COMPUTER SCIENCE (CSC)

CSC100AA / Introduction to Computer Science (C++)
3 Credits / 4.0 Periods for Lecture & Lab
Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC100AB / Introduction to Computer Science (C++)
4 Credits / 4.0 Periods for Lecture & Lab
Concepts of problem-solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110 / Introduction to Computer Science (Java)
3 Credits / 3.0 Periods for Lecture & Lab
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110AA / Introduction to Computer Science (Java)
3 Credits / 4.0 Periods for Lecture & Lab
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC110AB / Introduction to Computer Science (Java)
4 Credits / 4.0 Periods for Lecture & Lab
Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC120 / Digital Design Fundamentals
4 Credits / 6.0 Periods for Lecture & Lab
Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, ROMs, PLDs, synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits. Prerequisites: None. Corequisites: CSC100 or CSC110 or permission of Instructor or Division or Department Chair.
Crosslisted: EEE120
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC150 / Programming in C/C++
3 Credits / 4.0 Periods for Lecture & Lab
Introduction to C and C++ programming. Flow control, functions, pointers, data structures, file handling, and introduction to object-oriented programming. Prerequisites: Permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC150AA / Programming In C/C++
4 Credits / 4.0 Periods for Lecture
Introduction to C and C++ programming. Flow control, functions, pointers, data structures, file handling, and introduction to object-oriented programming. Prerequisites: Permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180 / Computer Literacy
3 Credits / 3.0 Periods for Lecture
Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180AA / Computer Literacy
3 Credits / 4.0 Periods for Lecture & Lab
Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC180AB / Computer Literacy
4 Credits / 4.0 Periods for Lecture
Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC181 / Applied Problem Solving With Visual Basic
3 Credits / 3.0 Periods for Lecture
Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.
Division: Business and Computing Studies

CSC181AA / Applied Problem Solving With Visual Basic
3 Credits / 4.0 Periods for Lecture & Lab
Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.
Division: Business and Computing Studies

CSC181AB / Applied Problem Solving With Visual Basic
4 Credits / 4.0 Periods for Lecture
Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC182 / Principles Of Programming With C#.NET
3 Credits / 3.0 Periods for Lecture
Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC182AA / Principles Of Programming With C#.NET
3 Credits / 4.0 Periods for Lecture & Lab
Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications. Prerequisites: None.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC200 / Principles of Computer Science (Java)
3 Credits / 3.0 Periods for Lecture & Lab
Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java. Prerequisites: A grade of C or better in CSC110 or (CSC100 or equivalent) and permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC200AA / Principles of Computer Science (Java)
3 Credits / 4.0 Periods for Lecture & Lab
Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java. Prerequisites: A grade of C or better in CSC110 or (CSC100 or equivalent) and permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC200AB / Principles of Computer Science (Java)
4 Credits / 4.0 Periods for Lecture & Lab
Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java. Prerequisites: A grade of C or better in CSC110 or (CSC100 or equivalent) and permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205 / Object Oriented Programming and Data Structures
3 Credits / 3.0 Periods for Lecture & Lab
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110 or permission of Instructor.

SUN# CSC 2205
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205AA / Object Oriented Programming and Data Structures
3 Credits / 4.0 Periods for Lecture & Lab
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205AB / Object Oriented Programming and Data Structures
4 Credits / 4.0 Periods for Lecture & Lab
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205AC / Object Oriented Programming and Data Structures
4 Credits / 5.0 Periods for Lecture & Lab
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC205AD / Object Oriented Programming and Data Structures
4 Credits / 6.0 Periods for Lecture & Lab
Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms. Prerequisites: A grade of C or better in CSC110 or permission of Instructor.
Fulfills: Computer/Statistics/Quantitative Applications [CS]; Computer/Stats/Quantitative Apps [CS]-in combo
Division: Business and Computing Studies

CSC210 / Data Structures And Algorithms (Java)
3 Credits / 3.0 Periods for Lecture & Lab
Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language. Prerequisites: A grade of C or better in CSC200.
Division: Business and Computing Studies

CSC210AA / Data Structures and Algorithms (Java)
3 Credits / 4.0 Periods for Lecture & Lab
Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language. Prerequisites: A grade of C or better in CSC200.
Division: Business and Computing Studies

CSC210AB / Data Structures and Algorithms (Java)
4 Credits / 4.0 Periods for Lecture & Lab
Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language. Prerequisites: A grade of C or better in CSC200.
Division: Business and Computing Studies

CSC220 / Programming for Computer Engineering
3 Credits / 5.0 Periods for Lecture & Lab
Introduction to procedural programming (C/C++) and hardware description language (VHDL). Prerequisites: A grade of C or better in (CSC/EEE120 and CSC205), or permission of Instructor or Division or Department Chair.
Division: Business and Computing Studies

CSC230 / Computer Organization and Assembly Language
4 Credits / 5.0 Periods for Lecture & Lab
Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory. Prerequisites: A grade of C or better in [(CSC100 or CSC110) and CSC/EEE120], or permission of Instructor or Division or Department Chair.
Crosslisted: EEE230
Division: Business and Computing Studies

CSC240 / Introduction to Different Programming Languages
3 Credits / 5.0 Periods for Lecture & Lab
Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.
Division: Business and Computing Studies

CSC283 / Bioinformatics and Scientific Computing
3 Credits / 4.0 Periods for Lecture & Lab
Introduction to bioinformatics, including history, concepts, major genetic databases and access tools. Computer software and techniques for analyzing one nucleotide or protein sequence, searching for similar sequences, and aligning and comparing two or multiple sequences. Microarray analysis and phylogenetic trees. Application of standard software to bioinformatic computing tasks, including word processing of reports, and use of spreadsheets for statistical analysis and graphing. Text editors, Unix, Internet web site searching and construction, and ethics. Prerequisites: A grade of C or better in [(BIO156 or BIO181) and (MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+ or higher)], or permission of Instructor or Department/Division Chair. Concurrent enrollment in, or previous completion of, BIO208 is strongly suggested but not required.
Crosslisted: BIO283
Division: Business and Computing Studies