

## **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)**

#### **Total Course Credits**

- General Courses: 24
- Basic Core Courses: 69.5
- Specialized Core Courses: 177.5
- Non-Core Courses: 16
- Thesis: 6
- Total: 293

#### **Program Description**

##### **Introduction**

Thirty years after developing the curriculum of the General Medicine in an attempt to implement the 12th paragraph of the third article as well as articles 29 and 31 and the first paragraph of the third article of the constitution of the Islamic Republic of Iran, in 1985, medical schools of country have embraced dramatic quantitative and qualitative changes ever since. Among the changes that have been made to the structure of medical schools, having been taken into consideration in current version, adding to the number of the medical schools, the dramatic increase in the number and variety of specialties and subspecialties, acquiring new knowledge and experience in education, and advances in information technology as well as ease of access to the up-to-date knowledge, along with major advances in approaches to knowledge and skills in the third millennium, may be referred to. On the other hand, changes in the health care system, as the development of the family physician programs within the health system, aging population and burden of diseases, greater access to the specialists in small cities, increasing use of diagnostic and therapeutic technologies in the routine care and, hence, high cost of the medical care, more and more active international engagements in the health care, as well as the development of evidence-based practice and new therapeutic concepts in medicine, a standard curriculum for developing expected competencies of the General Practitioners seems inevitable.

This curriculum has been developed considering changes in requirements of the health system, prevailing condition of medical schools, developments in medical knowledge throughout the world, experiences gathered during the past thirty years in education and due interventions for its quality improvement. So, this revised edition, while avoiding fundamental changes which might be opposed by most schools, has been prepared in such a way that any competent school could implement suggested new and more effective educational strategies while maintaining its original goals and (core) curriculum as well as ensuring its implementation by all medical schools of the country.

This being a curriculum at the national level, each school should formulate its specific academic curriculum based on it and the terms of reference of the Education Deputy of the Ministry of Health and Medical Education. An important feature of this curriculum as a national is its emphasis on the expected

Competencies of a general practitioner, flexibility in implementing, narrowing the courses to only the compulsory ones, relegating others to elective courses as decided by the schools and implementing strategies for particular circumstances as well. Credit courses on such important concepts and skills as professionalism, evidence-based medicine (EBM), traditional and complementary medicine, family medicine as well as practical tests and skill assessment are considered to be prerequisites for graduation. This is a new feature in this curriculum as compared with the previous one. It is expected that proper implementation of the curriculum in defined, especially outpatient and community clinical settings (in accordance with the standards set forth in chapter 4 of this document) will lead to greater improvement in social accountable medical education.

### **Program Definition and Description:**

Medicine is a branch of applied sciences, aiming at protecting and promoting health, and diagnosing, treating and preventing diseases. Rabi 'ibn Ahmad Akhaveini, in *Hedayat Al Motealemin* (Guidance of the Scholars), the oldest Persian text on medicine (4th century AH), defined medicine as: "Bejeshki (medicine) is a craft that, scientifically and practically, keeps people healthy or brings back it to them".

General Medicine (MD) is the basis of all specialized medical disciplines, so knowledge learned and skills developed during this period are essential not only for good practicing as GP, but also success in future higher education in various specialties and subspecialties fields.

General medical graduates learn knowledge, art, and skills of diagnosing, treating and preventing illnesses through acquisition of the essential knowledge in basic medical and various branches of clinical sciences and lots of practice, using them for their patients and other clients. In addition to acquiring knowledge and skills, social and professional development through guided, purposeful and thoughtfully participation in the professional interactions during the periods of study, apprenticeship, and internship is necessary as well for being a qualified doctor. To find In order to achieve these goals, it is necessary to carefully implement the program standards contained in chapter 4 of this document.

