

**American University of Beirut
Faculty of Arts & Sciences
Department of Biology
Syllabus**

Course number: Biology 202
Course title: General Biology II

Textbook: Biology by Raven and Johnson, 6th edition, McGraw Hill, 2002

Course description:

The course gives an overview of plant's and animal's systems and reveals the correlation between structures and functions and the evolutionary relationships between different groups of organisms.

Learning objectives:

By the end of the course the student should be able to

- Demonstrate knowledge of biological vocabulary
- Demonstrate knowledge of plant and animal structures
- understand the mechanisms and principles that govern body functions in plants and animals
- relate causes and effects
- understand the structure/function relationships
- demonstrate laboratory skills needed for structure identification and dissection.
- interpret data from a laboratory experiment
- demonstrate a scientific attitude

Means of evaluation

	% of final grade	
Exam I	20	(5 th week)
Exam II	20	(10 th week)
Final exam	35	
Mid-term practical exam	10	
Final practical exam	10	
Drop quizzes	5	

Course policies

Attendance

Class attendance is highly recommended. Absence of a student does not exempt him/her from the responsibility of the work done or from any announcement made during the missed session.

Students who miss classes excessively will be asked to drop from the course (AUB catalogue p 116)

Exams

Students are required to take all exams at the scheduled day and time. Failure to take an exam will result in grade of zero for this exams

No make up exams will be given. An alternative arrangement may be done, the nature of which is at the discretion of the instructor.

Course content

<u>Topic</u>	<u>No of lectures</u>	<u>chapter</u>
<u>Evolutionary history of plants</u>	2	37
<ul style="list-style-type: none">• Plant life cycle• Non-vascular plants• Vascular plants<ul style="list-style-type: none">○ Seedless vascular plants○ Seed plants		
<u>The plant body</u>	4	38
<ul style="list-style-type: none">• Meristems• Primary and secondary growth• Plant tissues• Root structure• Stem structure• Leaf structure		
<u>Nutrition and transport in plants</u>	3	39
<ul style="list-style-type: none">• Plant nutrients• Nutritional adaptations• Water and mineral movements• Water and mineral absorption• Phloem transport		
<u>Early plant development</u>	2	40
<ul style="list-style-type: none">• Establishing Root-shoot axis• Establishing tissue systems• Seeds formation• Fruits formation• germination		
<u>Plants growth in response to their environment</u>	4	41
<ul style="list-style-type: none">• growth responses• dormancy• plant hormone• environmental influence on flowering• plant defense responses		
<u>Plant reproduction</u>	2	42
<ul style="list-style-type: none">• rise of angiosperms• evolution of the flower• pollination		

<ul style="list-style-type: none"> • asexual reproduction • life span of plants 		
<u>Locomotion</u>	2	50
<ul style="list-style-type: none"> • types of skeleton • joints • muscle contraction • muscle fibers 		
<u>Digestion</u>	3	51
<ul style="list-style-type: none"> • types of digestive systems • vertebrate digestive system • regulation of digestion 		
<u>Circulation</u>	3	52
<ul style="list-style-type: none"> • types • functions • blood • blood vessels 		
<u>Respiration</u>	4	53
<ul style="list-style-type: none"> • diffusion of gases • respiration in aquatic animals • respiration in air-breathing animals • mechanism of breathing • regulation of breathing • gases transport in blood 		
<u>Nervous system</u>	4	54
<ul style="list-style-type: none"> • neuron organization • membrane potentials • propagation of nerve impulses • neurotransmitters • central nervous system • peripheral nervous system 		
<u>Sensory system</u>	4	55
<ul style="list-style-type: none"> • categories of sensory receptors • mechanical and chemical receptors • auditory receptors • photoreceptors 		
<u>Maintenance of the internal environment</u>	3	58
<ul style="list-style-type: none"> • homeostasis • osmotic balance • vertebrate kidney 		
<u>Immune system</u>	4	57
<ul style="list-style-type: none"> • non-specific defense mechanisms 		

- specific defense mechanisms
- cell-mediated immune response
- humoral immune response