Republic of Iraq
The Ministry of Higher Education & Scientific Research

University:Muthanna
College:Science
Department:Physics
Stage:M.Sc.
Lecturer name:Qahtan Adnan s
Academic Status:Prof.
Qualification:Ph.D
Place of work:colage of science

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Teaching plan for the semester form

Course Instructor	Qahtan Adnan Abdulqader
E_mail	qahtanalqpan@yahoo.com
Title	Advanced solid state physics
Course Coordinator	2nd semester
Course Objective	To give the M.Sc student an advanced idea about theories of thermal and electronic conductivity and how band theory in solids give a detailed description of conductors ,insulators and semiconductors.
Course Description	The theories of thermal and electronic conductivity and how band theory in solids give a detailed description of conductors ,insulators and semiconductors.
Textbook	***Solid state pysics ,By:A.J.* Deckker ,*Introduction to solid state physics By:* Kittle** **Crystallography and solid state physics By:A.K.Verma**
References	**Introduction to modern solid state physics Yuri M. Galperin** **Solid-state physics** **Introduction to the theory By: James Patterson and Bernard Bailey ,Springer,2010**

Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25%	-	5%	----	70%

General Notes	Tow theoretical hours weekly, tow units.

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Place of work:dept. of physics

Teaching plan for the semester form

week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	17/2/2019	General review for 4th stage syllabus	-	
2	24/2	Thermal properties of solids	-	
3	2/3	Lattice thermal conductivity	-	
4	10/3	Electronic specific heat	-	
5	17/3		-	
6	24/3/2019	Electrons in periodic potential	-	
7	31/4	Interaction of electrons and lattice vibration	-	
8	7/4	Band theory of solids	-	

9	**14/4**	**Semiconductors**	**-**	
10	**21/4**	**Magnetism and magnetic resonance**	**-**	
11	**28/4**	**Superconductivity**	**-**	
12	**5/5**	**Optical properties of solids**	**-**	
13	**12/5**	**Defects in solids**	**-**	
14	**19/5**	**Dielectrics and ferroelectrics**	**-**	
15	**26/5/2017**		**-**	

Instructor Signature: **Dean Signature:**