



## Course Specifications

<b>Course Title:</b>	General Microbiology
<b>Course Code:</b>	2012203-3
<b>Program:</b>	Bachelor in General Biology
<b>Department:</b>	Biology Department
<b>College:</b>	College of Sciences
<b>Institution:</b>	Taif University

## Table of Contents

<b>A. Course Identification</b> .....	<b>3</b>
6. Mode of Instruction (mark all that apply) .....	3
<b>B. Course Objectives and Learning Outcomes</b> .....	<b>3</b>
1. Course Description .....	3
2. Course Main Objective.....	3
3. Course Learning Outcomes .....	3
<b>C. Course Content</b> .....	<b>4</b>
<b>D. Teaching and Assessment</b> .....	<b>4</b>
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods .....	4
2. Assessment Tasks for Students .....	5
<b>E. Student Academic Counseling and Support</b> .....	<b>5</b>
<b>F. Learning Resources and Facilities</b> .....	<b>5</b>
1. Learning Resources .....	5
2. Facilities Required.....	5
<b>G. Course Quality Evaluation</b> .....	<b>6</b>
<b>H. Specification Approval Data</b> .....	<b>6</b>

## A. Course Identification

<b>1. Credit hours:</b>	3 hr
<b>2. Course type</b>	
a.	University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b.	Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b>	6 <sup>th</sup> level \ 2 <sup>nd</sup> year
<b>4. Pre-requisites for this course (if any):</b>	General Botany 2012103-3
<b>5. Co-requisites for this course (if any):</b>	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)	-
	<b>Total</b>	50

## B. Course Objectives and Learning Outcomes

<p><b>1. Course Description:</b> 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.</p>
<p><b>2. Course Main Objective:</b> This course covers the general basics of microbiology, classification, characterization, nutrition and replication of microorganisms.</p>

## 3. Course Learning Outcomes

CLOs		Aligned PLOs
1	<b>Knowledge and Understanding:</b>	
1.1	Classify different microorganisms according to relevant characters.	K2



CLOs		Aligned PLOs
1.2	Identify the basic concepts and routine procedures used to investigate microorganisms.	K3
<b>2</b>	<b>Skills:</b>	
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
<b>3</b>	<b>Values:</b>	
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
<b>Total</b>		<b>30L + 20P</b>

### D. Teaching and Assessment

#### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and Understanding:</b>		
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
<b>2.0</b>	<b>Skills:</b>		
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
<b>3.0</b>	<b>Values:</b>		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.1	Manage tasks and activities related to the discipline effectively and efficiently.	Open discussion Small group activities	Assignments

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Midterm Exam	5 <sup>th</sup>	20%
2	Semester Activities	Periodic	10%
3	Practical Reports	Weekly	20%
4	Final Practical Exam	11 <sup>th</sup>	10%
5	Final Exam	12 <sup>th</sup>	40%
<b>Total</b>			<b>100%</b>

\*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

<b>Required Textbooks</b>	<ul style="list-style-type: none"> <li>- Jacquelyn G. Black and Laura J. Black (2017). Microbiology: Principles and Explorations, 10<sup>th</sup> edition, John Wiley &amp; Sons.</li> <li>- Rokaya Kashkari (2009). General Microbiology, 3<sup>rd</sup> edition, Saudi House for Publishing (In Arabic).</li> </ul>
<b>Essential References Materials</b>	<ul style="list-style-type: none"> <li>- Tortora J.G., Funke B.R., Case C.L. (2018). Microbiology: An Introduction, 13<sup>th</sup> Edition, Pearson publications.</li> <li>- Stuart Hogg (2013). Essential Microbiology, 2<sup>nd</sup> Edition, Wiley-Blackwell.</li> </ul>
<b>Electronic Materials</b>	Blackboard website Website of Saudi digital Library
<b>Other Learning Materials</b>	Computer-based programs and professional software.

### 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> <li>• Classroom (capacity not more than 40 students)</li> <li>Microbial Lab (capacity not more than 20 students)</li> </ul>
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	Data Show projectors. Smart blackboard. Computer Portable PowerPoint presentations.

Item	Resources
<b>Other Resources</b> (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

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