Tehran University of Medical Sciences

In the Name of God

Islamic Republic of Iran
Ministry of Health and Medical Education
Deputy Ministry of Education

E-Learning in Medical Sciences
Master of Science (MSc)

Total Course Credits

Compensatory: 9
Core: 22
Non-core (Elective): 4
Thesis (MSc): 6

Total: 32

Program Description

Regarding the fast-growing demand in medical fields for greater internationalization, more flexible and student-centered training programs with multi-professional elements are determined to commence a revolutionary approach to train tomorrow's health experts by using the latest advances in e-learning. Although eLearning in medical education courses is the only major of its kind in the whole country, it has a long history as a postgraduate course in most groundbreaking universities such as Athabasca University (Canada), the University of Edinburgh (UK), the University of Maryland, the University College, University of Denver. This course aims to train future experts in health with advances in e-learning. E-Learning in medical education is a postgraduate degree (MSc) which will give students the skills they need to plan, design, and facilitate online learning opportunities for applicants in higher education, and to meet the needs of society in the area of e-learning in medical science. To promote public health and expand the boundaries, virtual and electronic education is playing an increasing role in medical education and training. Expanding and promoting the science of e-learning, actualizing the use of e-learning in medical education, and making scientific ties with other research centers and local/international organizations are major points to achieve. Last but not least, it should be noted that the program is implemented as a blended learning (partial attending classes along with e-learning delivery). The face-to-face classes in each semester will be offered according to the

course structure determined by the Department. It should be noted that all exams will be paper-based.

Admission Requirements

- Success in the entrance exams and eligibility according to I.R.I regulations
- Applicants should possess a doctorate in medicine, dentistry, Pharmacy, or a MSc. or BSc in various medical sciences fields, bachelor's or master's degrees in educational management, educational research and psychology, educational technology, adult education, higher education management and planning, educational sciences, curriculum planning and instructional planning, information science and epistemology, education (language, elementary, biology, chemistry, etc.), educational psychology, measurement and assessment, media management, information technology engineering, information technology management, information and communication technology, technology management, computer engineering, information security, librarianship and information dissemination.

Expected Competencies at the End of the Program

General Competencies*

- At the end of the program, graduates will be competent in the following areas:
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- • Communication-interaction skills
- • Education
- • Research and writing scientific articles
- • Critical thinking and problem-solving skills
- • Evidence-based management skills (policy-making, planning, organizing, monitoring, control, and evaluation)
- • Professionalism

Specific Competencies and Skills

- Take educational responsibilities
- Help university departments to initiate e-learning courses according to their needs.
- Implement e-learning in various contexts in the medical field
- Provide consultation in instructional design to facilitate online learning in various fields
- Conduct research and render consulting services related to e-learning in medical education
- Design, implement, and evaluate basic and applied research in various contexts of the related field.

Educational Strategies, Methods, and Techniques

Educational Strategies

This program is built upon the following educational strategies:

- A combination approach of student-centered and instructor-led learning
- Task-based Education
- Subject-based Education
- Problem-Based Learning (PBL)
- Evidence-Based Learning (EBL)

Teaching and Learning Methods

- The following instructional methods and techniques are utilized throughout the program:
- Seminars and conferences held within departments, between departments, across disciplines, and among universities
- Small group discussions, educational workshops, journal clubs, book reviews, and case presentations
- Individual and group projects and practical assignments
- Synchronous and asynchronous virtual learning techniques
- Participation in teaching activities at lower academic levels
- self-education, self-study

Student Assessment (Methods and Types)

- Students will be evaluated by:
- Written exams
- Verbal exams
- Practical examination
- Interactive computer exams
- Project-based assessment

Ethical Considerations*

*Note: the related document(s) can be found at http://hcmp.bedasht.gov.ir/.

Tables of the Courses

Table 1. Compensatory Courses

No.	Course Title	Credits			Hours			Prerequisites
		Theory	Practical	Total	Theory	Practical	Total	
01	Medical information systems	0.5	0.5	1	9	17	26	-
02	Advanced inferential statistics	1	1	2	17	34	51	-
03	Teaching methods and skills	2	-	2	34	-	34	-
04	Specialty English	2	-	2	34	-	34	-
05	Applied psychology of e-learning	2	-	2	34	-	34	-
Total		9						

Table 2. Core Courses

No	Title of the Course	Credits			Hours			Prerequisites
		Theory	Practical	Total	Theory	Practical	Total	
06	Applied research design on e-learning in medical sciences	1	1	2	17	34	51	02
07	Introduction to E-learning	2	-	2	34	-	34	-
08	E-learning tools and technologies	1.5	1.5	3	26	51	77	-
09	Measurement and evaluation in E-learning	2	1	3	34	34	68	-
10	Designing and developing electronic content 1	1	1	2	17	34	51	08
11	Designing and developing electronic content 2	1	1	2	17	34	51	08-10
12	Instructional design in E-learning	1	1	2	17	24	51	10-11

13	Learner support system in e-learning	-	1	1	-	34	34	07
14	Information security in E-learning systems	1	-	1	17	-	17	-
15	Professional ethics in information technology	1	-	1	17	-	17	07
16	Seminar on E-learning issues in medical sciences	-	1	1	-	34	34	06-07
17	Apprenticeship	-	2	2	-	68	68	08-10-11-12

Table 3. Non-Core Courses*

No	Title of the Course	Credits			Hours			Prerequisites
		Theory	Practical	Total	Theory	Practical	Total	
18	Strategic and operational planning	1	1	2	17	34	51	-
19	Educational management and leadership in E-learning	2	-	2	34	-	34	-
20	Information technology in healthcare	2	-	2	34	-	34	-
21	Business management in E-learning systems	1	1	2	17	34	51	01

* Students have to pass 4 credits based on their dissertation topics, and approval of their thesis advisor and postgraduate education council.