



## Course Specifications

<b>Course Title:</b>	Mycology and Plant Pathology
<b>Course Code:</b>	333 Mic-3
<b>Program:</b>	Bachelor of Science in Biology
<b>Department:</b>	Biology
<b>College:</b>	Science
<b>Institution</b>	Jazan University

## 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>4</b>
1. Course Description .....	4
2. Course Main Objective.....	4
3. Course Learning Outcomes .....	5
<b>C. Course Content .....</b>	<b>5</b>
<b>D. Teaching and Assessment .....</b>	<b>5</b>
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods .....	5
2. Assessment Tasks for Students .....	6
<b>E. Student Academic Counseling and Support .....</b>	<b>6</b>
<b>F. Learning Resources and Facilities.....</b>	<b>6</b>
1.Learning Resources .....	6
2. Facilities Required.....	7
<b>G. Course Quality Evaluation .....</b>	<b>7</b>
<b>H. Specification Approval Data .....</b>	<b>7</b>

## A. Course Identification

<b>1. Credit hours:</b> 3 -hours			
<b>2. Course type</b>			
a.	University <input type="checkbox"/>	College <input type="checkbox"/>	Department <input checked="" type="checkbox"/>
b.	Required <input checked="" type="checkbox"/>	Elective <input type="checkbox"/>	Others <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> Year-3 and Level-5			
<b>4. Pre-requisites for this course (if any):</b> Non			
<b>5. Co-requisites for this course (if any):</b> Non			

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

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	-	-
2	Blended	-	-
3	E-learning	-	-
4	Distance learning	30 hrs	100%
5	Other	-	-

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

No	Activity	Contact Hours
1	Lecture	30
2	Laboratory	30
3	Tutorial	-
4	Others (specify)	-
	Total	60

## B. Course Objectives and Learning Outcomes

### 1. Course Description

Course Title	Course No.	Credit Units			Year	Level	Pre-Requisite
		Theoretical	Practical	Total			
Mycology and Plant Pathology	333MIC	2	1	3	3 <sup>rd</sup>	5 <sup>th</sup>	Non

#### 1) Course Objectives:

Characteristics of the kingdom of fungi, their major taxonomic groups, methods of sexual and asexual reproduction and plant diseases caused by these microorganisms and their control

#### 2) Course Contents:

Introduction to Fungi - ecological and economic importance

Fungal morphology and fungal reproduction

Major taxonomic groups of fungi

Introduction to Plant Pathology - defining disease and disease symptoms- classification of diseases

Examples of some plant pathogenic fungi affecting some economical crops, symptoms appear on the infected plants, disease cycle and control managements applied

#### 3) Practical:

Methods of isolation and identification of fungi and maintain them in pure cultures; field trips to collect plant samples representing different disease syndrome. Application principles of plant pathology in the control of plant disease

#### 4) Assessment:

Exams: Essay/Objective, oral, class work, research work, translations

Practical: Identifying samples and slides, drawings.

Quiz 20%

Practical 30%

Final 50%

#### 5) Teaching Methods:

Lectures, field trips, photographs, slides, multimedia, web-based learning. Samples, light microscopes, glassware, chemicals.

#### 6) Text Books:

- Agrios, G.N. 2005 Plant Pathology. Elsevier Academic Press, San Diego, USA.

#### 7) References:

- Alexopoulos, C.J., Mims, C.W., Blackwell, M. (1996) Introductory Mycology, Wiley, New York.

- Agrawal, A.A., Tuzun, S., Bent, E. (1999) Induced Plant Defenses Against Pathogens and Herbivores. APS Press, St. Paul.

### 2. Course Main Objective

Characteristics of the kingdom of fungi, their major taxonomic groups, methods of sexual and asexual reproduction and plant diseases caused by these microorganisms and their control.

