# TEMPLATE FOR COURSE SPECIFICATION

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| HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW |

**COURSE SPECIFICATION**

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| This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. |

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| 1. Teaching Institution | Al‐Nahrain University |
| 2. University Department/Centre | Department of Chemistry |
| 3. Course title/code | Organic Chemistry / CHEM 431 |
| 4. Modes of Attendance offered |  Online/ Attendance  |
| 5. Semester/Year | First / 2022-2023 |
| 6. Number of hours tuition (total) | Two hour per week |
| 7. Date of production/revision of this specification | 11-10-2022 |
| 8. Aims of the Course |
| Enabling students to obtain knowledge and understanding of organic chemistry sciences especially about identification of organic compounds. Enable students to obtain knowledge and understanding of chemical tests and examinations and analysis the spectra  |

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| 9· Learning Outcomes, Teaching ,Learning and Assessment Methode |

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| 1. Cognitive goals .

A1- Develop students’ scientific skills in the field of organic chemistryA2- Focus on intellectual and analytical skills |
| B. The skills goals special to the course. B1 - Improving students' skill in understanding chemical equations for aldehydes and ketonesB2 - Improving students' dexterity by drawing the mechanics of interactions |
| Teaching and Learning Methods |
| 1. Using fun methods
2. Using active learning
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| Assessment methods |
| Participate during the lecture Do their homeworkExams  |
| C. Affective and value goals A- C1 - Building a good relationship between the teacher and the studentC2 - Develop students' ability to solve problems related to the intellectual framework in organic chemistry sciences.C 3 - Develop students' ability to solve problems related to the instructions of organic chemistry sciences. |

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| D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)D1 - Enable students to think and analyze various intellectual topics related to organic chemistry |

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| 10. Course Structure |
| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
| 1 | 2 | Introduction | Introduction | Active learning  | Discussion |
| 2 | 2 | UV | UV | Active learning | Discussion |
| 3 | 2 | FTIR | FTIR | Active learning | Discussion |
| 4 | 2 | 1H NMR | 1H NMR | Active learning | Exercise  |
| 5 | 2 | 1H NMR | 1H NMR | Active learning | Exam |
| 6 | 2 | 13C NMR | 13C NMR | Active learning | Homework  |
| 7 | 2 | Mass | Mass | Active learning | Discussion |

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| 11. Infrastructure |
| 1. Books Required reading: | Clayden J. Organic chemistryOrganic Chemistry Paula Yurkanis Bruice |
| 2. Main references (sources) | Clayden J. Organic chemistryOrganic Chemistry Paula Yurkanis Bruice |
| A- Recommended books and references (scientific journals, reports…). | Clayden J. Organic chemistryOrganic Chemistry Paula Yurkanis Bruice |
| B-Electronic references, Internet sites… | Clayden J. Organic chemistryOrganic Chemistry Paula Yurkanis Bruice |
| 12. The development of the curriculum plan |
| I suggest using the Organic Chemistry Clayden curriculum to be more suitable for our students because the book is complete and contains all the skills |