The College of Engineering and Computing offers a bachelor of science degree with a major in integrated information technology.

### Programs
- Cybersecurity Operations Minor (https://academicbulletins.sc.edu/undergraduate/engineering-computing/integrated-information-technology/cybersecurity-operations-minor/)
- Integrated Information Technology Minor (https://academicbulletins.sc.edu/undergraduate/engineering-computing/integrated-information-technology/integrated-information-technology-minor/)
- Integrated Information Technology, B.S. (https://academicbulletins.sc.edu/undergraduate/engineering-computing/integrated-information-technology/integrated-information-technology-bs/)

### Courses

**ITEC 101 - Thriving in the Tech Age (3 Credits)**
Pervasive impact of computers on today's global society; skills and strategies for using technology. How information technologies impact daily life and drive change.

**ITEC 104 - Program Design and Development (3 Credits)**
Fundamental algorithms and processes used in business information systems. Development and representation of programming logic. Introduction to implementation using a high-level programming language.

**ITEC 105 - Special Topics in Information Technology (3 Credits)**
Survey of core software development principles, application development from pseudocode and flow charting through coding process. Prerequisites: C or better in ITEC 264.

**ITEC 120 - Introduction to Networking (3 Credits)**
Survey of core skills and techniques for spreadsheet design and analysis of business problems.

**ITEC 245 - Introduction to Networking (3 Credits)**
Understanding the essential concepts of computer networks, including standards, topologies, security, media, switching, routing, and more.

**ITEC 246 - Introduction to Databases (3 Credits)**
Fundamentals of modern database design and applications.

**ITEC 247 - Records Control (3 Credits)**
Analysis and control of office records including creation, processing, maintenance, protection, and disposition. Prerequisites: ITEC 246.

**ITEC 248 - Advanced Business Document Preparation (3 Credits)**
Operations in Security Operations Centers (SOC). Securing information systems by monitoring, analyzing, detecting, and responding to security events.

**ITEC 249 - Professional Internship Seminar (3 Credits)**
Preparation for professional internship.

**ITEC 250 - Professional Internship Seminar (3 Credits)**
Contract approved by instructor, advisor, and department head for undergraduate students.

### GLD: Professional and Civic Engagement Internships

**ITEC 301 - Advanced Networking and Security (3 Credits)**
Survey of core software development principles, application development from pseudocode and flow charting through coding process. Prerequisites: C or better in ITEC 370.

**ITEC 302 - Cybersecurity Operations (3 Credits)**
Introduction to web based systems, including HTML, CSS, and JavaScript; working with Content Management systems (Wordpress, Joomla); Accessibility, SEO, and web development best practices. Prerequisites: C or better in either ITEC 101, CSCE 104, or CSCE 102.

**ITEC 352 - Software Design (3 Credits)**
Introduction to human computer interaction: human factors of interactive software, methods to develop and assess interfaces, interaction styles, and design considerations. Prerequisites: C or better in CSCE 104, ITEC 104, or CSCE 145; C or better in ITEC 245.
ITEC 447 - Management of Information Technology (3 Credits)
Overview of current practices and trends in end-user technology and information system management.
Prerequisites: C or better in ITEC 101 and ITEC 245.

ITEC 475 - Mainframe Systems (3 Credits)
Introduction to the large scale computer systems used by businesses to support thousands of simultaneous users and process millions of transactions.
Prerequisites: C or better in ITEC 352, or C or better in CSCE 146.
Cross-listed course: CSCE 415

ITEC 476 - Job Control Language (3 Credits)
Programming in job control language used to process batch jobs on mainframe computers. Use of standard system utility programs.
Prerequisites: C or better in ITEC 352, or C or better in CSCE 146.

ITEC 490 - Special Topics in Information Technology (3 Credits)
Advanced concepts, issues, and trends in information technology. Course content varies and will be announced in the schedule of classes by title. Satisfies IIT elective requirement. May be taken three times for credit.

ITEC 493 - Information Technology Security for Managers (3 Credits)
Information technology security from a managerial perspective, including security awareness, risk assessment, and security policy development.
Prerequisites: C or better in ITEC 445.

ITEC 495 - Professional Internship (6 Credits)
Internship coordinated by a faculty member and supervised by an approved business supervisor. Contract approved by instructor, advisor, and department head is required for undergraduate students.
Prerequisites: C or better in ITEC 301.

Graduation with Leadership Distinction: GLD: Professional and Civic Engagement Internships
Experiential Learning: Experiential Learning Opportunity

ITEC 510 - Emerging Information Technology Trends (3 Credits)
Survey of emerging information technology (IT) trends, featuring IT industry professionals presenting disruptive and emerging information technologies being developed and/or adopted by businesses within South Carolina.

ITEC 520 - Exploring The Internet of Things (3 Credits)
The Internet of Things (IoT) and its transformation of our lives, organizations, and communities. Uses simulations, virtualization, and various microcontrollers to reinforce key IoT concepts.

ITEC 534 - Advanced Human Computer Interaction (3 Credits)
Review of current trends & challenges of human-computer interaction, the design of emerging technologies including AI-driven technologies, such as chatbot design, Internet of Things design, and human-robot interaction design, biometric evaluation methods, and usability testing with AI-driven emerging technologies.
Prerequisites: B or better in ITEC 444 or ITEC 762.

ITEC 540 - Cloud Computing and Virtualization (3 Credits)
Comprehensive introduction to cloud computing. Key concepts such as cloud types, delivery models, leading service providers, networking, storage, virtualization, containerization, orchestration, and cloud security. Navigating modern IT environments and making informed decisions when implementing or utilizing cloud solutions.
Prerequisites: C or better in ITEC 104 or CSCE 104; C or better in ITEC 245.

ITEC 544 - Training Systems (3 Credits)
Theory, design, and implementation of technology-based training systems, including hardware and software solutions.
Prerequisites: C or better in ITEC 444.

ITEC 545 - Telecommunications (3 Credits)
Telecommunications systems, applications, and equipment allowing for the global dissemination of information.
Prerequisites: C or better in ITEC 245.

ITEC 552 - Linux Programming and Administration (3 Credits)
Shell scripting and administration in the Linux operating system.
Prerequisites: C or better in CSCE 104, ITEC 104, or CSCE 146.

ITEC 560 - Project Management Methods (3 Credits)
Project management principles and standard practices, including software applications for project management.
Prerequisites: C or better in ITEC 264 or MGSC 290.

ITEC 562 - Advanced Web Support Systems (3 Credits)
The development of advanced, dynamic, Web-based information systems, including the integration of back-end database-records management systems.
Prerequisites: C or better in ITEC 362.

ITEC 564 - Capstone Project for Information Technology (3 Credits)
Application of project management software, technologies, and practices to the design and implementation of real-world capstone projects.
Prerequisites: C or better in both ITEC 362 and ITEC 560.

ITEC 570 - Database Management and Administration (3 Credits)
Introduction to database administration and implementation using an enterprise-level Relational Database Management System (RDBMS).
Prerequisites: C or better in ITEC 370.

ITEC 590 - Special Topics in Integrated Information Technology (3 Credits)
Advanced concepts, issues, and trends in technology support and training management. Course content varies and will be announced in the schedule of classes by title. May be repeated twice for credit.