



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 : 2022 -2023

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 6th ed serway (pdf)
- 3/ serway , college physics 7th(pdf)
- 4/university of south florida laser safety training .
- 5/ الليزر و تطبيقاته د.سعود بن حميد الحياني، 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).