Course Specifications

Program(s) on which the course is given : P., P.&las., P.&comp., P.&G., P.&Ch.
Major or Minor element of program : major - major - major - major - major.
Department offering the program : P., P., P.&Math., P.&G., P.&Ch.
Department offering the course Physics
Academic year / Level 1
Date of specification approval 2012

A- Basic Information

Title:	**Waves and acoustics**	**Code: P144**
Credit Hours:	**3 h**	**Lecture: 3h**
Tutorial: 00	**Practicals:00**	**Total: 3h**

B- Professional Information

1 – Overall Aims of Course

Gave students general ideas about sound vibrations and its different classes like mechanical and electromagnetic waves with stress and sound waves proprieties and how to measure its speed superposition, damping, forced oscillation and scattering

2 – Intended Learning Outcomes of Course (ILOs)

a Knowledge and Understanding:

The student should be able to:

a1- have knowledge on calcification of sound waves and how measure its speed, their scattering, superposition , oscillation and forced oscillations

a2- understand waves behavior

b Intellectual Skills

After completing the course the student should be able to:

b1-Analyze mechanical waves and observing daily and the mechanism of operation

c Professional and Practical Skills

c1- The student will be able to solve problems related to mechanical waves wither periodic or damped

d-General and Transferable Skills

The student will has

d1-enhanced oral communication during normally asked question in the lectures

d2- enhanced self-evaluation when asked to evaluate their solved exams

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Units and dimensions	3	1	00
Circular motion and S.H.M	6	2	00
Sound	6	2	00
Superposition of two S.H vibrations	6	2	00
the damped and forced oscillation resonance	6	2	00
Scattering	6	2	00
Ultrasonic waves	6	2	00

4– Teaching and Learning Methods

4.1- lectures

4.2 project assignment

5- Student Assessment Methods

5.1 oral exam to assess students understanding and ability to communicate

5.2- mid term . to assess students progress and degree of memorizing and understanding .

5.3 final exam to assess performance of students through the whole course

Assessment Schedule

Assessment 1 oral exam every week .
Assessment 2 mid term Week 7th (mid).
Assessment 3 final exam week 14
Assessment

Weighting of Assessments

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

6- List of References

6.1- Course Notes

6.2- Essential Books (Text Books)

waves and acoustics, M. Ewaida

6.3- Recommended Books

6.4- Periodicals, Web Sites, … etc

7- Facilities Required for Teaching and Learning

Appropriate accommodation class room, black board, projector

Course Coordinator: Prof.Dr. M. Ewaida

Head of Department: Prof.Dr. Sana Maize

Date: / /