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| **College**  | Faculty of Applied Science |
| **Department** | Chemistry Department |
| **Program** | Chemistry |
| **Course Title** | Research Methods | **Course Number:** | 15050411 |
| **Year** | 2023/2024 | **Semester:** | Second Semester |
| **Prerequisite(s)** | 4th year students |
| **Instructor** | Prof. Sameer Bsharat  |
| **Instructor's e-mail** | s.bsharat@ptuk.edu.ps |
| **Office Hours** | Sunday (12-1), Thursday (12-1) |
| **W** | **0597899364** | **Class Room:** | E107 |
| **Course description** | The course introduces the definition of research, types of research ethical principles and challenges, and the elements of the research process within quantitative, qualitative, and mixed methods approaches. Students will use these theoretical underpinnings to begin to critically review literature relevant to their field or interests and determine how research findings are useful in forming their understanding of their future work or their higher study. Students will practice writing scientific research proposals and reports.  |
| **Course Intended Learning Outcomes (CILOs)** | 1. Understand research terminology
2. Be aware of the ethical principles of research, ethical challenges and approval processes
3. Describe quantitative, qualitative and mixed methods approaches to research
4. Identify the components of a literature review process
5. Critically analyze published research
 |
| **Textbook(s)** | Creswell, J. W. Research design: Qualitative, quantitative and mixed methods approaches. 5th Ed. Thousand Oaks, CA: Sage, 2018.ISBN: 978-1-5063-8670-6 |
| **Other required material (References):** | Lectures notes. |
| **Other Resources used (e.g. e-learning, field visits, periodicals, software, etc. )** | Videos, Endnote X9 program  |

**Academic Quality Assurance Department**

**Course Syllabus Form**

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| **Course Teaching Methods** |
| **Teaching Method** | **CILOs** |
| Powerpoint, Classical teaching methods using the whiteboard  |  |
| Practical Writing Skills, Training using Endnote X9 program  |  |

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| **Assessment Type** | **Details/Explanation of assessment in relation to CILOs** | **Weight** | **Date(s)** |
| **Midterm Exam**  |  | 35 |  |
| **Activities (Research, homework)** |  | 20 |  |
| **Final exam** |  | 45 |  |
| **Total** |  | 100% |  |

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| **Course Intended Learning Outcomes (CILOs)** |
| **CILOs** | **Mapping to Program ILOs** |
| **On successful completion of the course, students will be able to:** | **a** | **b** | **c** | **d** | **e** | **f** | **g** | **h** | **I** | **j** |
| Understand research terminology | x | x | x |  |  |  |  | x |  | x |
| Be aware of the ethical principles of research, ethical challenges and approval processes |  | x |  |  | x |  | x |  |  | x |
| Describe quantitative, qualitative and mixed methods approaches to research |  | x |  | x |  | x | x |  |  |  |
| Identify the components of a literature review process | **x** | x |  |  | x |  |  | x |  |  |
| Critically analyze published research |  | x |  | x |  | x |  |  |  |  |

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| **Course Weekly Breakdown** |
| **Week** | **Topics Covered** | **CILOs** |
| 1 | CH. 1: Introduction |  |
| 2 | CH. 2: Research and Research Process  |  |
| 3 | CH. 3:Types of Research Methods  |  |
| 4 | CH. 4: Research Proposal  |  |
| 5 | Examples of Research Proposal  |  |
| 6,7 | CH. 5: How to write scientific report, Practices of writing scientific report |  |
| 8 | Med term |  |
| 9 | CH. 6: Bibliography  |  |
| 10,11 | CH. 7: Literature review  |  |
| 12,13 |  CH. 8: Examples of literature review |  |
| 14 | CH. 9: Endnote program  |  |
| 15 | CH. 10: How to make a good presentation  |  |
| 16 | Final Exam |  |

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| **Prepared by:** | **Prof. Sameer Bsharat** | **Signature**  |  |
| **Head of Department**  | **Dr. Mansour Arrawi** | **Signature** |  |
| **Date**  | **3. 03. 2024** |