Course Specification
Student Version

Course Title:	Principle of Diseases I
Course Code:	PDO 204
Department:	Basic Medical Sciences
Program:	Bachelor of Medicine and Surgery
College:	Vision College, Riyadh
Institution:	Vision College, Riyadh
Revised:	July 2025

A. Course Identification

1. Credit hours: 4 (2+1+1)
2. Level/year at which this course is offered: Level 4/Year 2
3. Pre-requisites for this course (if any): MBG 203
4. Co-requisites for this course (if any): None

B. Teaching Methods

1	Lecture
2	Practical Session
3	PBL

C. Course Description and Objectives

1. Course Description

This course deals with morphology, cellular and molecular structure, classification, growth, and replication of human pathogens such as bacteria, viruses, fungi, and parasites. Also, it deals with host-pathogen relationships as well as concepts and applications of molecular microbiology

2. Main Course Objective

The main objective of this course is to cover the basic knowledge of general microbiology besides focusing on the fundamental cellular and tissue responses to pathologic stimuli and the natural history of these responses.

3. Course Objectives

By the end of this course, students should be able to:

- Understand the structure and function of the prokaryote and lower eukaryote as it pertains to their pathogenesis and susceptibility to antibacterial and antifungal agents.
- Demonstrate how the important bacterial and fungal pathogens are isolated.
- Identified the clinical pathogens and laboratory tested for their susceptibility to antimicrobial agents so that rational therapy can be instituted.
- learn the mechanisms of genetic exchange between bacteria and their importance in the transfer of antibiotic resistance and virulence determinants.
- Enables students to acquire knowledge of the biology of important viral pathogens which can be applied to understanding the pathogenesis of these obligate intracellular parasites.
- Collaborate with colleagues demonstrating presentation skills, group dynamics and teamwork competencies.
- Demonstrate lifelong learning skills and update knowledge, clinical and technology skills.

D. Course Content

No.	List of Topics
1	An introduction to microorganisms & Structure of Bacterial Cell
2	Bacteria in the human body (Normal Flora)
3	An overview of the Immune System
4	Bacterial Metabolic Requirements and Bacterial Growth
5	Bacterial Genetics: Bacterial Genome, Bacteriophage Replication
6	Bacterial Gene Exchange
7	Mechanisms of bacterial Pathogenesis and infection
8	Classification of Bacteria 1 (Gram +ve Cocci &Gram-ve Cocci)
9	Classification of Bacteria 2 Gram +ve Rods & Gram-ve Rods (2)
10	Classification of Bacteria 3 (Enterobacteriaceae)
11	Mycobacteria & Diagnosis of Bacterial Infection
12	The immune response to bacterial Infection 1
13	The immune response to bacterial Infection 1I
14	Introduction & Structure of viruses
15	The classification & Modes of Viral Infection
16	Viral Diseases I
17	Viral Diseases II
18	Viral Diseases III
19	The immune response to Viral Infection
20	Introduction to Parasites and Protozoa
21	Parasites II (helminths)
22	Parasites and Immune response
23	An introduction to Pathogenic Fungi
24	The Complement System
25	Humoral and Cell mediated Immunity
26	Inflammation as an immune response
27	Autoimmune diseases
28	Immunization and Immunity
29	Hypersensitivity and Allergy
30	Immunodeficiency disorders I
31	Immunodeficiency disorders II

E. Assessment Tools

#	Assessment task	Percentage of Total Assessment Score
1	PBL Evaluation Using Rubrics	10%
2	Quizzes	10%
3	Midterm Exam	20%
4	Final Practical Exam (Spotter exam)	20%
5	Final Written Exam	40%
	Total	**100%**

F. Learning Resources

Required Textbooks	**Mims' Medical Microbiology 5th edition, 2012 by Richard Goering, Hazel Dockrell, Mark Zuckerman, Ivan M. Roitt, and Peter L. Chiodini**
Essential Reference Material	**Review of medical microbiology and Immunology twelfth ed by Warren Levinson 2012**
Electronic Material	**1. https://microbiologyinfo.com/** **2. LMS resources**