

# **RES511 Research Methods in Science and Engineering**

**Level:** 5

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY JULY

## **Synopsis:**

RES511 Research Methods introduces the graduate student to a range of methods and practices in research at the graduate level. This course provides a strong foundation over a wide range of experimental and theoretical research methods, as well as the format and structure required for research reporting in scholarly output.

## **Topics:**

- Overview of Research Methods
- Research Scope, Planning and Resources
- Types of Research Outputs
- Structure of Research Reports
- Experimental Methods
- Theoretical Methods
- Visual Presentation of Research Results

## **Textbooks:**

RES511 Study units

ISBN-13: SG-1131

RES511 Tutor Marked Assignments 01

ISBN-13: OT-4509

**Learning Outcome:**

- Appraise, compare, critique and evaluate the different types of research, and will also be able to select his/her type of research based on his/her interest, strength and/or available resources.
- Compare, critique, evaluate, judge, improve and appraise a given research plan, and will also be able to compose, construct, create and design a realistic research plan.
- Critique, evaluate, improve, appraise and compare research abstracts, and will also be able to compose, construct and create research abstracts for all scholarly output.
- Evaluate, improve, appraise, compare and critique literature reviews, and will also be able to select, compose, construct and create literature reviews for all scholarly output.
- Appraise, compare, critique and evaluate the appropriateness of thesis structure up to the doctoral level, and will also be able to compose, construct, create, design, revise and support his/her own doctoral thesis structure.
- Assess, compare, critique, evaluate and appraise the appropriateness of experimental and theoretical methods, and will also be able to choose, construct, create, design, formulate, measure, revise and defend his/her own experimental and theoretical methods.
- Compare, appraise, critique, evaluate and judge the various charts and other graphical formats for effective communication of research results, and will also be able to choose, conclude, select, combine and design charts and other graphical formats that are appropriate for effective communication of his/her own research results.

**Assessment Strategies - Regular Semester (Evening Class):**

<b>Components</b>	<b>Description</b>	<b>Weightage Allocation (%)</b>
Overall Continuous Assessment	TUTOR-MARKED ASSIGNMENT 1	30
Overall Examinable Components	Written Exam	70
<b>Total</b>		<b>100</b>

\*The information listed is subject to review and change.