

TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
Department of MEDICAL ANALYSIS,
-2022 Fall
Course Information for MA 401 MYCOLOGY

Course Name: MYCOLOGY					
Code MA 401	Regular Semester 7	Theoretical 2	Practical 2	Credits 3	ECTS 4
Name of Lecturer(s)- Academic Title:	Muzhda Saber - MSc Ahang Mawlood - PhD Ahang Mawlood - PhD				
Teaching Assistant:	Ms zahra				
Course Language:	English				
Course Type:	Main				
Office Hours	2				
Contact Email:	muzhda.haydar@tiu.edu.iq ahang.mawlood@tiu.edu.iq ahang.mawlood@tiu.edu.iq Tel:07507725801 07501710033 07501710033				
Teacher's academic profile:	MSc PhD in medical microbiology. PhD in medical microbiology.				
Course Objectives:	This course provides a general introduction to the study of fungi. As fungi are poorly known, much of mycology is focused on understanding biodiversity, patterns of evolution(systematics), and basic biology (such as life cycles and ecosystem function). This course will provide a broad overview of each of the many groups of fungi and some fungus-like organisms. Emphasis is placed on collecting, identifying, and culturing fungi from the environment. We will also study the important ways in which fungi affect humans in the form of plant and animal pathogens and as food and beverage sources.				
Course Description (Course overview):	This course is a general study of the fungi (mold and yeast) including importance of fungi, fungal structure, specialized structure which is found in some types of fungi, life cycles, nomenclature, and current classification. Emphasis is on the biodiversity of the fungi and their ecological importance, as well as the parasitic and mutualistic/symbiotic interactions of the fungi with other organisms including plants, animals, microbes, and other fungi.				

COURSE CONTENT

Week	Hour	Date	Topic
1	2	4-7/10/2021	Definition of mycology, general characteristic of fungi, importance of fungi
2	2	10-14/10/2021	Dimorphic fungi, nutrition and metabolism, types of reproduction in fungi.
3	2	17-21/10/2021	Nucleus, homokaryotic and heterokaryotic nuclei, vacuoles, Apical hyphal growth.
4	2	24-28/10/2021	Type of hyphae, type of septum and their functions , structure of fungal cell wall and plasma membrane.
5	2	31/10-4/11/2021	Some vegetable structures, stroma, haustorium, appressorium, seclerotium,
6	2	7-11/11/2021	Nomenclature of fungi, taxonomy and classification of of fungi, pleomorphic fungi
7	2	14-18/11/2021	Midterm Exam
8	2	21-25/11/2021	Fungal systematic, phylogenetic classification, pyretic group, species concepts, number of fungi, characters, fossil fungi.
9	2	28/11-2/12/2021	Kingdom of Fungi, phyla of Fungi. General characteristic of chytridiomycota, explanation life cycle of some genera belong to chytrids
10	2	5-9/12/2021	General characteristics of zygomycota phylum, explanation of some genera to this division.

11	2	12-16/12/2021	General characteristic of Ascomycota phylum, some species of Ascomycetes
12	2	19-23/12/2021	General characteristic of basidiomycota phylum, explanation of some important genera.
13	2	26-30/12/2021	Slime molds and water molds
14	2	2-5/1/2022	Fungi as food, medicinal uses of fungi
15	2	9-13/1/2022	Final Exam
16	2	16-20/1/2022	Final Exam

COURSE/STUDENT LEARNING OUTCOMES

- 1 General Characteristics of Fungi
- 2 Advantage and Disadvantage of Fungi
- 3 Demonstrate a working knowledge of how fungi grow and reproduce, and where and how they can be isolated Phylum Zygomycota
- 4 Outline the higher taxonomy of the fungi and how the fungi relate to other organisms
- 5 Discuss the characteristics of the major classes and orders within the fungal kingdom

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)

Program Learning Outcomes

Cont.

