**INSTITUTE OF EDUCATION**

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

Learning Activities Plan:

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| **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** |