COMPUTER SCIENCE, BACHELOR OF SCIENCE

College: College of Science and Health
Department: Mathematical and Computational Sciences
Student Type: Traditional Undergraduate
Degree: Bachelor of Science
Campus: Both Lisle Campus and Mesa Campus

Progression in the Computer Science Program

To progress in the Computer Science program students must complete the introductory sequence of CMSC 2200 Computer Programming and CMSC 2205 Data Structures and Algorithms I with a GPA of 2.500 or above and a grade of "C" or better in each of these courses. A transfer student must meet these requirements through equivalent transfer courses. Additionally, a transfer student must earn a GPA of 2.500 or above in all major classes (excluding labs) during the first semester at Benedictine in order to progress in the Computer Science program.

If it is determined at any time that a student cannot progress in the Computer Science program or cannot graduate with a Computer Science degree, the student will be required to change his or her major and seek academic advising outside of that program.

Requirements - Major

The Computer Science major must complete a minimum of 51 semester credit hours of computer science courses numbered 2000 or above, including 33 semester credit hours at the 3000 level or above. Required courses are:

Code	Title	Hours
CMSC 2200	Computer Programming	3
CMSC 2205	Data Structures and Algorithms I	3
CMSC 2220	Computer Architecture	3
CMSC 2264	Introduction to Web Application Development	3
CMSC 2330	Introduction to Database Systems	3
CMSC 2365	Introduction to Computer Networks	3
CMSC 3270	Data Structures and Algorithms II	3
CMSC 3274	Object-Oriented Design and Programming	3
CMSC 3301	Technical Communications	3
CMSC 3303	Computer Science Ethics	1
CMSC 3330	Database Management Systems	3
CMSC 3391	Current Topics in CS	2
CMSC 4310	Operating Systems	3
CMSC 4375	Software Engineering	3
CMSC 4398	Capstone Project	3
Select three of the following:		9
CMSC 4363	Data Mining	
CMSC 4364	Mobile Commerce	
CMSC 4365	Computer Networks and Data Communication	
CMSC 4370	Algorithm Design and Analysis	
CMSC 4373	Big Data	
CMSC 4374	Advanced Web Application Development	
CMSC 4380	Artificial Intelligence	
CMSC 4383	Machine Learning	
CMSC 4384	Enterprise Architecture	
CMSC 4385	Theory of Programming Languages	
CMSC 4391	Selected Topics	
MATH 1150	Introduction to Statistics	3
MATH 1115	Business Calculus	3
or MATH 2210	Calculus I	
MATH 2240	Discrete Mathematics	4
Total Hours		**61**

- CMSC 3396 ACCA Seminar, CMSC 3397 Undergraduate Project, and CMSC 3399 Internship do not count toward major credit.
- Grades of "C" or better are required to apply computer science or computational courses toward the degree.
- A student cannot major in both Computer Science and Computer Information Systems.

Objectives

Students in the Computer Science or Computer Information Systems program will achieve the following student learning outcomes (SLO):

Student Learning Outcome 1: Demonstrate a comprehensive understanding of the Java programming language.
• University SLO: 1. Disciplinary Competence and Skills; 5. Analytical Skills

Student Learning Outcome 2: Demonstrate a thorough understanding of unit testing.
• University SLO: 1. Disciplinary Competence and Skills; 5. Analytical Skills

Student Learning Outcome 3: Demonstrate a strong understanding of algorithms.
• University SLO: 1. Disciplinary Competence and Skills; 2. Critical and Creative Thinking Skills; 5. Analytical Skills

Student Learning Outcome 4:   Develop oral and written communication skills.
• University SLO: 3. Communication Skills

Student Learning Outcome 5: Obtain practical experience with version control.
• University SLO: 1. Disciplinary Competence and Skills