



Course Descriptor BIOL 201: Microbiology

ACADEMIC YEAR	Fall 2021-2022		
Course Code & Title	BIOL 201: Microbiology		
Credit hours	3	Level of study	Diploma, bachelor
College / Centre	College of Applied and Health Sciences		
Co-requisites	BIOL281	Pre-requisites	BIOL101

1. COURSE OUTLINE

[Microbiology is the study of invisible, small microorganisms (characteristics, advantages and disadvantages) that form part of our world. These microorganisms include bacteria, viruses, fungi, algae and protozoa. Microbiology has been and will continue to be one of the pillars in the creation of opportunities for human progress and for the advancement of new knowledge to improve the quality of life. It has numerous applications in health and disease and in the development of new technologies in the various fields of microbiology like food and industrial microbiology, immunology, medical mycology, diagnostic microbiology, etc. This course is intended to prepare students for various careers and opportunities in the different fields of microbiology.

2. AIMS

[This course provides an introduction to the study of microorganisms and offers basic skills required to perform microbiological investigations. Introduce students to basic and important topics in microbiology which provides a basis for specialized studies in food Microbiology and food sciences. The course aims to keep students abreast with the latest development in all fields of Microbiology by training the students in practice and knowledge of microbiology relevant to the country of Sultanate of Oman..

3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes (Definitive)	Teaching and Learning methods (Indicative)	Assessment (Indicative)
Upon successful completion of this course, students will be able to:		
1. Classify the microorganisms based on the characteristics.	Lectures and presentations	In-class test, quiz
2. Identify the type's microorganisms, their characteristics and size.	Lectures and presentations	In-class test, quiz
3. Recognize the basic features of different groups of microorganisms.	Lectures and presentations	In-class test, quiz
4. Develop essential knowledge and understanding of concepts of Microbiology	Lectures and presentations	In-class test, quiz
5. Sustain and develop their enjoyment of, and interest in microbiology.	Lectures and presentations	In-class test, quiz

4. ASSESSMENT WEIGHTING

Course Descriptor
BIOL 201: Microbiology

Assessment	Percentage of final mark (%)
Quiz 1	10
Quiz 2	10
Assignments	20
Mid-term Exam	20
Final Examination	40
TOTAL	100%

5. ACHIEVING A PASS

Students will achieve **3** credit hours for this course by passing **ALL** of the course assessments [*alternatively, list the compulsory pass assessments**] and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

LECTURE TOPIC	TIME (HOURS)
Introduction to the course: (aims of the course, textbooks, and exam), Habitat of the microorganisms, scope of microbiology, History of Microbiology	6
Microscopy	3
Microbial Cell Structure and function (prokaryotic cells- sizes and shapes, components of prokaryotic cells, and components of eukaryotic cells).	6
Microbial Metabolism	6
Mid term 1	3
Microbial growth	6
Nutrition and isolation of microorganisms	6
Microbial growth control <i>in vitro</i>	3
Controlling Microbial growth <i>in vivo</i> (antimicrobial drugs)	3
Microbial Taxonomy	3
Microbial Ecology	3
Bacterial diseases	3
Recommended Reading	
Recommended Reading	
Revision	
Final Exam	



Course Descriptor
BIOL 201: Microbiology

TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	
TOTAL COURSE HOURS	45

7. RECOMMENDED READING

Core text/s:

Jeffrey C. Pommerville, Alcamo's Fundamentals of Microbiology 9th Edition, Publisher: Jones and Bartlett publishers ISBN 9780763762582
Microbiology: Canadian Edition, Wendy Keenleyside, licensed under a Creative Commons Attribution 4.0 International License

Library + online resources:

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