

# Programmer/Cyber Operations Associate of Applied Science Cyber Operations Focus

Full-time, Fall Start

[www.pima.edu/programmer-aas](http://www.pima.edu/programmer-aas)

Learn to design and develop software programs and applications. Courses focus on problem solving and structured programming concepts.

**Title IV Financial Aid eligible:** Yes

## What can I do with this degree?

**Career Options:** Become a programmer or programmer/analyst.

**Academic Options:** This program may apply toward a Bachelor of Applied Science (BAS). See an advisor.

### *CHOOSE YOUR COURSES WITH YOUR COLLEGE ADVISOR*

## Placement

Students must meet prerequisite standards before taking MAT 151 or 188, and WRT 101 required in the pathway below. If you are not prepared for these courses based on placement results you will need to take courses to build your skills prior to taking them. The sequence of courses follows.

Math: ICS 081 > MAT 092 > MAT 097 > MAT 151 or 188

Reading: ACL 080 > REA 091

Writing: ACL 080 > WRT 090 > WRT 101 (or WRT101S can replace both WRT 090 and WRT 101)

## Semester Pathway

This pathway is a suggested sequence of courses for your program of study. Work with an advisor to develop a unique pathway for you based on your placement recommendations, any prior college courses and your specific situation.

**General Education Note:** When General Education (Gen. Ed.) credits are listed below, select from the appropriate General Education course list linked from the program website. Some programs recommend specific courses.

For this pathway, ensure that one Gen. Ed. course fulfills the C or G requirement.

### **Semester 1-Fall (Semester Total: 15 credits)**

**CIS 129:** Programming and Problem Solving I (4 credits)

**ECN 150:** An Economic Perspective (3 credits)

**MAT 151:** College Algebra (4 credits)  
or MAT 188: Precalculus I (4 credits)

**STU 100:** College Success and Career Planning (1 credit)

**WRT 101:** English Composition I (3 credits)

### **Semester 2-Spring (Semester Total: 17 credits)**

**CIS 131:** Programming and Problem Solving II (4 credits)

**CIS 185:** Introduction to Python (3 credits)

**MAT 172:** Finite Mathematics (3 credits)

**WRT 102:** English Composition II (3 credits)

**Gen. Ed.: AGEC Biological and Physical Science List. (4 credits)**

**Semester 3-Fall (Semester Total: 17 credits)**

**Gen.Ed:** AGEC Social and Behavioral Science List. *Recommend* BIO181IN, BIO182IN or CHM151IN (4 credits)

**CIS 265:** The C Programming Language (3 credits)

**CIS 278:** C++ and Object-Oriented Programming (4 credits)

**CIS 280:** Systems Analysis and Design: Concepts and Tools (3 credits)

**Gen.Ed:** AGEC Humanities List. (3 credits)

**Semester 4-Spring (Semester Total: 17 credits)**

**CIS 250:** Introduction to Assembly Language (3 credits)

**CIS 269:** Data Structures (4 credits)

**CIS 281:** Systems Analysis and Design: Applications (3 credits)

**CIS 288:** Fundamentals of Cybersecurity (4 credits)

**Gen Ed:** AGEC Fine Arts List. (3 credits)

**PROGRAM TOTAL: 65 credits**

Program/Major Codes: **AASCPM/CPM**

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**Find more information about this program at:  
[www.pima.edu/programmer-aas](http://www.pima.edu/programmer-aas)**