University Benha **Faculty Science**

Course Specifications

Programme(s) on which the course is given : **Chem & Physics**

Major or Minor element of programmes

Department offering the programme: **Physics**

Department offering the course: **Physics**

Academic year/level **2nd year / 2nd semester**

Date of specification approval: **2008**

A- Basic Information

Title: Experimental physics **Code: Phy 214**

Credit Hours: **Lecture: - hr/week**

Tutorial: - hr/week **Practicals: 6** **Total: 6 hr/week**

B- Professional Information

1 – Overall Aims of Course

By Finishing of this course the graduate will be able to:

Uunderstand the Hygenz principle, Interference, diffraction and polarization of light.

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

To make the graduate able to:

A1- Understand the light interference phenomena.

A2- Study the different methods of obtaining the viscosity and surface tension of a fluids.

A3- Learning different method to determine some constants in nature

A4- Learning different method to determine some properties of matter

A5- Collect, summarize and analyze the practical data.

b- Intellectual Skills

To make the graduate able to:

b1- understanding how to use the electric devises in safety way.

b2- Collect, summarize and analyze the practical data.

b3- Reason in a any optical phenomena by a logic way.

c- Professional and Practical Skills

To make the graduate able to:

c1 - Analyze the ability of constructing different electric circutes

c2- Design the optical devices.

d- General and Transferable Skills

d1- Solve problems.

d2- Work in team.

d3- Wright reports

3- Contents

Topics actually taught	**No. of hours**	**Lecturer**
Abbe's Refractometer	3	Dr. Mohammed Abd Elwahab
Calabration of thermocouple	3	Dr. Mohammed Abd Elwahab
Air wedge	3	Dr. Mohammed Abd Elwahab
Compound pendulum	3	Dr. Mohammed Abd Elwahab
Lees' s Disk	3	Dr. Mohammed Abd Elwahab
Flywheel	3	Dr. Mohammed Abd Elwahab
bifilar suspension	3	Dr. Mohammed Abd Elwahab
modulus of rigidity for spring	3	Dr. Mohammed Abd Elwahab
Stivam law	3	Dr. Mohammed Abd Elwahab
Capacitance by capacitor discharge	3	Dr. Mohammed Abd Elwahab
Capacitance of capacitor by AC current	3	Dr. Mohammed Abd Elwahab
Single beam oscilloscope	3	Dr. Mohammed Abd Elwahab
Double beam oscilloscope	3	Dr. Mohammed Abd Elwahab
The Mutual Induction	3	Dr. Mohammed Abd Elwahab
The magnetic field due to a long	3	Dr. Mohammed Abd Elwahab

wire		
The magnetic field due to a solenoid	3	Dr. Mohammed Abd Elwahab

4– Teaching and Learning Methods

4.1-Discussion sessions

4.2-Class activities

5- Student Assessment Methods

5.1 Mid-term exam to assess Understanding

5.2 Final term exam to assess knowledge with understanding

5.3 Oral exam to assess understanding

Assessment Schedule

Assessment 1 Mid-term exam week 7

Assessment 2 Final term exam week 14

Assessment 3 Oral exam week 1-12

Assessment 4

Weighting of Assessments

Mid-Term Examination	10%
Final-term Examination	80%
Oral Examination.	10%
Practical Examination	0 %
Semester Work	0%
Other types of assessment	%
Total	100%

6- List of References

6.1- Course Notes

……Lecture materials……..

6.2- Essential Books (Text Books)

Atomic Physics Cheistopher J. Food Oxford

6.3- Recommended Books

Atomic Physics Cheistopher J. Food Oxford

6.4- Periodicals, Web Sites, … etc

http://www. hep.com

http://www. Physics2000

http://www. Physics today

7- Facilities Required for Teaching and Learning

Personal computer, data show and power point application.

Course Coordinator: Dr. Mohammed Abd Elwahab

Head of Department: Prof. Dr. L.I. Abou-Salem

Date: 1/6 /2008