**Course Specifications**

**Programme(s) on which the course is given: B.Sc.Ch, Ch&B, Ch&G, Ch&Z, CH&P, CH&Micro**

**Major or Minor element of programmes : Major and Minor**

**Department offering the programme : Chemistry or Dept B, Z, G**

**Department offering the course: Chemistry**

**Academic year / Level : 2013 4th Fourth**

**A- Basic Information**

**Title: Photo Chemistry Code: CH 4420**

**Credit Hours: 2 h Lecture:1.5h -**
**Tutorial: 1 Practicals:2**
**Total: 2h**

**B- Professional Information**

**1 – Overall Aims of Course**

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

- **Understand the meaning of light and the matter and it's properties**
- **Study 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- understand 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- Learn 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 it's applications .**

**c-Professional and Practical Skills**

**c1-Distinguish 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-Improv 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-Excitation and excited state**

**b-Intramolecular reaction of olefinic double bond**

**c-Laser,production,application and modifications**

**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. Adel Nassar**
**Date: / /**