هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission
اعتماد
NCAAA
2024
TP-153

Course Specification
(Bachelor)

Course Title:	Terrestrial and Aquatic Ecology
Course Code:	EVS 1114
Program:	Bachelor of Science in Environmental Science
Department:	Biology
College:	Science
Institution:	Imam Mohammed Ibn Saud Islamic University
Version:	1
Last Revision Date:	-

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: 3 (Lecture 2, Lab 2)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (Level 1/ First Year)					
4. Course general Description:					
This course provides a conceptual framework for understanding the range of the world's terrestrial and Aquatic ecosystems and provides practical field experience with major terrestrial and Aquatic ecosystems in the Kingdom of Saudi Arabia. Topics include: the structure and function of Terrestrial and Aquatic Ecology ecosystems, Appreciate the intrinsic and extrinsic values of ecosystems and biodiversity, the basics of nutrient cycling; food webs; biodiversity, concerns and consequences of associated human influence, energy usage and production including renewable resources, Comprehend the dimensions of the sustainability challenge.					
5. Pre-requirements for this course (if any)**:**					
EVS 1110 EVS 1112					
6. Co-requisites for this course (if any)**:**					
None					
7. Course Main Objective(s):					
The course intends to: - Provide students' knowledge of terrestrial and Aquatic ecosystems. -Explain the major processes and mechanisms that control the flow and storage of energy and the cycling of material in a terrestrial and Aquatic ecosystem. -Describe how human activity impacts ecosystems. -Comprehend the dimensions of the sustainability challenge.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	√	100%
2	E-learning	-	-
3	Hybrid • Traditional classroom • E-learning	-	-
4	Distance learning	-	-

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	-
4.	**Tutorial**	-
5.	**Others (specify)**	-
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Identify the main principles and processes involved in terrestrial and Aquatic ecosystems.**	K1-K2	-Lectures -Class participation	-Written exams -Class participation -Assessment of assigned work
1.2	**Explain the values and purposes of terrestrial and Aquatic ecosystems as part of global conservation strategies.**	K3-K4	-Lectures -Class participation	-Written exams -Class participation -Assessment of assigned work
2.0	**Skills**			
2.1	**Analyze the cultural, social, economic, and community implications in the protection and management of terrestrial and Aquatic ecosystems.**	S1-S2	-Lectures -Classroom discussions -Cooperative education	-Classroom participation -Presentations - Written exams
2.2	**Apply ecosystem management concepts and approaches to protection and management of terrestrial and Aquatic ecosystems.**	S3-S4	-Lectures -Classroom discussions -Cooperative education	Classroom participation -Presentations -Assignments -written exams
3.0	**Values, autonomy, and responsibility**			
3.1	**Participate in work and communicate effectively in groups.**	V1-V2	--Lectures -Classroom discussions -Research	-Classroom participation -Presentations

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
3.2	**Adhere to assigned tasks with responsibility.**	V3-V4	-Lectures -Classroom discussions	-Classroom participation -Presentations

C. Course Content

No	List of Topics (lectures)	Contact Hours
1.	Introduction, Syllabus. General principles of ecology (population ecology, community and ecosystem ecology), and basic knowledge of Terrestrial and Aquatic Ecology.	4
2.	The structure and function of Terrestrial ecosystems, Appreciate the intrinsic and extrinsic values of Terrestrial ecosystems and biodiversity.	4
3.	The structure and function of Aquatic ecosystems, Appreciate the intrinsic and extrinsic values of Aquatic ecosystems and biodiversity.	4
4.	Community Ecology of Terrestrial Ecology: Species Interactions, food chain and food webs.	4
5.	Community Ecology of Aquatic Ecology: Species Interactions, food chain and food webs.	4
6.	Basics of the nutrient cycling.	2
7.	Energy usage and production including renewable resources.	2
8.	Impact of human activities on the Terrestrial and Aquatic Ecology.	2
9.	The roles of people in conservation.	2
10.	Maintaining sustainable use of natural resources.	2
Total		**30**

No	List of Topics (labs)	Contact Hours
1.	Introduction: Terrestrial and Aquatic Ecology.	4
2.	Techniques and methods for quantifying environmental characteristics of terrestrial and aquatic ecosystems.	4
3.	Community structure by species richness, evenness and diversity of community (Plant and animal) using different indices.	2
4.	Collective analysis and discussion (Scientific papers and documentary videos on Terrestrial ecosystems).	4
5.	Collective analysis and discussion (Scientific papers and documentary videos on Aquatic ecosystems).	4
6.	Designing experiments and collecting and analyzing data for a range of animals and plants.	4
7.	Field observation, data analysis and presentation of findings in presentations and reports.	4
8.	Field observation, data analysis and presentation of findings in presentations and reports.	4
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm 1	Around 4th - 5th week	15%
2.	Midterm 2	Around 7th - 8th week	15%
3.	Quizzes, Participation, and Attendance	During the semester	10%
4.	Lab reports	During the semester	5%
5.	Lab Exam	15th week	15%
6.	Final Exam	16th week	40%
Total			100%

* Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	-Terrestrial Ecosystem Ecology: Principles and Applications, 2012, by Folke O. Andersson and Göran I. Ågren، -Fundamentals of Aquatic Ecology. 2009. K. H. Mann ،R. S. K. Barnes -Conservation Biology for all. 2010. edited by Sodhi, N. S, and P. R. Ehrlich. Oxford University Press. -Field and Laboratory Activities for Environmental Science. 2012. Eldon Enger ،Bradley F. Smith
Supportive References	
Electronic Materials	• Saudi Digital Library
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom and laboratories
Technology equipment (Projector, smart board, software)	Projector, smart board
Other equipment (Depending on the nature of the specialty)	Environmental-related instruments

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Direct
Effectiveness of students assessment	Program Leader	Direct
Quality of learning resources	Peer Reviewer	Indirect
The extent to which CLOs have been achieved	Program Leader	Direct
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Head of Biology Department**
REFERENCE NO.	
DATE	