Course Specification
Student Version

Course Title:	General Physics
Course Code:	PHYS 101
Department:	Common Sciences
Program:	Bachelor of Dental Surgery
College:	Vision College in Riyadh
Institution:	Vision College in Riyadh
Revised :	July 2025

A. Course Identification

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

B. Teaching Methods

1	Lecture
2	Practical Session
3	

C. Course Description and Main objective

1. Course Description

This course is designed for students in Health Science to enable them to appreciate the basic concepts of physics which are relevant to their further studies.

2. Course Main Objective

The main objective of this introductory course is to provide the students with a clear and logical presentation of the basic concepts and principles of introductory physics, and to strengthen their understanding through a broad range of interesting applications in the real world.

3. Course Main Objectives :

By the end of this course the students will be able to :

- Discuss the different physical units.
- Describe the states of matter.
- Differentiate between the three Newton's laws.
- Explain & differentiate between different basic physics concepts.
- Recognize the thermal, optical and electrical properties
- Differentiate between radioactivity, half-life and interaction of radiation with matter.

D. Course Content

No.	List of Topics
1	Motion in Straight Line - Velocity and Acceleration.
2	Vectors and Motion in Two Dimensions.
3	Force, Newton's Laws of Motion
4	Work, Energy and Power
5	Continue Coulomb's Law, Electric forces, Fields, and Potentials
6	Direct currents and Resistance (Ohm's Law)
7	Fluid Mechanics
8	Nature of light, Reflection of light, and Refraction of light
9	Structure of the eye, lenses, extension of vision
10	Introduction to Thermodynamics: Main Principles and Laws of Gases
11	Temperature, Thermometers , Heat, Heat capacity, Specific Heat, and Transmission of Heat
12	Nuclear Physics: Radioactivity and Half-Life
13	Ionizing Radiation : Interaction of Radiation with Matter
14	Measurements and errors – Graph – Precise measurements – Force table – Viscosity – Hooke's law – Simple pendulum – Ohm's law – Reflection and refraction with the ray box.

E. Assessment tools

#	Assessment task	Time	Percentage of Total Assessment Score
1	Quizzes (Short notes and MCQs)	During the Semester	10% (each 5)
2	Assignments (Short notes)	First Quiz & Second Quiz	10% (each 5)
3	Midterm Exam	Midterm Exam period	20%
4	Practical Exam	End of the semester	20%
5	Final Written Exam	Final Exam period	40%
	Total		**100%**

F. Learning Resources

Required Textbooks	R. A. Serway, Physics for Scientists and Engineers, Saunders Golden Sunburst Series, 2011, 8th edition, or 10th edition.
Essential Reference Material	1- Many other sources on general physics and introduction to physics are available on the Moodle platform. 2- A copy of the physics laboratory book is available in the college library. 3- Raymond A. Serway, Physics for Scientists and Engineers, 4th edition, Saunders Golden Sunburst Series, 1990. 4- D. Halliday and R. Resnick Fundamentals of Physics, 10th edition, 2011 (ISBN: 978- 1-118-23072-5 (Extended edition)).

	5- H. D. Young, R. A. Freedman, T. R. Sandin, And A. Lewis Ford, Sears and Zemansky's University Physics, 10th edition, 2000. (ISBN: 0-201-60322-5). 6- Jerry B. Marion and William F. Hornyak, General Physics with Bioscience Essays, 2nd Edition John Wiley & Sons, Inc, 1985.
Electronic Material	//