# 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 | Safety |
| 4. Modes of Attendance offered | presence |
| 5. Semester/Year | 2022/2023 - First semester |
| 6. Number of hours tuition (total) | 45 |
| 7. Date of production/revision of this specification | 24/10/2022 |
| 8. Aims of the Course |
| Introduce students to all basic concepts related to occupational safety in laboratories and factories |
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| 9· Learning Outcomes, Teaching ,Learning and Assessment Methode |
| A- Cognitive goals . A1 - Introducing students to all the basic concepts related to occupational safety A2. Increase awareness and education of students in all matters of occupational safety A3 - Occupational safety in industrial units |
| B. The skills goals special to the course. B1 - Teach the student to take all safety measures in laboratories B2 - Develop the student's skills to conduct on-site assessment of laboratories and factories B3 - Teaching the student how to identify the risks of working in factories and how to overcome them |
| Teaching and Learning Methods |
| Lectures, discussion during the lecture, presentation of specialized films and pictures that enhance the student's understanding of his subject matter, and the student presents a project that is a case study of safety issues that he presents as a presentation in front of his colleagues. |
| Assessment methods |
| Two semester exams, short exams and a seminar at the end of the semester |
| C. Affective and value goals C1- To develop the student's knowledge of safety mattersC2- It is possible for the student to teach others about safety mattersC3 - ways to reduce accidentsC4- Study the causes of accidents |
| Teaching and Learning Methods |
| Lectures and multiple visual and visual illustrations |
| Assessment methods |
| Two semester exams, short exams and a seminar at the end of the semester |

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| D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)D1- Teaching the student to take all safety measures in laboratoriesD2 - Develop the student's skills to conduct on-site assessment of laboratories and factoriesD3 - Teaching the student how to identify the risks of working in factories and how to overcome them |

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| 10. Course Structure |
| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
| 1 | 3 | Introduction to safetyGeneral safety rules | Introduction to safetyGeneral safety rules | lecture  | Semester exam and short examsOral exam |
| 2 | 3 | Personal protective equipments  | Personal protective equipments  | lecture  | Semester exam and short examsOral exam |
| 3 | 3 | Safety precautions when handling chemicals | Safety precautions when handling chemicals | lecture  | Semester exam and short examsOral exam |
| 4 | 3 | THE DANGERS OF WORKING IN A LABORATORY SETTING | THE DANGERS OF WORKING IN A LABORATORY SETTING | lecture  | Semester exam and short examsOral exam |
| 5 | 3 | Safety rules when dealing with glassware | Safety rules when dealing with glassware | lecture  | Semester exam and short examsOral exam |
| 6 | 3 | Exam 1 | Exam 1 | lecture  | Semester exam and short examsOral exam |
| 7 | 3 | Fire extinguisher  | Fire extinguisher  | lecture  | Semester exam and short examsOral exam |
| 8 | 3 | Equipments safety | Equipments safety | lecture  | Semester exam and short examsOral exam |
| 9 | 3 | Safety precaution after the end of work in the lab | Safety precaution after the end of work in the lab | lecture  | Semester exam and short examsOral exam |
| 10 | 3 | Risks and injuries in chemical laboratories | Risks and injuries in chemical laboratories | lecture  | Semester exam and short examsOral exam |
| 11 | 3 | Safety precautions for experiments requiring heating | Safety precautions for experiments requiring heating | lecture  | Semester exam and short examsOral exam |
| 12 | 3 | Waste disposal and recycling | Waste disposal and recycling | lecture  | Semester exam and short examsOral exam |
| 13 | 3 | Compressed gas safety | Compressed gas safety | lecture  | Semester exam and short examsOral exam |
| 14 | 3 | First aid | First aid | lecture  | Semester exam and short examsOral exam |
| 15 | 3 | Exam 2 | Exam 2 | lecture  | Semester exam and short examsOral exam |

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| 11. Infrastructure |
| 1. Books Required reading: |  Lisa Moran and Tina Masciangioli**....**'Chemical Laboratory Safety and Security |
| 2. Main references (sources) | Nicholas P. Cheremisinoff "Handbook of Hazardous Chemical Properties" |
| A- Recommended books and references (scientific journals, reports…). | Safety in chemical labrotary (Arabic version) |
| B-Electronic references, Internet sites… | <https://www.onepointesolutions.com/blog/lab-safety-symbols/> https://www.bu.edu/ehs/ehs-topics/chemical/safe-handling-and-storage-of-chemicals/ |
| 12. The development of the curriculum plan |
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| Update the information according to the development books and articles. |

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