In the name of God

Islamic Republic of Iran

Ministry of Health and Medical Education

Deputy Ministry for Education

General Medicine

Degree: Doctor of Medicine (MD)

M.B.B.S

Syllabus for Medical Planning, date 2019-2024

Isfahan University of Medical Sciences, Management of International Education Development.

Syllabus for Isfahan University of Medical Sciences

International

English Language Students, date 2024

Specifications of Program and Courses of Educational Program of MD

Main specifications of program:

Name of Program: Doctor of Medicine (MD)

Program approved by Higher Council of Medical Sciences Planning, Ministry of Health.

Total Educational Credits: 283 credits presented as follows:

- General Courses	14 Credits
- Basic Core Courses	69.5 Credits
- Specialized Core Courses	177.5 Credits
- Non-Core Courses	16 Credits
- Thesis	6 Credits

- Total . 283 Credits

Steps

This program includes 4 steps: Basic Sciences, Clinical Preliminaries, Clerkship and internship.

Core Courses:

The core courses include the core curriculum learning of which is necessary for all students of General Doctor of Medicine for meeting expected capabilities of general practitioners. Faculty of Medicine shall provide the conditions for ensuring the presentation of such courses and fulfillment of goals mentioned therein.

Core courses of program are presented as follows:

1. **The 1st Step (Basic Sciences):**

   General Courses: at least 8 credits out of 14 core credits before comprehensive examination of basic sciences

   Basic Courses: at least 46.5 credits out of 69.5 core basic credits before comprehensive examination of basic sciences

   Entering Clinical Preliminaries is subject to passing comprehensive examination of basic sciences.

2. **The 2nd Step (Clinical Preliminaries):**

   Number of Specialized Credits of Clinical Preliminaries: 29 credits

   Number of Floating Credits between Basic Sciences and Clinical Preliminaries steps: 15 credits of Basic Courses

3. **The 3rd Step (Clerkship):**

   Minimum duration of clerkship is 21 months which may be divided into, according to the faculty program, 2 sections of Clerkship I (or student) and Clerkship II (or externship):

   Total Theoretical Credits of Clerkship (Core): 31 credits

   Total Clinical Clerkship Credits (Core): 63 credits (equal to 21 months)

   Total Floating Theoretical Credits between Clinical Preliminaries and Clerkship (Core): 7 credits of specialized courses

   At the end of 3rd step, students shall pass the comprehensive examination of pre-internship.

   For participation in general pre-internship examination, students shall pass all general courses and all basic and specialized courses related to clinical preliminaries and clerkship.

4. **The 4th Step (Internship):**

Duration of Internship: 18 months

Number of Core Credits: 56 credits

One month from the internship step is assigned to the interns on vacation.

A student's graduation from a general medical doctorate is subject to success in the practical test of clinical competence.

Elective (non-core) Courses

Elective courses include the non-core subjects of program providing this possibility for universities and students to present the content and opportunities of various learning as complement for helping meet the capabilities expected from the MD according to the academic conditions, special needs of region and also interests of educational departments and students. Total specialized elective credits during this program are 16 credits:

Number of specialized selected credits that the student must have passed before the pre-internship test: 4 credits

Number of specialized selected credits (internship) that must be completed during the internship phase according to the university program and selection by intern: 12 credits

Table A: General Courses of MD

Code	Course Name	Number of Credit	Hours			Prerequisite or Concurrent Courses
			Theoretical	Practical	Total	
1	Persian Literature	3	51		51	
2	Physical Exercise I	1		34	34	
3	Physical Exercise II	1		34	34	
4	Islamic knowledge 1	2	34		34	
5	Islamic knowledge 2	2	34		34	
6	Islamic knowledge 3 General English language	2 3	34 51		34 51	
Total		**14**	**204**	**68**	**272**	

Table 2. Core Courses

Code	Course	Hours					Phase (Basic or Clinical Sciences)	Type of Course (Basic or Clinical Sciences)
		Total (Credit)	Theo.	Prac.	Clerkship	Internship		
Anatomy Courses:		(15)31 4	196	118				
101	Introduction to Anatomy	46	38	8			Basic	Basic

102	Musculoskeletal Anatomy	50	30	20			Basic	Basic
103	Head and Neck Anatomy	37	20	17			Basic	Basic
104	Cardiovascular System Anatomy	33	17	16			Basic	Basic
105	Respiratory System Anatomy	16	8	8			Basic	Basic

106	Gastrointestinal System Anatomy	43	26	17			Basic	Basic
107	Endocrine Glands Anatomy	10	4	6			Basic	Basic
108	Nervous System Anatomy	39	25	14			Basic	Basic
109	Special Senses System Anatomy	18	14	4			Basic	Basic
110	Genitourinary System Anatomy	22	14	8			Basic	Basic
Physiology Courses:		(8)150	122	28				
111	Cell Physiology	14	14				Basic	Basic
112	Heart Physiology	10	8	2			Basic	Basic
113	Respiratory Physiology	14	10	4			Basic	Basic
114	Nerves & Special Senses Physiology	28	24	4			Basic	Basic
115	Blood Circulation Physiology	23	19	4			Basic	Basic
116	Gastrointestinal System Physiology	14	10	4			Basic	Basic
117	Hematology Physiology	7	5	2			Basic	Basic
118	Glands & Reproduction Physiology	24	20	4			Basic	Basic
119	Kidney Physiology	16	12	4			Basic	Basic

Medical Biochemistry Courses:		(5)100	70	30				
120	Molecular-Cellular Biochemistry	47	32	15			Basic	Basic
121	Discipline Biochemistry	37	22	15			Basic	Basic
122	Hormones Biochemistry	12	12				Basic	Basic
123	Kidney Biochemistry	4	4				Basic	Basic
124	Medical Genetics	(2)34	34				Basic/Clinical	Basic
125	General Principles of Nutrition	(2)34	34				Basic/Clinical	Basic

126	Physics in Medicine	(2)38	30	8			Basic/Clinical	Basic
Microbiology and Parasitology Courses:		137 (7 credits)	101	36				
127	Medical Microbiology	61	41	20			Basic	Basic
128	Parasitology	40	28	12			Basic	Basic
129	Medical Mycology	19	15	4			Basic	Basic
130	Medical Virology	17	17				Basic	Basic
Immunology Courses:		(3) 55	47	8				
131	Medical Immunology	38	30	8			Basic/Clinical	Basic
132	Clinical Immunology	17	17				Clinical	Basic
Community Medicine and Health Sciences:		171 (9.5)	152	19				
133	Principles of Health Services	26	26				Basic	Basic
134	Principles of Epidemiology	34	34				Basic	Basic
135	Biostatistics	17	17				Clinical	Basic

