<p align="center">**In the Name of God**</p>

<p align="center">**Islamic Republic of Iran**
Ministry of Health and Medical Education
Deputy for Education</p>

<p align="center"># Medical Informatics
Degree: Master of Science (MSc)</p>

Total Course Credits
- Core: 20
- Non-core (Electives):   6
- Dissertation (PhD):   6

Program Description
The field of Medical Informatics is a branch of medical sciences whose M.Sc. graduates learn about using computer and information in health-related and medical sciences.

Definition
Graduates help in propagating theoretical and practical aspects of the field, advancing the frontiers of knowledge by preparing research literature as well as innovations and promoting public health by providing informatics-oriented solutions at the highest level.

Aim
In the next 10 years, the Islamic Republic of Iran will be among the top countries offering this course in terms of the educational excellence, research products and providing diagnostic services concerning Medical Informatics. The main mission of the course is training committed, knowledgeable and competent people in Informatics.

Admission Requirements
A bachelor degree in one of the fields of Medical sciences, Mathematics (all branches), Computer engineering, Computer sciences, Medical engineering, Electrical engineering (electronic), Information technology engineering, or a general doctorate in one of the fields of Medicine and Pharmaceutics and being eligible for entering the program according to the M.Sc. educational rules and regulations are requirements for qualification..
* These general conditions do not necessarily exclude specific conditions of each institute or university.

Expected Competencies at the End of the Program

General Competencies*

Specific Competencies and Skills

At the end of the program learners will be competent in the following skills:

- Keeping the physical, psychological, and occupational environment healthy
- Using specialized equipment
- Working in professional environments
- Interpreting test results

Educational Strategies, Methods and Techniques*

Student Assessment (Methods and Types)

a) Methods of assessment: Residents will be evaluated by the following methods: Written; oral; OSLE; Logbook-based assessment

b) Types of assessment: Periodic and comprehensive; monitoring the progress and completion of dissertation

Ethical Considerations*

*Note: The related document(s) can be found at http://hcmep.behdasht.gov.ir/.

Tables of the Courses

Table 1. Compensatory Courses in the Medical Informatics MSc

Code	Course Title	Credits			Hours			Prerequisite or concurrent
		Theoretical	Practical	Total	Theoretical	Practical	Total	
01	Medical Information systems *	0.5	0.5	1	9	17	26	
02	Scientific English	2	-	2	34	-	34	
03	General medicine and medical terminology	3	-	3	51	-	51	
04	Web-based and Windows-based (.NET) programing	2	1	3	34	34	68	
05	Practical Statistics in Healthcare	2	-	2	34	-	34	
06	Healthcare information technology	2	-	2	34	-	34	
Total		11.5	1.5	13	196	51	247	

These courses are basic for the master degree if they have not been completed previously. Students should earn all or some of the compensatory course credits (Table 1) as specified by the Department and approved by the post-graduate committee of the university.
* Completing this course is obligatory for all students.

Table 2. Core Courses in Medical Informatics M.Sc.

Code	Course Title	Credits			Hours			Prerequisite or concurrent
		Theoretical	Practical	Total	Theoretical	Practical	Total	
07	Medical data structure and electronic medical record	3	-	3	51	-	51	
08	Standards and coding healthcare data	3	-	3	51	-	51	
09	Design and evaluation of healthcare systems 1	1	1	2	17	34	51	07
10	Design and evaluation of healthcare systems 2	2	-	2	34	-	34	09
11	Seminar in Medical informatics	1	1	2	17	34	51	
12	Management in medical informatics	3	-	3	51	-	51	
13	Neural networks and intelligent systems in medicine	3	-	3	51	-	51	
14	Apprenticeship	-	2	2	-	102	102	
15	Dissertation			6				
	Total			26				

Table 3. Non-Core Courses in the Medical Informatics MSc

Code of the course	Title of the course	Number of Credits			Total hours of the course			Prerequisite or concurrent
		Theoretical	Practical	Total	Theoretical	Practical	Total	
16	Ethical and legal aspects in medical informatics	2	-	2	34	-	34	
17	Design practical research in medical informatics	1	1	2	17	34	51	
18	Healthcare decision supports systems	2	-	2	34	-	34	
19	Imaging and medical informatics	3	1	4	51	34	85	
20	Management of healthcare information systems	3	-	3	51	-	51	
21	Special topics	3	-	3	51	-	51	
22	Bioinformatics	3	-	3	51	-	51	
23	Introduction to open source programing	2	1	3	34	34	68	
Total		19	3	22	323	102	425	

* Students should choose 6 credits (Table 3) based on dissertation and after confirmation of the supervisor and approval of the post-graduate committee of the university.

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