

COURSE OUTLINE

1. GENERAL

SCHOOL	NATURAL SCIENCES		
DEPARTMENT	BIOLOGY		
LEVEL OF COURSE	UNDERGRADUATE		
COURSE CODE	BIO_MBT	SEMESTER OF STUDIES	6
COURSE TITLE	Molecular Biotechnology		
INDEPENDENT TEACHING ACTIVITIES	TEACHING HOURS PER WEEK	ECTS CREDITS	
Lectures	2	3	
COURSE TYPE	Field of Science		
PREREQUISITE COURSES:	There are no prerequisite courses. However, a good understanding of Molecular and Cellular Biology, Biochemistry, Genetics and Microbiology is recommended.		
TEACHING AND ASSESSMENT LANGUAGE:	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBPAGE (URL)			

2. LEARNING OUTCOMES

Learning outcomes
The course aims to familiarize students with: <ol style="list-style-type: none"> 1. Fundamental techniques and applications of the field 2. Core principles underlying the production of recombinant proteins 3. Key methodologies for the generation of transgenic animals
General Abilities
General Skills Developed by the End of the Course: <ul style="list-style-type: none"> • Ability to recognize, understand and design experimental methodologies • Ability to design and implement interdisciplinary approaches • Generation of new experimental ideas • Promotion of free, creative and inductive thinking

3. COURSE CONTENT

<ol style="list-style-type: none"> 1. Fundamental technologies of Molecular Biotechnology 2. Basic principles of recombinant protein production 3. Generation of transgenic plants and animals 4. Applications in the field of biomedicine 5. Ethical and social issues
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4. TEACHING AND LEARNING METHODS - ASSESSMENT

TEACHING METHOD.	Face to Face		
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of the e-class online platform, PowerPoint and online videos		
TEACHING ORGANIZATION	<i>Activity</i>	<i>Semester workload</i>	

	Lectures (13 weeks x 2 hours per week)	26
	Home study	49
	Total number of hours for the Course (25 hours of workload per ECTS credit)	75
STUDENT ASSESSEMNT	The course is assessed through written exams that include multiple-choice questions, true/false items, fill-in-the-blank questions, matching exercises, short-answer open questions, and problem-solving tasks.	

5. RECOMMENDED LITERATURE

Suggested bibliography:

1. Biotechnology for Beginners, 3rd Edition, Paperback ISBN: 9780323855693. eBook ISBN: 9780323855709
2. Molecular Biotechnology: Principles and Applications of Recombinant DNA, 6th Edition, ISBN: 978-1-683-67366-8

Related academic journals:

1. Nature Biotechnology
2. Nature Methods
3. Trends in Biotechnology
4. Molecular Biotechnology