**Course Description**

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| **Faculty** | **Pharmacy** | | | | | | |
| **Department** | Pharmaceutical Chemistry | | | **Level** | | | 7 |
| **Course** | **General Chemistry practical** | **Code** | **1703111** | **Prerequisite** | | |  |
| **Credit hours** | 1 | **Theoretical** |  | **Practical** | | |  |
| **Coordinator** |  | **Email** |  | | | | |
| **Teachers** |  | **Emails** |  | | | | |
| **Lecture Time** |  | **Place** |  | | **Attendance mode** | Face to face | |
| **Semester** |  | **Preparation date** |  | | **Modification Date** |  | |

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| **Abstracted Course Description** |
| Safety and laboratory rules; chemical observations; volumetric analysis; oxidation and reduction; colligative properties; thermochemistry and equilibrium |
| **Course Goals** |
| 1-This course is complementary part to the theoretical lectures in General chemistry for pharmacy.  2- It provides the students important knowledge to acquire good practical skills in the following fields:  a - It provides the students important basic laboratory skills  b - Studying different chemical and physical properties of chemical compounds using different glassware and chemical.  c - Identify different chemical compounds using chemical and physical properties.  d - to determine the limiting reactant in chemical reactions and its percent  e - to analyses vinegar solution and determine its concentration  f - To determine relative reactivity, depend on analysis or oxidation-reduction reaction of some chemical compounds  g- to know some properties of acids and bases and how to measure the PH of common acids and bases and to be familiar of buffers  h-to compare between acids and bases in there’s reactions and neutralization reaction  k- to determine the formula of hydrate salts  l- to do some tests on alkanes, alkenes and aromatic compounds |
| CILOs |
| Knowledge |
| A1 To know the safety rules in the labs  A2 To know the basic laboratory operations  A3 To know the laboratory equipment and safety laboratory. |
| Skills |
| B1 The student is expected to gain basic general chemistry practical skills of doing experiments  B2 To be able to identify chemical compounds depending on physical and chemical properties.  B3 To be able to apply the knowledge from their study in evaluating the limiting reagent. |
| Competencies |
| C1 To be able to analysis of vinegar solution and determine the formula mass and formula of hydrate  C2 To be able to determine the atomic mass and specific heat of metal also the heat of neutralization of strong acid-strong base reaction  C3 determine relative reactivity, depend on analysis or oxidation-reduction reaction of some chemical compounds. |
| Learning Methods |
| * Lectures * Oral dissection * Assignment |
| Evaluation Tools |
| Exams  Quiz |

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| **Week** | **Topics to** | **Learning method** | **Evaluation tool** | **ILOs** | **Hours** |
| **1.** | Check-in | **Manual of experiments** | QUIZ | **A** | **1** |
| **2.** | Basics Laboratory Operations | **Manual of experiments** |  | **A** | **1** |
| **3.** | Identification of a compound: Physical Properties | **Manual of experiments** |  | **A** | **1** |
| **4.** | Identification of a compound: Chemical Properties | **Manual of experiments** |  | **A** | **1** |
| **5.** | Limiting Reactant | **Manual of experiments** |  | **B** | **1** |
| **6.** | Vinegar Analysis | **Manual of experiments** | Exam | **B** |  |
| **7.** | Oxidation Reduction Reaction | **Manual of experiments** | Exam | **B** | **1** |
| **8.** | Acid and Base | **Manual of experiments** | **C** | **1** |
| **9.** | PH, Hydrolysis, and Buffer | **Manual of experiments** | Exam | **C** | **1** |
| **10.** | PH, Hydrolysis, and Buffer | **Manual of experiments** | **C** | **1** |
| **11.** | Formula of hydrate | **Manual of experiments** | Homework | **A** | **1** |
| **12.** | Formula of hydrate | **Manual of experiments** | **C** | **1** |
| **13.** | Tests on alkanes and alkenes and aromatic compounds | **Manual of experiments** | Exam | **Abc** | **1** |
| **14.** | Tests on alkanes and alkenes and aromatic compounds | **Manual of experiments** | Exam |  | **1** |
| **15.** | **Final Exam** |  |  |  | **2** |

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| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Plan of Course Evaluation** | | | | | | | | | | | | | **Evaluation Tools** | | **Mark** | **ILOs** | | | | | | | | | | **A1** | **A2** | **A3** | **B1** | **B2** | **B3** | **C1** | **C2** | **C3** | | **First Exam (Mid-term)** | | **30%** | \* | \* |  |  | \* |  |  |  | \* | | **Second Exam (If available)** | |  |  |  |  |  |  |  |  |  |  | | **Final Exam** | | **50%** |  |  |  |  |  | \* | \* | \* |  | | **Activities** | | **20%** |  | | | | | | | | | | **Activities Evaluation** | Homework/Tasks | 10% |  |  | \* | \* | \* |  | \* |  |  | | Case Study |  |  |  |  |  |  |  |  |  |  | | Discussion and Interactions |  |  |  |  |  |  |  |  |  |  | | Group Activities |  |  |  |  |  |  |  |  |  |  | | Laboratory Exams |  |  |  |  |  |  |  |  |  |  | | Presentations |  |  |  |  |  |  |  |  |  |  | | Quizzes | 10% |  | \* |  |  | \* | \* |  |  | \* | | Others |  |  |  |  |  |  |  |  |  |  | | **Total** | | 100% |  |  |  |  |  |  |  |  |  |   **Components** | |
| **Book** | **Laboratory manual General Chemistry principles and structure, Jo**  **Beran , James Brady, Fourth edition** |
| **References** | **Laboratory manual General Chemistry principles and structure, Jo**  **Beran , James Brady, Fourth edition** |
| **Recommended Readings** |  |
| **Electronic materials** |  |
| **Other websites** |  |

**Subject Coordinator:**

**Head of Curriculum Committee:**

**Department Head:**

**Faculty Dean:**

**Last update date**