# Course Specification
# Student Version

| | |
|---|---|
| **Course Title:** | Introduction to Chemistry |
| **Course Code:** | CHEM 101 |
| **Department:** | Common Sciences |
| **Program:** | Bachelor Medicine and Surgery |
| **College:** | Vision College in Riyadh |
| **Institution:** | Vision College in Riyadh |
| **Revised:** | July 2025 |

## A. Course Identification

| |
|---|
| **1. Credit hours:** 3 (2+1+0) |
| **2. Level/year at which this course is offered:** Level 2/Year 1 |
| **3. Pre-requisites for this course (if any):** None |
| **4. Co-requisites for this course (if any):** Biochemistry |

## B. Teaching Methods

| | |
|---|---|
| **1** | Interactive Lectures |
| **2** | Assignments |
| **3** | Practical Sessions |

## C. Course Description and Main objective

**1. Course Description**

This Course is designed to give students the basic knowledge necessary to understand the basic concept of Organic Chemistry (classification, preparation, properties), Physical Chemistry (Mole concept, balancing of equation & physical properties of solution).

**2. Course Main Objective**

The main objective of this course is to develop a conceptual understanding of the principle of Chemistry and gain a basic knowledge necessary to understand chemical reaction and balance chemical equation and atomic structure of element.

**3. Course Main Objectives:**

**At the end of this course the students will be able to:**

- Discuss different kinds of organic compounds and their reactions
- Describe the structure of different types of organic compounds
- Discuss chemical equations, mole concepts and theories of acids and bases
- Perform basic chemical experiments with high precise performance
- Apply problem-solving technique.

## D. Course Content

| No. | List of Topics |
|---|---|
| **Theoretical Lectures** | |
| **1** | Introduction to Organic Chemistry Part 1 |
| **2** | Introduction to Organic Chemistry Part 2 |
| **3** | Saturated hydrocarbons (alkanes) |
| **4** | Unsaturated hydrocarbons (alkenes) |
| **5** | Alcohol and phenols Part 1 |

| | |
|---|---|
| **6** | Alcohol and phenols Part 2 |
| **7** | Aldehydes and ketones |
| **8** | Carboxylic Acids /Amines |
| **9** | Chemical Reactions and Mole Concept |
| **10** | Periodic Table and Chemical Bonding |
| **11** | Theories of Acids and Bases Part 1 |
| **12** | Theories of Acids and Bases Part 2 |
| **13** | Physical Properties of Solutions |
| **14** | Project |
| **15** | Revision |
| **Practical Sessions** | |
| **1** | Elements and Compounds |
| **2** | Measurement of Mass and Volume |
| **3** | Make Standard Solution |
| **4** | Acids, Bases and pH |
| **5** | Acid Base Titration |
| **6** | Types of Chemical Reactions - part 1 |
| **7** | Types of Chemical Reactions - part 2 |
| **8** | Some Reactions of Hydrocarbons |
| **9** | Properties of Alcohols and Phenols |
| **10** | Aldehydes and Ketones |
| **11** | Revision |

## E. Assessment tools

| # | Assessment task | Time | Percentage of Total Assessment Score |
|---|---|---|---|
| **1** | Assignments and project – each assignment 2.5 marks | During the semester | 10 % |
| **2** | 2 Quizzes – each 5 marks | First Q (week 5 - 6)<br>Second Q (week 10 - 11) | 10 % |
| **3** | Midterm Exam | Midterm Exam period | 20% |
| **4** | Practical exam | Practical Exam Weeks | 20% |
| **5** | Final Written exam | Final Exams Weeks | 40% |
| | **Total** | | **100%** |

## F. Learning Resources

| | |
|---|---|
| **Required Textbooks** | JAMES E- BRADY, 2003: General Chemistry. |
| **Essential Reference Material** | // |
| **Electronic Material** | Electronic version of the book |