Course Specifications

Course Title:	**Mycology and Plant Pathology.**
Course Code:	**23074461-3**
Program:	**BSc Biology**
Department:	**Biology**
College:	**Aljumum University College**
Institution:	**Umm Al-Qura University**

Table of Contents

A. Course Identification

1. Credit hours:	3 hours
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	Level 7/ 4th year.
4. Pre-requisites for this course (if any)**:**	General Biology (23071101-4)
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**		70 %
2	**Blended**		
3	**E-learning**		10 %
4	**Correspondence**		10 %
5	**Other**		10 %

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	**28**
2	**Laboratory/Studio**	**42**
3	**Tutorial**	**6**
4	Practical/Field work/Internship	**6**
5	**Others** (specify)	**10**
	Total	**92**
Other Learning Hours*		
1	**Study**	
2	**Assignments**	
3	**Library**	
4	**Projects/Research Essays/Theses**	
5	**Others** (specify)	
	Total	

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

Fungi are one of the living organisms that can cause plant disease and are the cause of about eighty-five percent of all plant diseases. More than 100,000 species of fungi have been classified and include molds, mildews, and mushrooms. Most are beneficial or benign, with only about eight percent of fungal species causing plant diseases. Unlike plants, fungi do not have chlorophyll and cannot photosynthesize. Instead they must rely on other living things (plants) for sustenance, causing for them fungal diseases. Diseases like powdery mildew, cercospora leaf spot, take all root rot, and anthracnose are caused by different fungal species. However, the majority of plant diseases are caused by two main groups of fungus—those from Ascomycota and Basidiomycota.

2. Course Main Objective

By the end of this course, the student should be aware about the following:
1) Principle of plant pathology.
2) Fundamentals of Mycology and the followed taxonomy.
3) The plant pathogenic fungi as an invasive microorganisms for economically important agricultural crops and how to control these pathogens.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	Upon successful completion of this course, the student will be aware about the different genera and species of fungi. This will include their distribution, morphology, life cycles, pathogen genera for plants and the different ways to control these diseases as beside the fungal pesticides.	
2	**Skills:**	
2.1	Students will be trained to: 1) Successfully isolate the fungi from different sources. 2) Purify the contaminated culture isolate to get a pure fugal isolate. 3) Prepare the slides of fungal isolated to be examined by microscope. 4) Compare between different fungal isolates based on the morphological differences for identification purposes. 5) Distinguish between the harmful and beneficial fungal genera. 6) Develop the student cooperation and team work.	
3	**Competence:**	
3.1	1) Create a spirit of cooperation, understanding, respect and responsibility. 2) Work in groups to improve the skills of relationship with others. 3) Cooperation in solving the problems of the students in the compilation of scientific material.	

C. Course Content

List of Topics	No. of Weeks	Contact Hours
1. General characteristics of fungi in terms of the nature of the fungus and the environment, distribution, installation and vegetative cell wall and stored food and nutrition and ways of living and reproductive characteristics and the foundations of the division of fungi	1	1
2. Fungus whipworms department - the general characteristics of fungi gels - Classification of fungi sticky - a study of the general characteristics and study the rank Altimonettih - Sex Stiaumonets	2	2
3. Under section whipworms fungi - fungi range ovale its general characteristics, installation and life cycle of a number of important races with reference to the economic and Alohmatha examples like her: Sanktrem - Alomaest - Sabreaulegnia - Petheim - Viovthora - downy mildew fungi - Pogo	2	2
4. Department of fungus fungus Alasoutih- Alsegah - Department of the Open range Alsegotah fungus and general characteristics - rank Almiokoralat and examples such as the encroachment Raazobs Astolonnifer and encroachment Myukr	2	2
5. Under Ascomycetes section (ischial) - General characteristics of fungi ischial (Ascomycetes) - method of formation of germs Ascomycetes - taxonomic study and installation of a number of important races with reference to the economic importance of her Examples are: Chezuskaromesz - Saccharomyces cerevisiae - Tavrina - Alasbergalls Penicillium - fungi whiteness Powdery - Kitumaam - Sordaraa - Narospora - Zelara	2	2
6. Under fungi Basidiomycetes section - formation of germs Basidiomycetes way - taxonomic study, installation and life cycle of a number of important in this section races with reference to the economic importance, namely: fungi resonances - fungi Altvhamat - mushrooms - Omanata - Bullets - Kopraans - Hadenm- Clavaraa - to Ecuperdon	2	2
7. Under fungi Naqsh- and grounds department classification fungus missing - the diversity of microbial Alkonidah in fungi missing - taxonomic study and installation of a number of important in this section races with reference to the economic importance, namely: Candida albicans - FOMA - Putraats - Trajcuderma - Macrosburm - Alternaraya - Kerveolria - Drickaslera - Kladosporim - Vimasam - Jrafim - Rhizoctonia	2	2
8. Lichens and general characteristics of the environment and the distribution and types such as filamentous Ashenat Ashenat crusty and Ashenat paper and Ashenat tree - the study of anatomy for Ashenat and its importance in nature and in human life	2	2

