



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Practical General Biology
2	Course number	0304111
3	Credit hours (theory, practical)	One credit hour Practical
	Contact hours (theory, practical)	(3 practical hours weekly)Sunday(12-3pm,3-6pm),Monday(9.30-12.30am,12.30-3.30pm,3.30-6.30pm),Tuesday(9-12am, 12-3pm,3-6pm) Wednesday(9.30-12.30am,12.30-3.30pm,3.30-6.30pm) ,Thursday(9-12am, 12-3pm,3-6pm)
4	Prerequisites/corequisites	0304101 or concurrently
5	Program title	Bachelor of Biological Sciences and service course for many other programs
6	Program code	0304
7	Awarding institution	University of Jordan
8	Faculty	Faculty of Science
9	Department	Department of Biological science
10	Level of course	First year
11	Year of study and semester (s)	First semester 2016/2017
12	Final Qualification	B.Sc. in Biological Sciences (NA)
13	Other department (s) involved in teaching the course	none
14	Language of Instruction	English
15	Date of production/revision	First semester 2016

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.
Amal Abumoghli, At Biology, Ext.22211, a.abumoghli@ju.edu.jo

17. Other instructors:

Hana Alebous, Office: 404/2 Biology building , Phone number: 22237, Email: h.alebous@ju.edu.jo
Alia Silawi, Office 402 Biology building, Phone number: 22231 Email: Silawiam@ ju.edu.jo, Office hours: Wednesday, Monday (11-12 am) , Thursday(2-3) and by appointment
Asma Ibrahim, Office At Biology, Ext.22211, a.ibraheem@ju.deu.jo.sundat (2:30-3), Monday (12-12:30)
Bara'a hamawe, Office 221 Biology building, Phone number: 22219 Email: b.hamawi@ ju.edu.jo Office hours: Wednesday(11-12:30), Thursday (3-4pm)
Ghina hemod, Office 221Biology building, Ext.22219, Email: g.alhmoud@ju.edu.jo, Office hours Sunday, Thursday(10-12), Wednesday(2:30-3:30)
Mariam Elkhatib, Office At the green house, Email: Mariam_alkhatib

18. Course Description:

This course for undergraduate students deals with the following topics, safety items in the lab, safety rules, how to deal with chemicals and glass ware, knowing the most widely tools and items, How to use the microscope. Also the students will learn about the cell (in general). Also this course will cover Biological Macromolecules test, Enzyme test, Metabolic activity test, and also will cover Plant Tissues, Plant anatomy, Flower morphology, Seed structure, Animal Tissues, Vertebrate Anatomy, Cell Division and Genetics

19. Course aims and outcomes:

A- Aims:

- 1-To provide the student with the basic fundamentals about how the scientific process operates and a fundamental understanding of basic concepts of biology.
- 2-To help the student apply the scientific process when describing the results of an experiment done during lab.
- 3-To understand the significance of biological principles to other fields of study.
- 4-To demonstrate skills in using laboratory equipment.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

By the completion of this course, students will be able to:

- 1-Will learn about the safety rules, harmful chemicals, how to get rid of chemicals and broken glasses
- 2-Will be able to deal with emergency issues like small injuries and chemical burns.
- 3-Identify some of the tools commonly used in the lab for measurement.
- 4-Deal with microscope(how to carry, identify its parts),know the other types of microscopes, preparing a wet mount
- 5-View prokaryotic and eukaryotic cells using microscope, identify plant and animal cell organelles and describe their functions, recognize the common features of cells.
- 6-Conduct test to detect the presence of important biological macromolecules, understand the scientific basis of some of the biochemical tests, recognize the significance of the presence of control in every experiment.
- 7-Define enzyme and describe how it catalyses cellular reaction, discuss the effect of varying environmental conditions such as temp and PH on rate of enzymatically-controlled reactions, effect of enzyme concentration on the reaction rate ,indicate how the cofactor might operate.
- 8-Perform lab exercises that investigate the process of fermentation and identify the by-products, Perform lab exercises that investigate the process of cellular respiration and identify the by-products, differentiate between aerobic and anaerobic processes, determine oxygen consumption during aerobic respiration, assemble the equipments needed to measure the rate of photosynthesis in water plant, changing conditions of photosynthesis, extract and separate photosynthetic pigments.
- 9-Observe and describe the external and internal structure of the (root, stem and leaf of angiosperm plants, recognize and identify the structural parts of flowers and seeds, contrast the structures of monocots and dicots, recognize the organization of the root system and the shoot system of higher plants.
- 10-Outline the basic cellular and physiological regulatory mechanisms and exemplify their role in maintaining homeostasis using cases from plants and animals.
- 11-Define the following terms: tissue, organ, organ system, organism, histology, epithelial tissue, basement membrane, connective tissue, collagen fiber, elastic fiber, fibrocyte, chondrocyte, macrophage, mast cell, osteocyte, neuron, cell body and dendrite, Identify the four major types of tissue found in the body, associate the structure of the mammalian tissues with their functions.
- 12-Identify the main organs of the digestive, muscular, respiratory, urinogenital, and the cardiovascular system of the rat.
- 13-Define the following terms: mitosis, meiosis, homologous chromosome, gamete, gonad, sperm and egg. Identify the stages of mitosis and meiosis. Point out similarities and differences between animal and plant mitosis. Point out similarities and differences between mitosis and meiosis. Describe the significance of the mitotic and meiotic process.
- 14-Define:gene, genetic, haploid, diploid, homozygous, heterozygous, genotype and phenotype. Distinguish between dominant and recessive alleles.
- 15-Understanding the basic of Drosophila genetics.
- 16-Define simple and complex plant tissue, distinguish the different types of tissues found in vascular plants, determine the organization of plant tissues in plant organs.

