

Course Specifications

Programme(s) on which the course is given: BSc. Chemistry

Major or Minor element of programmes: Major

Department offering the programme: Chemistry

Department offering the course: Chemistry

Academic year / Level: Second

Date of specification approval: 2013

A- Basic Information

Title: Principals of physical organic chemistry

Code: CH244

Credit Hours: 2 h Lecture: 1.5

Tutorial: 1 Practicals: 2 Total: 2h

B- Professional Information

1 – Overall Aims of Course

Systemic learning of kinetics and reaction mechanisms of organic reactions.

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

a1- Study of the chemical reactions

a2- understand the chemical course of the reactions.

a3- Acquaintance with overall understanding of the reaction mechanisms

b- Intellectual Skills

b1-prediction of the reaction orders.

b2-Suggestion of the reaction mechanisms for the chemical reactions.

b3-Interpretation of the physical results from the reactions.

c- Professional and Practical Skills

c1-Understand the chemical reactions at the bench scale.

c2-Utility of the knowledge at the industrial scale.

c3-Prediction of the reaction pathways.

d- General and Transferable Skills

d1-Study the kinetics and chemical reaction mechanisms

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Chemical bonding	4	2	
Factors affecting electron distribution	4	2	-
Reactions involving intermediates	4	2	-
Bond orders	4	2	-
Nucleophilic substitution reactions	4	2	-
Addition reactions	4	2	-
Elimination reactions	4		-

4- Teaching and Learning Methods

4.1-lectures

5- Graduate Assessment Methods

5.1 written examination to assess the understanding and comprehension

Assessment Schedule

Assessment 1 short exam (class activities) every two weeks

Assessment 2 mid-term (written) Week 7

Assessment 3 final-term (written) Week 14

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)

Text books in organic chemistry.

6.3- Recommended Books

Text books in organic chemistry

7- Facilities Required for Teaching and Learning Structural models

Course Coordinator: Prof. Dr. / Abdel-Alem Hassan

Head of Department: Prof. Dr. / Adel Nassar

Date: / /