GAU, Faculty of Engineering

Course Unit Code P5111 Type of Course Unit First year of Bsc National Credits 3 Number of ECTS Credits Allocated 5 ECTS Theoretical (hour/week) 3 Practice (hour/week) 1 Semister when the course unit is delivered 1 Mode of Delivery E-learning activities Laboratory (hour/week) 1 Recommended Optional Programme Components Background of physics and calculus from high school Objectives of the Course: The arent of the divery and applications in a clear, understandable presentation. The course has two parts; theoretical part and experimental tests in the Laboratory. Laboratory. Laboratory and applications in a clear, understandable presentation. The seasesment. 1 Get familiar and understand conceptually topics of mechanics. 1.2.5 2 Apply the methods of solving elementary mechanics problems that leads to the first the seasesment. 1.2.5 3 Analyze the kinetic problems of one dimension and two dimensions motions by using type and integrate the basic physical sciences and the principles of engineering sciences into working practical knowledge. 1.2.5 3 Analyze the kinetic problems of one dimension and t	Cour	se Unit Title	General Physics 1			
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Course Contents					
Week			Exams		
1	Chapter 1	Physics and Measurement			
2	Chapter 3	Vectors			
3	Chapter 2	Motion in one dimension			
4	Chapter 4	Motion in two dimensions			
5	Chapter 5	The Laws of Motion			
6	Chapter 5	The Laws of Motion			
7	Chapter 5	The Laws of Motion			
8	Chapter 6	Circular Motion and Other Applications of Newton's Laws	Midterm		
9	Chapter 7	Energy and Energy Transfer			
10	Chapter 8	Potential Energy			
11	Chapter 8	Potential Energy			
12	Chapter 10	Rotation of a Rigid Object About a Fixed Axis	Quiz		
13	Chapter 12	Static Equilibrium and Elasticity			
14	Chapter 12	Static Equilibrium and Elasticity	Lab. Exam		
15		Homework and assessment practices.	Final		

Recommended Sources

Main:

- 1. Physics, for Scientists and Engineers, 6th edition, written by; R. E. Serway and J. W. Jewett, published by; Thomson Book/Cole Publisher Company, 2004.
- 2. Theory and problems of Applied Physics, Schaum's outline series, written by; Arthur Beiser, published by; McGraw-Hill Book Company, 2004.

Supplementary:

- 3. Physics, Classical and modern, 2nd Edition, written by; F. J. Keller, W. E. Gettys, M. J. Skove, published by; McGraw Hill Book Publisher Company, 1993.
- 4. Physics for Scientists and Engineers, Extended Version, Vol. 1, written by; Fishbane, Gasiorowicz, Thornton, published by; Prentice Hall Book Company, 2004.

Assessment

Attendance & E-learning	5%	
Laboratory	15%	Lab Grade = (Lab exam grade + Lab Attendance)
Midterm Exam (Written)	30%	
Quiz (Written)	10%	
Final Exam (Written)	40%	
Total	100%	

ECTS Allocated Based on the Student Workload

Activities	Number	Duration (hour)	Total Workload (hour)
Course duration in class (including the Exam week)	15	3	45
Labs and Tutorials	5	1	5
Assignments	7	2	14
Project/Presentation/Report Writing	5	2	10
E-learning Activities	2	1	2
Quizzes	1	8	8
Midterm Examination	1	18	18
Final Examination	1	20	20
Self Study	14	2	28
Total Workload	150		
Total Workload/30 (h)	5		
ECTS Credit of the Course	5		