هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification

Course Title:	**Principles of Ecology**
Course Code:	110 **ENW-2**
Program:	**Environmental Protection Technology**
Department:	**---**
College:	Applied College in Al-Aarda
Institution:	**Jazan University, Jazan**
Version:	**1st**
Last Revision Date:	**03/06/2024**

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (2)					
2. Course type					
A.	☐University	■ College	■ Program	☐Track	☐Others
B.	■Required		☐Elective		
3. Level/year at which this course is offered: (Level 1/ Year 1)					
4. Course general Description:					

This course is designed to provide students with essential concepts in environmental science and sustainable development, which consider the primary goals of Saudi Vision 2030. The course focuses on the environment and its multiple relationships with social and economic aspects. The course will introduce basic knowledge of environmental sciences, ecosystem structures and functions, biodiversity, and natural resources.

5. Pre-requirements for this course (if any)**:NONE**

6. Co-requisites for this course (if any)**:NONE**

7. Course Main Objective(s):

Upon completion of the course, it is expected that the student will have acquired familiarity with the following concepts:

1. **Understand the basic concepts, theories, and principles of environmental science.**
2. **Explain functions, structures and biodiversity in ecosystems.**

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	28	94%
2	E-learning	2	6%
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**	---
3.	**Field**	---
4.	**Tutorial**	---
5.	**Others (specify)**	---
Total		30

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

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Define** basic principles, concepts and terminology related to environmental sciences.	**K1**	Lecture, discussion in class	**Direct:** Quiz and mid-term & final Exams. **Indirect:** student survey
1.2	**Explain** function and structure of ecosystems	**K2**	Lecture, discussion in class	**Direct**: Quiz and mid-term & final Exams. **Indirect:** student survey
2.0	**Skills**			
2.1	**Apply** the methods of biodiversity and its structures in the environment.	**S1**	Lecture, discussion in class	**Direct**: Quiz and mid-term & final Exams. **Indirect:** student survey
2.2				
2.3				
3.0	**Values, autonomy, and responsibility**			
3.1	Work with multi-disciplinary teams to communicate effectively both in written and oral forms.	**V1**	Group discussion in class	**Direct:** Quiz and mid-term & final Exams. **Indirect:** student survey

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to environmental sciences.	3
2.	The components of the natural ecosystem and the types of ecosystems.	3
3.	Food chain, food web and energy flow in ecosystems	3
4.	Biogeochemical cycles: the fundamental elements C,O,H, (1)	3
5.	Biogeochemical cycles: the fundamental elements N, P and S (2)	3
6.	Environmental factors affecting the distribution of organisms (1)	3
7.	Environmental factors affecting the distribution of organisms (2)	3
8.	Resources in ecosystems	3
9.	Biodiversity and its Importance to humans	2
10.	Anthropogenic activities and their impacts on the environment	2
11.	Revision	2
	Total	30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizes	Continuous	10%
2.	Midterm exam	9th week	20%
3.	Assignments	Continuous	10%
4.	Final exam	16th week	60%
	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	• Alyaa Atokh Boran and M. Abo Deyah (2014) Ecology (in Arabic) 4th Eddition, Amman, Jordan. • Fulekar, M. H., Bhawana Pathak, and Raosaheb K. Kale, eds. Environment and sustainable development. New Delhi: Springer India, 2014.
Supportive References	• Hayati, A. A. (2007). Fundamentals of Ecology (in Arabic), First Edition, Dammam, Saudi Arabia. • Molles M.C.(2015) Ecology: Concepts and Applications 7th Edition, McGraw Hill, New York. • Molles M.C. (2008) Ecology. McGraw Hill, New York.

	• Botkin D.B. Keller E.A. (2007) Environmental Science. Wiley, New York.
Electronic Materials	· General Authority for Meteorology and Environmental Protection Saudi Arabia http://www.pme.gov.sa · Saudi Wildlife Authority Website http://www.swa.gov.sa/index.php/en
Other Learning Materials	----------

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	**Classrooms**
Technology equipment (projector, smart board, software)	**Smart board and projector**
Other equipment (depending on the nature of the specialty)	**NA**

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students, Peer and program leader	Indirect (Course Evaluation Survey) - Indirect peer evaluation
Effectiveness of Students' assessment	Students, Program assessment committee	Direct/ Indirect
Quality of learning resources	Students, Faculty members	Direct/ Indirect
The extent to which CLOs have been achieved	Faculty members	Indirect
Other	---	---

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**BOARD OF DEPARTMENT**
REFERENCE NO.	
DATE	**03\06\2024**