هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA T4 2020

Course Specifications

Course Title:	**General Microbiology**
Course Code:	**2012203-3**
Program:	**Bachelor in Botany**
Department:	**Biology Department**
College:	**College of Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours:	3 hr
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	6th level \ 2nd year
4. Pre-requisites for this course (if any):	General Botany 2012103-3
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**	6 hr/Week	100%
2	**Blended**	-	-
3	**E-learning**	-	-
4	**Distance learning**	-	-
5	**Other**	-	-

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	20
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	50

B. Course Objectives and Learning Outcomes

1. Course Description:

This course deals with studying principles of Microbiology, historical review of the pioneer microbiologists, classification of microorganisms (Bacteria, Fungi, Microalgae, Parasites, in addition to Viruses), structure and chemistry of microbial cell, microbial genetics, nutrition, metabolism, growth and reproduction as well as role of microorganisms in medicine, industry, agriculture, environment and biotechnology.

2. Course Main Objective:

This course covers the general basics of microbiology, classification, characterization, nutrition and replication of microorganisms.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding:**	
1.1	Classify different microorganisms according to relevant characters.	K2
1.2	Identify the basic concepts and routine procedures used to investigate	K3

CLOs		Aligned PLOs
	microorganisms.	
2	**Skills:**	
2.1	Recognize the importance of micro-organisms in medical, economic and environmental fields.	S3
2.2	Illustrate functions of microbial structures and modes of multiplication in microorganisms.	S4
3	**Values:**	
3.1	Manage tasks and activities related to the discipline effectively and efficiently.	V2

C. Course Content

No	List of Topics	Contact Hours
1	Chapter 1: Introduction to Microbiology: History and scope of microbiology, prokaryotic and eukaryotic cells- Viruses	3L + 2P
2	Chapter 2: Bacteria (Classification- Structure – Growth - Metabolism – Reproduction- Genetics – Applications)	6L + 4P
3	Chapter 3: Viruses (Classification- Structure – Growth - Metabolism – Reproduction- Genetics – Applications)	6L + 4P
4	Chapter 4: Fungi (Classification- Structure – Replication - Genetics – Applications)	6L + 4P
5	Chapter 5: Microalgae (Classification- Structure – Growth - Metabolism – Reproduction- Genetics – Applications)	6L + 4P
6	Chapter 6: Parasites (Classification- Structure – Growth - Metabolism – Reproduction- Genetics – Applications)	3L + 2P
Total		30L + 20P

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:**		
1.1	Classify different microorganisms according to relevant characters.	Lectures Concept maps	Paper-based exams
1.2	Identify the basic concepts and routine procedures used to investigate microorganisms.	Lectures Brain storming	Paper-based exams
2.0	**Skills:**		
2.1	Recognize the importance of micro-organisms in medical, economic and environmental fields.	Open discussion Small group activities	Paper-based exams Practical reports
2.2	Illustrate functions of microbial structures and modes of multiplication in microorganisms.	Interactive learning Brain storming	Practical reports Practical exam
3.0	**Values:**		
3.1	Manage tasks and activities related to	Open discussion	Assignments

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	the discipline effectively and cfficicntly.	Small group activities	

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Midterm Exam	5th	20%
2	Semester Activities	Periodic	10%
3	Practical Reports	Weekly	20%
4	Final Practical Exam	11th	10%
5	Final Exam	12th	40%
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:

6 hours per week for academic advice and consultations.
Teaching staff is also available using Blackboard web site and Taif University "Edugate" System.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	- Jacquelyn G. Black and Laura J. Black (2017). Microbiology: Principles and Explorations, 10th edition, John Wiley & Sons. - Rokaya Kashkari (2009). General Microbiology, 3rd edition, Saudi House for Publishing (In Arabic).
Essential References Materials	- Tortora J.G., Funke B.R., Case C.L. (2018). Microbiology: An Introduction, 13th Edition, Pearson publications. - Stuart Hogg (2013). Essential Microbiology, 2nd Edition, Wiley-Blackwell.
Electronic Materials	Blackboard website Website of Saudi digital Library
Other Learning Materials	Computer-based programs and professional software.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Classroom (capacity not more than 40 students) Microbial Lab (capacity not more than 20 students)
Technology Resources (AV, data show, Smart Board, software, etc.)	Data Show projectors. Smart blackboard. Computer Portable PowerPoint presentations.

Item	Resources
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Software of microbiology.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Indirect
Quality of learning resources	Peer Reviewer Students	Direct Indirect
Extent of achieving the course learning outcomes	Peer Reviewer Students	Direct Indirect

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	**Biology Department**
Reference No.	**Committee number 14 - Academic Year 1442-1443H**
Date	**22\5\2022G – 21\10\1443H**

كلية العلوم
قسم الأحياء
College of Science
Department of Biology
TU
جامعة الطائف
TAIF UNIVERSITY

عمادة كلية العلوم
Deanship of Science College
TU
جامعة الطائف
TAIF UNIVERSITY