**INSTITUTE OF EDUCATION**

**COURSE OUTLINE: Research in Science (RES1S)**

Learning Activities Plan:

|  |  |
| --- | --- |
| **Course Content** | **Timetable (in hrs)** |
| **I. Orientation and Introduction to the Course** | 1.5 |
| **II. An Introduction to Educational Research – Teaching Science**   1. The Process of Conducting Research Using Quantitative and Qualitative Approaches 2. The Action Research | 6 |
| **III. Research Designs for Teaching Science**   1. Survey Designs 2. Experimental Designs 3. Correlational Designs 4. Action Research Designs | 8 |
| **IV. The Steps in the Process of Research**   1. Identifying a Research Problem 2. Reviewing the Literature 3. Specifying a Purpose and Research Questions or Hypotheses 4. Collecting Quantitative Data 5. Analyzing and Interpreting Quantitative Data 6. Collecting Qualitative Data 7. Analyzing and Interpreting Qualitative Data | 10 |
| **Midterm Examinations** | **3** |
| **V. Exploring the Ways on How to Write A Research Paper**   1. Different Formats and Templates in Research Writing 2. The DO 16, S. 2017 – Research Management Guidelines 3. The Research Format for Science and Technology Fair 4. The AIMRAD Format | 10 |
| **VI. The Research Proposal for Researchers in Teaching Science**   1. Writing the Introduction 2. Writing the Review of Related Literature 3. Writing the Methodology 4. The Research Ethics Committee Guidelines | 12.5 |
| **Final Examinations** | **3** |