Course Specifications

Programme(s) on which the course is given: Physics & Laser
Major or Minor element of program Physics
Department offering the program Physics
Department offering the course Physics
Academic year / Level fourth
Date of specification approval 2012

A- Basic Information

Title:	**Laser systems**	**Code: L434**
Credit Hours:	**3 h**	**Lecture: 3h**
Tutorial: 00	**Practicals: 00**	**Total: 3h**

B- Professional Information

1 – Overall Aims of Course

a wide knowledge about most types of laser

2 – Intended Learning Outcomes of Course (ILOs)

a Knowledge and Understanding:

After completing the course the student should be able to

a1- explain technical and professional of most of laser systems

b-Intellectual Skills

After completing the course the student should be able to

b1- identify how to vary some parameters to get laser

cProfessional and Practical Skills

After completing the course the student should be able to

C1- know how to measure and investigate the active medium and electrical circuits

d General and Transferable Skills

d1- working with team

3- Contents

Topic	No. of hours	Lecture	Tutorial/Pr

			acti cal

4– Teaching and Learning Methods

4.1- lecture

5- Student Assessment Methods

5.1 oral to assess understanding

5.2-written exams to assess investigation, and derivations.

5.3 report to assess scientific review.

Assessment Schedule

Assessment 1	**semester work**
exam	**Week 8&16 (mid&finalterm).**
Assessment 2	**med term exams in week9**
Assessment 3	**final exam in week 16**

Weighting of Assessments

Mid-Term Examination	**20 %**
Final-term Examination	**60 %**
Oral Examination.	**10 %**
Semester Work	**10 %**
Total	**100 %**

6- List of References

6.1-.solid state laser

6.2- "gas laser"

6.3- ^ "laser". Reference.com. Retrieved May 15, 2008.

6.4- ^ G. P. Karman et al. "Laser optics: Fractal modes in unstable resonators" ***Nature*** **402, 138 (1999).**

7- Facilities Required for Teaching and Learning.

Data show – lab top computer - pens – blackboard - ...etc.

Course Coordinator: Dr.Hosam Ahmed Awad. **Head of Department: Prof.Dr. Sana Maize** **Date: / /**