### **History**

Academic medicine has paced with human civilization, and the scientific authority has been possessed by civilizations in proportion to their effective communication and greater global influence. The Flexner Report, at the beginning of the twentieth century, may well be the first milestone of the modern formal medical education. The impact of this report and the dynamism of medical education throughout the twentieth and present centuries has had clear implications for medical schools, including the explanation of various strategies and methods of education and assessment, systematic educational processes, and medical education having been developed as a subcategory of the science of education, which tries to document evidences concerning teaching processes and organizations. In addition to such advances in the academic medical education, dramatic changes in the content and context of medicine both as science and service provider, at times accompanied by paradigmatic changes, have strongly influenced teaching the General Medicine, especially in the third millennium.

In Iran, however, it dates back to before the advent of Islam. The great and well-known school and hospital, Jundishapur, during the sixth century AD, was both a university for both medicine and philosophy, and a hospital and dormitory as well. It, being the most important educational and research center in that time, had many scientists and physicians who were teaching, studying and practicing medicine. In addition to writing books, Iranian scholars translated many Greek and Hindi books into Pahlavi and taught them. By studying this university, it is possible to recognize the history of formal education of medicine in Iran. Also, the invention of hospital treatment method should be considered by Iranians to a large extent. Islamic period hospitals were often built on the basis of the samples and principles of the Jundishapur Hospital.

Azodoldoleh's famous hospitals in Shiraz and Baghdad, and later in Damascus followed the example of the Jundishapur as prototype. The first Islamic pharmaceutical product has also been from this largest medical center of the contemporary world. Jundishapur was the most important medical center of the world during the Arab conquests. It has been one of the most famous universities throughout the world for centuries.

Later with the flourishing of the Islamic civilization and its prosperity, Iranian physicians were still forerunners of academic medicine as well as publishing the reference books. The teaching place of Avicenna, as the oldest medical academy, where a valid textbook -The Law on Medicine- a valuable source of medical education for centuries, was published, is still there.

The education of modern medicine has not been especially organized in Iran until the foundation of the Dar al-Fonoun school, while The Law on Medicine of Avicenna and Explaining Causes by Nafisi were regarded as the authentic and classical books. There was no definite place for studying medicine, and the learners, having been graduated preliminaries (grammar and divine wisdom) and studied natural wisdom (medicine, etc.) at the offices of the contemporary famous physicians, could practice freely as doctors after learning the basics and getting brief information on medicine. This has been the case till Nasir al-Din Shah and Amir Kabir, the Chancellor, came to power, when Dr. Kolokeh of the court set out to train some people by the order of Naser-al-Din Shah. In 1850, Amir Kabir decided to build the campus Dar-al-Fonoun in a corner of the court which had been partly prepared by 1851. In 1873, Nasser-al-Din Shah ordered the establishment of a hospital and the first hospital (Sina) was opened in 1881 with the deceased Nazem al-Atebba as its principal. Consequently, other schools were derived from the Darul-Fonoun school.

In 1880, the School of medicine was separated from the Dar al-Fonoun with the late Loghman al-Dawla Adham as its dean. From then on, especially after 1890, medical education, divided into basic and clinical courses, became more disciplined at the School of Medicine. In 1895, the law of establishing the University of Tehran with various faculties including the Faculty of Medicine was approved by the Parliament. Today, nearly 100 years after the establishment of the first medical school, 63 medical schools are working throughout the country.

### **Philosophy (Values and Beliefs):**

A general practitioner works at the first line in providing community with the health services. Constantly being subject to the judgment and assessment of the community, she or he should have desirable professional qualities and professional skills while conforming to established norms.

Human are multi-dimensional with diverse physical-spiritual and cultural concerns and needs. This makes the human resources training programs aimed at improving community health cherish multi-layered and diverse values. A medical practitioner physician may not only deal with the body and its illnesses, but is the sole person who, as a professional, have most intimate encounter, occasionally even more than any close friend or relative, with those requesting health services. So, training doctors committed to ethics and professionalism should be the most important and a key element in related programs. Medical sciences are constantly changing, so physicians should be committed to lifelong learning and continuous professional development to ensure the accuracy of clinical decision making on providing appropriate services according to solid evidence. Thus, developing critical thinking and self-directed learning skills are mandatory in general medical program and should be considered especially in the implementation strategies.

