



Course Specifications

Muharram 1437 H

Institution:	. Majmaah University ...
Academic Department :	. Preparatory Year Deanship...
Programme :	Medicine and Medical Sciences....
Course :	.. Biology..
Course Coordinator :	.....
Programme Coordinator :	.....
Course Specification Approved Date :	٣/١/١٤٣٨ H



A. Course Identification and General Information

1 - Course title :	..... Biology..	Course Code:	PBIO 126.
2. Credit hours :	3hrs		
3 - Program(s) in which the course is offered:	. Medicine and Medical Sciences....		
4 – Course Language :	...English		
5 - Name of faculty member responsible for the course:	Dr. Maher Obeidat.		
6 - Level/year at which this course is offered :	Level1 Preparatory Year..		
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> • None .. 		
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> • None . 		
9 - Location if not on main campus :	Preparatory Year Building in majmaah and zulfi		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	70. %
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage? %
D - e-learning	<input type="checkbox"/>	What percentage? %
E - Correspondence	<input type="checkbox"/>	What percentage? %
F - Other	<input checked="" type="checkbox"/>	What percentage?	30 %
Comments :	.....	

B Objectives

<p>What is the main purpose for this course?</p> <p>. Biology will provide students with a solid foundation in the fundamental concepts and knowledge base of modern biology and help students develop the skills that are integral to the process of science. This course prepares students for their upper-level courses by emphasizing on the development of student’s scientific process skills, laboratory techniques, and an understanding of the fundamental principles of living organisms. Students explore biological science as a process, cell structure and function, cell types, organelles and macromolecules, enzymes, and an introduction to metabolism; comparison between catabolism and anabolism and studying cellular respiration as an example on catabolism. Students will also take the opportunity to understand the main concepts of cell division and cell cycle through comparison between mitosis and meiosis, the relation of meiosis to sexual reproduction.</p>
<p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <ul style="list-style-type: none"> • Using of educational videos





Participation of student in teaching procedures through presentations they prepare using different information sources, computer programs and modern facilities..

C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Biology: Exploring life	1	4
A tour of the cell; cell theory, cell types, structure and function of organelles	2+3	8
The molecules of cells; carbohydrates, lipids, proteins, and nucleic acids	4+5	8
The working cell; membrane structure and function, tonicity, and transport mechanisms	6	4
How cells harvest energy; catabolism, anabolism, and enzymes	7+8+9	12
Molecular biology of the gene; genetic material, DNA replication, and flow of genetic information	10	4
Animal structure and function; tissues and organs	11	4
Nutrition and digestion; the human digestive system	12	4
Gas exchange and circulation; the human respiratory system and the cardiovascular system	13	4
Reproduction and embryonic development; human reproduction	14	4

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30			30		60
Credit	30			15		45

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Introducing biology science and characteristics of living organisms	Discussion	Periodical tests
1.2	Studying prokaryotic and eukaryotic cell	Power point presentation	Discussions Assignments
١,٣	Studying cell organelles and their functions, cell membrane and its rule in transport, cell chemistry	Power point presentation Educational videos	Oral questions during lessons
١,٤	Studying enzymes	Power point presentation Discussion	Discussions
١,٥	Metabolism and cellular respiration	Power point presentation Discussion	Oral questions during lessons
١,٦	Cell division	Power point presentation Educational videos	Discussions Assignments
2.0	Cognitive Skills		
2.1	Identification of living and non-living organisms	Lectures	Periodical tests
2.2	Identification of prokaryotic and eukaryotic cells	Educational videos	Discussions
٢,٣	Comparison between different cell organelles and their functions	Practical activities	Evaluation of practical lessons performance
٢,٤	Comparison among cell macromolecules, their structure and functions	Practical activities	Evaluation of practical lessons performance
٢,٥	Comparison between catabolism and anabolism	Lectures	Discussions
٢,٦	Comparison between mitotic and meiotic cell division	Educational videos	Discussions
3.0	Interpersonal Skills & Responsibility		
3.1	Team-work inside lab	Discussion	Evaluation of team-work performance
3.2	Personal work inside lab	Presentations	Evaluation of personal work performance
٣,٣	Discussion groups during chapter reviews	Discussion	Evaluation of performance
٣,٤	Team-works presentations	Presentations	Observation
٣,٥	.....	.....	.....





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
٣,٦	.....	.....	.....
4.0	Communication, Information Technology, Numerical		
4.1	Ability of preparing a good presentation for other colleagues (collecting required information, preparing the report, preparing the presentation and discuss it with other colleagues).	Specify a particular point from the course for a small group of students to work on and prepare the presentation under supervision of the teacher	Evaluation of students in information report collection, preparation, presentation and preparation and presentation show and discussion
4.2	.....	.....	.....
٤,٣	.....	.....	.....
٤,٤	.....	.....	.....
٤,٥	.....	.....	.....
٤,٦	.....	.....	.....
5.0	Psychomotor		
5.1	Using the light microscope	Theoretical explanation	Evaluation of student performance inside the lab
5.2	Preparation of temporary slides and staining it	Practical application by the teacher	Practical test
٥,٣	Execution the required lab experiments for identification of biological molecules (carbohydrates , proteins and lipids)	Practical application by the students	Evaluation of performance
٥,٤	.....	.....	.....
٥,٥	.....	.....	.....
٥,٦	.....	.....	.....

5. Schedule of Assessment Tasks for Students During the Semester:





	Assessment task	Week Due	Proportion of Total Assessment
1	Attendance and participation	Weekly.	
2	Quizzes	6,10,12.	10%.
3	Practical test	15	10%
4	First midterm exam	7	20%
5	Second midterm exam	13.	20%
6	Final exam	17	40%
7	.....	.....	.....
8	.....	.....	.....





D. Student Academic Counseling and Support

Arrangements for availability of teaching staff for individual student consultations and academic advice. (including amount of time teaching staff are expected to be available each week).

E. Learning Resources

1. List Required Textbooks :

- Reece J.B. (2013). Campbell Biology (10th edition). Benjamin Cummings

2. List Essential References Materials :

- Reece J.B. (2013). Campbell Biology (10th edition). Benjamin Cummings

3. List Recommended Textbooks and Reference Material :

- A. Al-Huseiny and Demian “ practical animal biology” part one.

4. List Electronic Materials :

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5. Other learning material :

- Study guide for Campbell biology 10th ed. (CD)...

F. Facilities Required

1. Accommodation

- Classrooms
- laboratories
-

2. Computing resources

-
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-

3. Other resources

- . Attached

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

Quizzes, Oral discussions, Term paper, first, second and final exam

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2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :

Questionnaire for students through web site.
Following up by evaluation unit (quality center)
Self-evaluation procedure





External auditing
3 Processes for Improvement of Teaching : Evaluation and following up by department council Feedback by student questionnaire\ Student evaluation results during and by the end of the course •
4. Processes for Verifying Standards of Student Achievement Statistical processes for students results Re-checking for answer sheets samples by department council Re-checking for answer sheets samples by external committee.
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : Re-checking for answer sheets samples by external committee • .

Course Specification Approved
Department Official Meeting No (.....) Date ... / / H

Course's Coordinator

Name :
Signature :
Date : .../ ... / H

Department Head

Name :
Signature :
Date : .../ ... / H

