Course Specifications

General Information

Course name	Basic Microbiology
Course number	BIOL2352
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Introduction to the microbial world

2 - Diversity of prokaryotes, their development, structure and function. Prokaryotic metabolism, nutrition and growth. Microbial genetics and control

3 - Fundamental principles of the interrelationships of microorganisms with human

4 - Control of microbial growth

5 - Studying different groups of prokaryotes and their role in the environment

Intended Learning Outcomes

Knowledge and Understanding	* Understanding the principles of bacteriology, structure and diversity of bacteria.
Intellectual Skills	* Interpret the metabolic pathways carried out in bacteria in order to grow, reproduce, etc * Distinguish the different environmental and chemical factors needed for bacterial growth and culture media * Discriminate the factors affecting bacterial growth

Course Contents

1 - Overview of bacteriology
2 - The Impact of Microbes on the Environment and Human Activities
3 - Structure and Function of Bacterial Cells part I (Cell wall and membranes)
4 - Structure and Function of Bacterial Cells part II (Other structures and inclusions; biofilms)
5 - Bacterial growth and cell Cycle
6 - Bacterial Nutrition and sporulation
7 - Diversity of Metabolism in Prokaryotes
8 - Bacterial genome and gene transfer
9 - Bacteria and Archaea and the Cycles of Elements in the Environment
10 - Important Groups of Prokaryotes 1 (Archaea Cell Envelopes and Archaea groups)
11 - Important Groups of Prokaryotes 2 (Photosynthetic purple and green bacteria, Heliobacteria
12 - Important Groups of Prokaryotes 3 (Cyanobacteria and other bacteria)+presentation

Teaching and Learning Methods

1 - Lectures
2 - Revision and Discussion sections
3 - Student presentation
4 - Exams

Students Assessment

Assessment Method	TIME	MARKS
First hour exam	60minutes	20
Second hour exam	60minutes	20
Presentations		10
Final Exam	120minutes	50

Books and References

Recommended books	2008 Kenneth Todar, Textbook of bacteriology. University of Wisconsin, Madison, Wisconsin
	2006 Brock, Biology of microorganisms, Madigan, Martinko, and Parker