

Course specifications

Programme(s) on which the course is given: B.Sc. chemistry

Major or minor element of programmes: Major

Department offering the programme: chemistry

Department offering the course: chemistry

Academic year / Level: 3rd level

Date of specification approval: 2013

A- Basic Information

Title: kinetic chemistry

Code: CH 312

Credit Hours: 2 **Lecture:** 1.5

Tutorial: 1 **Practical:** 2 **Total:** 2

Teaching staff: Dr / Naema Salem

B- Professional Information

1 – Overall aims of course

- Understand the basic concepts of chemical kinetics
- Study the various types of reactions and their applications in different fields of chemistry.

2 – Intended learning outcomes of course (ILOs)

a-Knowledge and understanding:

After completing the course the graduate should be able to

a1-Take an account on energy changes in reactions.

a2- Define collision theory of reaction rate.

a3- Know the factors affecting the reaction rate.

b-Intellectual skills

b1- Create the graduates capability to understanding.

b2- Analyze many of natural phenomena that take place and

b3- Explain many of natural phenomena from kinetic point of view.

c-Professional and practical skills

c1- Solve many problems for understanding the applications of different laws

c2- Use lab. experiments of first, second order and third order reactions.

d-General and transferable skills

d1- Improve of the graduates skills especially in thinking,

d2- Have mutual discussion and oral presentation.

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Energy changes in reactions	2	2	-
Collision theory of reaction rate	2	2	-
Factors affecting reaction rate	2	2	-
Order of reaction	2	2	-
Reactions of first order (Exs.)	4	-	4
Reactions of second order (Exs.)	4	-	4
Reactions of third order (Exs.)	4	-	4

4– Teaching and learning methods

4.1- Lectures

4.2- Experiments

5- Graduate assessment methods

5.1- Short exam to assess the understanding

5.2 - Mid term to assess the Mid term performance

5.3 – Final term to assess the final term performance

Assessment schedule

Assessment 1 short exam **week every two weeks**

Assessment 2 mid-term exam **week 7th week**

Assessment 3 Final term **week 14th week**

Weighting of assessments

Mid-Term Examination (written + practical) 20 %**Final-term Examination (written + practical) 60 %**

Oral Examination.

Semester Work (written + practical) **20 %**

Other types of assessment

Total	100%
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Any formative only assessments

6- List of references

**1-Physical Chemistry, Third Edition, Robert G. Mortimer
Professor Emeritus Rhodes College Memphis, Tennessee.**

**2- Kinetic Processes, Kenneth A. Jackson Copyright, 2004
WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim**

**3- Steven S. Zumdahl, Susan A. Zumdahl and Donald J.
DeCoste (2007). Instructor's Resource Guide Chemistry.
Seventh Edition, Boston, New York.**

**7- Facilities required for teaching and learning
over head projectors**

Course coordinator: Dr. / Naema Salem

Head of Department: Prof. Dr. Adel A. Nassar

Date: / /