**Health Information Management**

1. **MSc in Health Information Technology**

The Health Information Technology has been designed to enable candidates to identify the existing technologies in the health system and implement them at all levels of health care services.

**Prerequisite Courses**

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| --- | --- |
| **Course list** | **Credit** |
| Medical Information Resources | 1 |
| Physiology | 3 |
| Medical Terminology | 2 |
| Inferential Vital Statistics | 2 |
| Disease Coding | 2 |
| Health Information Management | 2 |
| Data Structure | 2 |
| Introduction to Computer Programming | 1/5 |
| Insurance Claims in Hospital, Outpatient and Paraclinical Settings | 2 |
| Health Information Systems | 2 |
| Health Indicators and Analysis of Health Data | 2 |
| Health Information Management Apprenticeship | 2 |

**Core Courses**

|  |  |
| --- | --- |
| **Course list** | **Credit** |
| Digital Health | 2 |
| Health Data Analytics | 2 |
| Health are financial monitoring and reimbursement systems | 3 |
| Health Information Dashboards | 1 |
| Health Interventions Classification | 2 |
| Health Information Management and Quality Improvement | 2 |
| Research Methods | 2 |
| Electronic Health Record | 2 |
| Design and Modeling of Health Information Systems | 2 |
| Principles and Regulations of Professional Ethics in Health  Information Technology | 1 |
| Apprenticeship for Health Information Systems Management | 1 |
| Thesis | 6 |

**Non-core Courses**

|  |  |
| --- | --- |
| **Course list** | **Credit** |
| Evaluation Methods of Health Information Systems | 2 |
| Terminology Standards of Electronic Health Records | 2 |
| Programming for Smartphone Applications | 2 |
| Web Application Programming | 2 |
| Entrepreneurship in Health Information Technology | 2 |
| Advanced Biostatistics | 2 |

1. **MSc in Medical Informatics**

MSc program in Medical Informatics is a new field of study which applies information technology to data saving, retrieval, and optimal use of information analysis in decision making, problem solving, and improving health care systems. The program establishes a close relationship between medical basic sciences and modern computer technology, communication and interconnections. Medical Informatics places emphasis on the use of computer technology in all medical areas, such as health care services, health education, and research. It is an interdisciplinary science which requires research and study in medical basic sciences, medical biology, communication, information technology, and software engineering. The main mission of this program is to train and empower students to use available resources optimally, decrease medical errors, and ultimately improve health systems.

**Prerequisite Courses**

|  |  |
| --- | --- |
| **Course list** | **Credit hours** |
| Medical Information Resources | 1 |
| General Concepts in Medicine (Anatomy, Physiology and  Physiopathology) | 2 |
| Terminology and Diseases | 2 |
| Health Care System in Iran | 2 |
| Principles of Biostatistics and Epidemiology | 2 |
| Basics of Object-Oriented Programming | 2 |
| Principles of Computer Networks and Security | 2 |
| Introduction to Medical Informatics | 2 |
| Professional English Language | 2 |

**Core Courses**

|  |  |
| --- | --- |
| **Course list** | **Credit hours** |
| Advanced Medical Informatics | 1 |
| Analysis and Modeling of Health Information Systems | 2 |
| Design, Implementation and Management of Health Databases | 2 |
| Management of Medical Informatics Systems Implementation | 2 |
| Artificial Intelligence | 2 |
| Artificial intelligence in Medical Sciences | 2 |
| Data Mining and Knowledge Extraction in Medicine | 2 |
| Electronic Health Records and Standards | 2 |
| Human-Computer Interaction/Evaluation in Health Systems | 2 |
| Research Seminar | 1 |
| Apprenticeship | 2 |
| Thesis | 6 |

**Non-Core Courses**

|  |  |
| --- | --- |
| **Course list** | **Credit hours** |
| Design and Development of Web-Based Health Applications | 3 |
| Design and Development of Mobile Health Applications | 3 |
| Legal, Ethical and Social Aspects in Medical Informatics | 1 |
| Entrepreneurship Principles in Medical Informatics | 2 |
| Research Methods in Medical Informatics | 2 |
| Special Topics in Medical Informatics | 1 |