



## Course Specifications

<b>Course Title:</b>	<b>General Ecology</b>
<b>Course Code:</b>	<b>2012101-3</b>
<b>Program:</b>	<b>Bachelor in Microbiology</b>
<b>Department:</b>	<b>Biology Department</b>
<b>College:</b>	<b>College of Sciences</b>
<b>Institution:</b>	<b>Taif University</b>

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## A. Course Identification

<b>1. Credit hours:</b> 3 hr
<b>2. Course type</b> <b>a.</b> University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/> <b>b.</b> Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> 5 <sup>th</sup> Level / 2 <sup>nd</sup> year
<b>4. Pre-requisites for this course (if any):</b> General Biology 201104-4
<b>5. Co-requisites for this course (if any):</b> None

## 6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	6 hr/Week	100%
2	Blended	-	-
3	E-learning	-	-
4	Distance learning	-	-
5	Other	-	-

## 7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	30
2	Laboratory/Studio	30
3	Tutorial	-
4	Others (specify)	-
	<b>Total</b>	60

## B. Course Objectives and Learning Outcomes

<b>1. Course Description:</b> An introductory course to different ecology branches, general ecological mechanisms and main components of different ecosystems. It discusses characteristics of different habitats and different ecosystem components.
<b>2. Course Main Objective:</b> By the end of this course, the student can identify general ecological mechanisms, main components of different ecosystems, energy transfer mechanisms and distinguish between characteristics of different habitats and different ecosystem components.

## 3. Course Learning Outcomes

CLOs		Aligned PLOs
1	<b>Knowledge and Understanding:</b>	
1.1	Identify different branches, applications, laws and concepts of Ecology and other related sciences.	K1

CLOs		Aligned PLOs
1.2	Enumerate differences between various ecosystems and their main components.	K2
<b>2</b>	<b>Skills:</b>	
2.1	Utilize concepts and basics of Ecology in economic and social contexts.	S3
<b>3</b>	<b>Values:</b>	
3.1	Demonstrate commitment to professional and leadership standards.	V1
3.2	Appraise initiatives in professional planning for continuous learning and specialized work.	V3

### C. Course Content

No	List of Topics	Contact Hours
1	<b>Chapter 1:</b> Introduction and concept of ecology and ecosystems Components of ecosystems Food chain and food web Energy flow and energy transfer along different types of ecosystems Limiting factors Ecological pyramids	6L+6P
2	<b>Chapter 2:</b> Zonobiomes Biosphere: Atmosphere, Hydrosphere and Lithosphere	3L+3P
3	<b>Chapter 3:</b> Cycles of materials in nature (Water cycle, Carbon cycle, Nitrogen cycle, .... etc.)	3L+3P
4	<b>Chapter 4:</b> Bases of ecological classification of organisms	3L+3P
5	<b>Chapter 5:</b> Importance of conservation Ecology A study of some recent environmental issues Methods of determination of population densities of plants and animals Survivorship curves	6L+6P
6	<b>Chapter 6:</b> Methods used in conservation ecology Protected areas in KSA	3L+3P
7	<b>Chapter 7:</b> Soil as an effective component in terrestrial ecosystems	3L+3P
8	<b>Chapter 8:</b> Ecological Succession	3L+3P
<b>Total</b>		30L+30P

### D. Teaching and Assessment

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

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
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Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	<b>Knowledge and Understanding:</b>		
1.1	Identify different branches, applications, laws and concepts of Ecology and other related sciences.	Lectures Cooperative learning	Paper-based exams
1.2	Enumerate differences between various ecosystems and their main components.	Lectures Concept maps	Paper-based exams
2.0	<b>Skills:</b>		
2.1	Utilize concepts and basics of Ecology in economic and social contexts.	Small group activities Cooperative learning	Practical reports Practical exam
3.0	<b>Values:</b>		
3.1	Demonstrate commitment to professional and leadership standards.	Small group activities Open discussion	Practical reports Practical exam
3.2	Appraise initiatives in professional planning for continuous learning and specialized work.	Small group activities	Assignments

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments and activities: 1- Written Assignment 2- Power-point presentation	Variable	10
2	Midterm Exam	5 <sup>th</sup>	20
3	Periodic Exam	7 <sup>th</sup>	10
4	Practical Reports	Continuous	15
5	Final Practical Exam	11 <sup>th</sup>	5
6	Final Exam	12 <sup>th</sup>	40

\*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:**

6 hours per week (as defined in the teaching schedule of the faculty member) for academic advice and consultations.

Teaching staff is also available using Blackboard web site and Taif University “Edugate” System.

## F. Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	Ecology principles and applications (1992). J.L. Chapman and M.J. Reiss, 2 <sup>nd</sup> Edition, Cambridge University press.
<b>Essential References Materials</b>	Biodiversity (2007). Cheryl Jakob, Macmillan Library. Macmillan Education Australia. ISBN 9781420205428.

<b>Electronic Materials</b>	Blackboard website; Website of Saudi digital Library
<b>Other Learning Materials</b>	Computer-based programs and professional software

## 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Classrooms for 40 students\lecture. - Laboratory for 20 students\ lab activity
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	- Data show.
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- Equipment used in measurement of air parameters. - Equipment used in measurement of soil parameters. - Equipment used in measurement of water parameters.

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Indirect
Quality of learning resources	Peer Reviewer Students	Direct Indirect
Extent of achieving the course learning outcomes	Peer Reviewer Students	Direct Indirect

**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

<b>Council / Committee</b>	<b>Biology Department</b>
<b>Reference No.</b>	<b>Committee number 14 - Academic Year 1442-1443H</b>
<b>Date</b>	<b>22\5\2022G – 21\10\1443H</b>

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