Sample Brief Course Description	
Course title	Undergraduate Research
Course code	ECE 494
College	Engineering
Department / Program	Electrical Engineering /Electronic, Communications & Renewable Energy Engineering
Year/ Level	5^{th} year / 9^{th} Level
Course Type	A. ☐ University ☐ College ☐ Department ■ Others b. ☐ Required ■ Elective
Credited Hours	3
Contact Hours	(LT:3, LB:0, TR:0)
Pre-requisites (if any)	Passing (136) credit hours
Co-requisites (if any)	---
Course description	This course provides a practical introduction to research methods and the research community. Students in this course will understand the nature of applied research and the iterative process of research writing. The course helps students identify research topics, organize a literature review, and select appropriate research methods. At the end of the course, students complete a technical paper that includes an introduction, problem statement (research implications), literature review, methods section, results and analysis, and references, results, discussion, conclusions, and references.

	Publications of coursework and presentations of research work are highly encouraged and appreciated.
Course Main Objectives	Students will be able to: 1. Become familiar with research concepts and their components. 2. Discuss different research methods: statistical, theoretical, experimental or simulation. 3. Understand the structure of the technical proposal: problem statement, results, and a planned time to conduct research. 4. Critically evaluate research findings and draw conclusions.
Learning Outcomes	**1. Knowledge and Understanding:** 1.1 Recognize the appropriate research methodology: statistical, theoretical, experimental or simulation 1.2 Select the different means to disseminate research results through journals, magazines, conferences, and technical congregations and conferences to present his findings. 1.3 Recall knowledge of research methodologies in reports, presentations, research
	2. Skills: 2.1 Write literature review for a given research problem. 2.4 Communicate effectively to demonstrate theoretical knowledge comprehension and specialized transfer of knowledge, skills, and complex ideas.
	3. Values: 3.1 Support work teams providing leadership and creating a collaborative and inclusive environment while establishing goals to meet and planning tasks.
References	**Required Textbooks:** Leedy, Paul D., and Jeanne Ellis Ormrod. Practical research: Planning and design. Pearson. One Lake Street, Upper Saddle River, New Jersey 07458, 2019.