

# Computer-Aided Design Associate of Applied Science Mechanical/Electro-Mechanical Design Focus

Full-Time, Fall Start

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

Learn the design process used in advanced manufacturing.

**Title IV Financial Aid eligibility:** Yes

## What can I do with this degree?

**Career options:** Seek employment as a lead designer in advanced manufacturing firms, design firms, construction and welding firms, and governmental agencies.

**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 GTM105 and GTW101 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 > GTM 105

Reading: ACL 080 > REA 091

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

If MAT189 is chosen additional coursework may be required. If GTW 101 or WRT 154 is chosen, fewer courses may be required.

## 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, select one Gen. Ed. course that fulfills the C or G requirement. Recommended courses BIO 108IN, or POS 201 (SUN# POS1101), or SOC 110 meet this requirement.

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

**CAD 101:** Computer Aided Drafting (4 credits)

**CAD 117:** Print Reading with CAD for Manufacturing (4 credits)

**GTM 105:** Applied Technical Mathematics (3 credits) or MAT 189: Precalculus II (3 credits)

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

**Gen. Ed.:** CTE Communications list. Recommend WRT 101: English Composition I, SUN# ENG1101 (3 credits)

### Semester 2 - Spring (Semester Total: 14 credits)

**CAD 142:** Introduction to Parametric Modeling: SolidWorks (4 credits)

**CAD 153:** Electro-Mechanical Drafting and Design (4 credits)

**CAD 172:** Geometric Dimensioning and Tolerancing (3 credits)

**MAC 100:** Introduction to Machine Tool (3 credits)

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**Semester 3 - Fall (Semester Total: 16 credits)**

**CAD 203:** Advanced Electro-Mechanical Drafting and Design (4 credits)

**CAD 242:** Advanced Parametric Modeling: SolidWorks (4 credits)

**Technical Elective:** (Complete a total of 9 credit hours of from the technical electives list in the catalog)

**Gen Ed.:** CTE Arts & Humanities List. Recommend ART 110: Drawing I, SUN# ART1111 (3 credits)

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**Semester 4 - Spring (Semester Total: 16 credits)**

**CAD 270:** Integrated Mechanical/Electro-Mechanical Design (4 credits)

**CAD 280:** Computer-Aided Design Portfolio (1 credit)

**Technical Elective:** (Complete a total of 9 credit hours of from the technical electives list in the catalog)

**Gen. Ed:** CTE Social & Behavioral Sciences List. Recommend: SOC 110: Introduction to Cities and Global Society (3 credits)  
or POS 201: American National Government and Politics, SUN# POS1110 (3 credits)  
or ECN 201: Microeconomic Principles, SUN# ECN2202 (3 credits)

**Gen. Ed.:** CTE Other List, Science courses only. Recommended PHY 121IN: Introductory Physics, SUN# PHY1111 (4 credits)  
or BIO 108IN: Plants, People and Society (4 credits)  
or MAC 275 Applied Metallurgy (4 credits)

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**Program Total: 61 credits**

Program/Major/Concentration Codes: **AASELECMECHN/CAD1/DFTA**

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