According to the principles of education, proper instructional design and content organization of learning are absolutely essential. More direct interaction between the professors and students, early and purposeful contacts of the students with the clinical environment, as well as taking advantage of the plenty of opportunities to practice and develop skills and assign more responsibility to the students in accordance with the educational phases (during basic science courses, pre-clinical, clerkship and internship periods), coupled with methods of ensuring safety and acknowledging the patients' rights should be emphasized.

**The Vision:**

The curriculum, while being implementable by less advantaged faculties, should meet the internationally accepted standards using the latest findings in medical education. Finally, it should bring up capable, ethically committed and socially accountable alumni dedicated to meet needs of the health system of the country.

**The Mission:**

The mission is to explain the goals, learning opportunities, and rules to fulfill the expected abilities of the graduates. The curriculum, while addressing the concerns of all stakeholders, defines educational goals with a pragmatic and flexible approach so that all faculties can train general practitioners in as much accordance as possible to the national standards, taking into account their resources and educational features.

We believe that graduates should have sufficient knowledge and skills to serve as the gatekeeper of the health care system. They should be able to fulfill their professional role either through providing best (up-to-date) services to the patients directly or by coordinating their services with other providers, considering needs and resources, thus helping fulfill the Integrated Delivery System. The care provided by the graduates, regardless of the age, gender, race or cultural or social levels of clients, while considering their cultural, social, economic and psychological background, should be as consistent, comprehensive and extensive as possible, in order to promote the health of the community. They should also identify community problems that go beyond those of the people who seek health services. By understanding health-related behavior of the community, they will fulfill more effective role in supporting people's efforts to protect its health.

We believe graduates of this discipline should be responsible, compassionate, altruist and self-empowered, who work hard with commitment in promoting the health of the community. The medical schools, as executors of this curriculum, are committed to observe the values and principles of the Islamic Republic of Iran and create the conditions for the students for living up to the standards of human excellence based on the inexhaustible Islamic culture considering human dignity, the ultimate goal being to train physicians committed to the Islam and adhering to the scientific standards.

Providing the basis for evaluating the implementation and implementation of the program along with determining the extent to which all educational objectives are achieved and providing an appropriate mechanism for assessing graduates' ability is one of the most important missions of the program.

**Program Goals:**

The ultimate goal of the general medical education program is that by acquiring the expected competencies, graduates of this course will be able to take care of the patients' health and care according to the standards of service while complying with professional ethics standards, the ability to manage information and life-long learning, and serve as the front line of health services delivery.

**Professional obligations of graduates in the community:**

The professional obligations of graduates in general medicine are:

1. Taking technical responsibility of the private offices and authorized health services centers
2. providing health services in accordance with the standards approved by the Ministry of Health and Medical Education
3. providing health education counseling services to individuals, communities and target groups (with specific rules for each target group)
4. participating in all educational and research activities approved by the relevant authorities (Ministry of Health and Medical Education or other organizations authorized to employ general practitioners)

5. providing expert health care services to fulfill the needs of related organization within the scope of her/his professional competence of general practitioners
6. getting involved in health management

### **Admission Requirements**

The national placement exam should successfully be passed in accordance with the rules and regulations of the Ministry of Health and Medical Education

### **Expected basic Competencies and Skills:**

Main capabilities expected from the graduates are:

1. Clinical skills
2. Communication skills
3. Patient care (diagnosis, treatment, rehabilitation)
4. Promoting health and preventive strategy and physicians' contribution to it
5. Personal development and continuous learning
6. Showing professional commitment, observing medical ethics and respecting laws during practices
7. Decision-making, argumentation and problem-solving skills

A full description of the capabilities and a list of practical skills expected from the graduates of this field are detailed in the document on the expected Competencies of graduates of the General Medical Schools in the Islamic Republic of Iran approved by the sixty-second session of the Supreme Council for the Planning of Medical Sciences (2016/1/10).

