COSC - COMPUTER SCIENCE

COSC 1301 Introduction to Computing 3 Credit Hours (3 Lec, 1 Lab)
Overview of computer systems-hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics and databases. Current issues such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science.
Course Type: Component Area Option - A CAPP

COSC 1309 Logic Design 3 Credit Hours (3 Lec, 2 Lab)
A discipline approach to problem solving with structured techniques and representation of algorithms using pseudo code and graphical tools. Discussion of methods for testing, evaluation, and documentation.

COSC 1336 Programming Fundamentals I 3 Credit Hours (4 Lec, 2 Lab)
This course introduces the fundamental concepts of structured programming, and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. This course is included in the Field of Study Curriculum for Computer Science,

COSC 1415 Fundamentals of Programming 4 Credit Hours (4 Lec, 2 Lab)
Introduction to computer programming. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

COSC 1436 Programming Fundamentals I 4 Credit Hours (3 Lec, 3 Lab)
The course introduces the fundamental concepts of structured programming, and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. Prerequisite: College ready in Math, or credit or concurrent enrollment in MATH 1314 or higher level math
Course Type: Component Area Option - A CAPP

COSC 1437 Programming Fundamentals II 4 Credit Hours (3 Lec, 3 Lab)
This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. Prerequisite: COSC 1436

COSC 2425 Computer Organization 4 Credit Hours (3 Lec, 3 Lab)
The organization of computer systems is introduced using assembly language. Topics include basic concepts of computer architecture and organization, memory hierarchy, data types, computer arithmetic, control structures, interrupt handling, instruction sets, performance metrics, and the mechanics of testing and debugging computer systems. Embedded systems and device interfacing are introduced. Prerequisite: College ready in Math, Reading and Writing
Prerequisite: ((Writing-College Ready with a minimum score of 1300, Reading-College Ready with a minimum score of 1300, and Math-College Ready with a minimum score of 1300), (ENGL 376 with a grade of C_DV or higher, READ 376 with a grade of C_DV or higher, and MATH 376 with a grade of C_DV or higher), (ENGL 376 with a grade of P_DV or higher, READ 376 with a grade of P_DV or higher, and MATH 376 with a grade of P_DV or higher), (MATH 314 with a grade of C_DV or higher and INRW 376 with a grade of C_DV or higher), (MATH 324 with a grade of C_DV or higher and INRW 376 with a grade of C_DV or higher), (TSIA2 Math CRC with a minimum score of 950, TSIA2 ELAR CRC with a minimum score of 945, and TSIA2 Essay with a minimum score of 5), (TSIA2 Math CRC with a minimum score of 950, TSIA2 Essay with a minimum score of 5, and TSIA2 ELAR Diagnostic with a minimum score of 5), (TSIA2 Math Diagnostic with a minimum score of 6, TSIA2 ELAR CRC with a minimum score of 945, and TSIA2 Essay with a minimum score of 5), (TSIA2 Math Diagnostic with a minimum score of 6, TSIA2 Essay with a minimum score of 5, and TSIA2 ELAR Diagnostic with a minimum score of 5), (MATH 314 with a grade of P_DV or higher and INRW 376 with a grade of P_DV or higher), or (MATH 324 with a grade of P_DV or higher and INRW 376 with a grade of P_DV or higher))

COSC 2436 Programming Fundamentals III 4 Credit Hours (3 Lec, 3 Lab)
Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), searching, sorting, recursion, and algorithmic analysis. Programs will be implemented in an appropriate object oriented language. Prerequisite: COSC 1437