Course Specifications

Course Title:	**Animal Physiology 2**
Course Code:	**68023342-3.**
Program:	**BSc Biology.**
Department:	**Basic Sciences Department**
College:	**Adham University College**
Institution:	**Umm Al-Qura University**

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University ☐ College ☐ Department ■ Others ☐ **b.** Required ■ Elective ☐
3. Level/year at which this course is offered: **3rd Year / Level 6**
4. Pre-requisites for this course (if any)**:** **Animal Physiology 1(68023331-3).**
5. Co-requisites for this course (if any)**:**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom		70 %
2	Blended		
3	E-learning		10 %
4	Correspondence		10 %
5	Other		10 %

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	28
2	Laboratory/Studio	42
3	Tutorial	6
4	Practical/Field work/Internship	6
5	Others (specify)	10
	Total	92
Other Learning Hours*		
1	Study	
2	Assignments	
3	Library	
4	Projects/Research Essays/Theses	
5	Others (specify)	
	Total	

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description **This course will learn more about their body, to know more about all systems in human**

and animal body and how they work, including, systems structure and functions, and the role of each one and their correlated activities together. Their roles in maintain good health for their bodies and how each system works and cooperates with all human systems, and between each other.

2. Course Main Objective

After completing this course, students should be able to:

- Develop critical thinking skills and be able to apply physiological concepts and principles at the basic and applied levels.
- Develop a working knowledge of the major physiological systems, and be able to associate anatomical areas with their specific function.
- Develop an understanding of the role of evolutionary processes (e.g. natural selection) in driving the organization of physiological systems.
- Understand important physiological challenges animals face, how those challenges vary in relation to the animals' environment, and the processes by which animals deal with these challenges.
- Identify and describe structural differences of major physiological systems that characterize different taxonomic groups of animals.
- Relate physiological processes, from the biochemical to the system level, to the function of the entire organism in its environment.
- Develop an understanding of current research topics in animal physiology using the primary literature and to develop research questions and methodology to address these questions.
- Develop research questions, devise methods to answer these questions, apply appropriate statistical tests to analyze data and present results of graphically, through writing and by other means.
- Learn to properly and safely use animals and modern laboratory equipment to conduct physiological research.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	• Anatomical characteristics of living organisms.	
1.2	• Differentiate between different systems and organs.	
1.3	• Physiological basis of different system.	
1...	• Factors affecting on the biological processes inside living organisms. • Recognizing physiological changes. • Disorders arise after any organ injury	
2	**Skills :**	
2.1	The ability to:	
2.2		
2.3	• Understanding the physiological basis of different system..	
2...	• To use computer and internet. • To describe the disorders arise after any organ injury. • To identify some factors affecting on the biological processes inside living organisms. • To know anatomical characteristics of living organisms.	

CLOs		Aligned PLOs
	• To prepare some physiological experiments. • To recognize an overview of the tissues anatomy. • To refer different organs of different systems. • To dissect experimental animals, and identify various systems. • Microscopic examination to differentiate between different organs. • Recognizing physiological changes.	
3	Competence:	
3.1	• Developing oral presentations. • Communicating personal ideas and thoughts. • Work independently and as part of a team to finish some assignments. • Communicate results of work to others	
3.2		
3.3		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	Blood physiology	3
2	Circulatory system	4
3	Neurophysiology	4
4	Nervous system physiology	3
5	Midterm exam	2
6	Reproductive male system	3
7	Reproductive female system	3
8	Immune system	3
9	Revisions, Presentations	3
	Total	28h

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Anatomical characteristics of living organisms.	In class lecturing (using PowerPoint presentation and illustrations).	Written and oral periodical and final exams.
1.2	Differentiate between different systems and organs.	Activities and assignments.	Evaluation of lab activities results
1.3	Factors affecting on the biological processes inside living organisms.	Laboratory practice on new techniques	Lab exams and reports.
2.0	Skills		
2.1	Identify some factors affecting on	Small group	Evaluation of the

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	the biological processes inside living organisms	discussion.	topics prepared by students according to the content, arrangement, and covering of the topic.
2.2	Prepare some physiological experiments	Application of essential scientific techniques through lectures, classes and essays.	Course work reports.
2.3	Refer different organs of different systems.	Ask the students to make small search project during the semester	Midterm and final exams.
3.0	**Competence**		
3.1	Developing oral presentations.	Engage student in carrying out internet search.	Oral exams.
3.2	Communicating personal ideas and thoughts.	The ability to debate the scientific basis of subjects	Evaluation of student essays assignments and search work.
3.3	Work independently and as part of a team to finish some assignments.	Writing group reports	Observation of student ethical and moral behavior.

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Periodical Exam(s)	4	10%
2	Mid Term Exam (Theoretic)	8	20%
3	Mid Term Exam (practical)	9	10%
4	Reports and essay	11	5%
5	Final Practical Exam	15	15%
6	Final Exam	16	40%
7			
8			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- Two hours office per week.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Lecture notes prepared by faculty member responsible for the present course**
Essential References Materials	• **Animal Physiology, Second Edition, Richard W. Hill, Gordon A. Wyse, and Margaret Anderson, 2008.** • **Gerard, et al., (2008). Principles of Anatomy and Physiology John Wiley & Sons Inc., USA.** • **Stuart I Fox (2010) Human Physiology, Kindle Edition, McGraw-Hill, USA.** • **Lauralee Sherwood , Hillar Klandorf, Paul Yancey (2012). Animal Physiology: From Genes to Organisms, Brooks Cole, USA.** • **Gerard, et al. (2008). Principles of Anatomy and Physiology John Wiley & Sons Inc., USA.**
Electronic Materials	• **https://en.wikipedia.org/wiki/Chordate** • **http://www.ucmp.berkeley.edu/chordata/chordata.html** • **http://faculty.collegeprep.org/~bernie/sciproject/project/Kingdoms/Animal%20Kingdom%20-%205/Local%20copy/classification/chordata.html**
Other Learning Materials	**Microsoft office package.** **Multi-media associated with the text book and the relevant websites.**

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• **Prepared lecture hall with audio –visual aids.**
Technology Resources (AV, data show, Smart Board, software, etc.)	• **Digital lab containing 15 computers.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Strategies for Obtaining Student Feedback on Effectiveness of Teaching	**the Instructor or by the Department**	• **Questionnaires** • **Discuss students** • **Midterm and final tests.**

Evaluation Areas/Issues	Evaluators	Evaluation Methods
		• Former review.
Other Strategies for Evaluation of Teaching	the Instructor or by the Department	• Peer consultation by departmental specialized committee. • Self-evaluation of the program by the departmental plan committee.

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	