OVERVIEW STATEMENT

The School of Computing is a new unit within the College of Engineering that offers academic programs in new and unique delivery formats to prepare students to become successful computing professionals in the design, development and use of computer-based information systems. The preparation includes a comprehensive coverage of CIS concepts, theories and practices in key technology-driven areas of object-oriented design, analysis and programming; database, decision and system analysis; as well as real-world applications. The programs merge technical and management perspectives for strategic support of an organization’s computing and information systems. Students conduct research in analyzing real-world problems, designing sustainable solutions, implementing and testing their design, and critically evaluating peer results leading to lifelong learning strategies.

The Computer Information Systems (CIS) degree is designed for students interested in the niche of computing, which emphasizes design, construction and maintenance of information and data delivery and storage systems on varying platforms and using varying technologies. Computer Information System programs provide knowledge of current technology and tools for the design, implementation and maintenance of data-driven systems primarily as they are used within industry and as part of larger systems. Areas of computing that are stressed include systems that are service and Web-based, database, network, real-time, workflow/process-based, and component-based. Usability and security of such systems as they fit into appropriate corporate and industrial environments is also stressed and students are required to learn how to program.

The undergraduate associate and bachelor’s degrees are offered exclusively online in eight-week academic formats to accommodate mature students with time and location restrictions that require a concentrated but flexible environment. The master’s degree is offered via the traditional 15-week format on campus, online and at selected remote sites to accommodate working professionals and others who desire to transition into computing-related professions.

M.S., Computer Information Systems

The Master of Science in CIS degree emphasizes problem solving in general within the computing field, and in particular: software and services construction, database integration and system administration, all on a wide variety of platforms. The student is expected to program within and design solutions for various types of networks that may be a conglomeration of: wireless, Web-based, cloud-based and handheld device platforms. Since hardware and computer organization is also emphasized, the exploitation of new technologies is constantly at the forefront. Related topics include the integration of correct processes, services and policies so that departments and organizations can offer the best in computing to all customers inside and outside of the organization. CIS also encompasses information related systems and subsystems and how they reside within their enterprises,
organizations, corporations or within larger more complex data systems and warehouses. Applicants to the MS/CIS do not have to have a computing-related bachelor’s degree and are encouraged to cater or mold their program to their working or career path needs.

Electives in the MS/CIS may be taken in:
- CIS — Computer Information Systems (at least 6 credits)
- MGT — Management
- ECE — Electrical & Computer Engineering
- MTH — Mathematics
- CSE — Computer Sciences
- SWE — Software Engineering
- ORP — Operations Research
- SYS — Systems Engineering
- BUS — Business
- CYB — Information Assurance and Cyber Security
- ENM — Engineering Management

There are several career paths for individuals who earn a master’s in computer information systems, including systems analyst, computer programmer, network administration, Web-based programming, database administrator, system administrator and IT administrator. This program is offered on the main campus, via the virtual campus, and at the Orlando, Redstone and Patuxent sites.

B.S., Computer Information Systems
The Bachelor of Science in Computer Information Systems (CIS) provides a solid foundation of technical skills, business knowledge and computing technologies necessary to design, develop and implement business solutions for today’s complex systems. The program offers comprehensive coverage of CIS concepts, theories and practices in key technology-driven areas of programming languages, database and software systems, network theory and design, decision analysis, Internet and Web applications and systems analysis and design. The program merges technical and management perspectives for strategic support of an organization’s computing and information systems. This program is only offered through Florida Tech Online and is not offered on the main campus.

A.S., Computer Information Systems
The Associate of Science in Computer Information Systems (CIS) degree program offers a broad base of technical knowledge combined with a strong liberal arts foundation. The CIS program gives the student an introduction to CIS concepts and practices including systems analysis, programming and electronic commerce. Students apply critical thinking methods in identifying and solving problems related to the field of study. This program is only offered through Florida Tech Online and is not offered on the main campus.

RESEARCH INTERESTS
Reusable databases for specifying software and system requirements.
Requirements templates for multimedia and interactive tutorials.
Tools for automating online learning, test proctoring.
Legal and ethical implications for computing professionals.
Information resource implications on organizational complexities.