WHAT IS A COMPUTER INFORMATION SYSTEMS B.B.A. MAJOR?

The purpose of an information system is to improve the flow of information within an organization so that better business decisions can be made. The Computer Information Systems (CIS) major prepares students for careers in planning, analyzing, designing, implementing and managing information systems.

THE CIS PROGRAM IS...

- designed to prepare graduates to thrive in management positions built on a foundation of solid technical skills, integrative business knowledge and a professional network of loyal JMU alumni
- a program combining cutting edge technology with 21st century business practices into a hands-on learning environment
- preparing our students with analytical, technical, organizational and interpersonal skills so they can hit the ground running when they begin their careers

CAREER POSSIBILITIES

- Business Analyst
- Business Application Developer
- Business Intelligence Specialist
- Chief Information Officer
- Computer Forensics Specialist
- Customer Support Manager
- Database Analyst
- IT Auditor
- IT Consultant
- IT Risk Advisor
- Management Consultant
- Network Manager
- Project Manager
- Security Analyst
- Software Engineer
- Systems Analyst
- Systems Integration Consultant
- Technical Sales Manager
- Telecommunications Analyst
- Web Developer

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CONTACT INFORMATION

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COMPUTER INFORMATION SYSTEMS
## Department Highlights

- Ranked No. 1 out of 13 in the state of Virginia, and No. 5 in the U.S. by College Factual, 2018

## Lower B.B.A. Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Considerations</th>
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<td>Business Analytics I</td>
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<td>COB 204</td>
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<td>COB 241</td>
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<tr>
<td>ECON 201</td>
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<tr>
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<td>COB 242</td>
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<td>COB 300</td>
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<td>COB 300A</td>
<td>Integrated Business: Finance</td>
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<tr>
<td>COB 300B</td>
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<tr>
<td>COB 300C</td>
<td>Integrated Business: Marketing</td>
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<td>COB 300D</td>
<td>Integrated Business: Marketing</td>
<td></td>
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<td>COB 318</td>
<td>Legal and Ethical Environment of Business</td>
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<td>COB 487</td>
<td>Strategic Management</td>
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</tr>
</tbody>
</table>

## Major Coursework and Upper B.B.A. Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Note:</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>COB 242</td>
<td>Managerial Accounting</td>
<td></td>
<td>COB 191 and Calculus are prerequisites for COB 291</td>
</tr>
<tr>
<td>CIS 221</td>
<td>Principles of Programming*</td>
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<td>COB 241 is a prerequisite for COB 242</td>
</tr>
<tr>
<td>CIS 301</td>
<td>Cloud Server Management</td>
<td></td>
<td>MATH 220 may be substituted for COB 191</td>
</tr>
<tr>
<td>CIS 304</td>
<td>Enterprise Architecture</td>
<td></td>
<td>MATH 235 (Calculus) is preferred for ECON and FIN</td>
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<tr>
<td>CIS 320</td>
<td>Computing Telecommunications Networks</td>
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<tr>
<td>CIS 330</td>
<td>Database Design and Application*</td>
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<tr>
<td>CIS 331</td>
<td>Intermediate Computer Programming*</td>
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<tr>
<td>CIS 361</td>
<td>CIS Internship (recommended)</td>
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<tr>
<td>CIS 454</td>
<td>Systems Analysis and Design</td>
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<tr>
<td>CIS 484</td>
<td>IS Development and Implementation</td>
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<tr>
<td>Two CIS Electives</td>
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</table>

## Graduation Requirements

- General Education
- B.B.A. Core
- Major Courses
- Non-business Electives (see advisor)
- 120 credit hours minimum
- 60 credit hours from a 4-year university
- 2.0 or higher cumulative GPA
- 2.0 or higher major GPA

## COB Acceptance

- Students are formally admitted into the College of Business as a B.B.A. major and permitted to register for COB 300 when the following requirements are met:
- Credit is earned for all eight lower B.B.A. core courses: COB 202, COB 204, COB 241, COB 291, ECON 200, ECON 201, Calculus, Statistics
- No B.B.A. core course is attempted more than twice
- A 2.7 average GPA is earned in the lower B.B.A. core
- Only grades earned at JMU are included in the GPA calculation. Calculus is not included in the GPA calculation.
- A COB 300 application is submitted to the COB Academic Success Center by Nov. 1 for Spring and April 1 for Fall

## Considerations

- COB 202, COB 204, COB 241, COB 291, ECON 200, ECON 201, Calculus, Statistics

- MATH 220 may be substituted for COB 191
- MATH 235 (Calculus) is preferred for ECON and FIN
- COB 191 and Calculus are prerequisites for COB 291
- COB 241 is a prerequisite for COB 242
- MATH 220 may be substituted for COB 191
- MATH 235 (Calculus) is preferred for ECON and FIN

- *C or better required
BUSINESS ANALYTICS MINOR

Business Analytics is a technical approach to analyzing problems and making business-related decisions. It uses statistical methods, machine learning, management science techniques and mathematical modeling to forecast the implications of various choices and identify the best alternatives. The minor in business analytics prepares students to solve complex decision problems in a business environment with a combination of quantitative skills and hands-on expertise using current software applications.

Admission to the BSAN minor is limited and based on a student’s performance in four competency areas: calculus, economics, management science and statistics. Students seeking to add the BSAN minor must submit an application by October 1st and will be admitted as a cohort each fall to start the BSAN program in the spring. A student must be able to take the 300-level BSAN courses on a schedule of one per semester in a three-consecutive semester period, starting in the spring.

