

COMPUTER SCIENCE (CPSC)

CPSC 507 Computer Programming (3)

A problem-solving approach to learning computer programming.

Topics include variables, data types, conditional statements, loops, arrays, recursion, principles of software engineering, object-oriented programming, data structures, algorithms, and the use of standard libraries available in a variety of programming languages. The course will use commercially common programming languages and integrated development environments (IDEs).

CPSC 529 Database Systems (3)

Basic concepts of databases. Topics include conceptual data modeling, database design and normalization, and database implementation. Use of SQL for data definition, manipulation, and query processing. While primary emphasis will be on the relational model and traditional RDBMS, discussion will also include a survey of techniques for handling non-relational data models, massive datasets, and unstructured data, including data warehousing, in-memory databases, NewSQL, NoSQL and Hadoop.