BACHELOR OF APPLIED SCIENCE - COMPUTER INFORMATION SYSTEMS TECHNOLOGY, PROGRAM DEVELOPMENT/ SOFTWARE DEVELOPMENT SPECIALIZATION

Previous Degree Required: A.S./A.A.
Eligible for Financial Aid: Yes
Delivery Method(s): On-Campus, Online
Location(s): Cocoa, Palm Bay, Online
Additional Limited Access Application Process Required: No
Program Testing Requirements: Not Required
Academic Community: STEM
Program Code: CTBSPDCT
Classification of Instructional Programs (CIP) Code: 11.0401
Florida Department of Education CIP Code: 1101104011

The Program Development/Software Development Bachelor's Degree specialization at Eastern Florida State College prepares students for entry-level positions involving general computer software applications.

Refer to the Bachelor Degree Programs overview page to find information about admission, graduation, general education and other requirements. Students who need technical electives will work with a bachelor's advisor to determine the courses best suited to their plan of study.

Visit the program page for more information.

Specialization Requirements

Code	Title	Credit Hours
Associate Degree		
Complete Associate Degree		60
General Education or Technical Concentration		
General Education (for A.S. degree students) or Technical Concentration (for A.A. degree students)		21
Computer Information Systems Technology - Major Courses		
GEB 3213	Foundations of Managerial Communications	3
ISM 3011	Introduction to Information Technology Management	3
ISM 4300	Information Systems Operations Management	3
MAN 4504	Operational Decision Making	3
Program Development/Software Development Specialization		
CEN 3024	Software Development 1	3
CEN 4025	Software Development 2	3
CEN 4802	Software Integration, Configuration, and Testing	3
COP 3330	Object Oriented Programming	3
COP 3530	Data Structures and Algorithm Analysis	3
ISM 3324	Applications in Information Security	3
Specialization Electives Choose 9 Credits		**9**
CEN 4949	Internship	
COP 3703	Database Design and Architecture	
COP 3813	Internet Programming	
COP 4655	Application Development for Mobile Devices	
COP 4849	Web Applications Programming	
ISM 3113	Information Systems Analysis and Design	
ISM 4041	Emerging Information Technologies	
Total Credit Hours		**120**

- Satisfy the foreign language competency requirement
- Satisfy the civic literacy competency requirement

Important Note: Computer Information Systems Technology has two Common Program Prerequisites. hese courses must be completed with a grade of "C" or higher before being admitted to 3000 - 4000 level courses.

- COP 2334 Introduction to C++ Programming
- STA 2023 Statistics

Click on the course number to see course prerequisites. MAC 2311 will be accepted in place of STA 2023. Any Computer Programming course with a COP prefix will be accepted in place of COP 2334. No other course substitutions are permitted for either course.

Course Sequence

The following sequence is recommended. However, courses may not be offered in this order, so it is important that you work with an advisor to plan your schedule based on your specific needs.

Course	Title	Credit Hours
Term 1		
COP 3330	Object Oriented Programming	3
GEB 3213	Foundations of Managerial Communications	3
ISM 3011	Introduction to Information Technology Management	3
Technical Elective [1]		3
	Credit Hours	**12**
Term 2		
COP 3330	Object Oriented Programming	3
COP 3530	Data Structures and Algorithm Analysis	3
ISM 4300	Information Systems Operations Management	3
MAN 4504	Operational Decision Making	3
	Credit Hours	**12**
Term 3		
Technical Electives [1]		6
	Credit Hours	**6**
Term 4		
CEN 3024	Software Development 1	3
Technical Electives [1]		9
	Credit Hours	**12**
Term 5		
CEN 4025	Software Development 2	3

CEN 4802	Software Integration, Configuration, and Testing	3
Technical Electives [1]		6
	Credit Hours	**12**
Term 6		
Technical Electives		6
	Credit Hours	**6**
	Total Credit Hours	**60**

[1] Students must select 9 credits from the following list: CEN 4949 Internship, COP 3703 Database Design and Architecture, COP 3813 Internet Programming, COP 4655 Application Development for Mobile Devices, COP 4849 Web Applications Programming, ISM 3113 Information Systems Analysis and Design, and ISM 4041 Emerging Information Technologies. Students are required to take 12 additional technical electives.

Learning Outcomes

1. Systematically analyze data to improve organizational input and output processes, productivity and quality of work for users.
   - *Supports Core Ability: Process Information*
2. Demonstrate the ability to apply agile methods to the complete software development process model.
   - *Supports Core Ability: Process Information*
3. Demonstrate the ability to design and write high quality computer programs that are well organized and documented.
   - *Supports Core Ability: Think Critically and Solve Problems*
4. Demonstrate the ability to build and execute a software test plan.
   - *Supports Core Ability: Process Information*