Required Courses (after acceptance):
BSAN 390 - Statistical Modeling for Business Analytics
BSAN 391 - Decision Modeling for Business Analytics
CIS/BSAN 393 - Data Mining for Business Analytics

Electives (choose one of the following):
CIS 463 - Business Intelligence
CS/ISAT 344 - Intelligent Systems
ECON 475 - Financial Modeling and Risk Analysis
MATH 322 - Applied Linear Regression
MKTG 482 - Marketing Analytics

COMPUTER INFORMATION SYSTEMS MINOR

A minor in Computer Information Systems (CIS) will combine knowledge in the analysis and design of information systems with the understanding gained in a primary major. CIS is about computing in context. The context is business, and in particular the CIS pedagogical thrust emphasizes applications of information technology toward creating solutions for business-related problems. CIS is a technical field that requires mathematical and logical problem-solving ability, as well as the capacity to communicate effectively with a rigorous understanding of the business world. The minor is primarily structured to provide students in various disciplines with the opportunity to study business-oriented information systems.

Admission to the CIS minor is based on a student’s performance in seven competency areas: information systems, computer programming, calculus, statistics, critical thinking, writing and a quantitative-oriented business discipline.

Required Courses (after acceptance):
CIS 304 - Enterprise Architecture
CIS 330 - Database Design and Application
CIS 454 - Systems Analysis and Design

Electives (choose one of the following):
CIS 320 - Computing Telecommunications Networks
CIS 331 - Intermediate Programming
CIS 366 - Web Development
CIS 424 - Computer Security Management
CIS 434 - Information Technology Consulting
CIS 463 - Business Intelligence
CIS 464 - IS Project Management

COMPUTER INFORMATION SYSTEMS COB 300 PATHWAYS

<table>
<thead>
<tr>
<th>Traditional Pathway</th>
<th>Accelerated Pathway</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
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<tr>
<td>ECON 200/201</td>
<td>ECON 200/201</td>
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<tr>
<td>MATH 205/COB 191</td>
<td>MATH 205/COB 191</td>
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<td>COB 204</td>
<td>COB 204</td>
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<td>COB 241</td>
<td>COB 291</td>
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<tr>
<td>CIS 221</td>
<td>COB 242</td>
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<td></td>
<td>COB 202</td>
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<tr>
<td>Year 2</td>
<td>Year 2</td>
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<tr>
<td>COB 300A Management</td>
<td>COB 300A Management</td>
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<tr>
<td>COB 300B Finance</td>
<td>COB 300B Finance</td>
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<tr>
<td>COB 300C Operations</td>
<td>COB 300C Operations</td>
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<td>COB 300D Marketing</td>
<td>COB 300D Marketing</td>
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<tr>
<td>CIS 330</td>
<td>CIS 330</td>
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<tr>
<td></td>
<td>CIS 301</td>
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<tr>
<td>Year 3</td>
<td>Year 3</td>
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<tr>
<td>CIS 484</td>
<td>CIS 484</td>
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<td>CIS XXX</td>
<td>CIS XXX</td>
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<td>COB 487</td>
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<tr>
<td>Year 4</td>
<td>Year 4</td>
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</tbody>
</table>

The College of Business recognizes all students as individuals. The above pathways are intended as examples only. Students are encouraged to develop their individualized academic plans in consultation with an academic advisor, taking into account unique skills, interests and goals.
Updated 9/2019

COLLEGE OF BUSINESS CLASS OF 2018 PROFILE

Average Starting CIS Salary $66,906
Average Starting CoB Salary $57,837
% CoB Jobs with Signing Bonus 58%
Average CoB Signing Bonus $5,580

95% of CoB graduates are employed, in continuing education or engaged in other career related endeavors.

The Class of 2018 includes 800 students graduating August 2017, December 2017 and May 2018.

Choosing/Changing Majors
Resource Center
Job Search/Graduate School
Career Counseling
On-Campus Interviewing
Handshake Questions
Employer Relations

STEPS TO CAREER SUCCESS

FRESHMAN
- Adjust to campus life
- Explore majors
- Build rapport with faculty
- Establish a solid GPA
- Join a student organization
- Attend professional development events
- Consider study abroad programs
- Practice professional behavior
- Create a resume/make an appointment with a career advisor to review
- Ask your network about part time/summer job leads
- Shadow professionals in a field of interest to you
- Polish your online presence

SOPHOMORE
- Participate in the CoB Career KickStart
- Identify skills and interests
- Continue to work on your resume and build a reference list
- Activate your Handshake account
- Create a LinkedIn profile
- Attend JMU Career and Internship Fairs
- Attend career related events
- Research employers
- Apply for externship/internship
- Join a CoB student organization
- Apply for a CoB Career Trek
- Apply for a study abroad program

JUNIOR
- Apply for internships
- Practice with mock interviews and InterviewStream
- Attend JMU Career and Internship Fairs
- Seek leadership roles on campus (e.g., student organizations)
- Join a professional organization related to your interests
- Consider graduate school
- Develop a job search strategy
- Network and conduct informational interviews with business professionals and JMU alumni
- Participate in case competitions

SENIOR
- Update your resume
- Practice with mock interviews and InterviewStream
- Apply for full-time positions
- Follow up on job leads
- Network with business professionals and JMU alumni
- Use the on-campus recruiting program (OCR)
- Connect with the JMU Alumni Relations office
- Apply to graduate school
- Negotiate salary