



Department of General science

College of Basic Education

University of salahaddin Subject : General  
physics/theoretical Course name: laser  
second semester

Lecture Name : Msc /

Hassan Jalal Aziz Academic

Year : 2023 -2024

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Directorate of Quality Assurance and Accreditation بەڕێوەبەرایەتی دڵنیایی جۆری و متمانەبەخشین

Course Book 2020-2021

Course name	laser second semester
Teacher name	Hassan Jalal Aziz
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Course overview:

This course additionally give a concept in the field of electromagnetic wave , and the nature of light and quantum theory , the photo electric effect , photo emission, the electro magnetic spectrum. And study of laser maser ,properties, basic of laser, type of laser and application of laser.

Course objective:

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**Learning methods**

- 1/ Data show — power point
- 2/ White board
- 3/ module online
- 4/ written

**Course References**

- 1/laser and its application : by prof. dr.taha zaki.
- 2/ physical for scientists and engineering 6<sup>th</sup> ed serway (pdf)
- 3/ serway , college physics 7<sup>th</sup>(pdf)
- 4/university of south florida laser safety training .
- 5/ الليزر و تطبيقاته د.سعود بن حميد اللحياني, كلية العلوم- جامعة ام القرى ,

Lecture

Schedules

Content of course

Tuesday stage / 4

10:30- 12:30 (laser)

**Ranks distribution**

Semester	Practical degree %	Theory	
2 semester		20+20	40%
Final Exam		60	60%
Total 100%		100	100%

**Example**

- Q1: what is laser effect on the skin?
- Q2: at what wave length will emission from n=4 to n=1 for the (H) atom be observed?
- Q3: define the pumping and write types of pumping?

**Content of course:**

- 1-nature of light(two week).
- 2-the photo electric effect (one week).
- 3-photo emission ( one week ).
- 4-electro magnetic spectrum (two week).
- 5-laser beam (one week).

- 6-basic of laser (one week).
- 7-properties(one weeks).
- 8-pumping , elements of laser( one week ).
- 9-type of laser( two week ).
- 10- application of laser (medical)( two week ).