



Course Specifications

Course Title:	Aquatic ecology
Course Code:	ZOO 374
Program:	Bachelor degree in Zoology
Department:	Zoology
College:	Science
Institution:	King Saud University

Table of Contents

A. Course Identification	3
6. Mode of Instruction (mark all that apply)	3
B. Course Objectives and Learning Outcomes	3
1. Course Description	3
2. Course Main Objective.....	4
3. Course Learning Outcomes	4
C. Course Content	4
D. Teaching and Assessment	5
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods	5
2. Assessment Tasks for Students	6
E. Student Academic Counseling and Support	7
F. Learning Resources and Facilities	7
1. Learning Resources	7
2. Facilities Required.....	7
G. Course Quality Evaluation	7
H. Specification Approval Data	8

A. Course Identification

1. Credit hours: 2 (1+0+2)
2. Course type
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b. Required <input type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: Third level
4. Pre-requisites for this course (if any): Sixth Level
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	√	
2	Blended		
3	E-learning		
4	Correspondence	√	
5	Other	√	

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	28
2	Laboratory/Studio	14
3	Tutorial	
4	Others (specify)	
	Total	42
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

2. Course Main Objective

Physical and chemical characteristics of fresh and marine ecosystem.

Aquatic animals and their environments

Aquatic ecosystem

Annual review of course by departmental course planning committee.

Updating the course with latest developments in the field.

Annual review and updating practical sessions with new experiments, slides and new preparations.

Updating course resources using internet materials.

Comparison of course topics with those equivalent courses given in local and international universities

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	The student would gain knowledge concerning: Properties of aquatic ecology	
1.2	Chemical characteristics of water (dissolved oxygen, other dissolved gasses, pH & hardness) Aquatic animals and plants	
1.3	Physical characteristics of water (temperature, salinity, turbidity)	
1...		
2	Skills :	
2.1	Investigate the aquatic ecology and variation in different water sources	
2.2	Measure physical and chemical characteristics of the water and their applications. Classify aquatic animals.	
2.3		
2...		
3	Competence:	
3.1	Ability to work in a team to conduct a specific duty.	
3.2	Ability to work independently to characterize physical and chemical characteristic of water in different aquatic environment.	
3.3		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	Introduction and definitions of aquatic terms	1
2	The physical and chemical characteristics of the water	2
3	Freshwater ecosystem (Lentic, Lotic and wetland)	3
4	Marine ecosystem: some characteristic of marine environments (Sea Shore, Open sea, estuaries, marshes, Lagoons)	3
5	The relationship between aquatic animals and aquatic plants	2
6	Adaptation of animals to aquatic life	1

	Relationship between aquatic animals and physical and chemical properties of the aquatic environment	1
	The characteristics of some aquatic animals	2
Total		15

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	The student would gain knowledge concerning: Properties of aquatic ecology	In-class lectures are delivered using PowerPoint presentations and illustrations Laboratory practice and microscopic examinations. (Conducting experiments and writing reports). Activities and assignments.	Midterm and final exams Estimating writing skill Evaluation of lab reports and examinations
1.2	Chemical characteristics of water (dissolved oxygen, other dissolved gasses, pH & hardness) Aquatic animals and plants	In-class lectures are delivered using PowerPoint presentations and illustrations Laboratory practice and microscopic examinations. (Conducting experiments and writing reports). Activities and assignments.	Midterm and final exams Estimating writing skill Evaluation of lab reports and examinations
1.3	Physical characteristics of water (temperature, salinity, turbidity)	In-class lectures are delivered using PowerPoint presentations and illustrations Laboratory practice and microscopic examinations. (Conducting experiments and	Midterm and final exams Estimating writing skill Evaluation of lab reports and examinations

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
		writing reports). Activities and assignments	
2.0	Skills		
2.1	Investigate the aquatic ecology and variation in different water sources	Using illustrations materials and power point presentation Laboratory training on different methods for fish handling Writing reports.	Mid-term and final exams Evaluation of lab reports about practical session
2.2	Measure physical and chemical characteristics of the water and their applications. Classify aquatic animals.	Using illustrations materials and power point presentation Laboratory training on different methods for fish handling Writing reports.	Mid-term and final exams Evaluation of lab reports about practical session
...			
3.0	Competence		
3.1	Ability to work in a team to conduct a specific duty.	Close monitoring while performing practical work Using power point presentation and illustration	Student cooperation in lab sessions Evaluation of the obtained results
3.2	Ability to work independently to characterize physical and chemical characteristic of water in different aquatic environment.	Close monitoring while performing practical work Using power point presentation and illustration	Student cooperation in lab sessions Evaluation of the obtained results
...			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First midterm exam	6	15%
2	Second midterm exam	12	15%
3	Lab exam	13	30%
4	Final Exam	15	40%
5			
6			
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 :

Direct supervision by staff member over lab. Sessions.

Office hours 6 hr/ week

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	
Essential References Materials	
Electronic Materials	
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	حسين علي السعدي وآخرون (2008) البيئة المائية، دار اليازوري العلمية بوران, وابو دية, محمد (2000) علم البيئة – دار الشروق للنشر والتوزيع, عمان , الاردن الجهني وآخرون (1422هـ) الدليل العلمي ي البيئة الحيوانية، جامعة الملك سعود
Technology Resources (AV, data show, Smart Board, software, etc.)	Barnes, A. S. Al Mann (edit). 1991). Fundamental of aquatic ecology. Black well scientific publication, United Kingdom.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Microsoft office package

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods

Evaluation Areas/Issues	Evaluators	Evaluation Methods

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	