Course Specifications

Programme(s) on which the course is given : P., P.&las., P.&G., P.&Ch.
Major or Minor element of programmes : major - minor –minor – minor.
Department offering the programme : P., P., P.&G., P.&Ch.
Department offering the course Physics
Academic year / Level 4
Date of specification approval 2012

A- Basic Information

Title: Semiconductors Code: P411

Credit Hours: 3 h Lecture: 3h
Tutorial: 00 Practicals:00 Total: 3h

B- Professional Information

1 – Overall Aims of Course

the student will be able to handle the basic electronic elements

2 – Intended Learning Outcomes of Course (ILOs)

a Knowledge and Understanding:

The student should be able to differentiate and explain

a1- semiconductor types
a2- intrinsic semiconductor
a3- extrinsic semiconductor

b Intellectual Skills

The student will has ability to

b1-construct and build up some experiments

c Professional and Practical Skills

c1-the student will have the experience to repair some instruments

d General and Transferable Skills

d1-the student will be able use conmputers

and make search about the elements of the electric and electronic componenet of circuits.

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
What semiconductors	2	2	
Internsic semiconductor	2	2	
Extrinsic semiconductor	2	2	
Charge carriers	2	2	
The conduction	2	2	
Photoconduction	2	2	
Contact phenomena P-n junction	2 4	4 4	

4– Teaching and Learning Methods

4.1- Lectures

5- Student Assessment Methods

5.1 sheat exams to assess the theoretical knowledge

5.2- written to assess understanding

5.3 oral and disscutions to assess student scientific thinking

5.4 reaserch projects to assess the overall outcome

Assessment Schedule

Assessment 1 sheet exam Week 8&16 (mid &final term).

Assessment 2 oral exams Week every week

Assessment 3 reaserch projects Week 14

Weighting of Assessments

Mid-Term Examination 20 %

Final-term Examination 60 %

Oral Examination. 10 %

Semester Work **10 %**

Total **100 %**

Any formative only assessments

6- List of References

6.1- Course Notes

6.2- Essential Books (Text Books)

6.3- Recommended Books

properties of solid material by M. M. El Zaidia

6.4- Periodicals, Web Sites, … etc

7- Facilities Required for Teaching and Learning

Experimental lab…

Course Coordinator: Prof.Dr. M. M. El Zaidia

Head of Department: Prof.Dr. Sana Maize

Date: / /