



UNIVERSITATEA DE MEDICINĂ ȘI FARMACIE GRIGORE T. POPA IAȘI

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SYLLABUS

1. Programme Details

1.1.	“GRIGORE T. POPA” UNIVERSITY OF MEDICINE AND PHARMACY FROM IAȘI
1.2.	FACULTY OF MEDICINE / DEPARTMENT: MORPHOFUNCTIONAL SCIENCES II
1.3.	DISCIPLINE: ESSENTIAL NANOMEDICINE
1.4.	FIELD OF STUDY: HEALTH
1.5.	STUDY CYCLE: BACHELOR
1.6.	PROGRAMME OF STUDY: Medicine English

2. Discipline Details

2.1.	Name of the Discipline: ESSENTIAL NANOMEDICINE						
2.2.	Teaching staff in charge with lectures: Associate Professor Dr. LUPUȘORU RAOUL VASILE						
2.3.	Teaching staff in charge with seminar activities: -						
2.4. Year	IV	2.5. Semester	I	2.6. Type of evaluation	Colloquium	2.7. Discipline regimen	Optional

3. Overall Time Estimates (hours/semester of didactic activity)

3.1. Number of hours per week	2	Of which: 3.2. lectures	2	3.3. seminar/ laboratory	-
3.4. Total hours in the curriculum	14	Of which: 3.5. lectures	14	3.6. seminar/ laboratory	-
Distribution of time					Hours
Study time using coursebook materials, bibliography and notes					6
Further study time in the library, online and in the field					12
Preparation time for seminars / laboratories, homework, reports, portfolios and essays					12
Tutoring					2
Examinations					4
Other activities					-
3.7. Total hours of individual study					36
3.8. Total hours / semester					50
3.9. Number of credits					2



FACULTATEA DE MEDICINĂ

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4. Prerequisites (where applicable)

4.1. curriculum	Not applicable
4.2. competences	Not applicable

5. Conditions (where applicable)

5.1. for lecture delivery	Not applicable
5.2. for seminar / laboratory delivery	Not applicable

6. Specific Competences Acquired

Professional Competences (knowledge and skills)	- Knowledge and ability to use nanomaterials with various applications.
Transversal Competences (roles, personal and professional development)	- Communication skills in nanomedical research. - The ability to analyze and manage the risks and benefits of nanoparticles.

7. Objectives of the Discipline (related to the acquired competences)

7.1. General Objective	- Assimilation of the nanomedical concepts.
7.2. Specific Objectives	- Learning different types of nanoparticles and potential applications. - Understanding the risks and benefits of nanomedicine.

8. Contents

8.1. Lecture	Teaching methods	Comments
Lecture 1 - Introduction to Nanoscience	Powerpoint/ oral presentation	2 hours
Lecture 2 - From Nanobiotechnology to Nanomedicine	Powerpoint/ oral presentation	2 hours
Lecture 3 - Risks and Benefits of Nanomedicine	Powerpoint/ oral presentation	2 hours
Lecture 4 - Nanoparticles for Drug Delivery	Powerpoint/ oral presentation	2 hours
Lecture 5 - Nanosensors	Powerpoint/ oral presentation	2 hours
Lecture 6 - Nano-Imaging	Powerpoint/ oral presentation	2 hours
Lecture 7 - Other Applications of Nanoparticles and Perspectives in Nanomedicine	Powerpoint/ oral presentation	2 hours
Bibliography		
1. Martins JP, Santos HA, <i>Nanotechnology for Oral Drug Delivery: From Concept to Applications</i> , Elsevier Inc., Academic Press, London, 2020.		
2. Jain KK, <i>The Handbook of Nanomedicine</i> , Third Edition, Springer, New York, 2017.		
3. Ge Y, Li S, Wang S, Moore R, <i>Nanomedicine</i> , Springer, New York, 2014.		
8.2. Seminar / Laboratory	Teaching methods	Comments
Not applicable		
Bibliography		

9. Correlations between the contents of the discipline and the expectations of the epistemic community, of professional associations and of employers in the field

Knowledge and skills are set as teaching objectives and specified as such in analytical programs reviewed annually. After analysis within the discipline, these are discussed and approved within the Curriculum
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Bureau, in the sense of harmonization with other disciplines. Throughout this process, the correspondence between content and the expectations of the academic community, community representatives, professional associations and employers is systematically assessed, as far as possible. As a primary goal, the discipline aims to provide students with the optimal prerequisites for the next years of study in the Bachelor of Medicine program, in order to successfully hire, immediately after graduation, residency programs in Romania and other EU countries.

10. Evaluation

Type of activity	10.1. Evaluation criteria:	10.2. Methods of evaluation	10.3. Percentage of final grade
10.4. Lecture	Portfolio / projects / case presentation / essays / summaries / homework	Colloquium	100%
10.5. Seminar / Laboratory	-		
	-		
Minimum standard of performance: at least grade 5 to pass the discipline			

Date:

May 7th, 2021

Name and Signature of Didactic Co-ordinator

Prof. Manuela Ciocoiu, MD, PhD

Name and Signature of Department Director

Prof. Carmen Elena Cotrutz, MD, PhD