

Course Specifications

University Menoufiya

Faculty of science

Course Specifications:

Programme(s) on which the course is given: M.Sc.Ch

Major or Minor element of programmes : Major

Department offering the programme : Chemistry

Department offering the course: Chemistry

Academic year / Level :

A- Basic Information

Title: Photo Chemistry

Code: CH 6412

Credit Hours: 2 h

Lecture: 2h -

Tutorial: 0

Practicals: 0

Total: 2h

B- Professional Information

1 – Overall Aims of Course

-After completing the course the students should have a good knowledge in the following;

- Understanding the meaning of light and the matter and its properties
- Understanding the effect of the electromagnetic radiation on the organic molecules i.e. study the interaction of visible light as well as the ultraviolet radiation on the different classes of organic compounds .
- Application of light to produce Laser

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

a1- understanding the difference between the photochemical radiation and the thermal energy

a2- The bases of the photochemical reactions (including the mode of electronic excitation)

a3- Study as well as understanding the reactivity of different organic molecules toward the photolysis reactions and the photo oxidation reactions.

b- Intellectual Skills

b1- Learning the students the most recent routes for the synthesis of the different compounds via the photolysis and compared with the thermal reactions beside the LASER and its applications .

c- Professional and Practical Skills

c1- Learning the students the photolysis of all different classes (alkenes, alkynes and cycloalkenes) beside teaching and learning how can every student use the internet and the different chemistry webs which help them to follow up the course (e.g. www.organicchemistry.org), also, to be capable to follow up the recent methods for the synthesis of many organic compounds using all the available photochemical technique.

d- General and Transferable Skills

d1- Improving the mode of thinking and self confidence to all the students and increasing the ability to face and solve any problem in the field of the course

3- Contents

a- Basic of photochemistry

b- Stereoisomerism

c- Inter and Intramolecular photocycloaddition reactions.

d- Norrishe type I and type II photoreaction of carbonyl.

4- Teaching and Learning Methods

4.1- lectures

5- Student Assessment Methods

5.1 short exam

5.2- Mid-term

5.3 final exam

Assessment Schedule

Assessment 1 short exam	week: every two weeks
Assessment 2 mid-term exam	Week 9
Assessment 3 final exam	Week 15

Weighting of Assessments

Mid-Term Examination	20	%
Final-term Examination	60	%
Semester Work	20	%
Total		100%

6- List of References

Organic photochemistry

J..M.Coxon/Cambridge University press

Internet :All the free of charge chemistry Webs for example :-

www.chemweb.com

www.mdl.com

www.organicchemistry.com

7- Facilities Required for Teaching and Learning

- 7.a- Internet :Local connection or wireless connection in the lecture Hall
- 7.b- Data show installed in the lecture Hall
- 7.c- Labtop or PC in each lecture Hall

Course Coordinator: Prof.Dr.Magdy Zahran

Head of Department: Prof.Dr. Ahmed Abdel-Meged

Date: / /