



What is CIS and What Does Being a CIS Major Mean?

Computer Information Systems (CIS) is a blend of computer and business. A student pursuing this degree will take business courses such as Accounting, Decision Science, Finance, Marketing, and Management along with computer related courses.

Computer related courses include programming (two courses minimum), systems analysis and design, telecommunications, information management, and a capstone course bringing all these skills together to solve a real business problem. CIS students establish a robust foundation that prepares them to pursue either a business career with a strong understanding of how technology (leading edge and contemporary) facilitates achieving business objectives or a technology career with a strong understanding of how business objectives drive computer information systems toward achieving business goals.

(For additional information, see http://www2.cis.gsu.edu/cis/student/undergrad_faqs.asp)

Why Choose CIS for Your Undergraduate Major?

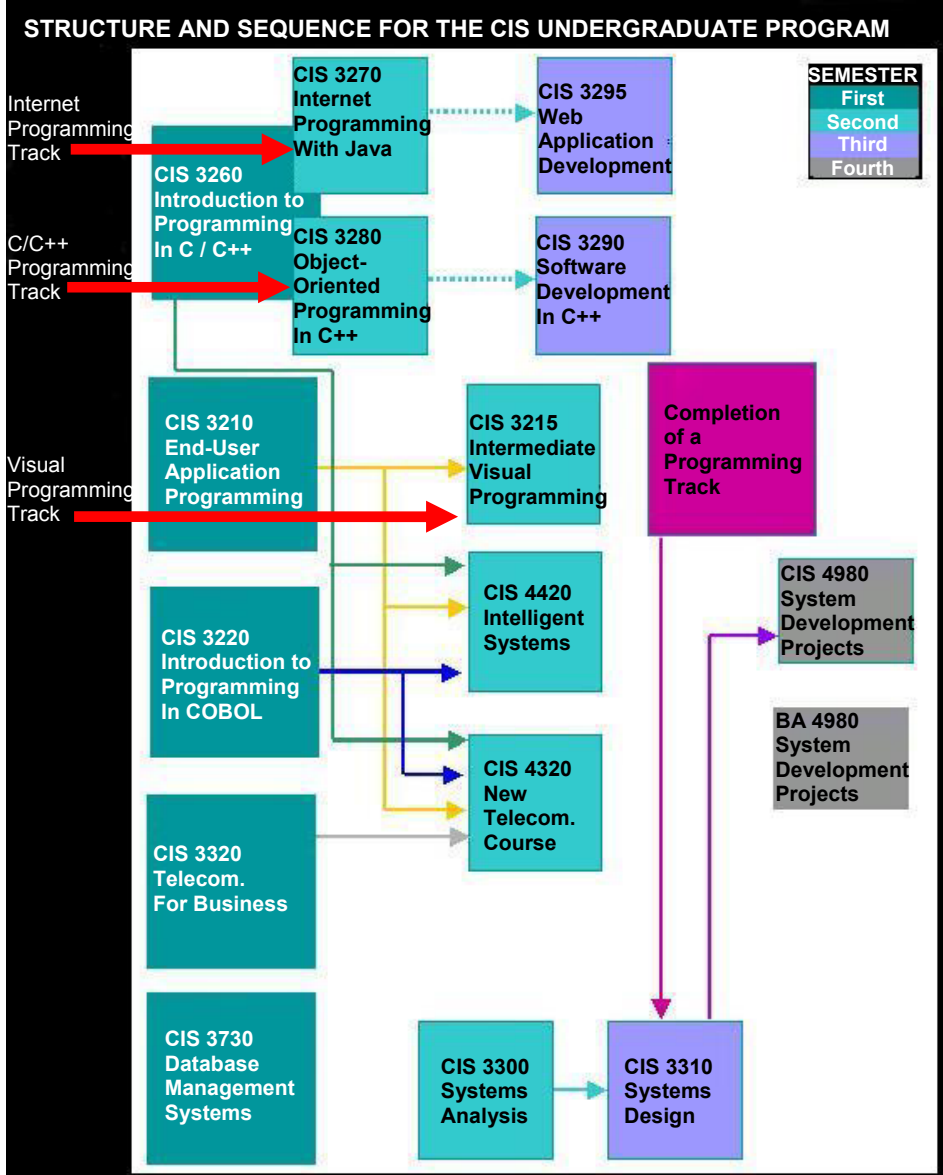
CIS undergraduates focus on preparing to meet business challenges through the use of technology. Facts that motivate the pursuit of an undergraduate CIS degree within the Robinson College of Business (RCB):

