

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Environmental Microbiology
Course number	BIOL2314
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Studying the kinds of microorganisms exists in soil
2 - physical, chemical and biological factors influence their development. The role of microbes in soil
3 - Knowledge about water organism and waste water treatment

Intended Learning Outcomes

Knowledge and Understanding	* Understanding of prevalent environmental conditions acting on air and their influence on survival of microorganisms
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Course Contents

1 - Introduction to soil, water and air microbiology
2 - Edaphon: The characteristics of soil microorganisms
3 - Edaphon: The number and distribution of soil microorganisms
4 - Edaphic factors: Water, Osmotic pressure, Redox potential, Soils pH,....
5 - Activity of microorganisms
6 - Soil bioremediation
7 - Water and water organisms
8 - Polluted water organisms and Water health standard
9 - Waste water treatment
10 - The air as an environment of microorganisms
11 - Adaptation of microorganisms to the air environment, Biological aerosols
12 - Mechanisms protecting lungs against bioaerosol penetration
13 - Survival and spread of bioaerosols, Biological aerosols as a hazardous source for humans

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Assessment		30
MIDEXAM		30
Final Exam		40

Books and References

Course note	Introduction to environmental microbiology. Barbara Kolwzan, Waldemar Adamiak
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