



Course Regime

Course: Introduction to Medicine, module **Informatics**

Study Programme: Medicine, Dental Medicine

Year of the Course: 1

Semester: Winter

Course type: Compulsory

Number of ECTS credits: 1,25 for Informatics (5 credits for the whole Course)

Lecturer(s): prof. dr. Maja Pohar Perme

Participating Organisational Units: Institute for Biostatistics and Medical Informatics

Date of Issue: 10. 9. 2020

1. Course objectives

Students acquire the basic knowledge on information systems and information tools and their role in health system. At practical work they get acquainted with some tools for information organisation, recall and medical data processing. The focus is on understanding of

- role of informatics at study, professional and research work;
- importance and ways of use of bibliographic databases in scientific information;
- informatic processes in health and methods of data modelling, development and use of databases;
- importance of standards for description of document contents, results of diagnostic procedures, and for provision of secure archiving and transfer of medical data;
- procedures for signal and medical images processing;
- procedures in artificial intelligence and the advantages of this field for processing large amounts of data;
- procedures in bioinformatics in omic data processing.

2. Comprehensive outline of the course organisation

Informatics is a stand-alone module within the Introduction to Medicine course. The examination score is the average of the partial exam scores of all four modules, provided that all four are positive. Studying in the Informatics module is carried out in the form of 15 one-hour lectures and four practical exercises, 4 hours long each. The module grade consists of a partial exam grade and a grade obtained from tutorials and from tests in the online classroom performed after each lecture. In one of the exercises the staff members of the Central Medical Library cooperate, explaining to students the services they can receive at the library. Attendance at practical work is compulsory. A student who does not attend the exercise must prepare a short seminar paper with content he or she has missed.

3. Description of on-going assessment of knowledge and skills

In three of the four exercises, students complete tasks to demonstrate an understanding of the contents discussed in the exercises. With successful solving, they can achieve up to 2 points in each exercise, which are later added to the result of the partial exam. After each lecture, students are given a simple test in the online classroom that addresses the content of a given lecture. By completing these tests, they can score up to 10 points in total, which are later added to the result of the partial exam.

4. Required conditions for the final examination (Course Exam)

Prerequisite for taking the partial examination in the module is the presence at three of the four exercises and the preparation of a short seminar paper on the topic of the missing exercise.

5. Final assessment and examination of knowledge and skills (Course Exam)

The examination in the module Informatics consists of multiple choice questions (MCQ) and open questions. Each MCQ can have more than one correct answer and can yield 0 to 10 points. It is not possible for a question to have negative points.

Exam criterium:

insufficient (1-5)	0,00 % to 49,99 %,
sufficient (6)	50,00 % to 59,99 %,
good (7)	60,00 % to 69,99 %,
very good (8)	70,00 % to 79,99 %,
very good (9)	80,00 % to 89,99 %,
excellent (10)	90,00 % to 100 %.

Information: IBMI, Vrazov trg 2, (01) 543 77 70, e-mail: ibmi@mf.uni-lj.si

6. Other provisions

At the module exam no special equipment is needed (and thus allowed) other than a calculator (not mobile phone).

7. Exam topics:

- Introduction to medical informatics and introduction to scientific information;
- databases: types and their purposes, data modelling, relational databases;
- electronic health record;
- health information systems;
- system for the medical decision support;
- signals and images in medicine;
- search models and web information systems;
- information security;
- cryptography;
- telemedicine and telematics;
- quality of health services;
- bioinformatics.