

Hashemite University	 	Plant Biology 1801041252 Compulsory Course
Faculty of Science		Pre-requisite: 1801041102
Department of Biology and Biotechnology		Credit Hours: 4 (3 hrs. theory + 1hr. practical)

Course Syllabus

Course Information	
Lecture's Time	8.30 – 10.00 Monday & Wednesday Practical Sessions: Sunday 11.30 -1.30, 1.30 -30 .30
Lecture Room	Biology Building 112 Practical Sessions lab.118
Instructor	Rajaa Abueideh Lab. Instructor: Ms. Shorouq Jaradat
Office Location	Herbarium Lab. at Herbarium building or Biology Building 103
Instructor's E-mail	raj@hu.edu.jo
Internet Home Page	staff.hu.edu.jo/rajaa
Office Hours	9.30-10.30 Sunday, 9.30-11.30 Tuesday + Messages using Microsoft teams
Textbook Sterns's Introductory Plant Biology , by K.R. Stern, J.E Bidlack and S.H. Jansky, 14 th edition. McGraw-Hill. New York 2017.	
References(s)	- Laboratory manual For Introductory Plant Biology by K.R. Stern, 14th edition. McGraw-Hill. New York 2017. - Botany an Introduction to Plant Biology, by J. D.Mauseth, 6th edition, Jones and & Bartlett Publishers, Boston, 2016. - Plant Biology by Thomas L. Rost, et al, 2nd edition, Thomas/Brooks/Cole. Belmont 2006 - Botany: an introduction to plant biology by Weier T. Elliot, 6th edition. Person/Prentice Hall. New York 1982

Grading Policy:

Theory

1 st Exam	20 %
2 nd Exam	20 %
Other	%
Final Exam	30 %
Total	70 %

Practical

Quizzes	5 %
Midterm	10 %
Reports & Activities	5 %
Final	10 %
Total	30 %

Course Objectives	
1) Understand the importance of plants to human beings and civilization. 2) Understand the hierarchy of plant structure by learning the basic features of plant cells, tissues, and organs. 3) Describe the anatomical and morphological differences among different plant organs. 4) Understand the components of soil ecosystem and how they interact. 5) Develop an idea about fruits, seeds dispersal 6) Understand the function of water in plants and develop an idea about the forces that move water from soil into and through the plant and into the air. 7) Realize the process of photosynthesis as an energy converter process 8) Understand the alternation of generations in plants. 9) Develop an idea about plant biotechnology and vegetative propagation in plants. 10) Understand the binomial system of plant nomenclature 11) Develop knowledge concerning the great diversity among plants 12) Differentiating between angiosperms and gymnosperms based on the anatomy and morphology of different organs 13) Use the compound microscope properly in examining plant tissues. 14) Report the observation in schematic drawing. 15) Practice collecting, preserving and identifying common plants	
Teaching and Learning Methods	
Theory classes. Practical sessions Scientific reports Group activities on selected laboratory sessions including preparation of certain plant tissues slides. Demonstrations of certain procedures. Field trips to the botanical garden at the university.	

Course Contents	
Week	Topic
1	- Introduction to Plant Biology - Cells Lab. 1: Introduction, lab. Instructions & The microscope
2	- Cells - Tissues Lab. 2: Microscopy & Plant Cell Structures.
3	- Tissues - Roots and Soil Lab. 3: Plant Tissues I: Meristems, Parenchyma Collenchyma & Sclerenchyma
4	- Roots and Soil - Stems Lab. 4 : Plant Tissues II: Secretory Tissues, Epidermis, Periderm & the vascular tissue: xylem & phloem.
5	- Stems - Leaves Lab. 5: Plant Organs Anatomy I: Monocot and Dicot and Gymnosperms Roots
6	- First- Hour Exam - Leaves Lab. 6: Plant Organs Anatomy I: Monocot and Dicot and Gymnosperms Stems.

7	- Flowers, Fruits and Seeds Mid – Term lab. Exam
8	- Meiosis and Alternation of Generations - Plant Biotechnology, Plant Breeding and Propagation - Plant Names and Classification Lab. 7: Morphology of The Leaf.
9	-Non-Vascular plants Lab. 8 : Anatomy and Morphology of The Flower and Types of inflorescences
9	- Non-Vascular plants -The Seedless Vascular Plants Lab. 9: Types of fruits.
10	Seed Plants: Gymnosperms Lab. 10: Non-Vascular Plants (Mosses)
11	- Seed Plants: Gymnosperms Lab. 11: Vascular Seedless Plants (Ferns)
12	- Seed Plants: Angiosperms - Second- Hour Exam Lab. 12: Gymnosperms & Angiosperms.
13	-Seed Plants: Angiosperms Lab. 13: -Revision
14	- Flowering Plants and Civilization - Final Lab Exam
15 & 16	Final Exam