BBA in
Computer Information Systems

Department of Computer Information Systems & Management Science

Summary

The computer information systems (CIS) curriculum is designed to prepare business students for careers as information systems professionals. The program of study focuses on the development and management of information systems in a business environment. Students develop the technical skills and organizational insights required to analyze, design, implement, and administer information systems. CIS courses require extensive hands-on projects, teamwork, and the use of high-end computer technology. The bachelor's degree program in Computer Information Systems is accredited by the Computing Accreditation Commission of ABET.

Requirements

In order to graduate with a B.B.A. in Computer Information Systems, students must complete 28 hours of CIS courses, 39 hours of business core courses, and the remainder in general education courses and non-business electives.

Highlights

- A highly dedicated and well-qualified faculty who believe in excellence and innovation in teaching, scholarship, and service.
- Outstanding placement: CIS graduates had a median starting salary of $60,000 (including bonuses) in 2009.
- CIS program recognized as 'Top Ten Undergraduate Information Technology Program' in U.S. by TechRepublic (2008).
- *College of Business*: ranked 16th nationally among public universities. *Business Week Ranking of* Undergraduate Programs (2009).
- *James Madison University*: ranked #1 among public master's-level universities in the South by *U.S. News & World Report* (2009)

Careers

CIS application areas and technical specialties, numerous career choices are available. The choices for a CIS major vary from the highly technical to the managerial and include: **business/systems analyst, application/web developer, IT consultant, project manager** and **computer security analyst.** Recent employers include: Accenture, Bearing Point, CACI, CarMax, CGI, Deloitte, Ernst & Young, Fast Enterprises, Freddie Mac, HPTi, IBM, KPMG, Lockheed Martin, ManTech, Pricewaterhouse Coopers, Protiviti and SRA International.

Students

AITP STUDENT CLUB: The AITP (Association for Information Technology Professionals) is a student-led organization that provides students a valuable link to the business world. Students from JMU successfully compete at the AITP National Collegiate Conference.
INTERNSHIPS: CIS students are encouraged to gain practical, career-related work experience through an internship. JMU's Academic Advising and Career Development office provides resources for both employers and students about internship and career information.

Contact Us

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CIS Course in COB Core

COB 204. Computer Information Systems. 3 credits.
An introduction to computer-based information systems. Emphasis is placed on the role of computers in business and society, computer hardware and software analysis, design and implementation of information systems, computer ethics, and collaboration using computers. Students will create databases and collaborate using computer-based tools.

CIS Required Courses

CIS 221. Principles of Programming. 3 credits
Instruction and practical experience in writing computer programs using object oriented design and event driven logic. Projects will include the use of control structures (sequence, selection, and iteration) as well as file and array processing logic. Taught using Visual Basic and the .Net framework.

CIS 301. Operating Systems & Server Administration. 1 credit.
This is a lab-based course that introduces the student to operating systems and sever administration. Students will acquire hands-on server skills in order to better understand the operational and security demands of business applications. *Corequisite or prerequisite for CIS majors: COB 300. Prequisite for CIS minors: COB 204 and junior standing.*

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CIS 304. Information Technology. 3 credits.
Emphasis is placed on the practice of applying ethics concepts and in the basics of role of computer technology in information processing, the workings of computer hardware and peripherals, several operating systems, file management systems, and data storage concepts. *Corequisite or prerequisite for CIS majors: COB 300. Prequisite for declared CIS minors: COB 204 and junior standing.*

CIS 320. Computing and Telecommunications Networks. 3 cr.
This course focuses on the underlying principles of telecommunications and how these principles are deployed to provide efficient and secure networks for providing voice, data, and video services. Emphasis is placed on understanding basic routing, switching, and data aggregation techniques. *Prerequisite: for CS majors: CS 139. Corequisite for CIS majors and minors: CIS 304. Prerequsite for ISAT majors: ISAT 252.*

CIS 330. Database Design and Application. 3 credits.
A study of the tools and techniques of database analysis and design including the implementation of the design using common database management system models. Taught using Oracle DBMS. *Corequisite or prerequisite for CIS majors: COB 300 and grade of 'C'or better in CIS 221. Prequisite for CIS minors:grade of 'C' or better in CIS 221 and junior standing.*

CIS 331. Intermediate Computer Programming. 3 credits.
Study of concepts and techniques used in structured programming for business applications including program specification, design, development, testing, implementation, and documentation. Taught using the Java programming language. *Prerequisite: CIS 221 or equivalent with a grade of "C" or better or CIS minor. Corequisite: CIS 304.*

CIS 454. Systems Analysis and Design. 3 credits.
An introduction to the techniques of systems analysis and design. Emphasizes concept of system life cycle and importance of users in system design. *Corequisite or prerequisite: CIS 330.*

CIS 484. IS Development and Implementation. 3 credits.
Comprehensive development and implementation of enterprise-level systems using object-oriented methodologies, database driven architectures, systems analysis and design procedures, and project management skills. Topics will include advanced programming techniques, database processing, GUI design, object communication and a comprehensive group capstone project. *Corequisite: CIS 454. Prerequisites: CIS 331 with a grade of 'C' or better and CIS 330 with a grade of 'C' or better.*

CIS Electives

CIS 363. Business Process Management.. 3 credits.
Covers the fundamental principles of successful process management for business applications and its role in identifying and communicating system requirements during a project life cycle. Students will learn to map process flows, analyze operational variables and evaluate the effects of random variation. *Prerequisites: COB 291 and junior standing.*

CIS 364. Decision Support Systems. 3 credits.
This course provides students with an understanding of computer-based information technologies, such as decision support systems, which enhance the decision-making capabilities of managers. Students will learn to design and build computer-based information systems for a business project within the Excel environment. *Prerequisites: COB 291 and junior standing.*

CIS 366. Web Development. 3 credits.
This course is an introduction to the development of web pages and web sites. The three major topics covered are HyperText Markup Language (HTML), the principles of design for web sites and the use of a programming language for web development. *Prerequisite: CIS 221.*

CIS 411 Computer Forensics for Business. 3 credits.
A study of the tools and techniques required to analyze the current and past contents of computer data storage devices. Analysis will include incident reporting, the audits of computer activity, and audits of operating system logs. *Preq: CIS 304 or permission of instructor.*

CIS 424. Computer Security Management. 3 credits.
Instruction and discussion in the design, development and implementation of a computer security program including legal and ethical considerations. *Prerequisites: CIS 221 and CIS 304.*

CIS 434. Information Technology Consulting. 3 credits.
This course investigates the tools used by and skills necessary for information technology consultants. Teams will be assigned professional consulting firms as manager/mentors and will work with their manager/mentor firm to complete projects that cover each phase of the consulting life cycle. *Prerequisite: Permission of the instructor.*

CIS 464. Information Systems Project Management. 3 credits.
Students will develop the knowledge and expertise applying techniques and tools by system analysts and project managers to plan and manage information system projects. *Corequisite: CIS 454 or permission of the instructor.*

CIS 498. Business Intelligence. 3 credits.
Investigates the concepts and practices associated with business intelligence. The class focus is on data warehousing techniques and analysis services tools. *Prerequisite: CIS 330 or permission of the instructor.*

Computer Information Systems @ James Madison University

Course Sequence Diagram for CIS Major – 2009-2010