Module Layout
ΧΜΠ615: Bioengineering - Environment

Faculty	*Code*	*Faculty of Pure and Applied Sciences*		
Programme of Study	*ΧΜΠ*	*Sustainable Environmental Engineering*		
Module	*ΧΜΠ615*	*Bioengineering - Environment*		
Level of Study	**Undergraduate**	**Graduate**		
		Master	**Doctoral**	
		X		
Language of Instruction	Greek			
Mode of Delivery	Distance			
Module Type	**Required**	**Electives**		
		X		
Number of Group Consulting Meetings	***Total***	***Physical Presence***	***Online***	
	13	**0**	**13**	
Number of Assignments	**1**			
Final Grade Calculation	**Assignments**	**Weekly Activities**	**Final Exam**	
	30 **%**	*10* **%**	*60* **%**	
Number of European Credit Transfer System (ECTS)	*5*			

Module Description

The science of Biotechnology combining interdisciplinary challenges such as classical engineering, chemical engineering, bio-engineering, natural sciences (physics, chemistry), soil science, applied mathematics, life sciences (biochemistry, biology), transport phenomena etc., offers the possibility for sustainable consumption and production while simultaneously managing resources, energy and waste efficiently. This will aim to provide useful goods for civil society as expressed through a sustainable design, the development of production processes and methods, the design and development of products and services, the manufacture and operation of equipment and process facilities of biotechnology, industry food, pharmaceuticals, decontamination methods, and other related industries taking into account sustainability, hygiene, safety and environmental protection conditions, with a focus on economic, social and environmental sustainability.

The course aims to apply the important principles of Bio engineering, Bio-technology, Environmental Engineering, Environmental microbiology, for the design and analysis of processes with an emphasis on the production processes of bio-products, medicines, food, control of good industrial practices, control standards for safe food production (such as HACCP, ISO 22000 etc.), biotechnological products and food waste management, promotion of bio-engineering and biotechnology tools and techniques, recovery of products of high nutritional value from waste, microbiological soil decontamination processes, bio-remediation strategies, xenobiotic substances, in correlating the effect of climate changes on microbial communities, etc.

Pre-requisite Modules	
Not applicable	

Co-requisite Modules	
Not applicable	

Grading Scheme

Assessment Method	Percentage on Final Grade	Workload	
		Hours	ECTS
Weekly Study *13 weeks * ~11 study hours*		*60-80*	*2.5*
Weekly Interactive Activities *13 weeks * ~1 hour of work*	*10%*	*~13*	*0.5*
Assignment	*30 %*	*30 - 50*	*2.0*
Final/Repeat Examination	*60 %*	*3*	*--*
Total	**100%**	*100-150*	*5*

Grading Rules and Assessment methods

- Students are evaluated with 10, if they earn 100% of the possible grade.
- Students are evaluated with 9, if they earn 90% of the possible grade, I.e. 90%*10=9, etc.
- Passing rate
  - 50% of the Assignment
  - 50% of the Interactive Activities
  - Students are allowed to participate in the final exam of a Module if they have overall earned the minimum grade (≥ 50 %) in both their Assignment and Interactive Activities
  - 50% of the Final exam

If a student earns a grade with decimal points, then it is rounded to the nearest half unit.