

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	General Biology
Course number	BIOL1301
Faculty	
Department	
Course type	College Needs
Course level	1
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

- 1 - To demonstrate an understanding of the language of biology. The fundamentals and concepts of general biology will be presented, including
- 2 - To illustrate the science of biology, the nature of molecules, the chemical building blocks of life, biology of the cell, cell structure, membranes, cell – cell interactions
- 3 - To demonstrate how cells divide, sexual reproduction and meiosis, molecular genetics, DNA: the genetic material, genes and how they work
- 4 - To understand viruses and simple organisms, how we classify organisms, viruses, prokaryotes, protists, fungi
- 5 - To discuss plant forms and functions plant body, animal forms and functions, organization of the animal body, regulating the animal body, the nervous system, endocrine system, immune systems

Intended Learning Outcomes

Knowledge and Understanding	<ul style="list-style-type: none"> * Illustrate the nature of molecules, the chemical building blocks of life, biology of the cell, cell structure, membranes, cell – cell interactions * Interpret how cells divide, sexual reproduction and meiosis, molecular genetics, DNA: the genetic material, genes and how they work * Understand how we classify organisms, viruses, prokaryotes, protists, fung
Intellectual Skills	<ul style="list-style-type: none"> * Distinguish between branches of fundamental Biology * Discriminate the organisms and their diversities and some special branches of biology
General Skill	<ul style="list-style-type: none"> * Effectively team work for intensive learning

Course Contents

- 1 - Introduction to Biology
- 2 - The chemical basis of life
- 3 - Biological macromolecules
- 4 - Cell structure
- 5 - Two basic types of cells
- 6 - Unique features of planet cells
- 7 - Movement of substances across the cell membrane
- 8 - How cell divide
- 9 - Sexual reproduction and meiosis
- 10 - Classification of organisms
- 11 - Animal tissues
- 12 - Organ systems
- 13 - From gene to protein

Teaching and Learning Methods

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

Teaching and Learning Methods for the Disabled Students

- 1 - Lectures
- 2 - Revision and Discussion sections
- 3 - Help each student according to his needs and his condition

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
First mid-term exam	Week 7	20
Second mid-term exam	Week 13	20
Attendance and discussion	Week 9 & 15	10
Final exam	Week 16	50

Books and References

Essential books Johnson, G.B.; Raven, P.H. (2002): Biology, 6th edition, McGraw-Hill Higher Education, USA.

Knowledge and Skills Matrix

Main Course Contents	Study Week	Knowledge and Understanding	Intellectual Skills	Professional Skills	General Skill
Introduction The science of biology	1	to evaluate the basic knowledge of student in the field of biology	Introduction to biology		Appreciate learning from literatures
The nature of molecules The chemical building blocks of life	2 & 3	Characteristics of molecules	Understanding the chemical building blocks of life		Knowledge about nature of molecules and the chemical building blocks of life
Biology of the cell Cell structure Membranes Cell – Cell interactions	4 & 5	Understanding the cell structure and membranes	Knowledge about cell structure and cell – Cell interactions		Understanding about cell structure and cell – Cell interactions
How cells divide Sexual reproduction and Meiosis	5	Understanding the how cells divide	Understanding the how cells divide		Knowledge about the how cells divide
Molecular genetics DNA: The genetic material Genes and how they work	6 & 7	Knowledge about gene	Understanding what are the molecular genetics		Understanding what are the molecular genetics
Viruses and simple organisms How we classify organisms Viruses Prokaryotes Protists Fungi	8 & 9 & 10	Distinguish and classify organisms	Knowledge about viruses, prokaryotes, protists and fungi		Understanding what the differences between viruses, prokaryotes, protists and fungi
Plant forms and functions Plant body	11	Understanding plants forms			
Animal forms and functions Organization of the animal body	12	Characteristics of animal body	Knowledge about animal body		Understanding the organization of the animal body
Regulating the animal body The Nervous System	13	Understanding animal body and its systems	Knowledge about Nervous System		Understanding the Nervous System
Endocrine System Immune System	14 & 15	Understanding animal body and its systems	Knowledge about Endocrine & Immune Systems		Understanding the Endocrine & Immune Systems