136	Research Methodology and Evidence-Based Medicine	26	7	19			Clinical/ Clerkship	Basic
137	Common Contagious Diseases Epidemiology in Country	17	17				Clinical/ Clerkship	Basic
138	Common Non-Contagious Diseases Epidemiology in Country	17	17				Clinical/ Clerkship	Basic
139	Principles of Demography and Family Health	34	34				Clerkship	Specialized
140	Health Psychology	(2) 34	34				Basic/Clinical	Basic

Medical Practices		(2) 68		68				
141	Medical Practice I	17		17			Basic	Basic
142	Medical Practice II	17		17			Basic	Basic
143	Medical Practice III	17		17			Basic	Basic
144	Medical Practice IV	17		17			Basic	Basic
Specialized English Language Courses:		(6) 102	102					
145	Specialized English LanguageI	51	51				Basic	Basic
146	Specialized English Language II	51	51				Basic	Basic
General Pathology Courses:		(3) 51	51					
147	Generalities of Pathology and Cell Injury	9	9				Basic/Clinical	Basic

148	Edema, Tissue Repair and Hemodynamic Disorders Pathology	10	10				Basic/Clinical	Basic
149	Human Body Immunity System Disorders Pathology	8	8				Basic/Clinical	Basic
150	Neoplasia Pathology	10	10				Basic/Clinical	Basic
151	Childhood Diseases & Genetic Disorders Pathology	8	8				Basic/Clinical	Basic
152	Environmental, nutritional and Infectious Diseases Pathology	6	6				Basic/Clinical	Basic
153	Practical Pathology	(1)34					Basic/Clinical	Basic
154	Clinical Pathology	(1)18	16				Clinical/ Clerkship	Specialized

Specialized Pathology Courses:		(4.7)9 2	68					
155	Cardiovascular System Pathology	8	6				Clinical	Specialized
156	Respiratory System Pathology	8	6				Clinical	Specialized
157	Kidney and Upper Urinary Tracts Pathology	8	6				Clinical	Specialized
158	Gastrointestinal System Pathology	12	8				Clinical	Specialized
159	Liver and Bile Tracts Pathology	8	6				Clinical	Specialized
160	Genital System, Lower Urinary Tract, and Breast Pathology	14	10				Clinical	Specialized

161	Hematology and Endocrinology Pathology	12	10				Clinical	Specialized
162	Skin, Bones, Soft Tissues and Joints Pathology	12	8				Clinical	Specialized
163	Central and Peripheral Nervous System Pathology	10	8				Clinical	Specialized
Medical Pharmacology Courses:		(4)68	68					
164	Basic Principles of Medical Pharmacology	17	17				Basic/Clinical	Basic
165	Cardiovascular & Pulmonary Drugs Pharmacology	10	10				Clinical/ Clerkship	Basic
166	Antimicrobial Drugs Pharmacology	10	10				Clinical/ Clerkship	Basic

167	Gastrointestinal System, Hematology and Rheumatology Drugs Pharmacology	10	10				Clinical/ Clerkship	Basic
168	Endocrine Drugs Pharmacology	9	9				Clinical/ Clerkship	Basic
169	Neurology Drugs Pharmacology	12	12				Clinical/ Clerkship	Basic
Medical History ar Physical Examination:		(4)136	34		102			
170	Medical History and Physical Examination I	(1)17	17				Clinical	Specialized

171	Medical History and Physical Examination Clerkship I	(1)51			51		Clinical	Specialized
172	Medical History and Physical Examination II	(1)17	17				Clinical	Specialized
173	Medical History and Physical Examination Clerkship II	(1)51			51		Clinical	Specialized
Clinical Introduction to Diseases		(18)32 2	290	32				
174	Clinical Reasoning of Common Signs and Symptoms Approach	(0.5)8	8				Clinical	Specialized
175	Introduction to Cardiovascular Diseases	(2)36	32	4			Clinical	Specialized
176	Introduction to Respiratory System	(2)36	32	4			Clinical	Specialized
177	Introduction to Hematology	(2)36	32	4			Clinical	Specialized
178	Introduction to Gastrointestinal System and Hepatology	(2.1)40	36	4			Clinical	Specialized
179	Introduction to Endocrinology and Metabolic Diseases	(2)36	32	4			Clinical	Specialized
180	Introduction to Nephrology	(1.6)30	26	4			Clinical	Specialized

181	Introduction to Rheumatology	(1.6)3 0	26	4			Clinical	Specialized
182	Introduction Pediatrics	(1)17	17				Clinical	Specialized
183	Introduction to Surgical Diseases	(1)19	15	4			Clinical	Specialized
184	Introduction to Nervous System	(0.5)9	9				Clinical	Specialized
185	Introduction Psychiatrics	(0.5)8	8				Clinical	Specialized
186	Introduction Infectious Diseases	(1)17	17				Clinical	Specialized
Clinical Courses								
187	Traditional Medicine	(2)34	34				Clerkship	Specialized
188	Internal Medicine Clerkship	9 Credits		9 Credits	3 months (12 wk)		Clerkship	Specialized
189	General Internal Medicine Internship	12 Credits		12 Credits		3 months (12 wk)	Internship	Specialized
190	Cardiovascular Diseases Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
191	Internship for Cardiovascular Diseases	4 Credits		4 Credits		1 months (4 wk)	Internship	Specialized
192	Pediatrics Clerkship	9 Credits		9 Credits	3 months (12 wk)		Clerkship	Specialized
193	Pediatrics Internship	12 Credits		12 Credits		3 months (12 wk)	Internship	Specialized
194	Childhood Diseases (1)	68 (4)	68	68 (4)			Clerkship	Specialized
195	Childhood Diseases (2)	17 (1)	17	17 (1)			Clerkship	Specialized
196	General Surgery Clerkship	6 Credits		6 Credits	2 months (8 wk)		Clerkship	Specialized

197	General Surgery Internship	8 Credits		8 Credits		2 months (8 wk)	Internship	Specialized
198	Surgical Diseases	85 (5)	85				Clerkship	Specialized
199	Orthopedics Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
201	Orthopedic Diseases (Theoretical Course)	51 (3)		51 (3)			Clerkship	Specialized
202	Urology Clerkship	1.5 Credits		1.5 Credits	2 weeks		Clerkship	Specialized
204	Genitourinary Diseases (Urology)	17 (1)	17	17 (1)			Clerkship	Specialized
205	Anesthesia Clerkship	1.5 Credits		1.5 Credits	2 weeks		Clerkship	Specialized
206	Gynecology and Obstetrics Clerkship	6 Credits		6 Credits	2 months (8 wk)		Clerkship	Specialized
207	Internship in Gynecology and Obstetrics	8 Credits		8 Credits		2 months (8 wk)	Internship	Specialized
208	Gynecology and Obstetrics	68 (4)	68	68 (4)			Clerkship	Specialized
209	Community Medicine Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
210	Internship in Community Medicine	4 Credits		4 Credits		1 months (4 wk)	Internship	Specialized
211	Psychiatry Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
212	Internship in Psychiatry	4 Credits		4 Credits		1 months (4 wk)	Internship	Specialized
213	Psychiatric Diseases	26 (1.5)	26	26 (1.5)			Clerkship	Specialized
214	Emergency Medicine Clerkship	1.5		1.5	2 weeks		Clerkship	Specialized
215	Internship in Emergency Medicine	4 Credits		4 Credits		1 months (4 wk)	Internship	Specialized
216	Radiology Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
217	Infectious Diseases Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
219	Infectious Diseases	34 (2)	34	34 (2)			Clerkship	Specialized

