Course Title	**MATHEMATICS FOR COMPUTING I**
Course Code	**MAT 122**
Course Purpose and Objectives	The purpose of this course is to introduce students to Mathematics for Computing in a pleasant and comprehensive manner. The students are encouraged to integrate Computing and mathematics for exploring the rich applications of mathematics to the Computing field, such as in Computer Graphics. The assignments are carried out using the technical computing language MATLAB. The MATLAB command syntax is supported in several software packages, as well as in MATLAB itself, and is being used throughout this module.
Learning Outcomes	1. Explain the strength of the combined knowledge of mathematics, computing and engineering as it appears in modern computing applications. 2. Discuss the importance of certain algebraic techniques, computing & engineering functions and trigonometric functions. 3. Discuss the significance of discrete mathematics, binary number system, set theory, logic and Boolean algebra in the foundation of digital computing. 4. Explore complex numbers and quaternions usage in Computing Apply various differentiation and integration techniques. 5. Explain the wide range of Computing applications based on the vector theory. 6. Explain the importance of sequences and series in computing.
Course Content	- Introduction to Mathematics for Computing - Coordinate Systems - Discrete Mathematics - Sequences and Series - Vectors - Matrix Algebra - Complex Numbers and Quaternions - Differentiation - Integration - Assignments