

COMPUTER SCIENCE (CSCI)

CSCI 1210 Logic and Design 3 Credits

This course introduces the basics of everyday logic. Students will learn how to think about design and logic flow. They will use flowcharts, and pseudo code in communicating and synthesizing information solving business problems. Students will be exposed to algorithm design and development in the process of decision making in all areas of the human experience. An introduction to computer hardware and components will also be provided.

Prerequisite(s): Successful completion of MATH 1001, MATH 1111 or STAT 1401.

CSCI 1301 Computer Science I 4 Credits

This course includes an overview of computers and programming; problem solving and algorithm development; simple data types; arithmetic and logic operators; selection structures; repetition structures; text files; arrays (one and two dimensional); procedural abstraction and software design; modular programming (including subprograms or the equivalent).

Prerequisite(s): MATH 1111.

CSCI 1302 Computer Science II 4 Credits

This course includes an overview of abstract data types; arrays (multi-dimensional) and records; sets and strings; binary files; searching and sorting; introductory algorithm analysis (including Big-O); recursion, pointers and linked lists; software engineering concepts; dynamic data structures (stacks, queues, trees).

Prerequisite(s): CSCI 1301 with the grade of C or better.

CSCI 2153 Intro to Database Systems 4 Credits

This course introduces students to the concepts and methods fundamental to databases development and database management systems. Students will design, implement and maintain a relational database. Students will explore basic functions and features of a database management system (DBMS), with an emphasis on the relational model. Students use various applications to construct databases and are introduced to Structured Query language (SQL). Topics include normalization, ERD, logical and physical design, SQL query, database applications, and data warehouse. Labs will use a database management system (DBMS) such as Oracle, MS SQL, MySQL or Access.

Prerequisite(s): CSCI 1301 with the grade of C or better.

CSCI 2323 Introduction to Networking 4 Credits

This course provides the student with an overview of networking concepts; creating network diagrams; network protocols and addressing; network cabling; wireless networking; network connections, virtualization, and Virtual Private Networks (VPN); encryption protocols; subnets; risk management and security in network design.

Prerequisite(s): CSCI 1301 with the grade of C or better.