220	Neurology Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
222	Neurologic Diseases	25 (1.5)	25	25 (1.5)			Clerkship	Specialized
223	Dermatology Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
225	Ophthalmology Clerkship	1.5 Credits		1.5 Credits	2 weeks		Clerkship	Specialized
227	Ear- Nose- Throat (ENT) Clerkship	3 Credits		3 Credits	1 months (4 wk)		Clerkship	Specialized
229	Medical Ethics	34 (2)	34	34 (2)			Clerkship	Specialized
230	Forensic Medicine and Intoxications	34 (2)	34	34 (2)			Clerkship	Specialized
	Thesis	6 Credits		6 Credits				

Note1: Specialized Courses are the clinical core courses and they do not end up to any specific specialty degree. Note2: The code numbers 200, 203, 218, 221, 224, 226, and 228 are mentioned in the Table 4.

Table 3: Some Non-Core

No.	The Course Category	Course Name	Hours (Credit)				
			Total	Theo.	Prac./Workshop	Clerkship	Type of the Course
1	Anatomy	Surgery Anatomy	(1)17	17			Specialized
2	Physiology	Sport Physiology	(1)17	17			Specialized
3	Biochemistry	Clinical Biochemistry	(1)17	17			Specialized
4	Community Medicine	Health Management in Accidents	(2)34	34			Specialized
5	Genetics	Clinical Genetics	(1)32	7	10	15	Specialized
6	Nutrition	Nutrition in Diseases	(2)40	28	12		Specialized
7	Immunology	Applied Immunology	(2)34	34			Specialized

8	Pharmacology	Pharmacotherapy of Common Diseases (Therapeutics)	(2)3 4	34			Specialized
9	Pharmacology	Prescription and Drugs Reasonable Prescription	(1)3 4		34		Specialized
10	Clinical Departments	Principles of Medicine Rehabilitation	(1.5)	14	10	20	Specialized
11	Clinical Departments	Patient Immunity	(2)3 4				Specialized

Note1: Specialty Courses are the clinical non-core courses and they do not end up to any specific specialty degree.

*The maximum number of selected course credits for each student during the course will be 4.

**Various departments can develop selected courses for students during basic, clinical and practicing phases according to their need or school clinical or internship based on the university's requirements and the needs of students in designing and delivering elective courses in basic sciences. The composition and the hours of theoretical, practical, and apprenticeship training, depending on the subject, objectives and content of the course, are the responsibility of the medical school curriculum committee.

Selected courses offered in Table 3 are examples of elective courses and universities can add other lessons to the list according to the needs and discretion of the school curriculum committee, and with the approval of the Secretariat of the General Medical Education Council.

Table 4. Some elective (Non-Core) Internship Rotations

Code	Name	Number of Credits	Duration
200	Orthopedics	2-4 Credits	2 to 4 weeks
203	Urology	2-4 Credits	2 to 4 weeks
218	Infectious Diseases	2-4 Credits	2 to 4 weeks
221	Neurologic Diseases	2-4 Credits	2 to 4 weeks
224	Skin Diseases	2-4 Credits	2 to 4 weeks
226	Eye Diseases	2-4 Credits	2 to 4 weeks
228	Ear, Throat and Nose Diseases	2-4 Credits	2 to 4 weeks
232	Family Medicine	One credit per week of internship	2 to 12 weeks
233	Neurosurgery	One credit per week of internship	2 to 4 weeks

234	Traditional Medicine	One credit per week of internship	2 weeks
235	Anesthetics	One credit per week of internship	2 weeks
236	Toxicology	One credit per week of internship	2 weeks
237	Psychosomatic Diseases	One credit per week of internship	2 to 4 weeks
238	Forensic Medicine	One credit per week of internship	2 weeks
239	Physical Medicine and Rehabilitation	One credit per week of internship	2 to 4 weeks

* The courses mentioned in Table I are just a few of the elective rotational internship periods. Presenting theoretical courses as well as elective rotational internship periods will be the responsibility of the universities which may develop other courses, in addition to the aforementioned ones, according to the criteria while considering local and regional conditions and available facilities. Courses will be presented after being approved by the Secretariat of the General Medical Education Council and taking into account the maximum number of Credits each student can take. This will be 12 The ceiling of the number of Credits of the chosen course for each student in the internship is 12 Credits during internship.

**The maximum number of Credits each student can take during elective rotational intern ship will be 12.

Note on the course syllabi:

1. The syllabus of the nation al curriculum course is a list the overall goals, course topic and their subject matter core contents within the frame of which each medical school specific educational program should be developed under the supervision of the undergraduate medical curriculum committee of the medical school. lllere, in addition the specific learning objectives, strategies and methods of learning and teaching, student assessment, course resources, and other provisions related to the presentation of each course will also be designed and announced.

2. Instituting and updating learning resources for courses contained in the Comprehensive Basic Science Examinations, Pre-internship, and Practical Examination of Clinical Competencies are the responsibility of the Joint Committee for the Designation of Resources for tests in General Medi cine. The Secretariat of the General Medical Education Council is required to announce as appropriate (on the website, through correspondence with the universities, etc.), updated references for the next year's examinations, at the beginning of each academic year.

3. School departments providing courses may establish other resources, in addition to those references prescribed before, at the discretion and approval of the general medical curriculum committee of the school.

