

# MODULE DESCRIPTION FORM

| Module Information                 |                      |                               |  |
|------------------------------------|----------------------|-------------------------------|--|
| Module Title                       | Organic chemistry    |                               | Module Delivery  |
| Module Type                        | Core                 |                               | Theory ✓<br>Lab ✓<br>Tutorial ✓<br>Seminar ✓                               |
| Module Code                        | FOR12023             |                               |  |
| ECTS Credits                       | 8                    |                               |  |
| SWL (hr/sem)                       | 200                  |                               |  |
| Module Level                       | 1                    | Semester of Delivery          | 2  |
| Administering Department           | Forensic Evidence    | College                       | College of Sciences  |
| Module Leader                      | Mohammed abbas jebur | e-mail                        | <a href="mailto:mohammed.jebur@uowa.edu.iq">mohammed.jebur@uowa.edu.iq</a> |
| Module Leader's Acad. Title        | Assistant Lect.      | Module Leader's Qualification | MS. C.   |
| Module Tutor                       | Ashraf Hussain Saleh | e-mail                        | <a href="mailto:ashraf.h@uowa.edu.iq">ashraf.h@uowa.edu.iq</a>             |
| Peer Reviewer Name                 | Ashraf Hussain Saleh | e-mail                        | <a href="mailto:ashraf.h@uowa.edu.iq">ashraf.h@uowa.edu.iq</a>             |
| Scientific Committee Approval Date | 01/03/2026           | Version Number                | V 1.0  |

| Relation with other Modules |                   |          |   |
|-----------------------------|-------------------|----------|---|
| Prerequisite module         | General Chemistry | Semester | 1 |
| Co-requisites module        | -                 | Semester | - |

  
 أ.م.د. شيما حسين نونيل  
 ٢٠٢٥ - ٢٠٢٦



  
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Department Head Approval

Dean of the College Approval

## Module Aims, Learning Outcomes and Indicative Contents

|                                 |  |
|---------------------------------|--|
| <b>Module Objectives</b>        | <ul style="list-style-type: none"> <li>- Teaching the students organic chemical reactions, chemical structures, knowing the form of organic compounds, and how to</li> <li>- Clarifying the mechanics of organic reactions and their practical applications aimed at developing and keeping pace with scientific development. For organic chemistry.</li> </ul> <p>Teaching and educating students on all the necessary and necessary information related to organic chemistry, qualifies them to work and research in all areas of organic chemistry</p>  |
| <b>Module Learning Outcomes</b> | <ol style="list-style-type: none"> <li>1- Students will be able to obtain knowledge and understanding of organic chemistry.</li> <li>2- Students will be able to obtain knowledge and understanding of structures.</li> <li>3- Students will be able to obtain knowledge and understanding of pile mechanics.</li> <li>4- Students will be able to obtain knowledge and understanding of the functional communication of organic chemistry.</li> <li>5- Students will be able to obtain knowledge and understanding of classical and modern methods of extraction.</li> <li>6- Students will be able to obtain knowledge and understanding the research through analyzing the published research papers and writing mini-research from them.</li> </ol>  |
| <b>Indicative Contents</b>      | <ol style="list-style-type: none"> <li>1- Introducing students to organic chemistry and its importance in our lives</li> <li>2- Introducing students to hydrocarbons and their types. (Alkanes, alkenes and alkynes).</li> <li>3- Introducing the student to methane gas and the method of its preparation.</li> <li>4- Introducing students to alkanes and their properties.</li> <li>5- Introduce students to the interactions of alkanes.</li> <li>6- Defining and unsaturating hydrocarbons and their types.</li> <li>7- Introducing the student to alkenes, naming them and their characteristics.</li> <li>8- Introducing students to the methods of preparing alkenes.</li> <li>9- Introducing the student to the reactions of alkenes.</li> <li>10- Familiarizing students with the detection of alkenes.</li> <li>11- Introducing the student to the entities and their characteristics and naming them</li> <li>12- Introducing the student to the interactions of alkynes</li> <li>13- Introduce the student to the reactions of aliphatic cyclic compounds</li> <li>14- Identification, description and naming of aromatic compounds.</li> <li>15- Introducing the student to the reactions of aromatic compound.</li> </ol> |

### Learning and Teaching Strategies

|                   |  |
|-------------------|--|
| <b>Strategies</b> | <ol style="list-style-type: none"> <li>1- Following Lecture method and the use of the interactive whiteboard</li> <li>2- Explanation and clarification Providing students with the basics and additional topics related to the outputs of chemical thinking and analysis organic.</li> <li>3- Forming discussion groups during lectures to discuss organic chemistry topics that require thinking and analysis</li> <li>4- Asking students a set of reflective questions during the lectures, such as what, how, when and why for specific topics</li> <li>5- Giving students homework that requires self-explanations in causal ways</li> </ol> |
|-------------------|--|

### Student Workload (SWL)

|                                 |                            |                               |     |
|---------------------------------|----------------------------|-------------------------------|-----|
| <b>Structured SWL (h/sem)</b>   | 78                         | <b>Structured SWL (h/w)</b>   | 5.2 |
| <b>Unstructured SWL (h/sem)</b> | 122                        | <b>Unstructured SWL (h/w)</b> | 8.1 |
| <b>Total SWL (h/sem)</b>        | <b>197 + 3 final = 200</b> |                               |     |

