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| **Hashemite University** | logo-changes copy  **Course Syllabus** | **Chemistry of Heterocyclic Compounds**  **110103732**  **3 Credit Hours** |
| **Faculty of Science** | **Pre-requisite:** |
| **Department of Chemistry** | **First Semester 2017/2018** |

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| Course Information | | | |
| (11:00- 12:30) Monday and Wednesday | | | Lecture's Time |
|  | | | Lecture Room |
| Dr. Kayed Abu Safieh | | | Instructor |
| Chemistry Building 207 | | | Office Location |
| (11-12) Sunday; Tuesday | | | Office Hours |
| **Text Book :** Heterocyclic Chemistry, 5 th. edition,.by J. Joule, K. Mills, and Smith.Blacckwell, UK ,2010. | | | |
| * Heterocyclic Chemistry, 2nd. edition,.by T.L.Gilchrist, Longman, UK, 1992. * Heterocycles in Life and Society, byA. Pozharskii, A. Soldatenkov, and A. Katritzky, John Wiley Sones, UK,1997. * Comprehensive Hetrocyclic Chemistry, by A.Katritzky and C. Ress, (eds), pergmon Press, Oxford, 1984. | **References(s)** | | |

Grading Policy:

1st Exam 20 % 2nd Exam 20 % Other 10 %

Final Exam 40%

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| **Course Objectives** |
| * Learning the fundamentals of heterocyclic compounds reactivity and synthesis. * Studying some scientific applications of heterocyclic compounds in life and society. * General features of the properties of heterocycles are emphasized. |
| **Teaching and Learning Methods** |
| Transparencies, power point and traditional lecturing will be used. |

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| Intended Learning Outcomes |
| 1. Training on nomenclature of heterocycles and their fused systems. 2. Learning the main reactivity and properties of certain classes of heterocycles. 3. Emphasizing on the heterocycles that are essential in life in addition to their applications. 4. Studying the features and properties of some heterocycle |

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| **Course Contents**   |  |  | | --- | --- | | **1** | **Topic** | | 2 | Nomenclature of heterocyclic compounds. | | 3 | Structure and main physical properties of aromatic heterocycles. | | 4 | Reactivity and synthesis of hetrocycles. | | 5 | Typical reactivity of pyridines, quinolines and isoquinolines: reactions and synthesis. | | 6 | Typical reactivity of diazines: reactions and synthesis. | | 7 | Typical reactivity of pyrroles, thiophenes and furans: reactions and synthesis | | 8 | Reactivity of indoles, benzo[*b*]thiophenes and benzo[*b*]furans. | | 9 | Typical reactivity of 1,3- and 1,2-azoles. | | 10 | Nomenclature of heterocyclic compounds. | | 11 | Structure and main physical properties of aromatic heterocycles. | | 12 | Reactivity and synthesis of heterocycles. | |

**Participation and Exams:**

Attendance is absolutely mandatory. Students who miss a (6) class sessions without a compelling excuse will qualifies the student to be dismissal.