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**		
1.1	Upon successful completion of this course, the student will be aware about the different genera and species of fungi. This will include their distribution, morphology, life cycles, pathogen genera for plants and the different ways to control these diseases as beside the fungal pesticides.	Lectures. Brainstorming. Discussions. Self-learning with training on the use of the library and the internet. Homework and small project. Individual and group presentations.	Periodical exam and reports. Mid- term exam. Final exam.
2.0	**Skills**		
2.1	Students will be trained to: 1) Successfully isolate the fungi from different sources. 2) Purify the contaminated culture isolate to get a pure fugal isolate. 3) Prepare the slides of fungal isolated to be examined by microscope. 4) Compare between different fungal isolates based on the morphological differences for identification purposes. 5) Distinguish between the harmful and beneficial fungal genera. 6) Develop the student cooperation and team work.	Students will be asked to use scientific Internet sources and the related software to prepare and present their essays and home works to develop cognitive skills	Class participation. Homework assignments. In class short MCQs quizzes. Research projects. Final written exams.
3.0	**Competence**		
3.1	Students will be distributed within different groups. Each group will have a leader to coordinate the responsibility for each individual.	Essays and home works will be assessed. The best one will be nominated and the justifications it will be clarified for other groups.	▪ Using Internet sources and presenting software to present home work (e.g. PowerPoint).
3.2			
…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Periodical exam, Home works, search or presentation	4th and 8th weeks	10 %
2	Midterm "Written Test (1)"	8th week	30%
3	Final Exam "Practical Test"	15th week	20%

#	Assessment task*	Week Due	Percentage of Total Assessment Score
4	Final Exam "Written Test (2)"	16th week	40%
5			
6			
7			
8	**Total**		100 %

***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:

Office hours : two hrs/week.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Fungi, algae book authored by Dr. Metwally Abdel-Azim Metwally
Essential References Materials	basics of mycology (2005) by Dr. Abdullah bin Nasser compassion professor fungi - Plant and Department of Microbiology - Faculty of Science - King Saud University fungi (2002) written by Dr. Abdul Aziz bin Alsrany Kaplan, Dr. Idris bin Munir Turkish, Prof. Dr. Mohammed Mohammed Husseini, Department of Biology - Faculty of Science, King Abdul Aziz University - Medina
Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)	*** A book written by plant diseases** Prof. Dr. / Hussein Laroussi Prof. Dr. / Samir Husni Prof. Dr. / Ali Mohammed Abdul Rahim
Electronic Materials	http://www.mycolog.com/fifthtoc.html http://www.biolib.cz/en/gallery/dir22/
Other Learning Materials	

2. Facilities Required

Item	Resources

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Class rooms are already provided with data show • Laboratory necessity • Reduce the number of students in class rooms • Find a solution for the air conditioning problem.
Technology Resources (AV, data show, Smart Board, software, etc.)	Providing class rooms with computers.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Bunsen burner. Autoclaves. Incubators. Isolation tools (Disinfectant, Petri dish, cotton, loop, media for cultivating fungi). Light microscope for examination of fungal isolates.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Strategies for Obtaining Feedback on Effectiveness of Teaching	Students	• The work of a questionnaire to assess the of scientific material presented by the students in END OF each semester to learn and cons scheduled to be avoided in the coming years • Work meetings with the students to take their opinions in decision • The level of the students periodically measure to note enables the student to absorb the planned article • Evaluating the results of the students to know the feedback of the scheduled Nutrition • Assess the duties required and knowledge of the extent of the student response to decision
Other Strategies for Evaluation of Teaching	by the Instructor or by the Department	• Preparation of reports on students scheduled • Evaluating the results of the students are supported by a committee to measure feedback • Self-assessment with the decision and the use of a single modern teaching methods

Evaluation Areas/Issues	Evaluators	Evaluation Methods
		• Internal periodic review by the Commission supported the decision.
Processes for Improvement of Teaching	by the Instructor or by the Department	• Find what's new in the scientific material to get to the best - Take advantage of the experience of others to pursue of scientific education to go along with continuous update. • The need to append the faculty members and the like training courses and specialized workshops for the advancement of the educational process in the best. • Need to benefit from the expertise of experienced follow-up of the educational process • Provide a suitable atmosphere for study and provide all the requirements to complete the educational process. • Development league to see weaknesses in the end by the Rapporteur of the Committee on Internal Audit.
Processes for Verifying Standards of Student Achievement	by the Instructor or by the Department	• Evaluation and reporting duties required. • A review of exams papers by faculty member. • Cooperation with the faculties of a debate in the local, regional and international universities to reach academic accreditation..
Describe the planning arrangements for periodically reviewing course effectiveness	by the Instructor or by the Department	• Review scheduled characterization and vocabulary periodically by an internal committee and then an external committee to get to the desired academic accreditation. • Compared to the course specification with similar

Evaluation Areas/Issues	Evaluators	Evaluation Methods
		decisions in other universities • The work of self-study with the decision to see the weaknesses and improve in the new plan. • Characterization of the decision to put in line with the reduction of unemployment and community service labour market. • Take advantage of the statistical analysis of the results of the students in the improvement and development of the weaknesses. • Updated learning resources to courses to keep up with the rapid developments in the field of science and knowledge.

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	
Reference No.	
Date	

Head of Department

Dr. Wessam M. Filfilan

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