



## Course Specifications

<b>Course Title:</b>	<b>Biological Control</b>
<b>Course Code:</b>	<b>2014202-3</b>
<b>Program:</b>	<b>Bachelor in Zoology</b>
<b>Department:</b>	<b>Biology Department</b>
<b>College:</b>	<b>College of Sciences</b>
<b>Institution:</b>	<b>Taif University</b>

## Table of Contents

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

## A. Course Identification

<b>1. Credit hours:</b>
<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: 12<sup>th</sup> level / 4<sup>th</sup> year</b>
<b>4. Pre-requisites for this course (if any): Economic Entomology 201325-3</b>
<b>5. Co-requisites for this course (if any): None</b>

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

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	6 hours /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>	<b>60</b>

## B. Course Objectives and Learning Outcomes

<b>1. Course Description:</b> This course deals with studying concepts of biological control (biotic and abiotic agents), ecological factors, pesticides and pollution, pests and pest control as well as environmental conditions that cause spread of infectious pathogens, disease cycles and methods used in diagnosis and controlling animal diseases.
<b>2. Course Main Objective:</b> To recognize different pests and pest control methods, classify parasites and pests ecology, be familiar with the different symptoms of infectious pathogens, and recognize the principles of animal-disease control.

### 3. Course Learning Outcomes

CLOs		Aligned PLOs
1	<b>Knowledge and Understanding:</b>	
1.1	Classify different animal pests and pathogens according to relevant biological characters.	K2

CLOs		Aligned PLOs
1.2	Identify the basic concepts and routine procedures used for biological control of pests and pathogens.	K3
<b>2</b>	<b>Skills:</b>	
2.1	Utilize concepts of pest control and management.	S2
2.2	Diagram functions of cellular macromolecules in biological control.	S4
<b>3</b>	<b>Values:</b>	
3.1	Utilize various electronic resources for data analysis, scientific thinking and problem solving.	V1
3.2		V2

## C. Course Content

No	List of Topics	Contact Hours
	<b>Chapter (1)</b>	
1	Concept of Biological control	2L+3P
2	Biological control history	4L+3P
	<b>Chapter (2)</b>	
3	Ecological factors as causal agents of plant diseases	4L+3P
4	Pesticides and Pollution	4L+3P
5	Parasites and pests ecology	4L+3P
	<b>Chapter (3)</b>	
6	Identify the biological enemies of agricultural pests	2L+3P
7	The use of biological enemies in biological control	4L+3P
	<b>Chapter (4)</b>	
8	Management Pest Integrated and their applications	2L+3P
9	International Organization of Biological Control (IOBC)	2L+3P
10	General Revision	2L+3P
<b>Total</b>		<b>30L+30P</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	Classify different animal pests and pathogens according to relevant biological characters.	Lectures Open discussion	Paper-based exams
1.2	Identify the basic concepts and routine procedures used for biological control of pests and pathogens.	Lectures Open discussion	Paper-based exams
<b>2.0</b>	<b>Skills:</b>		
2.1	Utilize concepts of pest control and management.	Interactive learning Open discussion	Paper-based exams
2.2	Diagram functions of cellular macromolecules in biological control.	Small group activities	Paper-based exams Practical reports
<b>3.0</b>	<b>Values:</b>		



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.1	Utilize various electronic resources for data analysis, scientific thinking and problem solving.	Small group activities Interactive learning	Assignments
3.2			

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments and activities: 1- Written Assignment Power-point presentation	Variable	10
2	Midterm Exam	5 <sup>th</sup>	20
3	Periodic Exam	7 <sup>th</sup>	10
4	Practical Reports	Continuou s	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 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>	P.G. Mason, 2013, Biological control programmes in Canada, 2001-2012, UK Publications
<b>Essential References Materials</b>	Ahmed, M. A., 2001. Dictionary of fungi. Academic Press, Cairo. Aly, M. M., 2005. Dictionary of Plant Pathology. Osiris bookshop. Aly, M. M., 2006. Plant Pathology. Osiris bookshop.
<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) for 2 h/week. Laboratory (capacity not more than 20 students) for 3 h/week.

Item	Resources
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	Data Show projectors Smart blackboard
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Preserved samples, glassware

## 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

Council / Committee	Biology Department
Reference No.	Committee number no. 14 - Academic Year 1442-1443H
Date	22/5/2022 G—23/10/1443H

كلية العلوم  
قسم الاحياء  
College of Science  
Department of Biology



عمادة كلية العلوم  
Deanship of Science College  
جامعة الطائف  
TAIF UNIVERSITY