Computer Science - AS			
Program Name: Computer Science	**Outcome #1**	**Outcome #2**	**Outcome #3**
Outcomes	Analyze, identify, design, implement and evaluate computing requirements for both theoretical and practical problems by developing critical thinking and problem-solving skills	Demonstrate fluency in one programming language to produce useful algorithms that solve mathematical, graphical and other structures	Demonstrate fluency in one programming language to produce useful algorithms that solve mathematical, graphical and other structures
IST/CSC102 - Introduction to Information Technology proposed	Compare, contrast and select appropriate technology to enhance personal and professional tasks Evaluate and employ safe security computing practices	Critically evaluate data through technology resources	
CSC109 UNIX/Linux Operating System	Choose appropriate UNIX/Linux operating system commands to make effective use of the environment to solve problems	Write efficient, effective scripts with documentation	Write efficient, effective scripts with documentation Research and present information and resources utilizing new commands
CSC 132 Introduction to C and C++ Programming	Critical Thinking and Problem Solving - use skills for analysis of programming problems and selection of algorithms	Information Literacy – Use textbook, programming references and online help to access necessary information Computation – Use mathematical skills to develop algorithms and verify program outputs	Computation – Use mathematical skills to develop algorithms and verify program outputs.
IST/CSC133 Introduction to Visual Basic -proposed	Develop and debug applications using Visual Basic 2010 that run under Windows operating system	Work in teams to produce design, documentation, and coding	Research and present one project on assigned VB problem
CSC 134 Introduction to Java Programming	Critical Thinking and Problem Solving - use skills for analysis of programming problems and selection of algorithms	Information Literacy – Use textbook, programming references and online help to access necessary information Computation – Use mathematical skills to develop algorithms and verify program outputs	Computation – Use mathematical skills to develop algorithms and verify program outputs.
IST 154 Networking Basics	Score a passing grade on a simulated Network+ exam by CompTIA Practice network etiquette during lab exercises	Practice network etiquette during lab exercises	Administer a windows network environment including users and group management. Solve problems in a network enviornment including cabling and nic cards
IST 155 Networking I	Sucessfully pass Cisco I exam by Cisco Practice network etiquette during lab exercises	Discuss importance of firewalls within a networked environment. Solve problems involving subnets.	Install and maintain router configuration environment. Troubleshoot cabling problems within a network.
CSC 202 Systems Design and Analysis	Analyze business information needs to develop an appropriate strategy to address these areas using proven industry analysis and design techniques	Work in teams to determine the requirements and design of an information system and then orally present it to peers and professionals	Work in teams to determine the requirements and design of an information system and then orally present it to peers and professionals
CSC 232 Advanced C++ Programming	Critical Thinking and Problem Solving - use skills for analysis of programming problems and selection of algorithms	Create flowcharts and/or pseudocode that outline the steps involved in program assignments. These can be discussed by peers, supervisors and clients Also create a user's manual for programming projects	Participate in group discussion of programming concepts during class lecture.
MAT 204 - Calculus II	Students will be required to provide heuristic and visual justification of important results.	Students will use calculus to solve applied problems from a variety of disciplines ranging from biology, economics, business, engineering, and the social sciences, but primarily focusing on applications from physics and mathematics.	Apply mathematical methods involving arithmetic, algebra, geometry, and graphs to solve problems.4) The ability to use numerical data and apply mathematical concepts appropriately
MAT 206 - Differential Equations	To use Laplace transformations to solve differential equations. To classify a given equation and determine a method to use to solve that equation. To use technology, in the form of a computer algebra package, the graphing calculator and other programs, to assist in the problem-solving process.	To effectively communicate results and the thought process that led to those results. The ability to use numerical data and apply mathematical concepts appropriately. To work effectively in groups.	Several methods of solving linear differential equations. To solve given types of non-linear differential equations. To use differential equations to solve application problems.

MAT 207 - Discrete Mathematics	Solve counting problems using combinatorial techniques. Perform set operations, including intersection, union, and finding the complement.		The ability to use numerical data and apply mathematical concepts appropriately. Understand the relationship between a statement and its converse, inverse, and contra-positive, including how to correctly negate statements. Perform set operations, including intersection, union, and finding the complement.
MAT 208 - Linear Algebra	Critically analyze and construct mathematical arguments that relate to the study of introductory linear algebra Communicate and understand mathematical statements, ideas and results, both verbally and in writing, with the correct use of mathematical definitions, terminology and symbolism Work collaboratively with peers and instructors to acquire mathematical understanding and to formulate and solve problems and present solutions	Use technology, where appropriate, to enhance and facilitate mathematical understanding, as well as an aid in solving problems and presenting solutions	Use computational techniques and algebraic skills essential for the study of systems of linear equations, matrix algebra, vector spaces, eigenvalues and eigenvectors, orthogonality and diagonalization. Use visualization, spatial reasoning, as well as geometric properties and strategies to model, solve problems, and view solutions, especially in R2 and R3, as well as conceptually extend these results to higher dimensions.