



**Jordan University of Science and Technology**  
**Faculty of Science & Arts**  
**Physics Department**

PHY211 Properties Of Matter And Heat - JNQF Level: 7
Second Semester 2023-2024

Course Catalog
2 Credit Hours. يغطي هذا المساق مواضيع مكملة في الفيزياء العامة مثل خواص المادة والجاذبية والموائع والحرارة والنظرية الحركية للغازات. This course covers complementary topics in general physics such as properties of matter, gravity, fluids, heat, kinetic theory of gases,
<b>Teaching Method:</b> On Campus

Text Book	
<b>Title</b>	Physics for Scientists and Engineers with. Modern Physics
<b>Author(s)</b>	Raymond A. Serway and John W. Jewett, Jr.
<b>Edition</b>	9th Edition
<b>Short Name</b>	Ref # 1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
Ref # 2	Physics for Scientists & Engineers with Modern Physics	Douglas C. Giancoli	4th Edition	

Instructor	
Name	Prof. Ahmad Omari
Office Location	-
Office Hours	
Email	sema@just.edu.jo

Class Schedule & Room
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Section 1:

Lecture Time: Mon, Wed : 13:00 - 14:00

Room: NF40

**Prerequisites**

Line Number	Course Name	Prerequisite Type
921020	PHY102 General Physics (2)	Prerequisite / Pass

**Tentative List of Topics Covered**

Weeks	Topic	References
Weeks 1, 2	Elasticity; Elastic properties of solids	<b>Ch12</b> From <b>Ref # 1</b>
Weeks 3, 4, 5	The Law of Gravity	<b>Ch13</b> From <b>Ref # 1</b>
Weeks 6, 7, 8	Fluid Mechanics	<b>Ch14</b> From <b>Ref # 1</b>
Weeks 9, 10, 11	Temperature	<b>Ch19</b> From <b>Ref # 1</b>
Weeks 12, 13, 14	Heat and the First Law of Thermodynamics	<b>Ch20</b> From <b>Ref # 1</b>
Week 15	The Kinetic Theory of Gases	<b>Ch21</b> From <b>Ref # 1</b>
Week 16	Wave motion, Sound Waves, Superposition and standing waves	<b>Ch16, 17, 18</b> From <b>Ref # 1</b>

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Student will be able to solve problems in material elasticity, gravity and fluid mechanics. [3SLO1(K1S1)] [1L7K1, 1L7S1]	28%	
Student will be able to analyze wave form and wave`s superposition functions [3SLO1(K1S1)] [1L7K1, 1L7S1]	29%	
Students will be able to solve problems in the concepts of material thermodynamics [3SLO1(K1S1)] [1L7K1, 1L7S1]	26%	
Student will be able to solve problem in the concepts of kinetic theory of gases [3SLO1(K1S1)] [1L7K1, 1L7S1]	17%	

**Relationship to Program Student Outcomes (Out of 100%)**

SLO1(K1S1)	SLO2(S23C1)	SLO3(C24)	SLO4(C3)	SLO5(C4)	SLO6(S2C3)
100					

**Relationship to NQF Outcomes (Out of 100%)**

L7K1	L7S1
50	50

Evaluation	
Assessment Tool	Weight
First Exam	25%
Second Exam	25%
Final Exam	40%
Homework	10%

Policy	
Attendance	Attendance at the lectures is required
course materials	the lectures will sometimes cover material not in the textbook
course information	Organizational material for the course, including the course description and syllabus, the course calendar, and times of office hours and help sessions.
Office hours	You may visit me during office hours for any reason without an appointment. You can come at other times also, but make an appointment so that you can be sure to catch me. You can contact us by email

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