- CIS majors will hold the 3 of the top 4 growth jobs over the next 8 years ([Bureau of Labor Statistics](#)).
- CIS majors will command strong salaries (16th [Computerworld Salary Survey](#)).
- CIS majors are an integral part of an environment lead by an internationally recognized [CIS department](#) that maintains strong [relationships with the business community](#).
- CIS majors are highly qualified colleagues working together toward shared career goals.
- CIS majors can achieve a [Certificate of Excellence](#) within two development language tracks.
- CIS majors have leading edge tools and techniques in their grasp ([MSDNAA](#), [Rational Suite Enterprise](#), and Oracle).
- CIS graduates form an ever-increasing network of successful alumni ([CIS Alumni Club](#)).

(For **job descriptions** of systems analyst and others, see <http://www.bls.gov/oco/ocos042.htm>.)

The CIS Department:

- Computer Information Systems is the largest department focusing exclusively on information systems studies in the United States.
- CIS has 30 full-time faculty with doctorates from such schools as Harvard, Indiana, M.I.T., Minnesota, Cornell, N.Y.U., London School of Economics, Copenhagen Business School, and other prominent universities. Their interests range from highly technical (e.g., object-oriented databases, wireless communication), to highly managerial (e.g., the contribution of information technology to the competitive strategy of a firm).
- In the fall of 2002, there were 914 undergraduate students majoring in computer information systems (the largest major in the college and one of the largest in the entire university), 414 masters students (both MBA and M.S.), and 22 doctoral students pursuing their Ph.D. degrees in information systems.
- One out of every three computer graduates in the State of Georgia comes from the CIS Department. Reflecting the diversity of the faculty, their studies range from systems and software development, telecommunications, database systems, and information systems management. Because the programs at both the undergraduate and graduate levels focus on leading-edge topics (e.g., C++, object-oriented development, client/server systems, e-commerce), Georgia State CIS graduates are much in demand.
- This year, *U.S. News & World Report* ranked both the department's graduate and undergraduate programs 12th in the nation. The undergraduate e-commerce program was ranked 11th.



Join the ranks of the CIS majors and acquire a superior technical foundation for envisioning and implementing business solutions.

For program of study details, please see: <http://cis.gsu.edu/~cstucke/GSUCISUGADV/ugcisadvisement.asp>. Undergraduate application is at: <http://www.gsu.edu/~wwwadm/app.html>. CIS majors get free software including Windows XP Pro, Visio, Visual Studio.Net, and more. See http://msdn-academy.com/gsu_cis/.

Undergraduate CIS Courses

(For the most current course descriptions and syllabi, please see <http://www2.cis.gsu.edu/cis/program/syllabus/>)

CIS 2010 Introduction to Computer-based Information Systems This course provides an introduction to computer and information systems concepts, including hardware, software, databases, data communications, and business applications. The student is introduced to methods of determining user requirements and developing application systems using databases and fourth-generation languages.

CIS 3210 End User Applications Programming Prerequisite: CIS 2010. This course provides an introduction to the assisting of end users of computer systems in developing their own special purpose applications. The emphasis in the course is on acquiring programming skills in one fourth-generation language and one interactive third-generation language. These skills are required in order to develop the technical capability to assist end users. Topics covered include end user computing versus traditional systems development, Rapid Application Development, prototyping, fundamentals of the Paradox Application Language (PAL), and fundamentals of the Visual BASIC programming language.

CIS 3215 Intermediate Visual Programming Prerequisite: CIS 3210. This course builds upon the skills and knowledge developed in CIS 3210. Emphasis is placed upon development in a visual environment. Major topics include object-oriented concepts, database linkages, graphics, and developing applications for the Internet. User interface design, code optimization and help file creation are covered. Students use state-of-the-art development tools and design methods to implement applications that run on a standalone PC, a network, and the Internet.

CIS 3220 Introduction to Programming in COBOL Prerequisite: CIS 2010. This course will introduce program design and file processing as practiced in the application of computers to business data processing. Common business programming topics such as data validation, report program design, control breaks, table processing, file sorting, and sequential-file update will be presented. The programming language COBOL will be used as a vehicle for the presentation of processing techniques.

CIS 3260 Introduction to Programming in C/C++ Prerequisite: CIS 2010. This course provides an introduction to programming using the C and C++ languages. Emphasis is placed upon the development of efficient, well-structured programs that are easy to maintain. Topics include problem analysis, program design, documentation, testing, and debugging. Basic features of the C and C++ programming languages such as data types, control structures, functions, arrays, pointers, and strings are covered. Transfer credit is not granted for this course.

