



Course Outline of Intermediate Physics Lab 402211

1. Instructor's Information

Instructor's / Coordinator's Name:	Ala Lutfi Almoumani Mahdi Hasan Alzobi
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Research and Teaching Assistant / Supervisor / Technical (if any):	NA

2. Course Description,

In this lab students will perform experiments in physical optics that enhance the theoretical understanding of lenses, spectrometer, Young double slit, diffraction grating, Franhofer diffraction, polarization of light, reflection and refraction of the light, photocell, Michelson interferometer, and Plank constant.

3. Course Information

Course No.: 402211	Intermediate Physics Lab	Level: 2 nd year
Course Type: Practical	Prerequisite/co-requisite:402221	Class Time:2-5
Academic Year:2020/2021	Semester: First	Study hours:3 hrs

4. Course Objectives:

1	Able to handle experiments related to the properties of light.
2	Enhance the theoretical understanding of physical optics.
3	Set up and use laboratory equipment to demonstrate certain aspects of physical optics.
4	Acquire the skills of data analysis and draw conclusions.

5. Learning Outcomes

1	Learn how to construct physical experiment using available lab instruments.
2	Observe some physical phenomena practically.
3	Identify the practical side of the theoretical physical optics.
4	Describe observations, discuss and analyzing the data.
5	Formulate conclusions that support and promote theoretical understanding of optics.
6	Training how to write lab report that describe the experiment and the results.

6. Course Content

Week	Subject
2	Focal length of lenses
3	Spectrometer
4	Young double slit experiment
5	Diffraction grating
6	Franhofer diffraction
7	Polarization of light
8	Reflection and refraction of light
9	Photocell
10	Michelson interferometer
11	Plank constant
	Final Exam

8. Assessment

Methods Used	Assessment Time	Distribution of grades
1- semester work (report, assignments, attendance)	During semester	45%
2- Quiz	Week: 2-11	15%
4- Final Exam	Week of the final exams	40%

Textbook and Supporting Material:

- Laboratory manual plus any scientific references that assist the student in reviewing and understanding the theoretical side of the experiment.