### **Educational Strategies, Methods and Techniques\***

#### **Student Assessment (Methods and Types)**

##### **a) Methods of the assessment**

Deciding on the assessment method, based on the learning objectives and existing conditions, will be the responsibility of the faculty curriculum committee. It should be selected and implemented in such a way that, while ensuring the validity and reliability of the methodology and tools used, ultimately encourage students to deep and continuous learning. Evaluation methods may be:

- Theoretical Courses: written tests, completing such assignments as written reports, lectures, oral tests, computer interactive tests.
- Practical and Clinical Courses: Closely observing student's clinical performance, structured objective tests such as OSCE, OSLE, OSFE, DOPS, 360 degree evaluations, portfolio assessment including Log book evaluation, and so on.

As for the **objective of professional behavior**, it will be best assessed by observing students throughout their course of study.

##### **b) Types of the assessment**

Arranging schedule for the continual assessments of students will be the responsibility of the Curriculum Committee of the Medical School.

**Comprehensive tests** during the course will be:

- A Comprehensive Test of the Basic Sciences at the end of the basic course
- A Comprehensive Pre-Internship Test at the end of the clinical course
- A Practical Final Test of the Clinical Competencies six months after the beginning of the internship

Passing each of the above tests will be a requisite for going to the next stage, while passing the final test will be required for graduation.

## **Ethical Considerations\***

\*Note: The related document(s) can be found at <http://hcmeq.behdasht.gov.ir/>.

## Tables of the Courses

**Table 1. General Courses**

Code	Course Name	Number of Credits	Hours			Prerequisite or Concurrent Courses
			Theoretical	Practical	Total	
1-4	Two Courses from Islamic Theories Courses*	4	68	-	68	-
5-8	One course from Islamic Ethics Courses*	2	34	-	34	-
9-11	One Course from Islamic Revolution of Iran Courses*	2	34	-	34	-
12-13	One Course from Islamic History and Civilization Courses*	2	34	-	34	-
14-15	One Course from Islamic Resources Courses*	2	34	-	34	-
16	Persian Literature	3	51	-	51	-
17	General English Language	3	51	-	51	-
18	Physical Education 1	1	-	34	34	-
19	Physical Education 2	1	-	34	34	Physical Education 1
20	Family and Population Planning	2	34	-	34	-
21	Islamic and Iranian culture and civilization	2	34	-	34	-
<b>Total</b>		<b>24</b>	<b>374</b>	<b>68</b>	<b>442</b>	

\*Note: Completing these courses is according to the titles of Islamic Education General Courses (the following table), ratified on meeting 542 of the Supreme Council of the Cultural Revolution dated 2004/07/13.

	Sub-discipline	Course Code	Course Title	Credits	Hours (Credits)			Prerequisite
					Theory	Practice	Total	
					1- Theoretic Fundamentals of Islam	011	Islamic Thought 1	
012	Islamic Thought 2	2	34			34		
013	Human in Islam	2	34	-		34		
014	Social and Political Rights in Islam	2	34			34		
2- Islamic Ethics	021	Philosophy of Ethics	2	34		34		
	022	Islamic Ethics	2	34		34		
	023	Ethics of Living	2	34		34		
	024	Practical Theosophy of Islam	2	34		34		
3- Islamic Revolution	031	Islamic Revolution of Iran	2	34		34		
	032	Constitutional Laws of Islamic Republic of Iran	2	34		34		
	033	Political Thoughts of Imam Khomeini	2	34		34		
4- Islamic History and Civilization	041	History of Islamic Culture and Civilization	2	34		34		
	042	Analytical History of Early Islam	2	34		34		
	043	History of Imamah	2	34		34		
5- Islamic Resources	051	Quran Thematic Commentary	2	34		34		
	052	Nahj al-Balagha Thematic Commentary	2	34		34		

