

**Department of …Food Technology…………………….**

**College of ………Agriculture……………………….**

**University of …Salahaddin……………………….**

**Subject: ……Practical BioChemistry………………………….**

**Course Book – *year 2***

**Lecturer's name MSc:Shno Salam Mohammed**

**Academic Year: 2017/2018**

**Course Book**

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| **1. Course name** | **Practical BioChemistry** |
| **2. Lecturer in charge** | **assistant lecturer :Shno Salam Mohammed** |
| **3. Department/ College** | **Horticulture /College of Agrculture** |
| **4. Contact** | **e-mail: Shno . Mohammed @su.edu.krd** |
| **5. Time (in hours) per week**  | **For example Theory:   0** **Practical:12** |
| **6. Office hours** | **Sunday (8:00 AM-2:30PM)** |
| **7. Course code** |  |
| **8. Teacher's academic profile**  | **My name is VianI born in Erbil at 1/8/1980 after six years i went to the school I finished all 12 years in school without failing, I was very active person till that time I wanted a first one. I finished 12 classsuccessfully 80%. After that i graduated to the Salahddin university / College of Education: Chemistry Department at 2001-2002. and designation in 2003/6 at Koya university college of scienceI was Demonstrator till 2006 , I finished MSc in Chemistry ( 2008 ).in 2/ 2011 I submitted to PhD in BRITAIN till 6 monthsI was there for taking English Course. After returning back to the KurdistanI tried to transfer from Koya university to Salahaddin university/ agriculture college.** |
| **9. Keywords** | **Carbohydrates, sugers.** |
| **10.  Course overview:** **Chemistry lab its the magnificent way to understanding students from hand working in laboratory and how deal with the dangerous materials like concentrated sulfuric and hydrochloric acid. Studying Chemistry like understanding the mechanism our life(food,body,dress......) all of that depends on Chemistry.** **I will begin with a focus on the practical value of organic chemistry to society .organic compounds permeate our daily lives in an unfathomable number of ways. Organic compounds play an essential role in such diverse fields as genetics, nutrition, materials science and consumer products development.** |
| **11. Course objective:** |
| **12.  Student's obligation****I will written the name of student absences and it have the degree. After that they dress lab coat and his palm and every  week they have quiz and report.**  |
| **13. Forms of teaching****I use sheets and white board some times data show.** |
| **14. Assessment scheme**‌**%15=%10 exam ,%1 absent, %2 quiz, %1 lab coat %1 daily activity**  |
| **15. Student learning outcome:****This is a list of very specific learning objectives for organic chemistry lecture. The lab will also provide hands-on opportunities to develop and apply this knowledge. If a specific objective is also partially addressed with an experiment, then the experiment number has been included in parenthesis**  |
| **16. Course Reading List and References‌:****-Vogel's textbook of practical organic chemistry/**[**Arthur Israel Vogel**](https://www.google.iq/search?tbo=p&tbm=bks&q=inauthor:%22Arthur+Israel+Vogel%22)**,** [**B. S. Furniss**](https://www.google.iq/search?tbo=p&tbm=bks&q=inauthor:%22B.+S.+Furniss%22)**/Longman, 1989 -** [**Science**](https://www.google.iq/search?tbo=p&tbm=bks&q=subject:%22Science%22&source=gbs_ge_summary_r&cad=0) **- 1514 pages**-**Advanced Practical Organic Chemistry, Third Edition****John Leonard, Barry Lygo, Garry Procter****-Textbook of Practical Organic Chemistry 5th ed****by** [**Vogel, Arthur I.**](https://archive.org/search.php?query=creator%3A%22Vogel%2C+Arthur+I.%22) |
| **17. The Topics:** | **Lecturer's name** |
| **18. Practical Topics (If there is any)** |  |
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| **1** | **Introduction to organic chemistry lab., general safety principles and instruction.** |
| **2** | **Purification of solid organic compounds by recrystallization.**  |
| **3** | **Purification of liquid organic compounds by distillation.** |
| **4** | **Extraction by active organic solvents.** |
| **5** | **Extraction of caffeine from Tea.** |
| **6** | **Preparation of Aspirin.** |
| **7** | **Preparation of Soap.** |
| **8** | **Preparation of chemical Fertilizer.** |
| **9** | **Preparation of Acetic acid.** |
| **10** | **Preparation of Ester RCOR.** |
| **11** | **Preparation of Amides.** |
| **12** | **Sodium fusion.** |
| **13** | **Detection of chemical active group (aldehyde & ketones).** |
| **14** | **Purification of liquid organic compounds  fractional distillation** |
| **15** | **Purification of liquid organic compounds by under vacuum distillation.** |

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| **19. Examinations:** |

**Q1/Complete the following reactions:**

**1-RCO2H + NH4OH ?**

**2-CH3COONa+H2SO4  ?**

**3-CH3CO2H+NaHCO3  ?**

**4-RCOOH +ROH ?**

**5-RCH2OH**?

**Q2/According to the following reaction:**

**CH3COONa+H2SO4 CH3COOH + NaHSO4**

**Find the percentage of acitic acid if, density = 1.05 gm/ml , volume of acitic acid = 2 ml and weight of sample is = 5 gm .**

**Atomic weight : C=12 , H=1 , O=16 , Na= 23**

**Q3/ Complete the following blanks:**

1. **Esters are important as -----------,---------,--------,---------**
2. **Extraction it is ------------**
3. **Partition coefficient is =----------------**
4. **Melting point it is a temperature -----------**
5. **Recristalization --------------**