

DRAFTING AND DESIGN TECHNOLOGY, ASSOCIATE IN SCIENCE

Program Code: DRAS
Meta-Major: STEM
Location(s): Cocoa, Melbourne
Delivery Method(s): On-Campus
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: 15.1302
Florida Department of Education CIP Code: 1615130202

The Drafting and Design Technology 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.](#)

Program Requirements

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	
GIS 2040	Fundamentals of Geographic Information Systems	
GRAC 2156	Vector Graphics	
MAT 1033	Intermediate Algebra	
Total Credit Hours		60

Learning Outcomes: Drafting & Design Technology A.S.

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