Course Specifications

Course Title:	General Physics
Course Code:	1003-102
Program:	N/A
Department:	Basic Science
College:	Dean of Preparatory Year & Supportive Studies
Institution:	Northern Boarder University

Table of Contents

A. Course Identification

1. Credit hours:
2. Course type **a.** University [√] College [ ] Department [ ] Others [ ] **b.** Required [√] Elective [ ]
3. Level/year at which this course is offered:
4. Pre-requisites for this course (if any)**:** N/A
5. Co-requisites for this course (if any)**:** N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	3	100%
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	45
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	45
Other Learning Hours*		
1	**Study**	45
2	**Assignments**	25
3	**Library**	25
4	**Projects/Research Essays/Theses**	10
5	**Others**(specify)	
	Total	105

***The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course is an introductory non-calculus Physics course. The course covers Newtonian mechanics; motion, momentum, and energy of particles, rigid rotating bodies, and fluids.

2. Course Main Objective

This Course aims to understand the concept of general physics (movement): theories and principles and the role of this in the scientific and scientific life of society.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	Understand the basics of the fundamentals of physics.	N/A
1.2	Compare the fundamental properties of linear and rotational motion.	N/A
2	**Skills:**	
2.1	Prove the learned formulas to solve the different applications topics.	N/A
2.2	Apply the laws knowledge to solve problems related to classical physics.	N/A
2.3	Instigate self-learning and the importance of lifelong physics learning.	N/A
3	**Competence:**	
3.1	Use the appropriate mathematical laws in the analysis and link solutions to solve the problems.	N/A

C. Course Content

No	List of Topics	Contact Hours
1	Introduction –Units and Dimensions	**6**
2	Vectors	**9**
3	Motion in one and two dimensions	**6**
4	Newton's Laws of motion	**6**
5	Work, Energy and Power	**6**
6	Linear Momentum Impulse and Collision	**6**
7	Rotation of Rigid bodies	**6**
Total		**45**

D. Teaching and Assessment

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

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Understand the basics of the fundamentals of physics.	a. Class discussions. b. Lectures. c. Seminars. d. Writing assignments.	a. Direct assessment components such as quizzes, homework, major midterm exam and final exams. b. Self-assessment feedback. c. Teacher direct observation assessment feedback. d. Quizzes.
1.2	Compare the fundamental properties of linear and rotational motion.	Class discussions, Self-learning worksheet	
2.0	**Skills**		
2.1	Prove the learned formulas to solve the different applications topics.	a. Problem solving. b. Class discussions.	a. Graded homework b. Individual and group
2.2	Apply the laws knowledge to solve		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	problems related to classical physics.	c. Assignments. d. Exercises. e. Case study.	assignments c. Assessment of class participation d. Short quizzes
2.3	Instigate self-learning and the importance of lifelong physics learning.		
3.0	**Competence**		
3.1	Use the appropriate mathematical laws in the analysis and link solutions to solve the problems.	a. Discussion with students. b. Making students aware about time management incompleting their assignments. c. -Encourage students to help each other. d. Assign Homework and projects. e. Group assignments.	a. Take attendance b. Class discussions c. Graded quizzes. d. Respect deadlines. e. Give clear and logical arguments. f. Engage students during class to gauge their ability to communicate their ideas

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	5,7,12,14	20%
2	Midterm	8	25%
3	Final Test	16	40%
4	Assignments	Every week	10%
5	Activities & Participation	Every week	5%

***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:

Office Hours (6 office hours/ week.)

Academic Advisor for Students

Blackboard Forum

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	General Physics for the Preparatory Year Students", First edition. 2017. El-Mutanabbi bookstore, L.D. no. 1437/262, ISBN:978-603-8182-35-2.

Essential References Materials	Halliday, D., Resnick, R., & Walker, J. (2020). Fundamentals of physics. John Wiley & Sons. Mansfield, M. M., & O'sullivan, C. (2020). Understanding physics. John Wiley & Sons. Serway, R. A., & Jewett, J. W. (2018). Physics for scientists and engineers. Cengage learning.
Electronic Materials	1.YouTube Videos on physics 2.Physics INTERNET web sites
Other Learning Materials	---

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom enough for 50 students, Black (white) boards. Projector
Technology Resources (AV, data show, Smart Board, software, etc.)	Blackboard system
Other Resources (Specify, e.g., if specific laboratory equipment is required, list requirements or attach a list)	---

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Students' evaluation in each semester	Teacher	Direct
Meeting with students	Students, Faculty, Program Leader	Direct, Indirect
e-suggestions	Students, Faculty, Program Leader	Direct, Indirect
Open door policy	Students, Faculty, Program Leader	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	Basic Sciences Department - Dean of Preparatory Year & Supportive Studies
Reference No.	2nd
Date	23-07-1443 H