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 / 2nd tearm**

Date of specification approval **2008**

A – Basic information

Title : **General Chemistry (2)**. Code : CH: **102**

Credit Hours : Lecture : **4hr / 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 students able to:

a- Understand the function groups of organic compounds

b- Understand the general properties of each function group

c- Name the simple organic compounds

d- Make conversion of one function group to another

e- Know the principle of physical chemistry and study chemical and ionic equilibrium

2- Intended learning outcomes of course (ILOS)

a- Knowledge and understanding:

a1- Know the basic science in organic chemistry

a2- study the identification of organic compounds

a3- Understand the importance of organic compound

b-Intellectual skills

b1- Teat with the physical properties of simple organic compounds

b2- Identify of simple organic compounds

b3- Distinguish chemical properties of simple organic compounds

b4- Know principle of types of solution

b5- Distinguish kinetics of reaction and chemical, ionic equilibrium

c-Professional and practical skill:

c1- Convert one organic compound to anther and treatment with principles of electrochemistry.

c2- Know the relation between each function group in very simple exp. And small quantities and oxidation –reduction conversions

c3- Able to understanding ionic and chemical equilibrium

d- General and transferable skills:

d1- Apply of different simple organic compounds

d2 – Use simple indicator in lab.

d3- Manage of the project in solution

d4- Make workshop in oxidation – reduction processes.

3- Contents

Topic	**No. of hours**	**Lecture**	**Tutorial /practical**
Function groups and solutions	24	12	3/9
Nomenclature and chemical equilibrium	16	8	2 / 6
Electronic effects and ionic equilibrium	16	8	2 / 6
Hyperdization and test	8	4	1 / 3
Bonds and electrochemistry	8	4	1 / 3
Isomerism and electrochemistry	8	4	1/3
Formula charge and oxidation reduction	8	4	1/3
Empirical Formula and spontaneous of reaction	8	4	1/3
Total	96	48	48

4-Teaching and Learning methods

4.1- Practical

4.2- Theoretical lecture

4.3- Discussion

5-Student assessment methods

5.1- Models to assess the ability of imagination in space

5.2 Practical to assess the ability of identify the compounds

5.3 Oral to assess to evaluate the students

5.4 Final exam to assess all the course knowledge and skills

Assessment Schedule

Assessment 1 Quiz1……week 4

Assessment 2 Discussion……..week **6**

Assessment 3 Mid-term…… week 7

Assessment 4 Quiz2…….week 10

Final exam week 14

Weighting of assessments

Mid term examination	5 %
Final term examination	70%
Oral examination	5%
Practical examination	20 %
Semester work	- %
Other types of assessment	- %
Total	100%

Any formative only assessments

6- List of references

6.1- Course notes

Texts note book

6.2-Essential books (text books)

- Morrison and Boyed, Organic Chemistry, ELBS, Longman(1997)
- Vogel;s Text book of practical organic compounds 5th edn. 1989
- 1- Physical chemistry 1st edition; Robert A. Alberty and Robert J. Silbey, John Wiley & sons Inc. (1998).

6.3- Recommended books

Organic chemistry Fifth Edition Jonh McMurry 1999

Principle of physical chemistry

6.4- Periodicals Web. Sites

Science direct, google.com; Chemweb.com

7-Facilities required for teaching and learning

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Course coordinator:

Prof. Dr. Mohamed Helmy Arief. **Prof. Dr. M. Abd alla**

Head of Department: Date: 10 / 7 /2007