Advanced Aquatic Animals
Zoo 621

Course specifications
(Postgraduate Degree)

Course Title:	**Advanced Aquatic Animals**
Course Code:	**Zoo 621**
Program:	**PhD degree in Zoology program**
Department:	**Zoology**
College:	**Science**
Institution:	**King Saud University**

Table of Contents

A. Course Identification

1. Credit hours: **2.0 (2+0)**
2. Course type ☒ Required ☐ Elective
3. Level/year at which this course is offered: PhD degree
4. Pre-requisites for this course (if any)**: None**
5. Co-requisites for this course (if any)**: None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	30	70
2	**Blended**		
3	**E-learning**		20
4	**Correspondence**		
5	**Other**		10

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	30
2	**Laboratory/Studio**	
3	**Seminars**	
4	**Others** (specify)	
	Total	30
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

1- Knowledge of Biology of aquatic animals.
2- Knowledge of General characteristics
3- Knowledge of calcifications of aquatic animals
4- Geographical distribution
5- Reproductive

2. Course Main Objective

- **Annual review of course by departmental course planning committee.**
- **Updating the course with the latest developments in the field and using internet materials.**

Updating practical sessions with new experiments and slides.

3. Course Learning Outcomes

	Course Learning Outcomes (CLOs)	Aligned PLOs*
1	**Knowledge**	
1.1	1- Knowledge of Biology of aquatic animals.	
1.2	2- Knowledge of General characteristics	
1.3	3- Knowledge of classifications of aquatic animals	
1.4	4- Knowledge of environmental factors affecting Aquatic animals.	
2	**Skills**	
2.1	Classification of different aquatic animals.	
2.2	Aquatic animal biology.	
2.3		
2...		
3	**Competence**	
3.1	To be able to work in a team to conduct a specific project.	
3.2	To be able to discus results of work in groups	
3.3		
3...		

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	**General characteristics**	**2**
2	**Classifications**	**2**
3	**Adaptation of aquatic animals**	**2**
4	**Geographical distribution**	**2**
5	**First exam**	**1**
6	**Reproduction (selected samples).**	**2**
7	**Biology of Aquatic animals groups:** **-1 Marine mammels** **-2 Reptiles and Amphepia** **-3 Aquatic birds** **-4 Fishes**	**14**

	-5 Echino dermata -6 Mullusca -7 Crustacean	
8	second exame	1
9		
	Total	28

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	1- Knowledge of Biology of aquatic animals.	Lectures are given using PowerPoint and handouts	Midterm and final exams
1.2	2- Knowledge of General characteristics	Reports and Oral presentations.	Evaluation of Reports.
1.3	3- Knowledge of classifications of aquatic animals		
1.4			
2.0	Skills		
2.1	Classification of different aquatic animals.	Using illustrations materials	Midterm and final exams.
2.2	Aquatic animal biology.	Activities and homework.	Evaluation of lab reports and examinations.
2.3		Reports	Evaluation of of activities and homework..
3.0	Competence		
3.1	To be able to work in a team to conduct a specific project.	Work in a team.	Assessment of group work.
3.2	To be able to discus results of work in groups	Discus results of work in groups.	Assessment of Individual work.
3.3		Individual work.	

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Midterm Exams.	9-13	30%
2	Report	14	30%
3	Final Exam.	15	40%
4			
5			

***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:

The supervision done by the staff member over lab. Sessions. **Office hours 5 hr/ week.**

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	**Ronald L. Shimek (2004). Marine Invertebrates. Publisher TFH-Microcosm, 2004** **448 pages.** **Annalisa Berta, James L. Sumich, Kit M. Kovacs (2005). Marine Mammals: Evolutionary Biology / Edition 2 Publisher: Elsevier Science.**
Essential Reference Materials	
Electronic Materials	**Websites on the internet that are relevant to the topics of the course**
Other Learning Materials	**Microsoft office package**

2. Educational and research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Modern lecture rooms equipped with all materials.**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Computer room containing at least 30 systems connected to the internet to be used by the students.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**Microscopes – electron microscope – slides – incubators – autoclaves –water baths – Water quality measurements- fish aquaria safety facilities.**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods

Evaluation Areas/Issues (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	