



Course Specifications

Course Title:	Microbial Plant Pathology
Course Code:	2013216-3
Program:	Bachelor in Microbiology
Department:	Biology department
College:	College of Sciences
Institution:	Taif University

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A. Course Identification

1. Credit hours: 3h
2. Course type 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"/>
3. Level/year at which this course is offered: 9 th level / 3 th year
4. Pre-requisites for this course (if any): Mycology, 2013113-3
5. Co-requisites for this course (if any): None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	6 hrs/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)	-
	Total	60

B. Course Objectives and Learning Outcomes

<p>1. Course Description: Plant diseases affecting Economic plants and their causes (biotic agents) - Direct and indirect losses from Plant diseases - Symptoms of plant infections in different microbes - inoculums of microbial infection - Environmental conditions suitable for the spread of microbial infectious – Disease cycles methods used in the diagnosis and controlling of plant disease.</p>
<p>2. Course Main Objective: Define disease in plants, classify plant diseases in terms of the definition of disease, be familiar with the different symptoms of disease in plants, know the principles of etiology and the events that occur during primary and secondary cycles of plant pathogenesis and understand the principles of plant-disease control.</p>

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	Knowledge and Understanding:	

CLOs		Aligned PLOs
1.1	Recognize the loss of plant disease , principles of plant pathology, scientific terminology and concepts across Phytopathology disciplines and other related sciences.	K1
1.2	Describe the basic symptoms of plant diseases and List the causes of plant diseases, Memorize a vocabulary of common terms associated with plant pathology,	K2
2	Skills:	
2.1	Describe principles of plant disease control and apply knowledge to the control and management of plant diseases.	S2
2.2	Diagnosis of plant disease and the identification of pathological symptoms and the cause of disease through the study of different samples in the laboratory	S3
3	Values:	
3.1	Communicate effectively using the proper presentation forms, scientific language to collect scientific synonyms used in the field of plant diseases and control and understanding of the nature of the disease	V3

C. Course Content

No	List of Topics	Contact Hours
	Chapter (1)	
1	The history of Phytopathology-Principles of Plant Pathology-Plant disease losses and distribution of pathogens-economic importance	3L+3P
2	Plant Diseases - Symptoms of plant Diseases.	
	Chapter (2)	
3	Spread of microbial plant pathology – Effect of Environmental conditions on Plant diseases.	3L+3P
4	Causal agent of Microbial Plant Pathology – Microbial parasitism-	
5	The phases of the disease cycle	
	Chapter (3)	
6	The Diagnosis of Microbial plant diseases.	3L+3P
7	Methods of Plant disease Controlling.	3L+3P
8	Fungal plant diseases: Damping-off diseases and their disease cycles.	3L+3P
9	Fungal plant diseases: Blights and leaf spots diseases - Post-harvest and storage diseases and their disease cycles.	3L+3P
10	Fungal plant diseases: Downy and Powdery mildews diseases and their disease cycles.	3L+3P
11	Fungal plant diseases: Rusts and Smuts diseases and their disease cycles	3L+3P
12	Fungal plant diseases: vascular wilt diseases and their disease cycles	3L+3P
	Chapter (4)	
13	Bacterial and Phytoplasma plant diseases (importance, nature) Examples of the most important bacterial and Phytoplasma plant diseases.	3L+3P
14	Plant viral and viroid diseases	
15	General discussions	
Total		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
1.0	Knowledge and Understanding:		
1.1	Recognize the loss of plant disease , principles of plant pathology, scientific terminology and concepts across Phytopathology disciplines and other related sciences.	Lectures Open discussion	Written exam
2.0	Skills:		
2.1	Memorize a vocabulary of common terms associated with plant pathology.	Lectures Concept maps	Written exam
2.2	Describe principles of plant disease control and apply knowledge to the control and management of plant diseases – Disease cycles of important pathogens and their control.	Lectures	Written exam
3.0	Values:		
3.1	Diagnosis of plant disease and the identification of pathological symptoms and the cause of disease through the study of different samples in the laboratory	Interactive learning Brain storming	Practical reports Practical exam
3.2	Communicate effectively using the proper presentation forms, scientific language to collect scientific synonyms used in the field of plant diseases and control and understanding of the nature of the disease	Open discussion 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 Power-point presentation	Variable	10
2	Midterm Exam	5 th	20
3	Periodic Exam	7 th	10
4	Practical Reports	Continuous	15
5	Final Practical Exam	11 th	5
6	Final Exam	12 th	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

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	Agrios, G. N., 1988. Plant Pathology. Academic Press (3rd ed.), NY 803 pp (Arabic Edition by Mosa abo-arkob 2018)
Essential References Materials	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.
Electronic Materials	Blackboard website Website of Saudi digital Library
Other Learning Materials	Computer-based programs and professional software.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom (capacity not more than 40 students) for 2 h/week. Plant Pathology Lab (capacity not more than 20 students) for 3 h/week.
Technology Resources (AV, data show, Smart Board, software, etc.)	Data Show projectors, smart blackboard. Computer Portable PowerPoint presentations to special lectures.
Other Resources (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	Direct
	Students	Indirect
Extent of achieving the course learning outcomes	Peer Reviewer	Direct
	Students	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	Committee number 14 - Academic Year 1442-1443H
Reference No.	22\5\2022G – 21\10\1443H
Date	Committee number 14 - Academic Year 1442-1443H

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