MD Curriculum Content

Introduction to Anatomy

Code: 101

Presentation: Basic Sciences of Medicine

Prerequisite: -

Type of Course: Theoretical (38 hours), Practical (8 hours), Total (46 hours)

Total Goals:

1- Recognizing the principles and nomenclature of anatomy and use them in imagining and describing the organs in different situations and movements of body;
2- Recognizing the general main body structures including the skeletomuscular, vascular and nervous systems, and determining the situation of important organs and body systems related to them;
3- Recognizing type of cells and general body tissues including the covering, muscular and connective tissues (with their derivatives), and getting familiar with the formation and evolution of embryo, placenta and the embryological origin of body organs; Viewpoint:
1- Observing and honoring the human dignity;
2- Giving the members of cadaver the educational and biological importance;
3- Offering their findings and questions through study on moulage before working on cadaver;
4- Actively cooperating in group works on cadaver concurrent to learning- training processes;

Description: training the principles and method of nomenclature of anatomy, general body structures including the musculoskeletal and nervous systems, situation and relation of organs, types of cell and general body tissues including covering, muscular and connective tissues (with its derivatives) and formation and evolution of embryo and placenta;

Necessary Content:

1- Introduction (history and introducing the masters), definitions and principles of working with cadaver, expressing the moral principles governing the medicine and cadaver;
2- Anatomical status of body, plates and centers, terminology and body movements;
3- Generalities of general body systems including skeleton, joints, muscular and nervous;
4- Normal anatomy of body and variations;
5- Principles of radiological and clinical anatomy;
6- Introduction to histology and tissue studying methods;
7- Cell and cytology;
8- Covering tissue;
9- Connective tissue and fat;
10- Blood and hematopoietic;
11- Bone, cartilage and joints;
12- Muscular tissue;

13-Nervous tissue;

14-Introduction to and definitions and gametogenesis including oogenesis and spermatogenesis;

15-Ovulation, zygosis and formation of zygote (the 1st week);

16-Implantation and forming the embryonic curtains and blood relation of mother and embryo (the 2nd week);

17-Forming 3-layer embryonic disc, gastrulation and forming body organs (the 3rd week);

18-Derivatives of ectoderm, mesoderm, and nervous stenosis layers (3rd to 8th weeks);

19-Fetal period (8th to 38th weeks), placenta and embryonic curtains and twins;

20-Principles of teratology and congenital disorders; 21- Growth after birth;

Necessary Notes: the viewpoint aspects shall be mainly focused on in all anatomy courses. If skin anatomy is not trained in this course, it shall be trained in endocrinology anatomy.

Musculoskeletal Anatomy

Code: 102

Presentation: Basic Sciences of Medicine

Prerequisite: Introduction to Anatomy

Type of Course: Theoretical (30 hours), Practical (20 hours), Total (50 hours) Total Goals: Cognitive: recognizing the following items and importance of surface and radiological findings related to their natural and clinical conditions:

1- The bones of lower and upper organs, their situation and joints of muscles, and ligaments;
2- Types of joints, structure of joints and their function;
3- Anatomic structure and function of muscular, vascular and nervous systems and related adjacent organs;
4- Dominant myotomy of muscles and joints, sensory innervation of different zones of body;
5- Applied, surface, clinical and radiological anatomy of musculoskeletal system;
6- Evolution of musculoskeletal system;
7- Spinal column;

Skills:

1- Bones of different zones of organs and their important clinical specifications in the skeleton;
2- Bones of different zones of organs and their important clinical specifications in the radiological clichés;
3- Important clinical skeletal symptoms in body of live person and cadaver;
4- Important clinical muscles of different zones of organs and their function in live person (accessible muscles), cadaver and moulage;
5- Movement of organs in different joints on the live person;
6- Important clinical sensory innervations in organs on live body or cadaver;
7- Important clinical surface veins in organs and situation of organs nerves on cadaver and moulage;
8- Taking pulse of common veins in different zones of organs in live person;

Description: as an integrated part of educational program of basic sciences of students of medicine, this course trains the principles, concepts and considerations of scope of each zone, structure, adjacent organs, surface, radiological and clinical anatomy of musculoskeletal system and joints of organs in order to prepare students for understanding and analyzing this system;

Necessary Content :

- Spinal column;
- Osteology of upper limb;
- Scapula and armpit walls and its concepts;
- Anterior and posterior arm and elbow cavity;
- Anterior and posterior forearm;
- Hand;
- Surface, clinical and radiological anatomy of joints;
- Osteology of lower limbs;
- Anterior and interior thigh;
- Sciatic zone and anterior thigh;
- Populite cavity;
- Continuation of feet and leg;
- Surface, clinical and radiological anatomy of joints;
- Evolution of musculoskeletal system;

Necessary Notes: all anatomy courses shall focus on the viewpoint aspects. If this course shall be trained before cardiovascular and respiratory systems, it shall include the diaphragm subject.

Courses of Physiology

- Cell physiology;
- Respiration physiology;
- Heart physiology;
- Nerves and special senses physiology;
- Blood circulation physiology;
- Gastrointestinal system physiology;
- Blood physiology;
- Gland and reproduction physiology;
- Kidney physiology;

Cell Physiology

Code: 111

Presentation: Basic Sciences of Medicine

Prerequisite: -

Type of Course: Theoretical (14 hours), Practical (- hours), Total (14 hours)

Total Goals: expecting in this course to learn the physiological concepts, principles and mechanisms related to the cell function in any of the following cases, and recognize them in natural and physiologically modified processes;

1- .Physiology, the cellular messages;
2- Cell membrane and its constituents, passage of matters through the cell membrane;
3- Rest and function potential;
4- Contraction of skeletal muscles and flat muscles;
5- Internal environment and homeostasis and role of different body systems in causing it;
6- The difference of combination of intracellular and extracellular liquid and the reason of causing it;
7- The intracellular messages;
8- The cellular membrane constituents and their function;
9- Matters transfer methods through cellular membrane;
10- Membrane rest potential and function potential;
11- Absolute and relative non-irritability process and the reason of causing it;
12- Contraction of skeletal muscle;
13- Contraction of flat muscle and its differences with the skeletal muscle;

Description: learning the general subjects related to the cell structure and their natural function, resting potential and function potential, specifications of muscular cells and their physiological function;

Necessary Content:

1- Hemostasis and body systems function regulation mechanisms;
2- Cell membrane and its elements, transferring matters through membrane and its methods (distribution, facilitated distribution, active transfer, and osmosis);
3- Membrane resting potential and its physical basis;
4- Function potential and its processes, function potential appearance and distribution;
5- Physiological analysis of skeletal muscle;
6- Muscular contraction and its mechanism;
7- Movement unit and muscular tension, classification of types of movement units;
8- Nerve- muscle synapse;
9- Stimulation- contraction couple in skeletal muscle and its mechanism;
10- Flat muscle and its types;
11- Contraction mechanism in flat muscle and its comparison with the skeletal muscle;
12- Membrane and function potentials in flat muscle and effect of hormone and local factors on it;

Courses of Medical Biochemistry

Cellular- Molecular Biochemistry

Discipline Biochemistry

Hormones Biochemistry

Kidney Biochemistry

Cellular- Molecular Biochemistry

Code: 120

Presentation: Basic Sciences of Medicine

Prerequisite: -

Type of Course: Theoretical (32 hours), Practical (15 hours), Total (47 hours)

Total Goals: introduction to the clinical importance, structure, classification, properties and function of biomolecules including water and tampons, amino acids, carbohydrates, lipids, proteins, enzymes, vitamins, and nucleotides, and also introduction to the gene replication process using the nucleic acids;

