVITIES - GENERAL MEDICINE</b>	<b>5</b>
	<b>FINAL EXAM</b>	<b>15</b>