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**Department of Chemistry**

**College of Science**

**University of Salahaddin**

**Subject: Organic Chemistry**

**Course Book – (Year 3)/1stsemester**

**Lecturer's name: Naween Musher Yons**

**Academic Year: 2022/2023**

**Course Book**

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| **1. Course name** | **Organic Chemistry** | |
| **2. Lecturer in charge** | **Naween Musher Youns** | |
| **3. Department/ College** | **Chemistry/ Science** | |
| **4. Contact** | **e-mail: naween.yons@su.edu.krd** | |
| **5. Time (in hours) per week** | **Practical: 8group, total 16 h**  **Chemical Store Officer,2 h**  **2 Students of research project,2h** | |
| **6. Office hours** | **None in time of Corona Virus, The online way will be used** | |
| **7. Course code** | **None** | |
| **8. Teacher's academic profile** | **https://sites.google.com/a/su.edu.krd/naween.yons-2022-2023** | |
| **9. Keywords** | **None** | |
| **10. Course overview:**  This course is crucial and recommended for stage three of undergraduate students to understand carbonic compounds as big molecules could be huge and massive, so the study will be sufficient and comprehensive. At the end of the year, the student will gain full knowledge for future employment. | | |
| **11. Course objective:**  By the end of the course the students should be able to  • recognise symmetry in organic molecules  • predict/rationalise stereochemical outcomes in organic reactions  Besides, at the end of the year students will have a more advanced level of understanding, of both theoretical and practical of Organic Chemistry. | | |
| **12. Student's obligation**  Students obliged to attend all theoretical lectures and practical sessions for around 14 week; quizzes will be given after each chapter completed, The practical sessions are to submit a report for each completed experiment, reviewed and corrected report will be returned to the student to know and learn to correct mistakes of standard writing. quizzes will be given after the experiment done | | |
| **13. Forms of teaching**   * Lecture notes prepared in Microsoft PPT, ChemDraw Ultra for drawings and presented to the students using PowerPoint by Data Show. The lecture indicates, introduction, brief review of the last lecture, explain every slide shown, troubleshooting, solve sample questions. Lecture ends with questions/answers and or quiz. * The notes usually giving to the students by email then they save copies on laptops or print them as handouts. * Every sitting exam assigned for the students, question papers displayed on public board, questions are corrected, marks rewarded, and the following lecture will be discussion to solve the exam questionnaire and place a copy of answers on to their notes after giving several ways of answering. * The corrected papers evaluated and marks displayed. Exam answer papers are to be saved for future references. * The exam paper covers most of the lectures given and indicated: Exam instructions, MCQ, definitions, chemical equations, explanations, Draw, give reasons, calculations, comparisons…etc. The questions are usually clear, direct and obvious, starting from easy, medium to hard. * Every class activity for students is to be recorded on lecture notebook, saved as references. * All student marks including attendance and quizzes shall be displayed on the department notes board. All year student effort will be calculated and added to the summer exam along with the practical marks out of a 100%. * Students who passed the first attempt summer exam will be granted next level of study. | | |
| **14. Assessment scheme**  The whole year marks out of 100%, breaking down to 50 marks (15 mark for exams including quizzes and classroom activity, and 35 mark for practical) plus 50 mark for final Summer exam. | | |
| **15. Student learning outcome:**  The students will learn from the lecturer, and other sources of information including the educational websites, books from the library, you tube …..etc. | | |
| **16. Course Reading List and References‌:**  Organic chemistry, Journals, Google internet search, books from library, | | |
| **17. The Topics:** | | **Lecturer's name** |
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| **18. Practical Topics (If there is any)** | |  |
| Organic chemistry experiments including: Each Wednesday and Thursday a 18h practical session will be compulsory for student to practice. Experiments are related to preparation of cyclic organic compounds.  **Experiment titles**  1-Quiltitive analysis of organic compounds  2-Hoffman degradation  3- Benzil rearrangement  4-Preparation of pinacol  5-Pinacol rearrangement  6-preparation of Schiff base  7-Aryl Halide  8- Aldol condensation  9-preparation of Isoborneol | | Naween Musher 16h  Dr. Media Noori Abdullah 4h  Jala Bahjet Ziwar 16h  Dr Serwan  ji |
| 19. Examinations: Practical Part  Q1) Define the following:  Schiff base, Benzilic acid rearrangement  Q2) Discuss why most alcohols are resistant to dehydration by base, but aldol products dehydrate  easily?  Q3) Write the reaction of NaNO2/ HCl with the following compounds and explain which one has the  more stable diazonium salts.  CH3CH2NH2  CH3-NH-C2H5  C6H5-NH2  Q4) Complete these reactions:  1. Anthraquinone K2Cr2O7/H2SO4    2. Cyclopentadine +Maleic anhydride  3. Benzaldehyde + Acetone  NaOH  Q5) Write the mechanism for the following reaction:    Q6)Write mechanism of this compound by Benzilic acid rearrangement  1- P-methylbanzil  2- P-nitrobanzil | | |
| **20. Extra notes:**  None. | | |
| **21. Peer reviewپێداچوونه‌وه‌ی هاوه‌ڵ**  This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.  *(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).*  ئه‌م کۆرسبووکه‌ ده‌بێت له‌لایه‌ن هاوه‌ڵێکی ئه‌کادیمیه‌وه‌ سه‌یر بکرێت و ناوه‌ڕۆکی بابه‌ته‌کانی کۆرسه‌که‌ په‌سه‌ند بکات و جه‌ند ووشه‌یه‌ک بنووسێت له‌سه‌ر شیاوی ناوه‌ڕۆکی کۆرسه‌که و واژووی له‌سه‌ر بکات.  هاوه‌ڵ ئه‌و که‌سه‌یه‌ که‌ زانیاری هه‌بێت له‌سه‌ر کۆرسه‌که‌ و ده‌بیت پله‌ی زانستی له‌ مامۆستا که‌متر نه‌بێت.‌‌ | | |