

SOFTWARE ENGINEERING and APPLIED MATHEMATICS

John Symms

Associate Professor of Mathematics

This interdisciplinary major is designed for students with a strong interest both in Computer Science and in Mathematics. Thus, the learning outcomes for the programs are those of the Computer Science and Mathematics programs (see pages 107 and 201). The program provides an in-depth foundation in both software engineering and the mathematics that underpins it, showcasing the links between the two disciplines. Students who pursue this major graduate and work in the field of software development or they may decide to pursue further education in graduate school in either computer science or industrial mathematics.

Bachelor of Science

Computer Science 110, Problem Solving through Programming

Computer Science 111, Introduction to Java

Computer Science 226, Data Structures Using Java

Computer Science 271, Computer Organization

Computer Science 272, Computer Architecture

Computer Science 323, Programming Languages

Computer Science 341, Software Design and Development

Computer Science 351, Database Design

Computer Science 440, Software Engineering

Computer Science 450, Projects for Computer Science Majors

Mathematics 160 and 161, Calculus I and II

Mathematics 205, Discrete Mathematics or

Mathematics 206, Transition to Advanced Mathematics

Mathematics 207, Calculus III

Mathematics 208, Linear Algebra

Mathematics 309, Differential Equations

Mathematics 312, Theory of Probability and Statistics

Mathematics 324, Numerical Analysis