Description: introduction to the biomolecules to learn the metabolism of such matters in discipline biochemistry; this collection of structural and functional information is presented to play role in analysis of health and disease;

Necessary Content:

1- Water and Tampons: structure of water, hydrogen bonds, Henderson- Hassel Bach equation, acid and base, definition of tampon, important body tampon, definition of acidosis and alkalosis and their clinical importance;
2- Amino Acids and Proteins: structure of amino acids, physiochemical properties, classification of amino acids, necessary and unnecessary amino acids, titration of amino acids, the 1^{st}, 2^{nd}, 3^{rd} and 4^{th} structures of proteins, proteins folding and loosing, structure and function of myoglobin, structure and function of hemoglobin, structure and function of collagen and their clinical importance;
3- Carbohydrates: definition, structure of carbohydrates, physiochemical properties, derivatives of monosaccharide, disaccharides, hemopolysaccharides, hetero-polysaccharides, glycoproteins and their clinical importance;
4- Lipids and Lipoproteins: structure, types and physiochemical properties of fatty acids, types of lipids (tricyclic glycerol, esterified and open cholesterol, phospholipids and sphingolipids), liposomes, Miessel and emulsion, special proteins (apo-lipoproteins), types of lipoproteins and their clinical importance;

5- Enzymes: definition, classification, structure, nomenclature, active position, enzymes mechanism, determining the enzyme activity, effective factors on enzyme function, Michaelis Menten equation, types of enzymes controller, isoenzymes, types of orderly and disorderly enzyme reaction, regulating the enzymes function and their clinical importance;

6- Vitamins: definition, classification, structure of vitamins, coenzyme role, water solvable vitamins, fat solvable vitamins, vitamins deficiency disorders and their clinical importance;

7- Nucleic Acids: constituents of nucleic acids (RNA and DNA), nucleosides, nucleotides, structure of DNA and its types, structure of RNA and its types;

8- Replication: prokaryotes and eukaryotes replication process, their repair and clinical importance;

Discipline Biochemistry

Code: 121

Presentation: Basic Sciences of Medicine

Prerequisite: Cellular- Molecular Biochemistry

Type of Course: Theoretical (22 hours), Practical (15 hours), Total (37 hours)

Total Goals: introduction to the importance of oxidative phosphorylation, metabolism paths of carbohydrates, lipids, amino acids and non-protein nitrogenized compounds and blood clinical enzymes, introduction to the quality and quantity changes of molecules and metabolites in clinical manifestations of different diseases related to each metabolism path, and also clinical importance of measuring the blood enzymes and some other fluids in body including blood, introduction to the importance of integrity of metabolism of triple matters under physiological conditions;

Description: introduction to the importance of oxidative phosphorylation, metabolism paths of carbohydrates, lipids, amino acids and non-protein nitrogenized compounds under physiological conditions, and also the role of such paths in related diseases;

Necessary Content:

1- Oxidative Phosphorylation: thermodynamic laws, free energy changes, reduction potential, electron transfer chain, osmosis chemistry theory, electron transfer chain preventers;

2- Carbohydrates Metabolism: digestion and absorption, glycolysis path, pyruvate oxidation, Krebs cycle, gluconeogenesis, glycogenesis, glycogenolysis, fructose metabolism, and galactose metabolism;

3- Amino Acids Metabolism: absorption and digestion, general amino acids catabolism reactions, urea cycle, specialized amino acids catabolism reactions (aromatic, branched and sulfur amino acids), unnecessary amino acids biosynthesis, compounds biosynthesis derived from amino acids;

4- Clinical Enzymology: the reasons of increasing and decreasing the serum activity of intracellular enzymes, necessary measures for clinical application of enzymes, clinical importance of enzymes (alkaline phosphatase, phosphatase acid, 5 nucleotides enzyme, Gama glutamic trans peptidase, aminotransferases, lactate dehydrogenase, keratin phosphokinase, Colin stares, aldose, amylase and lipase);

5- Lipid and Lipoprotein Metabolism: fats absorption and digestion, chylomicron metabolism, VLDL metabolism, LDL and HDL metabolism, lipoproteins metabolic paths diseases, fatty

acids biosynthesis path, beta oxidation of fatty acids, cholesterol biosynthesis, ketone objects biosynthesis;

6- Nucleotide Metabolism: De Novo path, purine biosynthesis, Salvage path, purines biosynthesis, regulating the purines biosynthesis path, purines catabolism, purines metabolic path diseases, De Novo path of pyrimidine biosynthesis, Salvage path of pyrimidine biosynthesis, regulating the pyrimidine biosynthesis path, pyrimidine catabolism, pyrimidine metabolic path diseases;

7- Non-Protein Nitrogenized Compounds Metabolism: hem biosynthesis, diseases related to hem biosynthesis, porphyria, hem catabolism, hem catabolism diseases;

8- Metabolic Paths Integrity: the importance of key and regulatory positions in metabolic paths, the importance of different tissues in metabolic paths, metabolic paths in liver and fatty tissue, metabolic paths in muscle tissue and after eating food, metabolic paths in fasting, metabolic paths after long hungry;

Medical Genetics

Code: 124

Presentation: Basic Sciences of Medicine, Clinical Preliminaries (According to Curriculum Approved by University)

Prerequisite: Cellular- Molecular Biochemistry, Cell Physiology

Type of Course: Theoretical (34 hours), Practical (- hours), Total (34 hours)

Total Goals: expecting in this course to have a good understanding of principal subjects of medical genetics, and recognize them in natural inheritance processes, common diseases and congenital disorders by knowing the most principal common techniques of medical and molecular genetics;

1- Strategic position of medical genetics in health system;
2- Types of inheritances and their similarities and differences, and also ability to distinguish them;
3- Important common human diseases in each inheritance discussed in medical genetics;
4- Types of congenital disorders, teratogens and twins, and their relation with medical genetics;
5- Application of the most important methods discussed in pre and post- birth genetic diagnosis;
6- Epigenetics and human diseases;
7- Cytogenetic and molecular genetics in human and their strong methods in diagnosis of human diseases;
8- Cellular and molecular fundamentals and origins of genetic diseases in human;
9- Principles of genetic consultation and its strategic position in determining risk and determining the disease inheritance pattern;
10- Strong methods of genetic engineering in medicine;
11- Strong methods of gene therapy and its important methods;

12- Strong methods of cancer genetics and important methods of its diagnosis and treatment;
13- Position of pharmacogenetics and individual medicine requirement;
14- Important genetic approaches and methods in prevention, recognition and treatment of diseases;

