

# COLLEGE OF ARTS AND SCIENCES

## BUSINESS COMPUTER INFORMATION SYSTEMS

### Faculty

- Greg Gagne (Arts & Sciences)
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- Alysse Morton (Business)

Business Computer Information Systems is a joint program between [Arts & Sciences](#) and the [Bill & Vieve Gore School of Business](#).

### Program Goals

- Actively participate in and execute the practice of software development.
- Plan, design, test, and implement a hardware or software project both individually and as part of a group.
- Apply business, statistical, modeling, and computer science principles and skills to identify business problems, research and craft solution strategies, and develop an effective course of action.
- Use a data and computer science platforms to process structured and unstructured data, construct data architecture, design visual dashboards, and deploy predictive models to find solutions to business problems that achieve stated objectives.

### Objectives

Business Computer Information Systems (BCIS) is an interdepartmental program combining studies in computer information systems from Westminster's Department of Computer Science and Bill and Vieve Gore School of Business.

Business Computer Information Systems professionals must have sound technical knowledge of computers, communications, software, but they must also understand how organizations and how they function. Thus, the Business Computer Information Systems major provides a combination of technical computer science coursework as well as several business courses, including a strong emphasis on the acquisition, deployment, and management of information technology and data architecture, applying statistical and quantitative methods, employing predictive models, and making data-driven decisions on a solid foundation of business and economic knowledge.

### Program Requirements

Students must maintain a minimum 2.5 GPA in all courses required for the Business Computer Information Systems major.

Students must meet the university-wide graduation requirements in addition to the Business Computer Information Systems major:

- 124 total hours
- 30 upper division hours
- WCore or Honors College requirements

### Business Computer Information Systems Major

Requirement Description	Credit Hours	Prerequisites
<b>I. World Language Requirement</b>	<b>8</b>	
Business Computer Information Systems majors must complete eight credit hours in a single world language.		
<b>II. Prerequisite Programming Courses</b>	<b>4</b>	
Take four credits from: CMPT 190 Learning to Code CMPT 210 Just Enough Java CMPT 201 Introduction to Computer Science  Students with prior programming experience may apply any upper division CMPT coursework toward the Programming Course requirement.	2 2 4	CMPT 190 or prior programming experience  Co-requisite CMPT 215
<b>III. Lower Division Courses</b>	<b>20</b>	
BUSI 101A Business Fundamentals I: Communicating	3	

Requirement Description	Credit Hours	Prerequisites
BUSI 101B Business Fundamentals I: Calculating	3	MATH 101 or above
CMPT 202 Introduction to Data Structures	4	CMPT 201 or CMPT 210
ACCT 213 Financial Accounting	3	BUSI 101A, BUSI 101B*
DATA 220 Introduction to Statistics	4	
ECON 253 Elementary Macroeconomics	3	MATH 101 or above
<b>IV. Upper Division Courses</b>	<b>27</b>	
BUSI 300 Information Technology	3	BUSI 101A and BUSI 101B and CMPT 190 or CMPT 201*
BUSI 400 Business Analytics**	4	BUSI 300
BUSI 405 Business Analytics Project	1	BUSI 400; co- requisite CMPT 385
CMPT 307 Databases	4	CMPT 202
CMPT 322 Software Engineering	4	CMPT 307
CMPT 385 Senior Project Proposal Writing	1	CMPT 322
CMPT 390 Senior Capstone	2	CMPT 385, BUSI 400
MGMT 305 Principles of Management	4	BUSI 101A, BUSI 101B*
Complete one of the following:		
DATA 350 Statistical Modeling	4	DATA 220
DATA 360 Data Science with Python	4	DATA 220, CMPT 190 or CMPT 202
<b>V. Electives</b>	<b>10</b>	
CMPT 300/400-level course (excluding May Term)		
Business Electives - Complete two of the following:		
ACCT 313 Managerial Accounting	3	ACCT 213
ECON 263 Elementary Microeconomics	3	MATH 101 or above
FINC 300 Business Finance	3	ACCT 213, BUSI 101A, BUSI 101B, CMPT 190 or CMPT 201*
MGMT 309 Operations Management	3	BUSI 101A, BUSI 101B, CMPT 190 or CMPT 201*
MKTG 300 Principles of Marketing	3	BUSI 101A and BUSI 101B*
<b>Total Hours for BCIS Major</b>	<b>69</b>	

\*Transfer students take BUSI 102 in lieu of BUSI 101A and BUSI 101B. Students may also take CMPT 190 and 210 in lieu of CMPT 201.

\*\*BCIS majors should take BUSI 400 after they complete the two business electives. They can take it prior to or alongside CMPT 385.

**Recommended Plan of Study for BCIS**

	Fall Semester	Spring Semester
Year 1	BUSI 101A BUSI 101B CMPT 201	BUSI 300 CMPT 202 DATA 220
Year 2	ACCT 213 CMPT 307 ECON 253	CMPT 322 MGMT 305 Business Elective*
Year 3	Business Elective* DATA 350 or DATA 360	CMPT Elective** BUSI 400
Year 4	BUSI 405 CMPT 385 Language 1	CMPT 390 Language 2

For language 1 & language 2, choose from CHIN 110 & 111, FREN 110 & 111, JAPN 110 & 111, LATN 110 & 111, or SPAN 110 & 111.

\*Must complete two of the following business electives: ACCT 313, ECON 263, FINC 300, MGMT 309, or MKTG 300. These should be taken before BUSI 405.

\*\*Must complete one non-May Term CMPT 300/400 elective.