



Course Specifications

Institution:	Faculty of Education in Zilfi.
Academic Department :	Physics
Programme :	Bachelor in Education
Course :	Classical Mechanics 1 (Phys122)
Course Coordinator :	Elham Aldufeery
Programme Coordinator :	Dr. Nagwa Ibrahim
Course Specification Approved Date :	12./ 2 / 1437 H



A. Course Identification and General Information

1 - Course title : Classical Mechanics 1 Course Code: Phys122	
2. Credit hours : (2 theory + 2 exercise) <input type="checkbox"/> <input type="checkbox"/>	
3 - Program(s) in which the course is offered: Faculty of Education in Zilfi/ physics department/ Second level <input type="checkbox"/>	
4 – Course Language : Arabic <input type="checkbox"/>	
5 - Name of faculty member responsible for the course: Elham Aldufeery	
6 - Level/year at which this course is offered : Second level	
7 - Pre-requisites for this course (if any) : •	
8 - Co-requisites for this course (if any) : • General physics 2+ Mathematics for physics 1 <input type="checkbox"/>	
9 - Location if not on main campus : (.....) <input type="checkbox"/>	
10 - Mode of Instruction (mark all that apply) <input type="checkbox"/>	
A - Traditional classroom <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> What percentage? <input type="checkbox"/> 50 % <input type="checkbox"/>
B - Blended (traditional and online) <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> What percentage? <input type="checkbox"/> % <input type="checkbox"/>
D - e-learning <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> What percentage? <input type="checkbox"/> 30% <input type="checkbox"/>
E - Correspondence <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> What percentage? <input type="checkbox"/> % <input type="checkbox"/>
F - Other <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> What percentage? <input type="checkbox"/> 20% <input type="checkbox"/>
Comments : <input type="checkbox"/>	

B Objectives

<p>What is the main purpose for this course?</p> <p>To provide the student with the basic concepts in the Vectors, the laws of motion in one dimension and in two dimensions, Newton's laws and the linear momentum.</p> <p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <p>Quick Quiz during the lecture to apply the newly acquired information, this will help to a good understanding.</p>





C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Vectors	1	2
Motion in one dimension	2	2
Motion in two dimensions	3	2
The law of motion (Newton's law)	4	2
Work	5	2
Kinetic and potential energy	6	2
Conservation of total energy law	7	2
linear momentum	8	2
Elastic and inelastic collisions	9	2
The center of mass law	10 <input type="checkbox"/>	2 <input type="checkbox"/>

2. Course components (total contact hours and credits per semester):

<input type="checkbox"/>	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	32	24 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	56 <input type="checkbox"/>
Credit	32 <input type="checkbox"/>	12 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	44 <input type="checkbox"/>

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Recognize the importance of classical mechanics in solving the physical problems.	Lecture & discussion	Med exams, Participation





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
			during the lecture & scientific activities
1.2	Identifying some of the important aspects of programs to help in solving the different equations of motion.	Lecture & discussion	Med exams, Participation during the lecture & scientific activities
١,٣	Identify the scientific basis for a number of physical quantities such as energy, work and interest in applications.	Lecture & discussion	Med exams, Participation during the lecture & scientific activities
١,٤	Identify some of the important aspects of inertia and movement of projectiles and her representation and review their benefits through different applications.	Lecture & discussion	Med exams, Participation during the lecture & scientific activities
١,٥	.....	.....	.....
١,٦	.....	.....	.....
2.0	Cognitive Skills		
2.1	Student will have a knowledge in the laws of motion	lecture	exams
2.2	Student will know the basic physics quantities	lecture	exams
٢,٣	Student will know some of the physics quantities like work and energy	lecture	exams
٢,٤	.....	.....	.....
٢,٥	.....	.....	.....
٢,٦	.....	.....	.....
3.0	Interpersonal Skills & Responsibility		
3.1	Communication skills with others	Discussions of study and collaborative work	Home work





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
3.2	Skills of take responsibility and lead the team	Discussions of study and collaborative work	Home work
٣,٣	Cooperative work skills	Discussions of study and collaborative work	Home work
٣,٤	.....	.....	.....
٣,٥	.....	.....	.....
٣,٦	.....	.....	.....
4.0	Communication, Information Technology, Numerical		
4.1	Develop the skills of observations, conclusion and explanation for the student	Ask questions and discussion	Quick Quiz & Med exam
4.2	develop the student personal to be a Dialogic personality	discussion	Quick Quiz & Med exam
٤,٣	Urged students to seek knowledge in several ways, the most important electronic tools	discussion	Quick Quiz & Med exam
٤,٤	Use electronics networks to serve the course	Cooperative learning Teamwork	Assessments the activities by each participating student
٤,٥	Develop the skills of teamwork and communication	Cooperative learning Teamwork	Assessments the activities by each participating student
٤,٦	.....	.....	.....
5.0	Psychomotor		
5.1	.....	.....	.....
5.2	.....	.....	.....
٥,٣	.....	.....	.....
٥,٤	.....	.....	.....
٥,٥	.....	.....	.....
٥,٦	.....	.....	.....

5. Schedule of Assessment Tasks for Students During the Semester:





	Assessment task	Week Due	Proportion of Total Assessment
1	Test theoretical mid test	6	20
2	Post a scientific / Theory	10	10
3	Post a scientific / practice	11	10
4	Practice final test	13	20
5	Theoretical test final	14	40
6	.....	.....	.....
7	.....	.....	.....
8	.....	.....	.....

D. Student Academic Counseling and Support

2 office hour

E. Learning Resources

1. List Required Textbooks :
 - Physics for Scientists and Engineers, Serway and Jewett, 6th Edition, ISBN:0534408427, Thomson Brooks.
 -
2. List Essential References Materials :
 - Lecture Notes
 -
 -
3. List Recommended Textbooks and Reference Material :
 - Fundamentals of physics , Halliday et al
 -
 -
4. List Electronic Materials :
 - ocw.mit.edu/courses/physics/



<ul style="list-style-type: none"> • •
5. Other learning material : <ul style="list-style-type: none"> • • •

F. Facilities Required

1. Accommodation <ul style="list-style-type: none"> • ...lecture room and laboratory •
2. Computing resources <ul style="list-style-type: none"> • Laboratory with 13 computers devices. •
3. Other resources <ul style="list-style-type: none"> • • •

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching: <ul style="list-style-type: none"> • Mid test • Discussion in lectures • questionnaires distributed to the students to find out their views of the course and on the effectiveness of the decision and the method of teaching
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor : <ul style="list-style-type: none"> • Periodic review of the course by a committee study plans and schedules in a department •
3 Processes for Improvement of Teaching : <ul style="list-style-type: none"> • Provide projectors in the rooms • Encourage students to introduce and declamation, and group discussions.





4. Processes for Verifying Standards of Student Achievement

- **The professor of the course exchange of correct sample of the home works or tests on a regular basis with a faculty member to another in the same decision in other educational institution.**
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5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- **Evaluating courses every year by Committee for Quality.**
- **Update decisions that need to be developed per year**
- **Use of modern technological tools for ease of explanation courses**

Course Specification Approved
Department Official Meeting No (4) Date 12 / 2 / 1437 H

Course's Coordinator

Department Head

Name : Elham Aldufeery

Name : Dr.Nagwa Ibrahim.

Signature :

Signature :

Date : 15/ 2 / 1437 H

Date : .../ ... / H