Description: introduction to the cellular and molecular genetics, types of inheritance patterns, role and application of genetic consultation in diagnosis of disease, determining the congenital pattern and risk, introduction to the strong cellular especially molecular methods in diagnosis and prevention of important genetic diseases, gene therapy, cancer genetics, epigenetics and pharmacogenetics;
Necessary Content:

1- History, position, importance, applications of medical genetics and mission;
2- Clinical cytogenetic: necessary preliminaries, chromosome disorders methods;
3- Molecular genetics and gene mutations, importance and applications;
4- Function, gene expression, and its regulation;
5- Principles of genetic consultation, tree analysis and application in mono- gene diseases;
6- Mono-gene inheritance patterns in human diseases (Mendel inheritance);
7- Mono-gene inheritance patterns in human diseases (Holandric inheritance);
8- Multi-factorial, cytoplasm and immunity inheritances;
9- Congenital disorders, teratogens and twins;
10- Genetic engineering and its applications in medicine;
11- The recent developments in pre- and post- birth molecular diagnosis;
12- Epigenetics and human diseases;
13- Gene therapy in human, the most principal common methods by introducing the important samples;
14- Application of viral and non-viral vectors in gene therapy;
15- Cancer genetics, common methods of gene therapy in cancer as well as the important samples;
16- Pharmacogenetics and medicine based on the individual specifications (individualized medicine);

Remarks: a training course of clinical genetics may be randomly designed and held in the centers with necessary qualifications by confirmation of genetic boards and general medicine. In this case, medical genetic consultation may be held in workshop form.
Genetics is omitted from the basic sciences general exam and included in preinternship general exam.

Biophysics

Code: 126

Presentation: Basic Sciences, Clinical Preliminaries (According to Curriculum Approved by University)
Prerequisite: -

Type of Course: Theoretical (30 hours), Practical (8 hours), Total (38 hours)

Total Goals:

1- Introduction to the physical fundamentals and bases of imaging methods and measuring the anatomic and physiological changes into the human body;
2- Introduction to the selection of common diagnostic imaging methods in patients;
3- Introduction to the analysis and interpretation of changes of diseases using the diagnostic equipment;

Description: introduction to the physics and generalities of diagnostic methods and related equipment to select some algorithms in the next steps of education and understand the application of diagnostic methods especially the imaging for patients, and diagnose the difference of noise and visual errors from disease and pathological changes after receiving the results and images of patients;

Necessary Content:

1- Optical Physics:
   - Importance and properties of visible light, infrared ray, ultraviolet ray and their medical consumptions;
   - Physical study of eye, diagnosis and correction of global disorders;
   - Fundamentals of astigmatism physics and its correction methods;
   - Physical fundamentals of specifications of retina, sight field, perspicuity, seeing the colors, ophthalmoscopy;
   - Physical fundamentals of seeing by two eyes, hyperopia, understanding the objects magnificence;
   - Physical fundamentals of common lens equipment used in medicine; - Practical program;
2- Ultrasound waves and its medical consumptions:
   - Production and properties of ultrasound waves;
   - Chemical and biological properties of ultrasound waves;
   - Application of ultrasound waves in medicine;
   - Physical fundamentals of common ultrasound equipment in medicine; - Practical program;
3- Consumptions of frequency currents in medicine:
   - Production and properties of high frequency currents;
   - Physiological properties and applications of high frequency currents in medicine (electrical operation and heat therapy);
   - Side effects of electricity on body and prevention ways;
   - Fundamentals of magnetic resonance imaging (MRI), image formation mechanism;
   - Different contrasts in MRI;
   - Diagnostic applications of MRI;
   - Physical fundamentals of common equipment of high frequency currents used in medicine; 4- Nuclear medicine:
   - Structure of atom and core energy;
   - Radioactivity and its properties (ionizing rays);
   - Natural radioactivity;

- Neutrons, artificial radioactivity;
- Radioactivity diagnosis and measurement;
- Marked molecules and its medical applications;
- Applications of radioisotopes in diagnosis and treatment;
- Practical program;

5- Physical fundamentals of radiology and radiotherapy:
- Nature and properties of X ray in diagnosis and treatment;
- X ray generators;
- X ray absorption and measurement;
- Radiobiology;
- Protection and principles of X and Gamma rays dosimetry; - Practical program;

6- Robotic applications in medicine;

Remarks: this course may be presented in the basic science period, or clinical preliminaries. Questions of this course are omitted from the basic sciences general exam and included in pre-internship general exam.

Courses of Community Medicine and Health Sciences

Principles of Health Services

Principles of Epidemiology

Biostatistics

Research Methodology and Evidence-Based Medicine

Common Non-Contagious Diseases Epidemiology in Country

Common Contagious Diseases Epidemiology in Country Principles of Demography and Family Health

Principles of Health Services

Code: 133

Presentation: Basic Sciences of Medicine

Prerequisite: -

Type of Course: Theoretical (26 hours), Practical (- hours), Total (26 hours)

Total Goals: introduction to the generalities and history of health in Iran and world, and types of health systems in the world, understanding the concepts of health and disease, and recognizing the threatening dangers of health and development of health in the world and Iran, introduction to the concept of health for all people and prevention levels, using the initial health cares, managing and evaluating the patients according to the prevention levels, introduction to the role of national and transnational organizations in the health development, and also the initial concepts of health education and health promotion, connecting the health relationship, training the patients in the field of health services, introduction to the goals of sustainable development, and recognizing the role of effective social factors on health to use them in patient management, introduction to the importance of environmental health, and professional health, and recognizing their role in population health promotion, introduction to the health of foodstuff and role of nutrition in health and using their principle in the related fields, understanding the importance of oral and dental health, introduction to the valuation of health technology, recognizing the immunization program and conducting its execution;

Description: introduction to the initial and infrastructural principles of health to protect and promote the individual and population health as a physician;

Necessary Content:

1- Generalities and history of public health in Iran and world, development including millennium development, HFA, universal health coverage (UHC), primary healthcare (PHC) and goals (MDGs);
2- Concepts of health and disease and prevention levels;
3- Primary healthcare system I (PHC);
4- Primary healthcare system II (PHC);
5- Health structure in world and Iran based on the indices;
6- Local, national and transnational organizations related to the health;
7- Environmental factors related to the health (air, water, solid wastes and wastewater, foodstuffs);
8- Social factors related to the health;
9- Workplace health and safety;
10- Principles and generalities of immunization;
11- Principles of health services management;
12- Health education and promotion;
13- Health services salary receivers; 14-

Remarks: social factors determining the health and goals of sustainable development of annual report of world health organization;

Principles of Epidemiology

Code: 134

Presentation: Basic Sciences of Medicine

Prerequisite: -

Type of Course: Theoretical (34 hours), Practical (- hours), Total (34 hours)

Total Goals: expecting to meet the following goals:

