



جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الآداب
Faculty of Arts



فكر حضاري وحوار متمدن
Civilized Thought ...Civilized
Dialogue

"عراقة وجودة"
"Tradition and Quality"

QF04/0408-4.0E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Department of Basic Sciences
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Study Plan No.	2022/2023	University Specialization	Bachelor of Physical therapy
Course No.	0420813	Course Name	Biology Lab
Credit Hours	1	Prerequisite *Co-requisite	* Biology for Medical Sciences
Course Type	☐ Mandatory University Requirement	☐ University Elective Requirement	☒ Faculty Mandatory Requirement
Teaching Style	☐ Full Online Learning	☐ Blended Learning	☒ Traditional Learning
Teaching Model	☐ 1 Synchronous: 1 Asynchronous	☐ 1 Face to Face: 1 Asynchronous	☒ 1 Traditional

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail
Office Hours (Days/Time)	Sunday, Tuesday, Thursday ()		Monday, Wednesday ()	
Division number	Time	Place	Number of Students	Teaching Style
				Traditional Learning
				Approved Model
				1 Traditional

Brief Description

This course covers the practical applications of the most important theoretical concepts covered in the Biology for Medical Sciences students course, such as knowledge and familiarity with the tools, instruments, and techniques used in biology. The student gets introduced to the general structure of the cell, including the physical properties of the cell, the structure and properties of biological macromolecules, and human and animal tissues.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	1. Laboratory manual of general biology, Third Edition, 2009 2. General Biology 1 Lab Manual, Jeremy Seto, 2018			
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	Laboratory Manual for Biology for Medical Sciences, Al-Zaytoonah University of Jordan			
Supporting Websites	-			
The Physical Environment for Teaching	☐ Classroom	☒ Labs	☒ Virtual Educational Platform	☐ Others
Necessary Equipment and Software	Moodle			



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Supporting People with Special Needs	-
For Technical Support	E-Learning & Open Educational Resources Center. Email: ellearning@zu.edu.jo ; Phone: +962 6 429 1511 ext. 425/362.

Course learning outcomes (K= Knowledge, S= Skills, C= Competencies)

No.	Course Learning Outcomes	The Associated Program Learning Output Code
Knowledge		
The student should be able to:		
K1	Recognize the parts of the prokaryotic and eukaryotic cell that can be examined under the light microscope.	MK1
K2	Describe the structure and properties of biological macromolecules.	MK1
K3	Identify the physical properties of the animal and plant cells.	MK1
K4	Recognize the types, structure, and function of animal tissues.	MK1
Skills		
The student should be able to:		
S1	Apply the fundamental principles of safe laboratory practices.	MS1
S2	Perform standard laboratory procedures used in the biology laboratory.	MS1
S3	Identify various types of microscopes, their components, usage, and maintenance procedures.	MS1
S4	Report findings and observations precisely and accurately.	MS1
Competencies		

Mechanisms for Direct Evaluation of Learning Outcomes

Type of Assessment / Learning Style	Fully Electronic Learning	Blended Learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm Exam	30%	30%	30%	0%
Participation / Practical Applications	0%	0%	30%	60%
Asynchronous Interactive Activities	30%	30%	0%	0%
Final Exam	40%	40%	40%	40%

Note 1: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, and work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Note 2: According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student)



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Schedule of Simultaneous / Face-to-Face Encounters and their Topics

Week	Subject	Learning Style*	Reference **
1	Check-in		
2	Introduction and Tools and instruments used in biology lab	Lecture, lab-based learning	Lab Manual
3	Methods and techniques used in biology lab	Lecture, lab-based learning	Lab Manual
4	The Microscopes	Lecture, lab-based learning	Lab Manual
5	The Structure of the cell part 1: Prokaryotic cell	Lecture, lab-based learning	Lab Manual
6	The Structure of the cell part 2: Eukaryotic cell	Lecture, lab-based learning	Lab Manual
7	The Cell Chemistry- Biological Molecules-part-1	Lecture, lab-based learning	Lab Manual
8	The Cell Chemistry- Biological Molecules-part-2	Lecture, lab-based learning	Lab Manual
9	The Physical properties of the cell-part-1	Lecture, lab-based learning	Lab Manual
10	The Physical properties of the cell-part-2	Lecture, lab-based learning	Lab Manual
11	Animal tissues-part-1	Lecture, lab-based learning	Lab Manual
12	Animal tissues-part-2	Lecture, lab-based learning	Lab Manual
13	Animal tissues-part-3	Lecture, lab-based learning	Lab Manual
14	Check-out	Lecture, lab-based learning	Lab Manual
15	Practical Exam		
16	Final Exam		

* Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.

** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.

Schedule of Asynchronous Interactive Activities (in the case of e-learning and blended learning)

Week	Task / Activity	Reference	Expected Results
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