

Course Specification Student Version

Course Title:	General Physiology - 1
Course Code:	PSL 211
Department:	Basic Medical Sciences
Program:	Bachelor of Dentistry
College:	Vision College in Riyadh
Institution:	Vision College in Riyadh
Revised:	July 2025

A. Course Identification

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| 1. Credit hours: 3 (2+1+0) |
| 2. Level/year at which this course is offered: Level 3/Year 2 |
| 3. Pre-requisites for this course (if any): None |
| 4. Co-requisites for this course (if any): None |

B. Teaching Methods

1	Lecture
2	Assignment
3	Practical session

C. Course Description and Objectives

1. Course Description

This course provides fundamental information necessary for understanding the functional aspects of various systems in the living body along with the emphasis on the regulatory mechanism that maintain the normalcy of the functions within narrow limits. It forms the strong foundation on which other medical fields are constructed. The primary aim of this course is to meet the needs of the dental students in getting knowledge of recent developments in the field of physiology and in knowing the important applied aspects of various topics. In Physiology I course, there is introduction about cell and homeostasis, followed by sections describing blood and body fluids, cardiovascular physiology, respiratory physiology, and muscle physiology. The descriptive diagrams are given in such a way that the students can easily understand them. The explanation of the topics is supported with the flow charts and tables which make the studying a pleasure and stress-free.

2. Course Main Objective

This course is designed to provide students with an understanding of the function & regulation of the human body and physiological integration of the organ systems to maintain homeostasis.

At the end of the course the student should be able to:

- Understand the homeostatic mechanisms, the cell structure and functions, the body fluids and electrolytes.
- Identify the components and functions of blood.
- Identify the functions of cardiovascular system, including the cardiac conduction system, the venous return and cardiac output, the blood pressure regulation and the microcirculation.
- Recognize the functions of the respiratory system, including the mechanisms of oxygen transfer and oxygen transport and the regulation of respiration.
- Know the physiology of skeletal muscles.

3. Course Objectives

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

- Describe essential theoretical knowledge of basic sciences related to dental sciences.
- Explain the normal structure and function of the body in relation to its organ systems.
- Perform routine measurements of blood characteristics, blood pressure, and electrocardiography.
- Establish collaborative teamwork and leadership responsibility in dental practice.

D. Course Content

No	List of Topics
1	Introduction to physiology and homeostasis
2	Cell structure and membrane transport
3	Erythropoiesis
4	Leucocytes and immunity
5	Haemostasis
6	Cardiac excitability and automaticity
7	The cardiac output and venous return
8	Regulation of blood pressure
9	The microcirculation and shock
10	Functional properties of the respiratory system
11	Mechanics of respiration
12	Oxygen transfer and oxygen transport
13	Hypoxia and cyanosis
14	The regulation of respiration
15	Muscle physiology

E. Assessment Tools

#	Assessment task	Percentage of Total Assessment Score
1	Quizzes	10 %
2	Assignment/Seminar Presentation	10 %
3	Practical examinations	20 %
4	Midterm exam	20 %
5	Final examination	40 %
	Total	100%

F. Learning Resources

Essential References	<ul style="list-style-type: none"> Essentials of Physiology For Dental Students, first edition. K Sembulingam & P Sembulingam. Jaypee, 2011.
Supportive References	<ul style="list-style-type: none"> None
Electronic Materials	<ul style="list-style-type: none"> The power point slides by the collage website
Other Learning Materials	<ul style="list-style-type: none"> None

