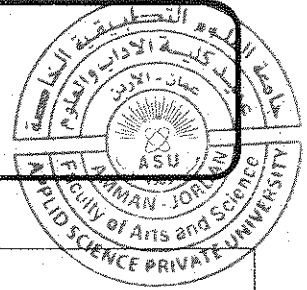




Faculty of Arts & Humanities
Course Syllabus
Semester: Second
Academic Year 2020 / 2021



Course Title:	Biology Lab. For Pharmacy
Course No.:	1501142
Prerequisite:	Biology
Department:	Basic Science and Humanities
Coordinator:	Wafa` Ahmad

Instructor Name	Office Number	Office Phone	Office Hours	E-mail
Mrs. Wafa` Adnan Ahmad	216		10-12 Sun., Tue., Thurs.	w_ahmad@asu.edu.jo

*** Course Description:**

This course deals with use and care of the microscope, animal and plant cell division. It also includes the basics of genetics, method of DNA extraction, study of animal tissues and human body systems using different slides and models

*** Learning Outcomes:**

Upon completion of the course, this module should lead to the following learning outcomes:

A. Knowledge and Understanding (student should) :

- A1. Understand biological facts, terms, principles, concepts, relationships and experimental techniques, including practical laboratory skills.
- A2. Have an ability to carry out laboratory experiments
And activities safely and effectively
- A3 Have an ability to record and interpret biological data.



B. Cognitive and Intellectual Skills :

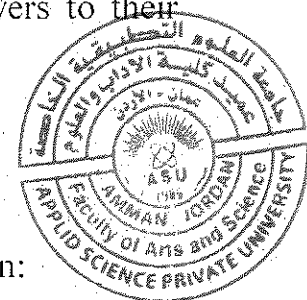
At the end of this module, students will be able to: Develop their intellectual skills through understanding the concepts of biology and formulating questions and thinking of the appropriate answers to their questions.

C. Subject specific skills :

- C1. Use a light microscope and prepare microscopic slides.
- C2. Visually differentiate, and explain the differences between: prokaryotic cells, eukaryotic cells, plant cells and animal cells.
- C3. Determine net direction of diffusion and calculate %change in weight of the dialysis bag.
- C4. Perform biochemical tests to identify types of molecules (including reducing and non-reducing sugars, starch, lipids and proteins) present in a variety of biological materials.
- C5. Describe, explain and investigate factors affecting enzyme kinetics including the effect of temperature and pH on the enzymatic reactions activity.
- C6. Identify the necessary reactants and products of photosynthesis and cellular respiration.
- C7. Identify different types of cell divisions and sequence images of eukaryotic cells undergoing mitosis
- C8. Perform extraction procedure of DNA molecules.
- C9. Identify and distinguish between tissues in the human body.
- C10. Explain the structure and function of organ systems in the human body.

D. Transferable Skills : At the end of this module, students will be able to:

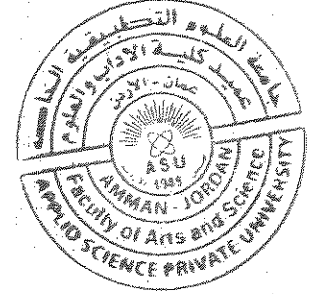
- D1. Improve their ability to analyze data based on their understanding to the basic biological concepts
- D2. Working in groups (self-management, teamwork)





• **Course Contents and Schedule:**

Semester Weeks	Subject
First	Introduction to Biology –Lab.
Second	The Microscope
Third	The Cell
Fourth	Physical properties of the cells
Fifth	Chemical Aspects of Living Organisms (1)
Sixth	Chemical Aspects of Living Organisms (2)
Seventh	Metabolism
Eighth	MID TERM EXAM
Ninth	Cell Division
Tenth	DNA extraction from anything living.
Eleventh	Genetics
Twelfth	Animal Tissues
Thirteenth	Body Systems
Fourteenth	Revision
Fifteenth	FINAL EXAM



*** Teaching Methods:**

- Interactive scientific experiments.
- Using microscopic slides.
- Using scientific charts.
- Using human's body systems models
- Group discussions of experiments' results.

*** Evaluation:**

Mid Term Exam	30%	12/4/2021
Assignment (Reports)	20%	
Final Exam	50%	
Total	100%	



*** Written laboratory reports :**

Lab Reports – will be due following completion of activity-graded on a scale of 0-20

*** Guideline for written laboratory reports :**

Write in simple and clear language.

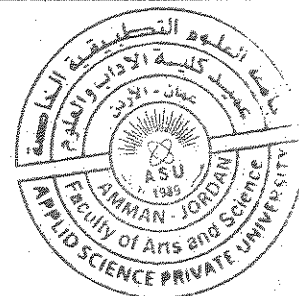
- Observation of structures or biological activities should be recorded very carefully.
- Drawing should be done during the lab. Period.
- The size of drawing should be reasonable.
- The components of drawing should be identified.
- Every drawing should have a title. •
- Label figures and table with appropriately descriptive titles.
- Drawing should be done using pencil.

*** Textbook :**

Laboratory Manual of Biology lab. 2019/2020

*** Reference :**

Enger,E.D and Ross,F.C. 2008.Laboratory Manual Concepts in Biology 13th edn.McGrawHill Companies.





ASU
جامعة العلوم التطبيقية الخاصة
APPLIED SCIENCE PRIVATE UNIVERSITY

AMMAN - JORDAN



المستوى الذهبي

جامعة كل العرب

Subject Coordinator:

Mrs. Wafa` Ahmad

Signature:

أ. وفاء أحمد

Head of Curriculum

Dr. Hussam Miqdad

Signature:

Committee:

Department Head

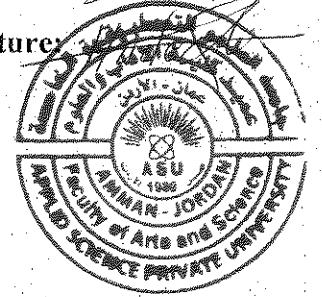
Dr. Hussam Miqdad

Signature:

Dean Faculty

Dr. Hadeel Saed

Signature:



Copy to:

Department Head.

Head of Curriculum Committee;

Course File.