# TEMPLATE FOR COURSE SPECIFICATION

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# 2nd Year/2022-2023

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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 | CHEM 251 |
| 4. Modes of Attendance offered |  |
| 5. Semester/Year | 2022-2023 |
| 6. Number of hours tuition (total) | 30 hours |
| 7. Date of production/revision of this specification |  |
| 8. Aims of the Course | |
| The basic principles of biochemistry | |
| Studying the chemical composition of a living cell and its components | |
| studying the chemical and structural formulas of living molecules such as carbohydrates, amino acids and proteins | |
| Study the chemical reactions of the above compounds in 3 | |
| Study the vital functions performed by the above molecules in 3 | |
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| 9· Learning Outcomes, Teaching ,Learning and Assessment Methode |

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| A- Cognitive goals . A1. Learn about biochemistry  A2. Learn to deal with vital interactions  A3. Employing other disciplines such as organic chemistry in the study of biochemistry  A4.  A5.  A6 . |
| B. The skills goals special to the course. B1. Understand the basic principles of biochemistry  B2. Dealing with vital interactions  B3Employing an understanding of the basics of biochemistry in the future, other sisters, such as studying pathological analyzes and drug compositions |
| Teaching and Learning Methods |
| Presentation of the lecture via Power Point and the adoption of biochemistry sources identified for a student at the beginning of the course, as well as the adoption of writing reports on some topics to motivate the student to see more |
| Assessment methods |
| A quarterly exam during the academic course and the adoption of the cup system at the beginning of the lecture for ten or five minutes and scientific reports in addition to asking questions during the lecture and homework |
| C. Affective and value goals C1. Endearing the student to the topic by linking it to daily life  C2. Building the mental capacity of the student  C3. Encourage them to delve into the topic because of its importance  C4. |
| Teaching and Learning Methods |
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| Assessment methods |
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| D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)  D1.  D2.  D3.  D4. |

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| 10. Course Structure | | | | | |
| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
| 1st | 2 | Introduction | Introduction about importance of biochemistry  **-**the chemical elements of life  -the type of cell  -cell structure and function  cellular membranes | Power point |  |
| 2nd | 2 | Study of the chemical structure of carbohydrates | The chemical structure of carbohydrates | Power point | Ask them during the lecture |
| 3th | 2 | Carbohydrate Interactions | Study of the interactions of carbohydrates | Powerpoint | Quiz |
| 4th | 2 | Studying the chemical composition of fats | fats | Powerpoint | Quiz |
| 5th | 2 | Studying the chemical reactions of fats | lipid interactions | Powerpoint | Quiz |
| 6th | 2 | Mid exam |  |  | Quiz |
| 7th | 2 | The chemical structure of amino acids | Amino acid | Powerpoint | Quiz |
| 8th | 2 | Stereostructure of isomers of amino acids | Stereostructure of isomers of amino acids | Powerpoint | Quiz |
| 9th | 2 | Stereostructure of isomers of amino acids | Stereostructure of isomers of amino acids | Powerpoint | Quiz |
| 10th | 2 | amino acid interactions | amino acid interactions | Powerpoint |  |
| 11th | 2 | amino acid interactions | amino acid interactions | Powerpoint | Quiz |
| 12th | 2 | Mid exame |  |  |  |
| 13th | 2 | Review before the final exam |  |  |  |

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| 11. Infrastructure | | |
| 1. Books Required reading: | | Mckee.Mckee  Biochemistry |
| 2. Main references (sources) | | Mckee.Mckee  Biochemistry |
| A- Recommended books and references (scientific journals, reports…). | |  |
| B-Electronic references, Internet sites… | |  |
| 12. The development of the curriculum plan | |
| Adopting new sources in addition to developing the level of homework to develop the students’ level of thinking | |

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