Univerza v Mariboru
University of Maribor

Medicinska fakulteta
Faculty of Medicine

UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION	
Predmet:	Telemedicina
Subject Title:	Telemedicine

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Podiplomski študijski program Biomedicinska tehnologija			

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Labor work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
15	20	10			105	**5**

Nosilec predmeta / Lecturer: prof. dr. Dejan Dinevski

Jeziki / Languages:	**Predavanja / Lecture:**	Slovensko/slovene
	Vaje / Tutorial:	

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Opravljena Bioinformatika

Prerequisits:

Vsebina:

- Osnove in principi telemedicine
- Zgodovina telemedicine ter njene prednosti
- Tehnološki temelji telemedicine in standardi za prenos medicinskih podatkov
- Medicinski senzorji za prenos informacij o stanju pacienta
- Praktične aplikacije telemedicine v zdravstvenem sistemu:
  1. telezdravstvo,
  2. nega bolnika na daljavo,
  3. nadzor bolnika na daljavo,
  4. telekonzultacije
- Videokonferenca v telemedicini – pridobivanje drugega mnenja na daljavo
- Praktični primeri na posameznih medicinskih področjih: teledermatologija, telekirurgija, telepatologija, telekardiologija…
- Informacijski sistemi v medicini,
- Uporaba slik in grafike v medicini (DICOM),
- Odločitveni sistemi v medicini,
- Inteligentni sistemi v medicini,
- Moderna telemedicinska praksa

Content (Syllabus outline):

- Basic principles of telemedicine
- History of telemedicine and it's benefits
- Technological background of telemedicine and standards for data transfer in medicine
- Medical sensors for the transmission of information about the state of the patient
- Practical applications of telemedicine in the health systems:
  1. Telehealth
  2. Telecare
  3. Telemonitoring
  4. Teleconsultations
- Videoconference in telemedicine – second opinion on distance
- Practical examples on different medical fields: teledermatology, telesurgery, telepathology, telecardiology,…
- Information systems in medicine
- Use of pictures and graphics in medicine (DICOM standard)
- Decision systems in medicine
- Intelligent systems in medicine
- Modern telemedicine practise

Temeljna literatura in viri / Textbooks:

Obvezna literatura:

- Edward H. Shortliffe, James J. Cimino: *Biomedical Informatics*, Springer USA, 2006
- R.L. Bashsur, G.W. Shannon, History of *Telemedicine, Mary Ann Liebert, Inc.publishers, 2009*

Dopolnilna literatura:

- Joan M. Kiel (ur.): *Information Technology for the Practicing Physician (Computers in Health Care)*, New York, 2000.
- Jeffrey C. Bauer, Marc A. Ringel: *Telemedicine and the Reinvention of Healthcare*, McGraw Hill, 1999.
- A. Hasman: *Handbook of Medical Informatics*, Springer, 1998.

Cilji:	**Objectives:**
Študent se bo na podlagi osnovnih znanj poglobil v nekatera od naštetih poglavij telemedicine in medicinske informatike z namenom globljega razumevanja, obvladovanja in praktične uporabe le-teh.	The student will deepen the knowledge of the selections of listed telemedicine and medical informatics chapters in order to better understand and be able to utilize and practically implement the acquired knowledge.

Predvideni študijski rezultati:	**Intended learning outcomes:**
Znanje in razumevanje: Po zaključku tega predmeta bo študent: • Razumel in poznal področja telemedicine in medicinske informatike. • Znal uporabljati določene aplikacije iz naštetih področij. Prenosljive/ključne spretnosti in drugi atributi: • Samostojno delo z računalnikom • Uporaba računalniških programov in informacijske tehnologije • Sposobnost iskanja podatkov	Knowledge and Understanding: On the completition of this course the student will: • Understand and be acquainted with the basics of telemedicine and medical informatics. • Be able to use the applications from the listed chapters. Transferable/Key Skills and other attributes: • Autonomous work with the computer • Use of computer applications and information technology • Ability to search for the information

Metode poučevanja in učenja:	**Learning and teaching methods:**
• Predavanja • Seminar • Vaje, e-izobraževanje	• Lectures, • Seminar • Excercises, e-learning

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Način (ustno izpraševanje, projekt) • Seminar • Ustni zagovor	**50** **50**	Type (oral examination, project): • Seminar • Oral test