1- Introduction to the definition, applications, history and concepts of epidemiology;
2- Understanding and using the diseases transfer, epidemic diagnosis and its control method;
3- Understanding the concepts of disease appearance, health and disease sizes and healthcare system;
4- Calculating and interpreting the disease sizes;
5- Understanding the concept of natural history and disease pre-notice;
6- Recognizing and using the classification of types of studies in researches of medical sciences;
7- Understanding and using the danger measurement method;
8- Understanding the difference of relation and cause and Hill principles;
9- Recognizing the diagnostic tests validity measures;
10- Calculating the tests validity and reliability indices and relation between them and principles of disease screening;

Description: introduction to the initial and infrastructural principles of epidemiology to work as a physician by recognizing the epidemiologic appearance of diseases, indices and related rates in keeping and promoting the individual and population health;

Necessary Content :

1- Introduction, history and application of epidemiology;
2- Diseases transfer method, epidemiology and its control;
3- Occurrence of diseases: occurrence care and sizes;
4- Disease occurrence: measures of death and other health sizes;
5- Natural history of disease and pre-notice;
6- Principles of ecological and sectional studies;
7- Principles of case- evident and cohort studies;
8- Danger estimation;
9- Principles of interventional studies;
10- Evaluating the diagnostic tests;
11- Principles and application of screening;
12- Statistical and cause relation;

Health Psychology

Code: 140

Presentation: Basic Sciences/ Clinical Preliminaries

Prerequisite: -

Type of Course: Theoretical (34 hours), Practical (- hours), Total (34 hours)

Total Goals:

1- Knowing the different fields of psychology;

2- Introduction to specifications of general psychology of humans including intelligence, personality, memory, recognition of emotions and learning, and defining their relation with promotion of physical and mental health;
3- Achieving a general understanding of role of psychology in promotion of health for improving the life quality and prevention of physical and mental disorders;

Description: using the concepts of this course, reaching an extensive image of interrelation of body and soul, and regarding the role of psychological factors in prevention of appearance and facilitation of treatment in the clinical activity;

Necessary Content :

1- Psychology, medicine and health;
2- Brain, recognition, emotion and behavior;
3- Mental growth;
4- Health and behavior;
5- Motivation, emotion and health;
6- Memory, memory and health;
7- Stress, immunology and health;
8- Mental disorders;
9- Rehabilitation and psychological interventions;
10- Personality and health;
11- Addiction: pathology and side effects;
12- Murder: etiology and side effects;
13- Intelligence;
14- Psychometrics;

Remarks: by focusing on the health dimensions including the physical, psychological, social and spiritual health and self/ psychology of self;

Introduction to the application of psychometric tests in medicine including the tests of:

- General Health Questionnaire (GHQ);
- Minnesota- Multiphasic- Personality- Inventory (MMPI);
- Mindful Cognitive Movement Therapy (MCMT I);

Courses of Medical Ethics

Medical Ethics I

Medical Ethics II

Medical Ethics III

Medical Ethics IV

Medical Ethics I

Code: 141

Presentation: Basic Sciences

Prerequisite: -

Type of Course: Theoretical (- hours), Practical (17 hours), Total (17 hours)

Total Goals:

Cognitive Goals:

- Introduction to the collection of expected capabilities of graduates of general medicine;
- Introduction to the concepts of ethics and principles of professional behavior in medicine;
- Introduction to the basic principles of learning medicine and effective planning for practice;
- Introduction to the basic knowledge of interpersonal communicative skills for connecting the effective relation with professors, personnel, family and friends; Viewpoint Goals:
- Undertaking and obliging to acquire expected capabilities during the studies;
- Considering the special professional position and existence of moral sensitivities in medicine;
- Performing regularly and immediately all educational affairs including the assignments and duties assigned;

- Using the study skills and time management (including the time management, learning and study style management) in arranging the educational activities; Skill Goals:
- Observing the principles of professional behavior in their function, and having the behavior and appearance appropriate to the dignity of student of medicine;
- Connecting a good relationship with professors, educational and administrative officers;
- Having effective and honest expression in interpersonal relations;
- Connecting good verbal and eye relation;
- Listening actively;
- Presenting effective planning for learning using the principles of time management and study skills;
-

Description: this course is a part of long theme of professional ethics in curriculum of general medicine, organized and presented in the form of a semester.
Organized in the form of 0.5 practical workshop credit (17 hours), this course describes the key ethics and skills a physician shall have in medicine, begins with introducing the capabilities of general medicine and describing its importance during the study, and continues by presenting generalities related to the introductory skills of effective professional, communicative and learning behavior learnt by a student of medicine at the beginning of entering medicine. At the end of the course, the students are expected to get familiar with these principles and acquire the sufficient knowledge and skill for using them.
This course may be presented in the form of several workshops during the academic semester. To ensure the efficiency of course, the university is required to consider good process and means for evaluation of using the workshop teachings by students.

Necessary Content:

- Introduction to the capabilities expected from general practitioner;
- Principles of professional behavior in medicine I: explaining the importance of role of student as physician during studying and reviewing the principles of professional behavior in medicine;
- Interpersonal communicative skills I: communicative elements and communication obstacles, principles of connecting effective relationship (active listening and self- appearance techniques), using the body language (application of non-verbal techniques in communications);

- Basic principles of learning medicine: studying skills and time management skills; Remarks: this course is a part of long theme of professional ethics in curriculum of general medicine. Therefore, the result of evaluation is reported in qualitative form (with four grades of more than expectation, in an acceptable form, acceptable by mentioning the further effort in the next courses of medical ethics, and nonacceptable). The first three levels mean passing, and the last failing, which requires taking the course again.

This course is not included in general exam.

The syllabuses presented in this course are on recommendation basis, and curricular planning committee of the university can change them up to 40% if required.

Courses of Specialized English Languages

Specialized English Language in Medicine I

Specialized English Language in Medicine II

Specialized English Language in Medicine I

Code: 145

Presentation: Basic Sciences

Prerequisite: General English Language

Type of Course: Theoretical (51 hours), Practical (- hours), Total (51 hours)

Total Goals: reading and understanding the medical English texts, realizing and using the academic and medical expressions and words, talking fluently about the medical subjects, and understanding fast the speech of others on the medical topics, and also the importance of English language in educational activities in definite time with cooperation of department (as a viewpoint goal);

Description: according to the increasing need of students and graduates of medicine to study of medical books and papers in order to increase and update their medical knowledge and perform the research on different subjects related to this field, this course tries to increase the students' capabilities and skills in reading and understanding the medical texts. For this purpose, the much time of class ($2/3^{rd}$) is allocated to education of specialized texts reading and comprehension techniques. This course considers the need of students to speaking English language in physical (personal) and virtual environments. Accordingly, a part of class time is allocated to the practice of educating the specialized audio-lingual techniques; so, this class shall be held in English language. Each student shall give lecture in English language in class for at least 5 minutes.

