



## Course Specifications

<b>Course Title:</b>	<b>Desert Ecology</b>
<b>Course Code:</b>	<b>2014219-2</b>
<b>Program:</b>	<b>Bachelor in General Biology</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> 2 hr
<b>2. Course type</b>
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> 11 <sup>th</sup> level - 4 <sup>th</sup> year
<b>4. Pre-requisites for this course (if any):</b> Biodiversity 2012202-2
<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	3 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	-
3	Tutorial	-
4	Others (specify)	-
	<b>Total</b>	<b>30</b>

## B. Course Objectives and Learning Outcomes

<b>1. Course Description:</b> This course deals with studying different types and distribution of deserts in the world generally and in Saudi Arabia specially, the main components of desert ecosystem, desertification, sandy dunes, as well as desert plants and animals and their adaptations.
<b>2. Course Main Objective:</b> To identify characteristics of living organisms in relation to desert habitats and the main components of desert ecosystem. Furthermore, to survey biodiversity of living organisms in different desert conditions and identify desertification as well as adaptations of plants and animals in desert.

## 3. Course Learning Outcomes

CLOs		Aligned PLOs
1	<b>Knowledge and Understanding:</b>	
1.1	Recognize facts, principles, scientific terminology and concepts across desert ecology and other related sciences.	K1

CLOs		Aligned PLOs
1.2	Classify desert organisms according to related biological characters.	K2
<b>2</b>	<b>Skills:</b>	
2.1	Apply biological concepts relating biotic and abiotic components in deserts.	S1
<b>3</b>	<b>Values:</b>	
3.1	Conduct tasks based on convincing evidences with autonomy.	V2

### C. Course Content

No	List of Topics	Contact Hours
1	<b>Chapter 1: Desertification</b> Definition of desertification, desertification stages, causes of desertification, methods of combating desertification. desertification in the Arabian World, impacts of desertification	3L
2	<b>Chapter 2: Geomorphological Properties</b> Theories form the Land's surface in arid and semi-arid regions, mechanical and chemical weathering.	6L
3	<b>Chapter 3: Climate characteristics in desert ecosystem</b>	3L
4	<b>Chapter 4: Types of soils (saline cortex, acidic cortex, brilliant surfaces, rocky surfaces)</b>	3L
5	<b>Chapter 5: Sandy Dunes and Desert Tables</b> Definition of sandy dune, types of sandy dunes and characteristics of each one	3L
6	<b>Chapter 6: The Deserts around the world</b> Desert distribution, desert classification (based on topography, based on temperature, based on rainfall)	3L
7	<b>Chapter 7: Adaptation of desert plants</b> Morphological adaptations and growth forms, structural adaptations of desert plants.	3L
8	<b>Chapter 8: Adaptation of desert Animals</b> Morphological and physiological adaptations of some desert animals, morphological, physiological, behavioral characteristics of camel as an ideal desert animal.	6L
<b>Total</b>		<b>30L</b>

### D. Teaching and Assessment

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

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and Understanding:</b>		
1.1	Recognize facts, principles, scientific terminology and concepts across desert ecology and other related sciences.	Lectures Brain storming	Paper-based exams
1.2	Classify desert organisms according to related biological characters.	Lectures Concept maps	Paper-based exams
<b>2.0</b>	<b>Skills:</b>		
2.1	Apply biological concepts relating	Small group activities	Paper-based exams

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	biotic and abiotic components in deserts.	Brain storming	
3.0	<b>Values:</b>		
3.1	Conduct tasks based on convincing evidences with autonomy.	Open discussion Interactive learning	Assignments

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Midterm Exam	5 <sup>th</sup>	30%
2	Semester Activities	Periodic	10%
3	Periodic Quizzes (Blackboard)	Periodic	10%
4	Final Exam	12 <sup>th</sup>	50%
<b>Total</b>			<b>100%</b>

\*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>	- Walter G. Whitford (2002). Ecology of Desert Systems. Elsevier Publications. - البتانوني، كمال الدين حسن (١٩٩٢). بيئة صحراوية، مركز جامعة القاهرة للتعليم المفتوح، القاهرة، جمهورية مصر العربية.
<b>Essential References Materials</b>	- John B Sowell (2001). Desert Ecology. First Edition, University of Utah Press, USA. - القصاص، محمد عبدالفتاح (١٩٩٩). التصحر- تدهور الأراضي في المناطق الجافة. المجلس الوطني للثقافة والفنون والآداب. الكويت.
<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.)	Classroom (capacity not more than 40 students).
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	Data show

Item	Resources
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	---

### 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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