**Table 2. Core Courses**

Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
<b>Anatomical Sciences</b>		<b>196</b>	<b>118</b>	<b>314(15)</b>				
101	Introduction to the Anatomical Sciences	38	8	46			Basic Sciences Basic	
102	Musculoskeletal Anatomy	30	20	50			Basic Sciences Basic	
103	Anatomy of the Head & Neck	20	17	37			Basic Sciences Basic	
104	Anatomy of the Cardiovascular System	17	16	33			Basic Sciences Basic	
105	Anatomy of the Respiratory System	8	8	16			Basic Sciences Basic	
106	Anatomy of the Gastrointestinal System	26	17	43			Basic Sciences Basic	
107	Anatomy of the Endocrine System	4	6	10			Basic Sciences Basic	
108	Anatomy of the Nervous System	25	14	39			Basic Sciences Basic	
109	Anatomy of the Special Senses	14	4	18			Basic Sciences Basic	
110	Anatomy of the Genitourinary System	14	8	22			Basic Sciences Basic	
<b>Physiology</b>		<b>122</b>	<b>28</b>	<b>150 (8)</b>				



Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
111	Cell Physiology	14	-	14			Basic Sciences	Basic
112	Physiology of the Heart	8	2	10			Basic Sciences	Basic
113	Physiology of Respiration	10	4	14			Basic Sciences	Basic
114	Physiology of the Nervous System and Special Senses	24	4	28			Basic Sciences	Basic
115	Physiology of the Circulatory System	19	4	23			Basic Sciences	Basic
116	Physiology of the Gastrointestinal System	10	4	14			Basic Sciences	Basic
117	Physiology of Blood	5	2	7			Basic Sciences	Basic
118	Physiology of the Endocrine System and Reproduction	20	4	24			Basic Sciences	Basic
119	Physiology of the Urinary System	12	4	16			Basic Sciences	Basic
<b>Medical Biochemistry</b>		<b>70</b>	<b>30</b>	<b>100 (5)</b>				
120	Cell and Molecular Biochemistry	32	15	47			Basic Sciences	Basic
121	Discipline Biochemistry	22	15	37			Basic Sciences	Basic
122	Hormones Biochemistry	12	-	12			Basic Sciences	Basic
123	Kidney Biochemistry	4	-	4			Basic Sciences	Basic
124	Medical Genetics	-	34	34 (2)			Basic/Introduction to the Clinical Sciences	Basic
125	General Nutritional Principles	-	34	34 (2)			Basic/Introduction to the Clinical Sciences	Basic
126	Physics in Medicine	8	30	38 (2)			Basic/Introduction to the Clinical Sciences	Basic
<b>Microbiology &amp; Parasitology</b>		<b>101</b>	<b>36</b>	<b>137 (7)</b>				
127	Medical Bacteriology	41	20	61			Basic Sciences	Basic
128	Parasitology	28	12	40			Basic Sciences	Basic
129	Medical Mycology	15	4	19			Basic Sciences	Basic
130	Medical Virology	17	-	17			Basic Sciences	Basic
<b>Immunology</b>		<b>47</b>	<b>8</b>	<b>55 (3)</b>				
131	Medical Immunology	30	8	38			Basic/Introduction to the Clinical Sciences	Basic

Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
132	Clinical Immunology	17	-	17			Basic/Introduction to the Clinical Sciences	Basic
<b>Community Medicine &amp; Health Sciences</b>		<b>152</b>	<b>19</b>	<b>171 (9.5)</b>				
133	Principles of the Health Services	26	-	26			Basic Sciences	Basic
134	Principles of Epidemiology	34	-	34			Basic Sciences	Basic
135	Medical Statistics	17		17			Introduction to the Clinical Sciences	Basic
136	Research Methods & Evidence-Based Medicine	7	19	26			Introduction to the Clinical Sciences/Clinical Practices	Basic
137	Epidemiology of Common Contagious Diseases of the Country	17	-	17			Introduction to the Clinical Sciences/Clinical Practices	Basic
138	Epidemiology of Common Non-Contagious Diseases of the Country	17	-	17			Introduction to the Clinical Sciences/Clinical Practices	Basic
139	Principles of Demography and Family Health	34	-	34			Clinical Practices	Specialized
140	Health Psychology	34	-	34 (2)			Introduction to the Clinical Sciences/Clinical Practices	Basic
<b>Medical Practices</b>		<b>68</b>		<b>68 (2)</b>				
141	Medical Practices 1	-	17	17			Basic Sciences	Basic
142	Medical Practices 2	-	17	17			Basic Sciences	Basic
143	Medical Practices3	-	17	17			Basic Sciences	Basic
144	Medical Practices 4	-	17	17			Basic Sciences	Basic
<b>English for Special Purposes</b>		<b>102</b>	<b>-</b>	<b>102 (6)</b>				
145	English for Special Purposes 1	51	-	51			Basic Sciences	Basic
146	English for Special Purposes 2	51	-	51			Basic Sciences	Basic
<b>General Pathology</b>		<b>51</b>	<b>-</b>	<b>51 (3)</b>				
147	General Pathology and Cell Pathology	-	9	9			Basic/Introduction to the Clinical Sciences	Basic

Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
148	Pathology of the Inflammation, Tissue Healing, and	-	10	10			Basic/Introduction to the Clinical Sciences	Basic
149	Pathology of Human Immunologic Disorders		8	8			Basic/Introduction to the Clinical Sciences	Basic
150	Pathology of Neoplasia		10	10			Basic/Introduction to the Clinical Sciences	Basic
151	Pathology of Genetic Disorders and Childhood Diseases		8	8			Basic/Introduction to the Clinical Sciences	Basic
152	Pathology of Environmental, Nutritional, and Infectious Diseases		6	6			Basic/Introduction to the Clinical Sciences	Basic
153	<b>Practical Pathology</b>	-	34	34 (1)			Basic/Introduction to the Clinical Sciences	Basic
154	<b>Clinical Pathology</b>	16	2	18 (1)			Introduction to the Clinical Sciences/Clinical Practices	Specialized
<b>Specific Pathology</b>								
155	Pathology of Cardiovascular System	6	2	8			Introduction to the Clinical Sciences	Specialized
156	Pathology of Respiratory System	6	2	8			Introduction to the Clinical Sciences	Specialized
157	Pathology of Kidney and Upper Urinary Tract	6	2	8			Introduction to the Clinical Sciences	Specialized
158	Pathology of Gastrointestinal System	8	4	12			Introduction to the Clinical Sciences	Specialized
159	Pathology of Liver and Biliary Ducts	6	2	8			Introduction to the Clinical Sciences	Specialized
160	Pathology of Genitals, Lower Urinary Tract and Breasts	10	4	14			Introduction to the Clinical Sciences	Specialized
161	Pathology of Hematopoietic and Endocrine Systems	10	2	12			Introduction to the Clinical Sciences	Specialized
162	Pathology of Skin, Bones, Soft Tissues and Joints	8	2	12			Introduction to the Clinical Sciences	Specialized
163	Pathology of Central and Peripheral Nervous System	8	2	10			Introduction to the Clinical Sciences	Specialized
<b>Medical Pharmacology</b>		<b>68</b>		<b>68 (4)</b>				
164	Basic Principles of Medical Pharmacology	17	-	17			Basic/Introduction to the Clinical Sciences	Basic

Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
165	Pharmacology of Drugs for Cardiovascular and Pulmonary Diseases	10	-	10			Basic/Introduction to the Clinical Sciences	Basic
166	Pharmacology of Antimicrobial Drugs	10	-	10			Basic/Introduction to the Clinical Sciences	Basic
167	Pharmacology of Drugs for Gastrointestinal, Hematologic, and Rheumatologic Diseases	10	-	10			Basic/Introduction to the Clinical Sciences	Basic
168	Pharmacology of Drugs for Endocrinologic Diseases	9	-	9			Basic/Introduction to the Clinical Sciences	Basic
169	Pharmacology of Neurologic and Psychiatric Diseases	12	-	12			Basic/Introduction to the Clinical Sciences	Basic
<b>History Taking and Physical Exam</b>		<b>34</b>		-	<b>102</b>			
170	History Taking and Physical Exam 1	17	-	17 (1)			Introduction to the Clinical Sciences	Specialized
171	History Taking and Physical Exam 1 Clerkship		-	51 (1)	51		Introduction to the Clinical Sciences	Specialized
172	History Taking and Physical Exam 2	17	-	17 (1)			Introduction to the Clinical Sciences	Specialized
173	History Taking and Physical Exam 2		-	51 (1)	51		Introduction to the Clinical Sciences	Specialized
<b>Introduction to Clinical Medicine</b>		<b>29</b>	<b>32</b>	<b>322 (18)</b>				
174	Clinical Reasoning in Approaching to Common Signs and Symptoms	8	4	8 (0.5)			Introduction to the Clinical Sciences	Specialized
175	Introduction to Cardiovascular Diseases	32	4	36 (2)			Introduction to the Clinical Sciences	Specialized
176	Introduction to Respiratory Diseases	32	4	36 (2)			Introduction to the Clinical Sciences	Specialized
177	Introduction to Hematologic Diseases	32	4	36 (2)			Introduction to the Clinical Sciences	Specialized
178	Introduction to Gastrointestinal and Liver Diseases	36	4	40 (2.1)			Introduction to the Clinical Sciences	Specialized
179	Introduction to Endocrine and Metabolic Diseases	32	4	36 (2)			Introduction to the Clinical Sciences	Specialized
180	Introduction to Kidney Diseases	26	4	30 (1.6)			Introduction to the Clinical Sciences	Specialized

Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
181	Introduction to Rheumatologic Diseases	26	-	30 (1.6)			Introduction to the Clinical Sciences	Specialized
182	Introduction to Childhood Diseases	17	4	17 (1)			Introduction to the Clinical Sciences	Specialized
183	Introduction to Surgical Diseases	15	-	19 (1)			Introduction to the Clinical Sciences	Specialized
184	Introduction to Neurologic Diseases	9	-	9 (0.5)			Introduction to the Clinical Sciences	Specialized
185	Introduction to Psychiatric Diseases	8	-	8 (0.5)			Introduction to the Clinical Sciences	Specialized
186	Introduction to Infectious Diseases	17	-	17 (1)			Introduction to the Clinical Sciences	Specialized
<b>Clinical Courses</b>								
187	Traditional Medicine	34		34 (2)			Clerkship	Specialized
188	Internal Medicine Clerkship			9 Credits	3 months (12 wk)		Clerkship	Specialized
189	General Internal Medicine Internship			12 Credits		3 months (12 wk)	Internship	Specialized
190	Cardiovascular Diseases Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
191	Internship for Cardiovascular Diseases			4 Credits		1 months (4 wk)	Internship	Specialized
192	Pediatrics Clerkship			9 Credits	3 months (12 wk)		Clerkship	Specialized
193	Pediatrics Internship			12 Credits		3 months (12 wk)	Internship	Specialized
194	Childhood Diseases (1)	68		68 (4)			Clerkship	Specialized
195	Childhood Diseases (2)	17		17 (1)			Clerkship	Specialized
196	General Surgery Clerkship			6 Credits	2 months (8 wk)		Clerkship	Specialized
197	General Surgery Internship			8 Credits		2 months (8 wk)	Internship	Specialized
198	Surgical Diseases			85 (5)			Clerkship	Specialized
199	Orthopedics Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
201	Orthopedic Diseases (Theoretical Course)			51 (3)	2 weeks		Clerkship	Specialized
202	Urology Clerkship			1.5 Credits			Clerkship	Specialized
204	Genitourinary Diseases (Urology)	17		17 (1)	2 weeks		Clerkship	Specialized
205	Anesthesia Clerkship			1.5 Credits			Clerkship	Specialized
206	Gynecology and Obstetrics Clerkship			6 Credits	2 months (8 wk)		Clerkship	Specialized
207	Internship in			8 Credits		2 months	Internship	Specialized