### Module Evaluation

|                             |                            | Time/Number |     | Weight (Marks) |     | Week Due   | Relevant Learning Outcome |
|-----------------------------|----------------------------|-------------|-----|----------------|-----|------------|---------------------------|
|                             |                            | TH          | LAB | TH             | LAB |            |                           |
| <b>Formative assessment</b> | <b>Quizzes</b>             | 2           | 2   | 4              | 10  | 5 and 11   | 3,7                       |
|                             | <b>Homework assignment</b> | 2           | 1   | 4              | 10  | 6 and 13   | 1,8                       |
|                             | <b>Onsite Assignments</b>  | -           | -   | -              | -   | Continuous | All                       |
|                             | <b>Projects</b>            | 1           | 7   | 2              | 10  | 14         | All                       |
| <b>Summative assessment</b> | <b>Midterm Exam</b>        | 1           |     | 10             |     | 7          |                           |
|                             | <b>Final Exam</b>          | 3hr         |     | 50             |     | 15         |                           |
| <b>Total assessment</b>     |                            |             |     | 100 Marks      |     |            |                           |

### Delivery Plan (Weekly Syllabus)

|                | Material Covered                                 |
|----------------|--|
| <b>Week 1</b>  | An Introduction to Organic Chemistry             |
| <b>Week 2</b>  | Nomenclature of hydrocarbon                      |
| <b>Week 3</b>  | Nomenclature of hydrocarbon and stereo chemistry |
| <b>Week 4</b>  | Hydrocarbons                                     |
| <b>Week 5</b>  | Unsaturated Hydrocarbons                         |
| <b>Week 6</b>  | Exam   |
| <b>Week 7</b>  | Aromatic Hydrocarbons                            |
| <b>Week 8</b>  | Organic Halogen Compound                         |
| <b>Week 9</b>  | Alcohols and Phenols                             |
| <b>Week 10</b> | Ethers, Aldehydes and ketones                    |
| <b>Week 11</b> | Cyclic compound                                  |
| <b>Week 12</b> | Carboxyl acid, Esters and Sulfonic acid          |
| <b>Week 13</b> | Nitro compounds, Amines and Amides               |
| <b>Week 14</b> | Review Week                                      |
| <b>Week 15</b> | Preparatory week before the final Exam           |

### Delivery Plan (Weekly Lab. Syllabus)

|                | Material Covered   |
|----------------|--|
| <b>Week 1</b>  | Lab 1: Material Safety Data Sheet (MSDS)                               |
| <b>Week 2</b>  | Lab 2: Determination of melting points                                 |
| <b>Week 3</b>  | Lab 3: Determination of boiling points                                 |
| <b>Week 4</b>  | Lab 4: Recrystallization   |
| <b>Week 5</b>  | Lab 5: Density of Some Organic Compounds                               |
| <b>Week 6</b>  | Lab 6: exam  |
| <b>Week 7</b>  | Lab 7: Identification tests of Alkanes, Alkenes, Alkynes and Aromatic  |
| <b>Week 8</b>  | Lab 8: Identification tests of primary, secondary and tertiary alcohol |
| <b>Week 9</b>  | Lab 9: Identification tests of Ketones and Aldehydes                   |
| <b>Week 10</b> | Lab 10: Identification tests of flash point                            |
| <b>Week 11</b> | Lab 11: exam theoretical   |

|                |  |
|----------------|--|
| <b>Week 12</b> | Lab 12: exam practical                         |
| <b>Week 13</b> | Application by identification organic compound |
| <b>Week 14</b> | Application by identification organic compound |
| <b>Week 15</b> | Review before final exam                       |

| Learning and Teaching Resources |  |                           |
|---------------------------------|--|---------------------------|
|                                 | Text   | Available in the Library? |
| <b>Required Texts</b>           | 1- Organic chemistry, Morrison and Boyd.<br>2- Chemistry, Clayden J., Creeves N., Warren S and Wothers P., Oxford, 2001. | No                        |
| <b>Recommended Texts</b>        | Organic Chemistry  | No                        |
| <b>Websites</b>                 | <a href="https://en.wikipedia.org/wiki/Organic_chemistry">https://en.wikipedia.org/wiki/Organic_chemistry</a>            |                           |

| Grading Scheme                      |                         |              |          |                                       |
|-------------------------------------|-------------------------|--------------|----------|---------------------------------------|
| Group                               | Grade                   | التقدير      | Marks %  | Definition                            |
| <b>Success Group<br/>(50 - 100)</b> | <b>A</b> - Excellent    | Excellent    | 90 - 100 | Outstanding Performance               |
|                                     | <b>B</b> - Very Good    | Very Good    | 80 - 89  | Above average with some errors        |
|                                     | <b>C</b> - Good         | Good         | 70 - 79  | Sound work with notable errors        |
|                                     | <b>D</b> - Satisfactory | Satisfactory | 60 - 69  | Fair but with major shortcomings      |
|                                     | <b>E</b> - Sufficient   | Sufficient   | 50 - 59  | Work meets minimum criteria           |
| <b>Fail Group<br/>(0 - 49)</b>      | <b>FX</b> – Fail        | Fail         | (45-49)  | More work required but credit awarded |
|                                     | <b>F</b> – Fail         | Fail         | (0-44)   | Considerable amount of work required  |
|                                     |                         |              |          |                                       |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.