

# COMPUTATIONAL SCIENCE (COSC)

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**COSC 2020 Comput Concepts & Applic (4)**

This course introduces students to the foundations of algorithm development and programming, basics of matrix algebra and numerical analysis, solving ordinary differential equations.

**Corequisite(s):** COSC 2021.

**COSC 2021 Computing Concepts & App Lab (0)**

Lab for ENGP 2020.

**Corequisite(s):** COSC 2020.

**COSC 3000 C++ Prog For Sci & Engr (3)**

This course begins with an introduction to C++ and will cover up to relatively sophisticated programming techniques including data structures, abstract data types, interfaces, and algorithms. The goal is for the student to get a taste of the design and implementation of large programs and to become proficient at programming in C++.

**COSC 3100 Data Visualization (3)****COSC 3200 Large Scale Computation (3)****COSC 6000 C++ Prog For Sci & Engr (3)**

This course begins with an introduction to C++ and will cover up to relatively sophisticated programming techniques including data structures, abstract data types, interfaces, and algorithms. The goal is for the student to get a taste of the design and im

**COSC 6100 Data Visualization (3)****COSC 6200 Large Scale Computation (3)****COSC 6600 Comput Model Biomed Sys (4)**

The objective of this graduate course is to provide students with the skills and knowledge necessary for computational modeling of biological and physiological systems. The first half of the course will cover introduction to UNIX, and elements of programming.

**Corequisite(s):** COSC 6601.

**COSC 6601 Comp Model of Biomed Sys Lab (0)**

Lab section for COSC 6600.

**Corequisite(s):** COSC 6600.

**COSC 6700 Math Models Ecol & Evolution (3)**

An introductory course in mathematical modeling in biology with emphasis on construction and interpretation of models in ecology. The goals of the course are to provide training in a wide variety of mathematical and computational techniques that are used