هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA T4 2020

Course Specifications

Course Title:	Medical Microbiology	
Course Code:	**433 MIC – 2**	
Program:	**Biology**	
Department:	**Biology**	
College:	**Science**	
Institution:	**Jazan University**	

Table of Contents

A. Course Identification

1. Credit hours: 2 h
2. Course type **a.** University ☐ College ☐ Department ☑ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: Seven/Four (7/4)
4. Pre-requisites for this course (if any)**: Microbial Physiology 334MIC**
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**	15 h	75%
2	**Blended**	5 h	25%
3	**E-learning**	-	-
4	**Distance learning**	-	-
5	**Other**	-	-

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	15 h
2	**Laboratory/Studio**	30 h
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	45 h
Other Learning Hours*		
1	**Study**	24 h
2	**Assignments**	2 h
3	**Library**	2 h
4	**Projects/Research Essays/Thesis/Lab reports**	2 h
5	**Others**(specify) Exam preparation (mid-1 + final)- -Office hours	9 h 1 h
	Total	85 h

B. Course Objectives and Learning Outcomes

1. Course Description

Course Description:

Course Title	Course No.	Credit Units			Year	Level	Pre-Requisite
		Theoretical	Practical	Total			
MEDICAL MICROBIOLOGY	433MIC	1	1	2	4th	7th	334Mic

1) Course Objectives:
- Types of host-parasite relationship.
- Medically important bacteria, which disease, they cause, and how we treat infection
- Medically important Fungi

2) Course Contents:
- Host - parasite relationship.
- Pathogenesis.
- Host defense.
- Medically important bacteria (characteristics, diseases, diagnosis and treatment).
- Medically important fungi.
- Microbial flora and its relation to health and disease; General mechanisms of bacterial, viral and fungal pathogenesis; bacterial, chlamydial, rickettsial, and fungal infections that affect the major organ systems

3) Practical:
Practical principles for microbial isolation, transfer and identification.
- isolation and identification of Gram +ve pathogenic bacteria.
- isolation and identification of Gram -ve pathogenic bacteria.
- isolation and identification of some pathogenic fbungi.

4) Assessment:
Exams: Objective(MCQs), class work, Quiz, Written.
Practical: Identifying samples and slides, drawings.
Quiz 25%
Practical 25%
Final 50%

5) Teaching Methods:
Lectures, photographs, slides, multimedia, web-based learning. Samples, light microscopes, glassware, chemicals.

6) Text Books:
- Kayser et al (2005) Medical Microbiology, Published by Thiem Stuttgart, New York, USA.

7) References:
- Volk W.A.(1994) Essentials of Medical Microbiology. Lippincott Company, Philadelphia.
- Mims *et al*. (1993) Medical Microbiology. Mosby-Year Book, London.
- Greenwood *et al*. (1992). Medical Microbiology. Churchill Livingstone, Edinburgh.

2. Course Main Objective

This course aims at giving the student knowledge in the fields:

- Chemotherapy
- Host – parasite relationship
- Characteristics, antigenic structure, pathogenicity and diagnosis of gram positive bacteria
- Characteristics, antigenic structure, pathogenicity and diagnosis of gram negative bacteria
- Mycosis and mycotoxicosis
- Dermatophytosis
- Dermatophytes
- Epidemiology, clinical types and characteristics of otomycosis and penicillinosis

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.3	List all characteristics importance features steps related to Medical Microbiology.	K1
2.1	Differentiate (compare) between different mechanisms, functions, practices and aspects related to Medical Microbiology.	K2
2.3	Draw all systems organs cells and its contents diagrams and figures of Medical Microbiology.	K3
2	**Skills :**	
1.3	Examine theoretically or practically the slides photos, diagrams or statements of Medical Microbiology	S1
2.1	Predict the results of some Medical Microbiology problems and experiments.	S2
3	**Values:**	
1.2	Integrate prior knowledge of Medical Microbiology technology along with new knowledge in the profession for the sake of self-continuing professional development	V1

C. Course Content

No	List of Topics	Contact Hours
1	**Chemotherapy, factors affecting chemotherapy, Mechanism of action of chemotherapy, Microbial mechanisms of resistance.**	**1**
2	**Host – Parasite relationship. Mechanism of pathogenesis and host resistance. Entry into host. Colonization and multiplication of pathogens. Resistance to host defences. Damage to host tissues.**	**1**
3	**General characteristics, antigenic structure, pathogenicity and laboratory diagnosis of Gram-positive bacteria.**	**5**
4	**General characteristics, antigenic structure, pathogenicity and laboratory diagnosis of Gram-negative bacteria.**	**4**
5	**Mycosis and Mycotoxicosis. Candidiasis. Type of candidiasis.**	**1**
6	**Dermatophytosis. Types of dermatophytosis. Dermatophytes.**	**1**
7	**Epidemiology, clinical types and culture characteristics of otomycosis and**	**1**

	penecillinosis.	
Total		14

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**		
1.3	List all characteristics importance features steps related to Medical Microbiology.	Lectures,	Quizzes, Short Answer Question (SAQ), MCQs, Assignments
2.1	Differentiate (compare) between different mechanisms, functions, practices and aspects related to Medical Microbiology.	Lectures,	Quizzes, SAQ, MCQ, Assignments
2.3	Draw all systems organs cells and its contents diagrams and figures of Medical Microbiology.	Lectures,	Quizzes, Short Answer Question (SAQ), MCQs, Assignments
2.0	**Skills**		
1.3	Examine theoretically or practically the slides photos, diagrams or statements of Medical Microbiology	Lectures, Lab work	Quizzes, SAQ, MCQs assignment.
2.1	Predict the results of some Medical Microbiology problems and experiments.	Lectures, Lab work	Quizzes, SAQ, Assignment.
3.0	**Values**		
1.2	Integrate prior knowledge of Medical Microbiology technology along with new knowledge in the profession for the sake of self-continuing professional development	Lab work	Lab work, assignments

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Lecture Quizzes 1	4	5
2	Mid-term Theory exam	6	10
3	Practical Midterm exam	8	10
4	Homework assignment	10	5
5	Lecture Quizzes 2	12	5
6	Final practical exam	14	15
7	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 : Each group of students is assigned to a member of staff who will be available for help and academic guidance office hours at specific hours on daily basis.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- Kayser et al (2005) Medical Microbiology, Published by Thiem Stuttgart, New York, USA
Essential References Materials	- Wesley A. Volk (1994). Essentials of Medical Microbiology. Lippincott company, East Washington Square, Philadelphia, PA (1995)
Electronic Materials	-http://jmm.sgmjournals.org/ -http://www.journals.elsevier.com/international-journal-of-medical-microbiology/
Other Learning Materials	

2. Facilities Required

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

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	Students, Faculty	Direct (Questionnaire)
Effectiveness of assessment	Peer Reviewer	Direct (Cross Check marking)
Extent of achievement of course learning outcomes	Program Leader	Indirect (QA Committee)
Quality of learning resources	QA. Committee	Indirect (Benchmarking)

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	Consultant Committee/ Board of Biology Department
Reference No.	6th Meeting of the board of biology department 1440-1441
Date	08/03/2020