008 Biomedicinska informatika

008 Biomedical Informatics

The course aims to present an overview of the field of biomedical informatics, which is concerned with storage, retrieval, protection, transport, standardization and optimal usage of biomedical data and information. The importance of managing and integrating biomedical data and information for the purpose of increasing the quality and efficiency of problem solving and decision making is presented from the clinical, scientific, educational, technological, social, as well as financial point of view. Practical work consists of implementing computerized and computer-assisted techniques that adhere to the established standards in biomedical informatics and are used for protection, storage, transport and retrieval of biomedical data and information.

Biomedical data and information; computer science and informatics in biomedicine; the role of information-driven decision making in biomedicine; development of biomedical systems; standards in biomedical informatics; protection of biomedical data; ethical aspects of biomedical informatics; basics of clinical, health, imaging and bioinformatics; access and retrieval of biomedical information from databases; decision-support systems in healthcare; education in healthcare; development and marketing of informatics technology in medicine and healthcare.

Literature:

- Biomedical Informatics, E.H. Shortliffe, J.J. Cimino, Springer, 2006.
- Medical Informatics: Knowledge Management and Data Mining in Biomedicine, H. Chen, S.S. Fuller, C. Friedman, W. Hersh (Eds.), Springer, 2010.
- PACS and Imaging Informatics: Basic Principles and Applications, H.K. Huang, Wiley-Blackwell, 2010.