EEX 3417 Software Development for Engineers

Level	3
Course Code	EEX 3417
Course Title	Software Development for Engineers
Credit value	4
Core/Optional	Core (B. Tech.)
Course Aim/s	Apply fundamental concepts of programming to develop a software application to solve a problem.
Course Learning Outcomes (CLO):	At the completion of this course student will be able to: CO1 Demonstrate the ability to gather requirements to develop a software solution CO2 Describe an algorithmic solution to a problem using pseudocode and flowcharts. CO3 Design a solution to a problem using structured design principles and object oriented design principles. CO4 Applies fundamental concepts of programming to write, test, debug and deploy computer programs. CO5 Uses Database Management Systems to represent data related to a problem. CO6 Describe security threats for software and the basic techniques to make software secure. CO 7 Use Numerical Computing Software for engineering problem solving.
Content	**Outline Syllabus:** Unit I – Introduction to Software Systems Development Unit II – Introduction to Programming Unit III – Application Software in Engineering Unit IV – Database Management Systems and Interface Design Unit V – Software Development Life Cycle **Laboratory classes** Programming in C and creating a GUI to connect to a database with open source software **Mini project** Individual project which includes a GUI and a simple database