University Benha Faculty Science

Course specifications

Programme (s) on which the course is given Chemistry/ **Chem.,phys. / Applied Chem.**

Major or minor element of programmes **Major**

Department of offering the programme Chemistry

Department offering the course **Chemistry**

Academic year /Level **1st year / 1st term**

Date of specification approval **2008**

A – Basic information

Title : **General Chemistry (1)**. Code : CH: **101**

Credit Hours : Lecture : **4 hr / week**

Tutorial : 1 hr/week Practical : 3 hr/ week **Total :8 hr /week**

B – Professional Information

1- Overall aims of course: At the end of this course the student able to:

a – Understand the principle of physical chemistry

b- Know the different states of matter

2- Intended learning outcomes of course (ILOS)

a- Knowledge and understanding:

a1- Know the basic principles of gases, liquids and solids

a2- Study the Principles of thermodynamics

a3- Study introduction of nuclear chemistry

b-Intellectual skills

b1- Treat with the physical properties of simple organic compounds

b2- Treat with the principles of matter state

b3- Understanding the bases of electrochemistry

c-Professional and practical skill:

c1- Students are able to discuss the principles of electrochemistry.

c2- Know how to convert one phase to another one

c3 – Students able to be treat with bases of practical physical chemistry

d- General and transferable skills:

d1- Application and managements of different matter state

d2 – Able to programmed in the matter state

d3- work shop in the matter state

3- Contents

Topic	**No. of hours**	**Lecture**	**Tutorial /practical**
Principles of gases	8	4	1/3
Kinetics of gases	8	4	1 / 3
Law of gases and discussion	8	4	1 / 3
Test	8	4	1 / 3
Solid	16	8	2 / 6
Liquids	8	4	1/3
Principle of liquids	8	4	1/3
Thermodynamics	16	8	2/6
Nuclear chemistry	16	8	2/6
Excesses	16	4	1/3
Total	102	52	52

4-Teaching and Learning methods

4.1- Practical

4.2- Theoretical lecture

4.3- Discussion

5-Student assessment methods

5.1- Discussion to assess applying and evaluating the information

5.2 Practical to assess the ability to understanding treatment with matter

5.3 Exams to assess to evaluate the students

5.4 Final exam assess all the course knowledge and skills

Assessment Schedule

Assessment 1 Discussion……week 3

Assessment 2 assay……..week **4**

Assessment 3 Mid-term…… week 7

Assessment 4 Quiz2……week 14

Weighting of assessments

Mid term examination 5 %

Final term examination	45%
Oral examination	5%
Practical examination	25 %
Semester work	10 %
Other types of assessment	10 %
Total	100%

Any formative only assessments

6- List of references

6.1- Course notes

Texts note book

6.2-Essential books (text books)

1- Physical chemistry 1st edition; Robert A. Alberty and Robert J. Silbey, John Wiley & sons Inc. (1998).

2- General chemistry 3rd edition; Ralph H. Petrucci, Macmillan Publishing Co.Inc., New York (1984).

6.3- Recommended books

Principle of physical chemistry, Lohn Wiley & Sons, Inc. (1998)

6.4- Periodicals Web. Sites

Science direct, google.com; Chemweb.com

7-Facilities required for teaching and learning

- over head project……

Course coordinator:

Prof. Dr. M. Abd alla

Head of Department:

Date: 10 / 9 /2007