Necessary Content:

- Physiology of human body;
- Anatomy of human body;
- Molecular change;
- Traditional medicine;
- Hepatitis;
- Surgery;
- Ebula;
- Cardiovascular system I;
- Cardiovascular system II;
- HIV AIDS;
- Cancer;
- Diagnosis;
- Epidemiology I;

-

- Epidemiology II;
- Public healthy I;
- Public health II;
- Pain I;
- Pain II;
- Medical terminology;
- Medical terminology;

Remarks: this class shall be held in English language.

During academic semester, different texts of medical subjects engaged by students in basic and clinical sciences with are presented in the form of reading and conversation skills.

Course Plan

Semester: 1,2	Academic Year: 2022
Level: M.D	Major: General Physician
Course Title: General English	Department: MUI
Course Code:	University Professor: Dr. Saeed Khazaie
Location of Teaching the Course: Tadbir Building	Credit Hours: 51
Prerequisite: Ability to communicate in English	Credit Units: 3
Hours and Days of Call: Saturday 2-4 pm, Sunday 10-12 pm (every other week)	Tel: #98 9368428644
Address: Isfahan University of Medical Sciences	Email: saeed.khazaie@gmail.com
Name of Student Representative and Cellphone Number:	Number of Students:

English Language Department, Medical University of Isfahan (MUI)
General English, Term Worksheet (Spring Semester)

Session	Units	Inside-the-classroom homework	Follow-up activity quiz
1	Unit: 1	Teaching → practicing in dyads or triads → doing the first items of the exercises individually or collectively Doing activities	Introducing dictionary.
2	Unit:1		What does a dictionary tell you?
3	Unit: 2		How to work with a dictionary?
4	Unit: 2		Finding word items quickly. ✓
5	Unit: 3		What is TOFEL?
6	Unit: 3		Different types of TOFEL
7	Unit: 4		The skills in the TOEFL
8	Unit: 4		What is IELTS? ✓
9	Unit: 5		Parts of IELTS.
10	Unit: 5		What is MHLE?
11	Unit: 6		What is GRE?
12	Unit: 6		Parts of GRE. ✓
13	Unit: 7		What is TOLIMO?
14	Unit: 7		Parts of TOLIMO.
15	Unit: 8		Reference books for International exams (I).
16	Unit: 8		Reference books for International exams (II). ✓

* Roll call is regularly done throughout the course.

(The Assessment instruments that will be used to test students ability to learn the skills and competencies stated in learning outcomes)

Assessment Tools	From 20 (100%)
Mid Exam (Theory)	40%
Final Exam	40%
Practical (Assignments)	20%
Class Activities	10%
Total Marks	100

Student's Responsibilities:

- Prepare for the class in advance
- Use the lectures outline (PowerPoint presentations) and handouts (if any) as
- a guideline for your study.
- Students are expected to spend 2-3 hours of studying for each hour in class.

Discipline and educational rules:

- Be on time at the beginning of the day and/or after recess breaks,
- Delay in entering and hurrying out of class is prohibited
- Come prepared with supplies and completed assignments,
- Be respectful of classmates, lecturers and property.
- The maximum permission time to participate in the class is 5 min after the start.
- Mobile phone use is prohibited during class.
- If the maximum permissible absences (17.4% of total attendance) are in accordance with the teaching rules, the course will be eliminated
- On Exam Cheating: Any kind of exam cheating or contributing to cheating at an exam may have serious consequences

Mid Exam Date: **Final Exam Date:**

Isfahan University of Medical Sciences, English Department

Lesson Plan

Topic English for the Medical Purposes, proposing content materials through PowerPoint slides
Aims ■ To present general view about English for the Medical Purposes ■ To practice vocabulary items ■ To practice reading skills
Week 1-16
Level one
Duration 40 minutes +
Materials General English (by Dr. Reza Torabi)
Date 30 September 2022
Introduction In this course, undergraduate students who are studying Medicine will learn about reading *materials in this area* in foreign language (FL) English, that is to say, English for the Medical Purposes. First teacher reads the paragraphs one by one through the slides. After that, the they need to develop activities (viz., self-made activities) to show their comprehension. In the meantime, students are expected to write the discussion in summary, which in turn, paves the way to see if they understand the contents or not. Initial items of the exercises are then done as sample forms. Mention should be made that the grammatical and word-related points are elucidated simultaneously.
Follow-up activity (5 minutes) Using Augmented reality to visualize the real-life fields

* In this session, all the details and objectives of the experiment were explained to the students.

This plan is developed by Dr. Saeed Khazaie, Assistant Professor, Department of English Language, School of Management and Medical Information Sciences, Isfahan University of Medical Sciences, Isfahan, Iran.

saeed.khazaie@mng.mui.ac.ir

Course Plan

Semester: 1	**Academic Year :** (1401--1402) 2022 --2023
Level: undergraduate	**Major:** medical
Course Title: Computer usage	**University Professor:** paria tajabor
Prerequisite: Introduction to computers	**Credit Units:** (0.5 Theo and 0.5 Prac.)
Hours and Days of Call: Thursday 12--2 pm Wednesday 12--2 pm	Email: P.tajabor@gmail.com

The General Purpose of the Lesson:

how to improve knowledge base by learning some computer softwares.

Proprietary Goals:
Learning Outcomes (Objectives):

Computer basics
Windows and Toolbars
Microsoft Office Software(Word--Excel--PowerPoint)
Endnote
Network and Configuration

Assessment Tools:

(The Assessment Tools that will be Used to Test Students Ability to Understand the Course Material and Gain the Skills and Competencies Stated in learning Outcomes)

Assessment Tools	From 20
Final Exam	6
Practical	12
Class Activities	2
Total Marks	20

References (Text Books): help part of software

Sub Sources:

Teacher lecturer handouts.

Student's Responsibilities: to do practical exercises in the meanwhile class.

Mid Exam Date: no mid--term

Final Exam Date:?

Course Topics	Number of class sessions	Presentation type	Source	assessment
Learn about a statistical data processing application(word)	3	Speech and show the program and work with them(offline)	Teacher handouts And student notes from class	Test and practical exam
Practical exercises	1	online	Printed exercises	Class activity
Endnote program	2	Speech and show the program and work with them(offline)	Teacher handouts And student notes from class	Test and practical exam
Learn about a statistical data processing application(excel)	3	Speech and show the program and work with them(offline--onilne)	Teacher handouts And student notes from class	Test and practical exam
Practical exercises	1	By students(online)	Printed exercises	Class activity
Research methods	2	Speech	Teacher handouts	Test and practical exam

Network and configuration methods	3	Speech and show the program and work with them	Teacher handouts And student notes from class	Test and practical exam
Exam	1	-	-	-