Sample Brief Course Description	
Course title	Programming Applications for Engineers
Course code	ECE 201
College	Engineering
Department / Program	Electrical Engineering
Year/ Level	3/5
Course Type	A. ☐ University ☐ College ■ Department ☐ Others b. ■ Required ☐ Elective
Credited Hours	3
Contact Hours	(LT:2, LB:2,TR:0)
Pre-requisites (if any)	CS 110T
Co-requisites (if any)	---
Course description	This course is four credit hours (2 Theory, 4 Laboratory) that cover up Fundamental principles, concepts and methods of programming (C and MATLAB), with emphasis on applications in the physical sciences and engineering. Basic problem solving and programming techniques; use of programming logic in solving engineering problems.
Course Main Objectives	The course is intended for the students to:

	1. Introduce the uses of computer languages in the analysis of contemporary scientific problems covering the basic syntax and structure with examples drawn from real applications. 2. Covers both conceptual areas of converting a problem to be solved into a computer-based solution, and specific aspects of individual languages and the types of problems they are best suited to solve. 3. Emphasis is placed on the importance of structure, documentation, major toolboxes and libraries, interfacing techniques and platform specific issues.
Learning Outcomes	**Knowledge and Understanding:** 1. Demonstrate an understanding of key concepts in programming and analyze alternative algorithm designs to implement a solution designed to make efficient use of limited resources of the computer. 2. Demonstrate competency in the fundamental principles, concepts and methods of programming (C and MATLAB), with emphasis on developing solutions in the domains of physical sciences, mathematics and engineering.
	Skills: 1. Explore common programming concepts in various computing environments and implement those concepts across more than one language.
	Values: 1. Gain experience in organization and implementation of a small team assignment by group discussions, system integration, project management and documentation skills.