Code	Course Name	Hours (Credits)					Phase (Basic or Clinical Sciences)	Type of Courses (Basic or Specialized)
		Theoretical	Practical	Total	Clinical Practicing	Internship		
	Gynecology and Obstetrics							
208	Gynecology and Obstetrics	68		68 (4)			Clerkship	Specialized
209	Community Medicine Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
210	Internship in Community Medicine			4 Credits		1 months (4 wk)	Internship	Specialized
211	Psychiatry Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
212	Internship in Psychiatry			4 Credits		1 months (4 wk)	Internship	Specialized
213	Psychiatric Diseases	26		26 (1.5)			Clerkship	Specialized
214	Emergency Medicine Clerkship			1.5	2 weeks		Clerkship	Specialized
215	Internship in Emergency Medicine			4 Credits		1 months (4 wk)	Internship	Specialized
216	Radiology Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
217	Infectious Diseases Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
219	Infectious Diseases	34		34 (2)			Clerkship	Specialized
220	Neurology Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
222	Neurologic Diseases	25		25 (1.5)			Clerkship	Specialized
223	Dermatology Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
225	Ophthalmology Clerkship			1.5 Credits	2 weeks		Clerkship	Specialized
227	Ear- Nose- Throat (ENT) Clerkship			3 Credits	1 months (4 wk)		Clerkship	Specialized
229	Medical Ethics	34		34 (2)			Clerkship	Specialized
230	Forensic Medicine and Intoxications	34		34 (2)			Clerkship	Specialized
	Thesis			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 Courses**

No.	The Course Category	Course Name	Hours (Credits)				Type of the Course
			Theoretical	Practical/ Workshop	Total	Clerkship	
1	Anatomical	Surgical Anatomy	17	-	17 (1)	-	Specialty
2	Physiology	Exercise Physiology	17	-	17 (1)	-	Specialty
3	Biochemistry	Clinical Biochemistry	17	-	17 (1)	-	Specialty
4	Community Medicine	Health Management During Accidents and Catastrophes	34	-	34 (2)	-	Specialty
5	Genetics	Clinical Genetics	7	10	32 (1)	15	Specialty
6	Nutrition	Nutrition in Diseases	28	12	40 (2)	-	Specialty
7	Immunology	Applied Immunology	34	-	34 (2)	-	Specialty
8	Pharmacology	Therapeutics for Common Diseases	34	-	34 (2)	-	Specialty
9	Pharmacology	Prescription and Logical Administration of Medications	-	34	34 (1)	-	Specialty
10	Clinical Departments	Principles of Physical Medicine and Rehabilitation	14	10	44 (1.5)	20	Specialty
11	Clinical Departments	Patient Security	34	-	34 (2)	-	Specialty

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 Optional (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	2-4 Credits
232	Family Medicine	2-4 Credits	2 to 4 weeks
233	Neurosurgery	2-4 Credits	2 to 12 weeks
234	Traditional Medicine	2 Credits	2 weeks
235	Anesthetics	2 Credits	2 weeks
236	Toxicology	2 Credits	2 weeks
237	Psychosomatic Diseases	2-4 Credits	2 to 4 weeks
238	Forensic Medicine	2 Credits	2 weeks
239	Physical Medicine and Rehabilitation	2-4 Credits	2 to 4 weeks

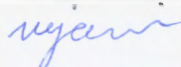
\* The courses mentioned in Table 1 are just a few of the elective rotational internship periods. Presenting theoretical courses as well as elective rotational internship periods will be the responsibility of the universities which may develop other courses, in addition to the aforementioned ones, according 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 internship will be 12.

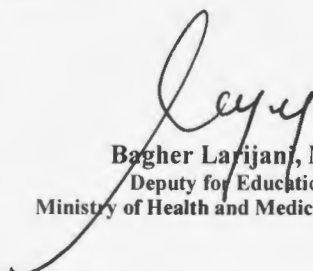
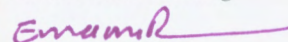
**Note on the course syllabi:**

1. The syllabus of the national 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. There, 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-Internships, and Practical Examination of Clinical Competencies are the responsibility of the Joint Committee for the Designation of Resources for tests in General Medicine. 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.

**Marzieh Nojomi, MD**  
Secretary of the Council for General  
Medical Education



**Seyed Hassan Emami Razavi, MD**  
Secretary of the Supreme Council for  
Medical Sciences Planning



**Bagher Larijani, MD**  
Deputy for Education  
Ministry of Health and Medical Education