UNIVERSITY OF PATRAS
SCHOOL OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY
POSTGRADUATE PROGRAM: NANOMEDICINES FOR DRUG DELIVERY- NANOMED (EMJMD)

COURSE TITLE: SUMMER SCHOOL AND WORKSHOP
CODE:HG4_NM9

NANOMEDICINES FOR DRUG DELIVERY- NANOMED (EMJMD)

COURSE OUTLINE

1. GENERAL

SCHOOL	HEALTH SCIENCES		
ACADEMIC UNIT	DEPARTMENT OF PHARMACY		
PARTICIPATING INSTITUTIONS	-		
TITLE of POSTGRADUATE PROGRAM	NANOMEDICINES FOR DRUG DELIVERY- NANOMED (EMJMD)		
LEVEL	POSTGRADUATE		
COURSE CODE	**HG4_NM9**	**SEMESTER**	**B'**
COURSE TITLE	**NANOMED SUMMER SCHOOL AND WORKSHOP**		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
Courses, Seminars, essay's	2	3

COURSE TYPE	Specialized knowledge (Nanomedicines, Pharmaceutics), Skills Development.
PREREQUISITE COURSES	None
LANGUAGE of INSTRUCTION and EXAMINATIONS	ENGLISH
COURSE OFFERED to ERASMUS STUDENTS	THIS IS ALREADY AN EMJMD PROGRAM COURSE
COUSRSE (URL)	https://www.pharmacy.upatras.gr/images/DS/NanoMed/HG4_NM09.pdf

2. LEARNING OUTCOMES

Learning Outcomes
Upon successful course completion, students will acquire knowledge, skills and abilities related to level 7 of the European Qualifications Framework for Lifelong Learning. In particular, students will: 1. understand basic concepts on Nanomedicines on a specific subject (or subjects) related with the theme of the summer school 2. have been introduced to the techniques and methodology underlying the development of specific nanomedice types (during the workshop) 3. have the experience of presenting/defending their work (3-month internship or 6 month Diploma Thesis) to an audience (similar to conference). 4. Have been introduced to soft skills (writing cv, writing reports, research project proposals etc) –(during the summer school).

General Competences
• Working independently • Team Work • Working in an international environment • Working in an interdisciplinary environment • Production of free, creative and inductive thinking • Adapting to new situations

3. SYLLABUS

The summer School is organized each year by one of the partner Universities;

One Invited Professor gives lectures for 8 days on selected topics related to Nanomedicines;

During the summer school students are asked to complete an essay or case study, which they present on the final day, and are also evaluated by written .

Student evaluation is based on a written test, and oral presentation of specific topic case study or essay. evaluations

PUBLIC PRESENTATIONS

1st year students present their Posters (from 3 month Internship results)

2nd year students defend their Diploma Thesis, orally during the workshop, in from or their examination committee and the workshop audience

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face	
USE of INFORMATION and COMMUNICATIONS TECHNOLOGY	• Use of ICT - e-class platform • Communication with students	
TEACHING METHODS	***Activity***	***Semester Workload***
	Lectures from Invited Professor	30
	Scientific presentations during Workshop	20
	Presentations of Poster /Thesis	2
	Case Studies' Preparation & non-directed Study	23
	Course Total **(25 hours of work-load per ECTS credit)**	**75**

STUDENT PERFORMANCE EVALUATION	Language of Evaluation: Greek / English Written exams • Multiple choice questionnaires, Short answer questions, Open ended questions (60% of final grade) Public Presentation • Presentation of a Case study (Greek or English) (40% of final grade)

5. RECOMMENDED BIBLIOGRAPHY

Suggested Bibliography:

1. Nanomedicine for the Treatment of Disease: From Concept to Application. (2019). United States: Apple Academic Press.
2. Advances and Challenges in Nanomedicine. (2019). (n.p.): Frontiers Media SA.
3. Nanomedicine for Bioactives: Healthcare Applications. (2020). Singapore: Springer Nature Singapore.
4. Igarashi, E. (2018). Nanomedicines and Nanoproducts: Applications, Disposition, and Toxicology in the Human Body. United States: CRC Press.
5. Gregoriadis, G. (2018). Liposome Technology: Volume III: Targeted Drug Delivery and Biological Interaction. United Kingdom: CRC Press.
6. Liposomes: Methods and Protocols. (2023). Germany: SPRINGER-VERLAG NEW YORK.
7. Liposomes in Drug Delivery: What, Where, How and When to Deliver. (2024). United Kingdom: Elsevier Science.
8. Grumezescu, A. M. (2019). Nanomaterials for Drug Delivery and Therapy. Netherlands: Elsevier Science.

Related Academic Journals:

Nature Nanotechnology
J, Controlled Release
ACS Nano
Inter. J. Pharmaceutics
J. Pharm. Sciences
J. Liposome Research
Nanomedicine
Int. J. Nanomedicines
Pharmaceutics