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| 1 | Evaluate clinical laboratory data by interpreting laboratory results and relating the data to various disease states. | I |
| 2 | apply principles of evidence-based medicine to determine clinical diagnoses. | I |
| 3 | apply the basic principles of gross and microscopic anatomy, physiology, biochemistry, immunology, microbiology/virology. | I |
| 4 | formulate and implement acceptable treatment modalities to various disease states. | I |
| 5 | use technology effectively in the delivery of instruction, assessment, and professional development. | P |
| 6 | exhibit essential employability qualities by demonstrating laboratory safety, analyzing laboratory results, and displaying professional conduct. | P |
| 7 | exhibit organizational skills, accountability, and ethical behavior. | P |
| 8 | apply skills needed in operating laboratory equipment for testing, assessing quality assurance for lab equipment, and adhering to standard safety practices in the laboratory environment. | P |
| 9 | apply problem-solving and decision-making skills. | P |
| 10 | apply and promote health policies and regulatory standards in the field career. | A |
| 11 | develop research in the field of medical analysis using qualitative and quantitative methods. | A |

Prerequisites (Course Reading List and References):

Lansing M. Prescott (2002). Microbiology. Fifth edition. 2.Alexopoulou, C.J., Mims, C.W. and Blackwell. (1996). Introductory mycology. 3.Webster, J and Weber, R. (2007). Introduction to Fungi. 3rd Ed. 4. John Webster and Roland Weber, (2007) Introduction

Student's obligation (Special Requirements):

Exam policy: Student should get at least 2 exam during the course (semester). There will be no make-up exams for absence students without medical report. Classroom polices: 1- Attendance: Attendance and active participation in discussions are strongly encouraged. Students are responsible for obtaining any information they miss due to absence. 2- Lateness: Lateness to class is disruptive 3- Electronic devices: All cell phones are to be turned off at the beginning of class and put away during the entire class. 4- Talking: During class please refrain from side conversations. These can be disruptive to other students and teacher.

Course Book/Textbook:

The course will cover fungi, yeasts and mushrooms topics together with printed media and internet articles which deal with advantage and disadvantage of the fungi, general characteristics of fungi, reproduction of fungi (sexual and asexual) and fungal taxonomy. Instructional strategies attempt to strike a balance between developing the students ability to cope with fungi, extending their general academic reading skills, and increasing their basic knowledge of and understanding of fungi. The course will give students a better understanding of a number of important mycological topics, the followings are examples but not restricted to: importance (advantage and disadvantages), general characteristics, growth, Reproduction, Life cycles, Evolutionary relationships and Taxonomy of fungi.

Other Course Materials/References:	To get the best of the course, it is suggested that you attend classes as much as possible, read the required lectures, teacher's notes regularly as all of them are foundations for the course. The students are required to do one closed book exam at the mid of the semester besides other assignments including translations and one research paper. The exam has 25 marks, the attendance, classroom activities; translations and research paper count 10 marks.
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Teaching Methods (Forms of Teaching):	Lectures, Practical sessions, Presentation, Seminar, Assignments, Case studies, , ,
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COURSE EVALUATION CRITERIA		
Method	Quantity	Percentage (%)
Attendance	1	5
Participation	1	5
Quiz	2	5
Midterm Exam	1	20
Laboratory	1	10
Practical Exam	1	10
Final Exam	1	40
Total		100
Examinations: True-False, Fill in the Blanks, Short Answers, Definition, ,		

Extra Notes:

ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD			
Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	16	2	32
Practical Hours	16	2	16
Final Exam	1	2	2
Attendance	1	2	2
Participation	1	10	10
Quiz	2	8	16
Midterm Exam	1	8	8
Laboratory	1		0
Practical Exam	1		0
Total Workload			86
ECTS Credit (Total workload/25)			3.44

Peer review

Signature:
Name:
Lecturer

Signature:
Name:
Head of Department

Signature:
Name:
Dean