Information Systems (BS)

This program is offered by the Walker School of Business & Technology/Math & Computer Science Department.

Program Description
The information systems program combines select foundations of the traditional computer science curriculum with the data analytics technologies necessary to provide the proper analysis of business data to information.

Students in this program will learn how to design and implement databases and how to plan for new and modified information systems. Project management skills are introduced, which enable a project to be kept on-budget and on-time. Students will also experience a broad category of applications and techniques for gathering, storing, analyzing and providing access to data to help business users perform better decision making.

Graduates from this program will be prepared to work with many aspects of information systems while also meeting the demand for data and information analysts who can understand database functions, query data and perform activities in analytical processing. They will produce results that move the organization forward and will become key professionals in making it successful.

Learning Outcomes
• Students will demonstrate critical thinking skills in the field of computer science.
• Students will demonstrate the ability to solve problems related to the program content.
• Students will demonstrate an understanding of the concepts and principles of software systems.
• Students will analyze, design and document a system component using appropriate computer science techniques and models.
• Students will make a formal presentation of a software system project including the demonstration of a working application.
• Students will be able to demonstrate critical thinking skills in the field of data analytics.
• Students will be able to demonstrate an understanding of fundamental principles of data analytics systems and technologies.

Degree Requirements
A minimum of 128 credit hours consisting of the following:

• 54 required credit hours
• Applicable University Global Citizenship Program hours
• Electives

At least 18 of the required 36 computer science credit hours must be taken at Webster University.

All upper-level courses must be taken at Webster University.

Required Courses
• COSC 1550 Computer Programming I (3 hours)
• COSC 1560 Computer Programming II (3 hours)
• COSC 1570 Math for Computer Science (3 hours)
• COSC 2610 Operating Systems (3 hours)
• COSC 2670 Telecommunications (3 hours)
• COSC 2810 Systems Analysis and Design (3 hours)
• COSC 3410 Computer Security (3 hours)
• COSC 3500 IT Project Management (3 hours)
• COSC 4110 Database Concepts (3 hours)
• COSC 4120 Database Applications (3 hours)
• COSC 4810 Information System I (3 hours)
• COSC 4820 Information System II (3 hours)

Students who do not have a minor or certificate in data analytics are required to select 18 hours (6 courses) from the following list of courses:

• STAT 1100 Descriptive Statistics (3 hours)
• COAP 2560 Electronic Spreadsheet (3 hours)
• CSIS 1500 Introduction to Business Technologies (3 hours)
• CSIS 2300 Electronic Commerce (3 hours)
• CSIS 2500 Introduction to Data Science (3 hours)
• CSIS 3410 Information Analysis (3 hours)
• CSIS 3500 Service-Oriented Architecture (3 hours)
• CSIS 3700 Data-Analytics Methods (3 hours)
• CSIS 4320 Data Warehousing (3 hours)
• CSIS 4330 Data Mining (3 hours)