



## College of Engineering and Computing

### **Applied Computer Science, B.S.** **2023-2024** Concentration in Business Management

#### **Employers and Employment**

Computer scientists have a vast range of well-paid opportunities after college. Software and technology are everywhere; to solve the problems of the future, we need expert programmers with a solid grasp of both theoretical and applied computational competency to develop, maintain, and enhance these solutions. As computing has become ubiquitous, there are also many specialized cross-disciplinary opportunities to work on new and exciting ventures. As one of the nation's top technology hubs, the DC region hosts countless technology companies, governmental contractors, and non-governmental organizations, pursuing virtually any cause that resonates with you. Students at GMU have ample opportunities to work with elite companies, prepare for security clearances, and gain valuable work experiences in tandem with this strong educational program in computing.

#### **About the Applied CS Program**

The bachelor of science in applied computer science (BS ACS) is for students who want the knowledge and expertise of computer science to work in one of the many disciplines that require advanced computing techniques. These fields do not merely use computing but create new and interesting problems for the computer scientist. One such field is the area of Business Management.

#### **About the Business Management Concentration**

Management is a vital part of any business. The Business Management concentration explores the principles of management and marketing, organizational behavior and human resource management, as well as entrepreneurship and starting a business. Students in this concentration can further explore negotiations, social and cultural impacts, global management strategies, and more. With a solid background in Computer Science, graduates of this program will also be prepared to assess, implement, and deploy appropriate technologies that will drive the success or failure of an organization.

This program formalizes the connections between real world needs for management with the technology background to leverage modern and emerging tools and techniques for identifying and responding to the modern workplace. Many industries desperately need someone with both a strong management background as well as an understanding of the limits and opportunities of emerging technologies.

## Sample Schedule

### FIRST SEMESTER (14 CREDITS)

CS 110 Essentials of Computer Science	3
CS 112 Introduction to Programming	4
MATH 113 Analytical Geometry & Calculus	4
ENGH 100/101 [MC]	3

### SECOND SEMESTER (16 CREDITS)

CS 211 Object-Oriented Programming	3
MATH 114 Analytical Geometry & Calculus II	4
COMM 100/COMM101[MC]	3
BUS 100 [MC-SBS]	3
Literature [MC]	3

### THIRD SEMESTER (16 CREDITS)

CS 262 Low-Level Programming	3
MATH 125 Discrete Mathematics	3
MKTG 303 Principles of Marketing	3
Natural Science Elective	4
MGMT 303 Principles of Management	3

### FOURTH SEMESTER (15 CREDITS)

CS 310 Data Structures	3
CS 330 Formal Methods & Models	3
MGMT 313 Organizational Behavior	3
Arts [MC]	3
STAT 250 Introduction to Statistics I	3

### FIFTH SEMESTER (15 CREDITS)

MGMT 321 Introduction to Human Resource Management	3
MATH 203 Linear Algebra	3
ENGH 302 Advanced Composition	3
PSYC 100	3
Natural Science Elective	3

### SIXTH SEMESTER (16 CREDITS)

CS 321 Software Engineering	3
CS 367 Computer Systems and Programming	4
MGMT 451 Introduction to Entrepreneurship	3
Global Understanding [MC]	3
History [MC]	3

### SEVENTH SEMESTER (15 CREDITS)

CS 471 Operating Systems	3
CS 483 Analysis of Algorithms	3
BMGT Related Elective	3
BMGT Related Elective	3
General Elective	3

### EIGHTH SEMESTER (13 CREDITS)

BMGT Related Elective	3
MGMT 453 Starting a Business	3
CS 306 Synth of Ethics/Law	3
ACS Senior Elective	3
General Elective	1