

# COMPUTER PROGRAMMING AND ANALYSIS, ASSOCIATE IN SCIENCE

**Program Code:** CPAS  
**Meta-Major:** STEM  
**Location(s):** Cocoa, Melbourne, Palm Bay, Titusville, Online  
**Delivery Method(s):** On-Campus, Hybrid  
**Previous Degree Required:** HS Diploma  
**Eligible for Financial Aid:** Yes  
**Additional Limited Access Application Process Required:** No  
**Program Testing Requirements:** CPT - Common Placement Test (PERT, ACCUPLACER, SAT, ACT)  
**Classification of Instructional Programs (CIP) Code:** 11.0201  
**Florida Department of Education CIP Code:** 1511020101

The Computer Programming and Analysis A.S. degree program has the following related College Credit Certificates (CCCs):

- [Computer Programmer CCC](#)
- [Web Development Specialist CCC](#)

This program is designed to prepare students for entry-level program development and analysis positions in a software development environment. Students currently employed in the field can supplement and upgrade their skills through a variety of offerings in programming languages and applications. The curriculum includes foundational knowledge of various programming languages, databases, and web development. Electives allow students to extend their knowledge of multi-threaded applications, database applications, client server applications, advanced Graphical User Interface (GUI) applications, mobile application development in a variety of development environments, and the Extensible Markup Language (XML) standard. [Visit the program page for more details and how to apply.](#)

## Program Requirements

Code	Title	Credit Hours
<b>General Education Courses</b>		
ENC 1101	Composition 1	3
	<a href="#">Humanities Requirement</a>	3
	<a href="#">Mathematics Requirement</a>	3
	<a href="#">Natural Science Requirement</a>	3
	<a href="#">Social/Behavioral Science Requirement</a>	3
<b>Computer Programs - Core Courses</b>		
CGS 1000	Exploring Digital Technology	3
CGS 2100	Microcomputer Applications	3
COP 2700	Database Techniques	3
CTS 1142	Information Technology Project Management	3
CTS 1329	Microsoft Client O/S	3
CTSC 1134	Network+	3
<b>Major Courses</b>		
COP 1000	Principles of Programming	3
COP 2334	Introduction to C++ Programming	3
COP 2335	C++ Programming Advanced	3

COP 2360	C# Programming	3
COP 2800	Introduction to Java Programming	3
COP 2822	Web Page Authoring	3
<b>Technical Electives</b>		
Select 9 credits from the following:		9
CET 1176	Computer Maintenance and Repair	
CETC 1123	Microprocessor Fundamentals	
COP 1657	Introduction to Mobile Applications Programming	
COP 2047	Python Programming	
COP 2362	C# Programming Advanced	
COP 2671	Mobile Applications Development	
COP 2805	Advanced Java Programming	
COP 2812	Introduction to XML	
COP 2948	Service Learning Field Studies 1	
MAT 1033	Intermediate Algebra	

**Total Credit Hours** **90**

## Learning Outcomes: Computer Programming & Analysis A.S.

- Code elementary data type variables using pseudocode
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code programmer designed functions using pseudocode
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code C++ programs designed for reading text files
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code C++ programs using repetition control structures
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code C# programs using built-in and programmer defined methods
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code C# programs using logical operators
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code Java iterative control structure types
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code using Java built-in math functions
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code hypertext markup language using Meta Tags
  - *Supports Core Ability: Think Critically and Solve Problems*
- Code hypertext markup language using images as list markers
  - *Supports Core Ability: Think Critically and Solve Problems*