Template of Course Specification

Name and Scientific title of the subject instructor: Muataz Salman Hassam

Name of Course: Physics

Course Specification

1.	**Teaching Institution**	**Al-Ayen University / Petroleum Engineering College**
2.	**University Department / Center**	Petroleum Engineering College
3.	**Course Title / Code**	Physics
4.	**Program(s) to which it contributes**	B.Sc.
5.	**Modes of Attendance offered**	Class attendance
6.	**Semester/Year**	1st and 2nd, 2023
7.	**Number of hours tuition (total)**	60
8.	**Date of production/revision of this Specification**	Oct. 2022
9.	**Aims of the Course: The student will know the following:**	
	1	Understanding the principals of Physics the resultant of forces and materals
	2	Find the position of the body on the number line
	3	Learn about the types of energy
	4	Learn about gravitational energy
10.	**Learning Outcomes, Teaching, Learning and Assessment Methods**	
	A	**Knowledge and understanding:** The Physics program seeks to develop capabilities of students to understand the effects of forces and moments on the body in correlation with potential work, energy, and vibrations of a body reaching for a best understanding of the material behavior in that a particular engineering application.
	B	**Subject-specific skills:** The program provides the capability to scientifically analyze the engineering problem and to find out the potential behavior that the material/body can undergo.
	C	**Assessment methods:** The assessment method are divided into three parts; quizzes, monthly exams, and final exams.
	D	**Thinking Skills:** Providing a skilled staff to the scientific community that can effectively contribute to develop and tackle the relevant engineering problems.
	E	**Teaching and learning methods:** The teaching is performed theoretically based upon theoretical concepts of Physics .

F	**General and Transferable Skills (other skills relevant to employability and personal development):** The most important skills are the knowledge and capability to provide scientific proposals to tackle a given engineering problem.

11.	**Course Structure**				
Week	**Hours**	**Required Teaching Outputs**	**Unit/Module or Topic Title**	**Teaching Methods**	**Assessment Methods**
1.	2	Student will understand	Basic Principles of Physics	Class attendance	Quizzes, monthly exams, and final exams
2.	2	Student will understand	Position, Displacement, Average Velocity and Acceleration	Class attendance	Quizzes, monthly exams, and final exams
3.	2	Student will understand	Energy	Class attendance	Quizzes, monthly exams, and final exams
4.	2	Student will understand	Kinetic Energy	Class attendance	Quizzes, monthly exams, and final exams
5.	2	Student will understand	Work	Class attendance	Quizzes, monthly exams, and final exams
6.	2	Student will understand	Work–Kinetic Energy Theorem	Class attendance	Quizzes, monthly exams, and final exams
7.	2	Student will understand	Gravitational potential energy	Class attendance	Quizzes, monthly exams, and final exams
8.	2	Student will understand	Conservation of Mechanical Energy	Class attendance	Quizzes, monthly exams, and final exams
9.	2	Student will understand	Wave Motion	Class attendance	Quizzes, monthly exams, and final exams
10.	2	Student will understand	Wave Motion	Class attendance	Quizzes, monthly exams, and final exams
11.	2	Student will understand	Wave Motion	Class attendance	Quizzes, monthly exams, and final exams
12.	2	Student will understand	Fluids	Class attendance	Quizzes, monthly exams, and final exams
13.	2	Student will	Fluids	Class	Quizzes, monthly

		understand		attendance	exams, and final exams
14.	2	Student will understand	Fluids	Class attendance	Quizzes, monthly exams, and final exams
15.	2	Student will understand	Archimedes' Principle	Class attendance	Quizzes, monthly exams, and final exams
16.	2	Student will understand	Buoyant Force	Class attendance	Quizzes, monthly exams, and final exams
17.	2	Student will understand	Viscosity	Class attendance	Quizzes, monthly exams, and final exams
18.	2	Student will understand	Viscosity	Class attendance	Quizzes, monthly exams, and final exams
19.	2	Student will understand	Surface Tension	Class attendance	Quizzes, monthly exams, and final exams
20.	2	Student will understand	Surface Tension	Class attendance	Quizzes, monthly exams, and final exams
21.	2	Student will understand	Surface Tension	Class attendance	Quizzes, monthly exams, and final exams
22.	2	Student will understand	Surface Tension	Class attendance	Quizzes, monthly exams, and final exams
23.	2	Student will understand	contact angle	Class attendance	Quizzes, monthly exams, and final exams
24.	2	Student will understand	Wetting Phenomena	Class attendance	Quizzes, monthly exams, and final exams
25.	2	Student will understand	Wetting Phenomena	Class attendance	Quizzes, monthly exams, and final exams
26.	2	Student will understand	capillary pressure	Class attendance	Quizzes, monthly exams, and final exams
27.	2	Student will understand	Heat Transfer	Class attendance	Quizzes, monthly exams, and final exams
28.	2	Student will understand	**Conduction**	Class attendance	Quizzes, monthly exams, and final exams
29.	2	Student will understand	Convection	Class attendance	Quizzes, monthly exams, and final

					exams
30.	2	Student will understand	Radiation	Class attendance	Quizzes, monthly exams, and final exams

12.	**Infrastructure**
Required reading: **·CORE TEXTS** **·COURSE MATERIALS** **· OTHER**	
Community-based facilities) include for example, guest Lectures, internship, field studies)	Scientific collaboration with other academic staff in the relevant field is one of our future plan to develop the program.

13.	**Admissions**
Pre-requisites	
Minimum number of students	10
Maximum number of students	30