

COMPUTER-AIDED DRAFTING AND DESIGN, ASSOCIATE IN SCIENCE/

Previous Degree Required: HS Diploma

Eligible for Financial Aid: Yes

Delivery Method(s): On-Campus

Location(s): Cocoa, Melbourne

Additional Limited Access Application Process Required: No

Program Testing Requirements: Assessment in Reading, Writing, and Math

Academic Community: STEM Science, Technology, Engineering, and Mathematics

Program Code: DRAS

Classification of Instructional Programs (CIP) Code: 15.1302

Florida Department of Education CIP Code: 1615130202

The Computer-Aided Drafting and Design A.S. degree program has the following associated College Credit Certificates (CCCs):

- [AutoCAD Foundations CCC](#)
- [Drafting Design CCC](#)

This degree program provides competency in computer-aided drafting and design technology for students who desire employment in the design field upon graduation.

Technical drafters work in close association with engineers, designers, scientists, technical writers, production personnel, and salespersons to help design new products. Technical drafters translate ideas, sketches, calculations, and specifications into complete, accurate working drawings used by skilled craftspersons in the manufacture of products.

[Visit the program page for more details and how to apply.](#)

Code	Title	Credit Hours
General Education Courses		
ENC 1101	Composition 1	3
	Humanities Core Requirement	3
	Mathematics Core Requirement	3
	Natural Science Core Requirement	3
	Social/Behavioral Science/Core-Civic Literacy Requirement	3
Major Courses		
ETDC 1540	Civil Drafting	4
ETDC 2320	AutoCAD Fundamentals	4
ETDC 2340	Advanced AutoCAD	4
ETDC 2355	AutoCAD 3D	3
ETDC 2357	Parametric Modeling	3
ETDC 2545	Advanced Civil Drafting	4
TARC 1120	Architectural Drafting	4
TARC 2122	Advanced Architectural Drafting	4
Support Courses		
CGS 2100	Microcomputer Applications	3
Select one of the following:		3
ENC 1102	Composition 2	

OST 2335	Business Communications	
SLS 1101	Success Strategies for College and Life	
Technical Electives		
Select 9 credits from the following:		9
EET 1084	Introduction to Electronics	
ENC 2210	Technical Writing	
ETD 2941	Internship	
ETDC 1150	Blueprint Reading	
ETDC 2322	Creo Parametric	
ETDC 2364	SolidWorks Fundamentals	
ETMC 1010	Mechanical Measurement	
GRAC 2156	Vector Graphics	
MAT 1033	Intermediate Algebra	
MGF 1100	Mathematical Literacy	
Total Credit Hours		60
Course	Title	Credit Hours
Term 1		
ENC 1101	Composition 1	3
ETDC 2320	AutoCAD Fundamentals	4
Technical Electives ¹		6
Credit Hours		13
Term 2		
ETDC 2340	Advanced AutoCAD	4
ETDC 2357	Parametric Modeling	3
Mathematics Core Requirement		3
Social/Behavioral Science/Core-Civic Literacy Requirement		3
Credit Hours		13
Term 3		
ETDC 1540	Civil Drafting	4
ETDC 2355	AutoCAD 3D	3
Credit Hours		7
Term 4		
ETDC 2545	Advanced Civil Drafting	4
TARC 1120	Architectural Drafting	4
Technical Elective ¹		3
Support Elective ¹		3
Credit Hours		14
Term 5		
CGS 2100	Microcomputer Applications	3
TARC 2122	Advanced Architectural Drafting	4
Natural Science Core Requirement		3
Humanities Core Requirement		3
Credit Hours		13
Total Credit Hours		60

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Technical Electives

Select 9 credit hours from the following:

EET 1084 Introduction to Electronics
ENC 2210 Technical Writing
ETD 2941 Internship
ETDC 1150 Blueprint Reading
ETDC 2322 Creo Parametric
ETDC 2364 SolidWorks Fundamentals
ETMC 1010 Mechanical Measurement
GRAC 2156 Vector Graphics
MAT 1033 Intermediate Algebra
MGF 1100 Mathematical Literacy

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Support Course

Select one of the following:

ENC 1102 Composition 2
OST 2335 Business Communications
SLS 1101 Success Strategies for College and Life

Learning Outcomes: Computer-Aided Drafting & Design A.S.

1. Demonstrate knowledge of maps, surveying, bearing angles, plan and profile views, and grading cut/fill
 - *Core Ability Supported: Think Critically and Solve Problems*
2. Apply basic CAD drafting skills for engineering drawings, including orthographic projection, dimension assignment, and precise geometry
 - *Core Ability Supported: Think Critically and Solve Problems*
3. Apply advanced CAD techniques for engineering drawings, including use of Attributes, XREFs, Layers, Blocks, and Curve creation
 - *Core Ability Supported: Think Critically and Solve Problems*
4. Prepare mechanical CAD drawings based on 3D models
 - *Core Ability Supported: Think Critically and Solve Problems*
5. Prepare parametric 3D model drawings to include advanced features, rendering, motion analysis, and assembly constraints
 - *Core Ability Supported: Think Critically and Solve Problems*
6. Prepare civil drafting drawings, including parcel and roadway layouts and profiles
 - *Core Ability Supported: Think Critically and Solve Problems*
7. Prepare architectural floor plans, elevations, sections, and schedules for a complete residence
 - *Core Ability Supported: Think Critically and Solve Problems*
8. Create a 3D architectural CAD model of a complete office building, with associated construction drawings
 - *Core Ability Supported: Think Critically and Solve Problems*