The Hashemite University Faculty of Science Department of Biology and Biotechnology	 Course Syllabus	Mycology 1801041342 General Microbiology 1801041241 Academic Year- First Semester 2025-2026

Course Information				
Lecture's Time	Sunday &Tuesday 8:30- 9:30			
Lecture Room	Biology Building 232			
Instructor	Professor Khaled H. Abu-Elteen			
Office Location	Biology Building 109			
Office Hours	Sun	Mon	Tues	Wedn
	9:30 – 10:30	8:30- 9:30	9:30-10:30	8:30-9:30
Text Book				
References(s)	**Main text book:** *Fungi : Biology and Applications*, 3rd Edition, Kevin Kavanagh (Eds), John Wiley & Sons Ltd.2017. **Subsidiary books:** **Textbook of Fungi. 3rd Reprint** , by Sharma, O.P., Tata McGraw-Hill Publishing Company, New York.1997			

Grading Policy:

Theory		Practical
1st Exam	25%	Quizzes __%
2nd Exam	25 %	Midterm __%
Other	10 %	Reports __%
Final Exam	40%	__%

Course Objectives

I expect you to leave the course girded with the following mycological skills:

1. Understand some of the varied roles fungi play in ecosystems.
2. Understand how fungi are put together, and how they work.
3. Be able to recognize a fungus when you see one.
4. Given an unknown fungus, Know what to look for their identify it, and be able to find an appropriate key for identification.
5. Be able to make and maintain a culture of a fungus.
6. Understand the "good" and "bad" impacts of fungi on other organisms.

Teaching and Learning Methods

Lectures, Homework, Class discussion.

Course Contents

Week	Topic
1	**Introduction to Fungi**, Numerical Estimates to Fungi, Hypha and Mycelium, Fungus basics.
2	***Fungal Cell: Microscopic and Macroscopic, Growth and Nutrition.*** Fungal Reproduction: Asexual and Sexual Reproduction.
3	**Classification of Fungi**: Criteria used in Fungal Taxonomy, Division of Kingdom Fungi, Important Systems of Classification of Fungi.
4	**Economic Important of Fungi**: Antibiotics from Fungi, Organic acids and other useful products from Fungi, Important diseases caused by Fungi, Spoilage of food and stored grains.
5	Toxins and Aflatoxins, Fungi in Aircraft fuel tanks. **Growth of Fungi** in the laboratory.
6	**Lecture Exam I** **Measurement of growth**, Nutrient acquisition, Nutritional requirement,
7	Other environmental requirements: Hydrogen ion concentration, Temperature, Aeration, Light, etc.,
8	**Metabolism in Fungi**: Carbohydrates and energy metabolism
9	Nitrogen metabolism, Lipid metabolism, Secondary metabolism
10	**Zygomycetes** : General characteristics, Classification, *Rhizopus* and *Mucor*
11	**Ascomycetes I**: Typical Ascomycota, General characteristics, Economic importance, Ascus development, Classification

12	**Ascomycetes II** : Hemiascomycetes and Plectomycetes : *Saccharomycescerevisiae, Aspergillus* and *Penicillium*
13	**Lecture Exam II** **Basidiomycetes I** : General characteristics, Variation in Basidia
14	**Basidiomycetes II** : Classification, Teliomycetes, Rust-Fungi,
15	**Deuteromycotina** : General characteristics, Classification
16	**Medical Mycology** **Final Exam : Date , Time and Location to be Announced**

Attendance

Attendance will be strictly enforced according to the current university regulations.

Attendance is absolutely mandatory. Students who miss a 5-6 class sessions without a compelling excuse will qualifies the student to be dismissal. Students who miss a lab without a compelling excuse will lose participation points.

The first lecture exam on 6th week during lecture period covers all materials up to that date. The second lecture exam on 13th week during lecture period covers all materials after the first exam. **No makeup exam**. The final exam (date, time and location to be announced) covers all the information you have learned during the course.

Of course, please do feel free to ask for help when you need it. Your teaching assistant and I are sincerely devoted to helping you to learn this stuff, and there is no such thing as asking questions.