CIS 3270 Internet Programming with Java Prerequisites: CIS 3260. This course builds upon the student's foundation of programming principles through the introduction of an Internet programming language such as JAVA. Major areas covered include operating-system-dependent versus operating-system-independent Internet applications. Focus is on object-oriented programming as it relates to the Internet, as well as on best coding practices associated with the Internet programming language. Students implement a basic applet and develop a working prototype of an Internet program.

CIS 3280 Object-Oriented Programming in C++ Prerequisite: CIS 3260. This course introduces the object-oriented approach to problem solving, program design, coding, and testing using the C++ programming language. Topics covered include object-oriented analysis and design, encapsulation, inheritance, and polymorphism.

CIS 3290 Software Development in C++ Prerequisite: CIS 3280. This course covers software development for the Windows operating system using the C++ programming language. Various approaches to application development are examined, including class libraries, code generators, and direct use of the API, MDI, and OLE applications are also discussed.

CIS 3295 Web Application Development Prerequisite: CIS 3270. This course builds upon the skills and knowledge developed in CIS 3270. Emphasis is placed upon the development of enterprise applications in Internet environments. Major topics include development, infrastructure, and implementation. Design methodologies, client-side and server-side programming, and implementation techniques for enterprise-wide web applications are covered. Web servers and web application servers, as well as their integration with legacy systems, are also discussed. Students use state-of-the-art development tools and design methods to implement an enterprise web application.

CIS 3300 Systems Analysis Prerequisites: CIS 2010, CIS 3210 or CIS 3220 or CIS 3260. This course provides an introduction to the analysis and logical design of computer-based information systems. Emphasis is placed upon the development of requirements specifications that serve the business needs of the organization and provide the necessary base for subsequent systems development. Both data-oriented and process-oriented approaches are covered.

CIS 3310 Systems Design Prerequisites: CIS 3300, six semester hours of CIS programming courses. This course builds upon the skills and knowledge developed in CIS 3300. Emphasis is placed upon the design and development of information systems, including the software and databases that are needed to support the business needs of the organization. Both data-oriented and process-oriented design methods are covered. These methods are discussed in the context of managing a systems development project, including issues such as project estimation and project management techniques, software quality assurance, and configuration management.

CIS 3320 Telecommunications for Business Prerequisite: CIS 2010. This course introduces the subject of computer networks and the use of computer networks in business applications. Topics covered include client-server networks, network hardware and software, distributed computing, key issues in network management, and the fundamentals of data communications.

CIS 3730 Database Management Prerequisite: CIS 2010. This course provides an introduction to the management of database systems. Major emphasis is placed on understanding the various database management functions and providing database support for the organization. Topics include types of data models and database management systems, data definition and manipulation, administration of database systems, and the management of databases, including database security, error recovery, concurrency control, and distributed database systems.

CIS 4320 Advances in Networking Prerequisite: CIS 3320. The course builds upon the skills and knowledge developed in CIS 3320. Emphasis is placed on the high-speed computer and telecommunications networks. The course includes both wireline and wireless technologies for designing, implementing, managing, and using broadband networks. Major topics include communications media, switching, and networking requirements of broadband networks, design of broadband networks, regulatory and management issues, and application of broadband networks.

CIS 4389 Directed Readings in Information Systems Prerequisite: consent of instructor.

CIS 4420 Knowledge Systems Prerequisite: CIS 3260. This course covers the development and use of knowledge-intensive systems in business applications. Techniques to support knowledge-intensive business processes and exploit the vast amount of data available, especially in the Internet age, are explored. Students are exposed to several knowledge-based development environments for the construction of knowledge-intensive applications. Several knowledge-intensive systems are studied for insight into their motivation, construction, and use.

CIS 4850 Software Development Environments Prerequisite: varies depending on topic. This course provides an opportunity for the student to gain experience with one of several widely used software development platforms. A "software development platform" typically includes a programming language, a database system, and an operating system. The specific platform covered will vary from semester to semester as will the associated course prerequisites.

CIS 4980 System Development Projects Prerequisite: Math 1070, DSc 3120, Fi 3300, Mgt 3500, Mk 3010; all required CIS 3000-level courses. This course provides the student with an opportunity to apply the knowledge and skills acquired in the core courses to larger and more complex problems and to gain experience in working as part of a team. This course is available only to BBA-CIS majors at Georgia State University. It requires students to meet with clients during normal business hours.