SYLLABUS

1. Information on the study programme

1.1. Higher education institution	**UNIVERSITATEA DE MEDICINA SI FARMACIE "VICTOR BABEŞ" TIMIŞOARA**
1.2. Faculty	**FACULTATEA DE MEDICINĂ DENTARĂ**
1.3. Department	FUNCTIONAL SCIENCES
1.4. Study programme field	Healthcare
1.5. Study cycle	Undergraduate
1.6. Study programme / Qualification	DM

2. Information on the course

2.1. Course title	Medical informatics							
2.2. Lecture faculty	—							
2.4. Laboratory instructor	Ioan-Dumitru DRĂGAN, MS, PhD, assistant professor							
2.5. Study year	**I**	2.5 Semester	**1**	2.6 Examination type	**C**	2.7 Course type	Content[3]	**DC**
							Mandatory[4]	**DI**

3. Estimated study time (number of hours per semester)

3.1 Attendance hours per week	**1**	3.2 out of which lecture	–	3.3 laboratory	**1**
3.4 Attendance hours per semester	**14**	3.5 out of which lecture	–	3.6 laboratory	**14**

Distribution of the allocated amount of time	hours
Study of literature, course handbook and personal notes	14
Supplementary documentation at library or using electronic repositories	12
Preparing for laboratories, homework, reports etc.	28
Tutoring	5
Examinations	2
Other activities…	

3.7 Total number of hours of individual study	**61**
3.8 Total number of hours per semester	**75**
3.9 Number of credits (ECTS)[5]	**3**

4. Prerequisites (if it is the case)

4.1. curriculum	—
4.2. competences	Basic knowledge of using IT&C (general high school level)

5. Requirements (if it is the case)

5.1 for the lectures	—
5.2 for the seminar / laboratory	• Computer room with a PC for each student and LAN connected to Internet.

6. Specific acquired competences

Professional competences	1. Capacity to appropriately use the IT&C tools and technology: software packages for medical data acquisition and processing, focusing on the dentist's practice. 2. Capacity to critically appraise web-based medical literature. 3. Ability to currently use the tools for Internet navigation: uploading/downloading information, use of electronic means for professional correspondence and communication, editing on-line information
Transversal competence	1. Developing the capacity to integrate information from different sources. 2. Effective professional communication and knowledge transfer across the professional fields, both medical and non-medical 3. Effectively identifying their own role and responsibility in an interdisciplinary team.

7. Course objectives

7.1. General objective	Knowledge and understanding of basic concepts in medical information technology and communication, with the specific methods and practical tools.

7.2. Specific objectives	Basic knowledge of the principles behind medical data management systems and the processing road to medical knowledge; basic practical skills to prepare professional documents and presentations in digital formats. Developing the knowledge and practical skills for navigating and researching on the Internet, together with the understanding of critically analyzing the validity of information sources.

8. Content

8.1 Lecture	Teaching methods	Hours	Remarks, details
—			
Recommended literature: —			
8.2. Practical work	Teaching methods	Hours	Remarks, details
1. Introduction: basics of information technology (*hardware*, *software*); course web-page. The *eLearning* platform to be employed during the semester.	demonstration, supervized practical exercises, discussing and critical analysis of results	1	
2. Web-based documenting in the medical profession. Information searching. Examples and exercises to understand the quality and validity of medical information.		1	
3. Discussions/debates, critically appraising the findings, ethical aspects in handling medical information. Assigning the themes for documenting projects.		1	
4. Medical databases. Creating a data file: defining the scheme/structure. Examples.		1	
5. Medical databases: data entering and validating.		1	
6. Basics in using a spreadsheet application.		1	
7. Data organizing and graphs in a spreadsheet application with examples in *Excel*.		1	
8. Data portability: importing/exporting data between software applications. Text formats for data.		1	
9. Basic concepts in *mHealth*.		1	
10. Examples with mobile applications: advantages and possible shortcomings, portability.		1	
11. Data security. Possible solutions.		1	
12. Basic tools and practical skills to prepare a professional report in digital form.		1	
13. Basic tools and practical skills to prepare a presentation.		1	
14. Medical informatics and biostatistics: tools and perspectives. Oral session of oral presentations (with *PowerPoint* support) and group debates.		1	

Mandatory literature:

1. Shortliffe EH, Cimino JJ (eds). Biomedical Informatics. Computer Applications in Health Care and Biomedicine (4th Ed). New York: Springer, 2014
2. Wikipedia: Handbook of Biomedical Informatics (free access).
http://en.wikipedia.org/wiki/Book:Handbook_of_Biomedical_Informatics

Recommended literature:

1. Muntean C, Catu C, Petak F: Information and Communication Technology in Medicine. Timişoara: Eurobit 2011.

9. Correlations between the content of the course and the requirements of the professional field and relevant employers.

The practical lessons introduce the concepts and specific methods of medical informatics, emphasizing its usefulness in the dentists' everyday practice.

10. Evaluation

Activity	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final mark
10.4 Lecture	—	—	—
10.5 Laboratory	*Knowledge for mark 5*: • valid and active accounts for e-mail and the *eLearning* platform; • basic operation with data files; • practical ability to navigate on the Internet	Group and individual class work, with formative feed-back during the semester (30%). Practical examination in class (30%).	100%

	Knowledge for mark 10: • skilled application of the data collection and processing methods; • adequate search of a subject on the Internet and identification of the quality information sources; • capacity to critically interpret the retrieved web-based information and subsequently defend an opinion.	Documenting on a current subject in medical informatics, critical analysis and oral presentation of findings (40%).	
10.6 Minimum needed performance for passing: Minimum 5 for all assessment criteria.			

Date of completion: 17th Sep 2018	Signature (lecture): —	Signature (laboratory instructor): **Ioan-Dumitru DRĂGAN**, PhD, assistant professor
Course Chair **Diana LUNGEANU**, PhD, professor		
Date of department approval:	Signature (head of the department): **Virgil PĂUNESCU**, MD, PhD, professor	

Notă:

1) Domeniul de studii - *se alege una din variantele:* Licenţă/ Masterat/ Doctorat (**se completează conform cu Nomenclatorul domeniilor şi al specializărilor/ programelor de studii universitare în vigoare**) ;

2) Ciclul de studii - *se alege una din variantele:* Licenţă/ Master/ Doctorat;

3) Regimul disciplinei (conţinut) - *se alege una din variantele:* **DF** (disciplină fundamentală)/ **DD** (disciplină din domeniu)/ **DS** (disciplină de specialitate)/ **DC** (disciplină complementară) - *pentru nivelul de licenţă;* **DAP** (disciplină de aprofundare)/ **DSI** (disciplină de sinteză)/ **DCA** (disciplină de cunoaştere avansată) - *pentru nivelul de masterat*;

4) Regimul disciplinei (obligativitate) - *se alege una din variantele:* **DI** (disciplină obligatorie)/ **DO** (disciplină opţională)/ **DFac** (disciplină facultativă);

5) Un credit este echivalent cu 25 – 30 de ore de studiu (activităţi didactice şi studiu individual).

6) Pentru specializările şi/sau disciplinele a căror tematică se regăseşte în bibliografia de rezidenţiat, aceasta devine obligatorie.