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### 3. Course Learning Outcomes

CLOs		Aligned PLOs
<b>1</b>	<b>Knowledge and Understanding</b>	
1.1	Define all principals, concepts, theories and aspects concerning with Mycology.	K1.1
1.2	Draw life cycle, diagrams and structures of important fungi.	K2.3
1.3	Apply the knowledge of Mycology to solve some applied techniques and problems.	K3.1
<b>2</b>	<b>Skills :</b>	
2.1	Debate the Mycology theories, principles and processes of fungi.	S1.1
2.2	Argue different Mycology approaches in laboratory or field or even theoretically.	S2.2
<b>3</b>	<b>Values: By the end of the course the students will be able to:</b>	
3.1	Apply practices of life-long learning in various Mycology and scientific disciplines for their professional career.	V1.1
3.2	Illustrate awareness of risk assessment and safety observation when dealing with various equipment at various fields.	V2.1

### C. Course Content

No	List of Topics	Contact Hours
1	Introduction to the Kingdom fungi.	4
2	Economic importance of fungi.	6
3	Fungal morphology and fungal reproduction	4
4	Major taxonomic groups of fungi	4
5	Introduction to Plant Pathology - Defining disease and disease symptoms	6
6	Examples of some plant pathogenic fungi affecting some economical crops, symptoms appear on the infected plants, disease cycle and control managements applied.	6
<b>Total</b>		<b>30</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	Define all principals, concepts, theories and aspects concerning with Mycology.	Lectures	Quizzes, Short Answer Question, MCQs
2.3	Draw life cycle, diagrams and structures of important fungi.	Lectures, Lab Work	Quizzes, Short Answer Question, MCQs
3.1	Apply the knowledge of Mycology to solve some applied techniques and problems.	Lectures-Group Discussion	Assignments

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>2.0</b>	<b>Skills</b>		
1.1	Debate the Mycology theories, principles and processes of fungi.	Lectures-Discussion	Quizzes, Short Answer Question, MCQs
2.2	Argue different Mycology approaches in laboratory or field or even theoretically.	Lectures-Group Discussion	Quizzes, Short Answer Question, MCQs
	<b>Values</b>		
1.1	Apply practices of life-long learning in various biological and scientific disciplines for their professional career.	Illustrate ability to work in groups.	Illustrate ability to work in groups and
2.1	Illustrate awareness of risk assessment and safety observation when dealing with various equipment at various fields.	Demonstrate risk assessment and safety	Demonstrate risk assessment and safety

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Written Assignment	3	5
2	Group Assignment	4	2
3	Theoretical quiz	5	5
4	Midterm exam	7	10
5	Practical Midterm exam exam	9	10
6	Practical Assignment	11	3
7	Final Practical Assignment	13	15
8	Final exam	15	50

\*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:**

10 Office hours/faculty/week.

Online student advising for semester 2021-1 because of world pandemic Covid-19.

## F. Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	" الفطريات" اميرة العبد العال 2010 - جامعة الدمام، دار المتنبى للنشر.
<b>Essential References Materials</b>	<p>أساسيات علم الفطريات عبد الله ناصر الرحمة 2013 جامعة الملك سعود للنشر.</p> <p>N. Agrios, 2005. Plant Pathology the fifth edition.</p>

<b>Electronic Materials</b>	<a href="https://www.apsnet.org/about/history/Centennial/.../Pages/Mim_s.aspx">https://www.apsnet.org/about/history/Centennial/.../Pages/Mim_s.aspx</a> Skip Navigation Links APS > About APS > History > 2008 Centennial > Perspectives from Plant Pathologists > <b>Mycology and Plant Pathology</b> , <a href="https://www.biodiversitylibrary.org/bibliography/28996">https://www.biodiversitylibrary.org/bibliography/28996</a> .
<b>Other Learning Materials</b>	Other learning material such as computer-based programs/CD, professional standards or regulations and software.--

## 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	1 Lecture room(s) for groups of 50 students. 1 Laboratory for group of 25 students.
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	AV, data show, Smart Board.
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Light microscopes, glassware, chemicals, consumables, dissection tools

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course Contents		
Course Facilities		
Teaching Methodology		
Assessment Quality		
Assessment Methodology		

**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>Reference No.</b>	
<b>Date</b>	