20. Topic Outline and Schedule:

1.

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction- Before you start	1	Hana Alebous, Alia Silawi, Asma ibrahim, Bara'h Al- hamawi Ghina hemod, MariamElkhateb	1,2,3	Quiz, midterm and final	Lab manual P1-5,25-28
The Microscope	2	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	4,5,9,13,15	Quiz, midterm and final	Lab manual Unit 3
The Cell	3	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	5	Quiz, midterm and final	Lab manual Unit 4
Biological Macromolecules	4	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	6	Quiz, midterm and final	Lab manual Unit 5
Enzymes Metabolism	5	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	7	Quiz, midterm and final	Lab manual Unit 6 and 8
Physical Properties of the	6	Hana Alebous, Mrs Alia	8,10	Quiz, midterm and final	Lab manual Unit 7

Cell		elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb			
MIDTERM EXAM	7	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb		Includes all previous topics	
Plant Tissues	8	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	9,16	Quiz and final exam	Lab manual Unit 11
Plant anatomy Flower morphology Seed structure	9	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	9,16	Quiz and final exam	Lab manual Unit 16 Unit 19
Animal Tissues	10	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss Ghina hemod,Miss Mariam Elkhateb	11	Quiz and final exam	Lab manual Unit 12
Vertebrate Anatomy	11	Hana Alebous, Mrs Alia elsilawi,Mrs Asma ibrahim,Mrs Bara'a hamawe,Miss	12	Quiz and final exam	Lab manual Unit 13

		Ghina hemod, Miss Mariam Elkhateb			
Cell Division	12	Hana Alebous, Mrs Alia elsilawi, Mrs Asma ibrahim, Mrs Bara'a hamawe, Miss Ghina hemod, Miss Mariam Elkhateb	13	Quiz and final exam	Lab manual Unit 9
Genetics	13	Hana Alebous, Mrs Alia elsilawi, Mrs Asma ibrahim, Mrs Bara'a hamawe, Miss Ghina hemod, Miss Mariam Elkhateb	14,15	Quiz and final exam	Lab manual Unit 10
Final exam	14	Hana Alebous, Mrs Alia elsilawi, Mrs Asma ibrahim, Mrs Bara'a hamawe, Miss Ghina hemod, Miss Mariam Elkhateb		Includes all topics	

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

Lecturing and discussions throughout the semester
 Power point presentation
 Office Hours
 Quizzes

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

The grade is distributed over 2 online multiple-choice exams and 6 quizzes as detailed in the table below.

Description	Weight
Midterm exam	25%
Quizzes and Evaluation	35%
Final exam	40%

23. Course Policies:

A- Attendance policies:

Enrolled students are expected to attend the lab session in line with the university of Jordan policy as outlined in your student handbook

B- Absences from exams and handing in assignments on time:

You should talk to your instructor as soon as possible if you miss an exam. All such cases will be dealt with according to the rules outlined in your student handbook

C- Health and safety procedures:

There is a simple first aid kit in the lab

D- Honesty policy regarding cheating, plagiarism, misbehavior:

All violations pertaining to cheating, plagiarism, misbehavior will be dealt with in accordance to the rules outlined in your student handbook

E- Grading policy:

Midterm and final exam are made up of MCQ's and will be graded automatically

6 quizzes are written by lab instructor

F- Available university services that support achievement in the course:

NA

24. Required equipment:

Microscopes

Models

Sildes

25. References:

A- Required book (s), assigned reading and audio-visuals:

Online tutorial

B- Recommended books, materials, and media:

26. Additional information:

Name of Course Coordinator: السيدة امل ابو مغلي Signature: ----- Date: 12/ 01/ 2016

Head of curriculum committee/Department: الاستاذة الدكتورة سوسن العوران Signature: -----

Head of Department: الدكتورة هناء العبوس Signature: -----

Head of curriculum committee/Faculty: الاستاذة الدكتورة أمل العابودي Signature: -----

Dean: الاستاذ الدكتور صالح محمود Signature: -----

Copy to:

Head of Department
Assistant Dean for Quality Assurance
Course File