



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

PHY261 Thermodynamics
Second Semester 2020-2021

Course Catalog
3 Credit Hours. This course deals with experimental laws that govern the behavior of thermal systems and the derivation of physical properties related to them

Text Book	
Title	Thermodynamics, Kinetic Theory, and Statistical Thermodynamics
Author(s)	F. W. Sears & G. H. Salinger,
Edition	3rd Edition
Short Name	1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
2	Classical and Statistical Thermodynamics	Carter, A. H	1st Edition	
3	Introduction to Thermophysics	Espinola, T. P	1st Edition	

Instructor	
Name	Bashar Al Jawrneh
Office Location	-
Office Hours	
Email	bsaljwrneh@just.edu.jo

Class Schedule & Room

Section 1:

Lecture Time: Mon, Wed : 13:00 - 14:30

Room: 150 منصة الكترونية

Prerequisites

Line Number	Course Name	Prerequisite Type
922110	PHY211 Properties Of Matter And Heat	Prerequisite / Pass

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Fundamental concepts	From 1
Weeks 2, 3, 4	Equations of state	From 1
Weeks 5, 6, 7	First law of Thermodynamics	From 1
Weeks 8, 9, 10	Some consequences of the first law	From 1
Weeks 11, 12	Entropy and the second law of Thermodynamics	From 1
Weeks 13, 14	Combined first and second laws	From 1
Weeks 14, 15	Thermodynamic potentials	From 1
Week 16	Applications of thermodynamics to simple systems	From 1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Show the basic knowledge and understanding of the basics of thermodynamics. [31]	25%	Final, Midterm, quizzes
Show the basic knowledge and understanding of the equation of state of ideal and real gases. [31]	25%	Final, Midterm, quizzes
Understand and apply the first and second laws of thermodynamics to understand and explain systems in physics problems. [31]	25%	Final, quizzes
Apply thermodynamics potential and solve simple system [31]	25%	Final, quizzes

Relationship to Program Student Outcomes (Out of 100%)

1	2	3	4	5	6
100					

Evaluation

Assessment Tool	Weight
Final	50%
Midterm	30%
quizzes	20%

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