



Course Specifications

Institution:	College of Education at Zulfi
Academic Department :	Department of Physics
Programme :	Second Level
Course :	General Pysics-2
Course Coordinator :	Dr. Rasha Abdalhai
Programme Coordinator :	Dr. Nagwa Ibrahim
Course Specification Approved Date :	15 / 2 / 1437 H



A. Course Identification and General Information

1 - Course title :	General Pysics-2	Course Code:	PHYS. 123
2. Credit hours :	3		
3 - Program(s) in which the course is offered:	Physics Program (B.Sc.)		
4 – Course Language :	Arabic		
5 - Name of faculty member responsible for the course:	Dr. Rasha Abdalhai		
6 - Level/year at which this course is offered :	3 rd		
7 - Pre-requisites for this course (if any) :	General Pysics-1 (PHYS. 111)		
8 - Co-requisites for this course (if any) :			
9 - Location if not on main campus :	(.....)		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input type="checkbox"/>	What percentage?	80 %
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage?	0 %
D - e-learning	<input type="checkbox"/>	What percentage?	5 %
E - Correspondence	<input type="checkbox"/>	What percentage?	0 %
F - Other	<input type="checkbox"/>	What percentage?	15 %
Comments :		

B Objectives

What is the main purpose for this course?
To recognize the methods of heat- transferring, nature & Behavior of light and the fundamental of electricity & magnetism.

C. Course Description

1. Topics to be covered





First: Theoretical Part

List of Topics	No. of Weeks	Contact Hours
Temperature, Units of Temperature, Conversion between the units of Temperature	1	3
Types of Thermometers	1	3
Methods of transferring the heat	1	3
General law of an ideal gas	1	3
Elasticity, Hook's law, Stress, Strain	1	3
Surface Tension, Determination of the Surface Tension Coefficient	1	3
Nature and behavior of Light	1	3
Determination of refractive index	1	3
Luminous flux & illumination	1	3
Calculating the velocity of light, Fokker Method, ...	1	3
Coulomb's law, voltage, capacitance	1	3
Kirchhoff's laws, Wheatstone Bridge, Metre Bridge	1	3
Magnetic Permeability, retardation circuit	1	3
Faraday's law, Lenz law, Self inductance	1	3
Photoelectric effect, Thompson experiment to measure (for an electron) the ratio between the charge and the mass	1	3
Final Exam	1	3

Second: Experimental Part

Experiment Number	Experiment Subject
1	Measuring the latent heat
2	Boyle's law & measuring the atmospheric pressure
3	Measuring the coefficient of expansion for an insulator (Lee method)
4	Measuring the coefficient of expansion for a conductor (Searle method)
	Measuring the linear coefficient of expansion for a rod
5	Measuring the Young modulus
6	Materialization of Archimedes rule
	Measuring the coefficient of surface tension
7	Measuring thermal coefficient for a resistance
8	Measuring the density and the volume coefficient of expansion for a liquid

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



	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30		30	60
Credit	2		1	3

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	To recognize the basic principles of light, heat, electricity and magnetism	<ul style="list-style-type: none"> Developing basic communicative Ability through short and varied situated discourse. Lecturing Team work Exercises 	<ul style="list-style-type: none"> Homework. Group Discussion Presentation Mid-term exam Final test
1.2	To recognize on some applications of light, heat, electricity and magnetism in the life.		
1.3	To show some applied researches in this field.		
2.0	Cognitive Skills		
2.1	Collect general information to the related topics.	<ul style="list-style-type: none"> Problem solving Class discussion presentation Individual meeting with the instructor (encouraging students to discuss different topics outside the classroom)	<ul style="list-style-type: none"> Class Participation Presentation Essay Question Research
2.2	Use the mathematical equations and related work to be use for the universe understanding.		
2.3	Apply the gained mathematical and experimental knowledge in any physical related topic.		
3.0	Interpersonal Skills & Responsibility		





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
3.1	Work in a group and learn time management.	<ul style="list-style-type: none"> • Discussion with students • Making students aware about time management in completing their assignments and projects. • Counsel students how to make a good presentation in French. • Encourage students to help each other • Group presentation • Group assignments 	<ul style="list-style-type: none"> • Respecting dead lines. • Showing active class participation. • Helping other students to understand tasks in the class. • Giving clear and logical arguments • Performing seriously on midterms and final exams
3.2	Learn how to search for information through library and internet		
3.3	Present a short report in a written form and orally using appropriate scientific language		
4.0	Communication, Information Technology, Numerical		
4.1	Communicate with teacher, ask questions, solve problems, and use computers.	<ul style="list-style-type: none"> • Exercises • Problem solving • oral quizzes • Essay questions • Encourage students to use program soft wea 	<ul style="list-style-type: none"> • Write reports • Exercises related to specific topics
4.2	Illustrate deal with confidence with differential equations, integrations, and differentials.		
4.3	Operate questions during the lecture, work in groups, and communicate with each other and with me electronically, and periodically visit the sites I recommended		
4.4	Students use information technology in the classroom		
5.0	Psychomotor		
5.1			

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

	Assessment task	Week Due	Proportion of Total Assessment
1	Theoretical Midterm Exam	7 th	20
2	Homework, Quizzes, Discussions, Team Group, Projects & Lab	11 th	20
3	Experimental Final Exam	13 th	20
4	Theoretical Final Exam	15 th	40





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D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

Two office hour per week

E. Learning Resources

1. List Required Textbooks :

General Physics, by A.S. Al Sulaimani

2. List Essential References Materials (Journals, Reports, etc.)

General Physics, by K. Weshah, M. Alhaaj and R. Albeetaar.
General Physics, by A.S. Al Sulaimani

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)

Software are available with the lecturer

5. Other learning material such as computer based programs/CD, professional standards or Regulations and

Softw are.
Microsoft Office

F. Facilities Required

1. Accommodation

Lecture room, a smart board to write on and computer

2. Computing resources

Computer Lab. and internet lab.

3. Other resources

Library, and Seminar Room , Wi-Fi internet connections

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

Student evaluation electronically organized by the University

2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :





There is a department committee

3 Processes for Improvement of Teaching :

1. Course report.
2. Program report

4. Processes for Verifying Standards of Student Achievement

Efficiency of course will be reflected on the results of the class, which reviewed by members of the teaching staff in addition to other duties such as discussing ideas and ways of teaching and learning. The course should be developed periodically to ensure that it contains the latest developments in the field of study. Development could be put as an objective in the report of the course to be achieved each semester

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- 1- Course Evaluation
- 2- Exam Evaluation
- 3- Improvement plan
- 4- Program Outlearning with course outlearning
- 5- Outlearning from the pre-requisite course

Course Specification Approved

Department Official Meeting No (**fourth**) Date **12 / 2 / 1437 H**

Course's Coordinator

Name : Dr. Emad Alhami
Signature :
Date : 15/2 / 1437 H

Department Head

Name : Dr. Nagwa Ibrahim
Signature :
Date : 15/ 2 / 1437 H

