



3D Prototyping

Certificate (27 SCH*)

*Semester Credit Hour

7/2023

First Semester - 12 SCH

DFTG 1305 - Technical Drafting
DFTG 1309 - Basic Computer-Aided Drafting
DFTG 1325 - Blueprint Reading and Sketching
DFTG 2319 - Intermediate Computer-Aided Drafting

Second Semester - 15 SCH

DFTG 1345 - Parametric Modeling and Design
DFTG 2302 - Machine Drafting
DFTG 2312 - Technical Illustration and Presentation
DFTG 2332 - Advanced Computer-Aided Drafting
DFTG 2340 - Solid Modeling/Design

Marketable Skills

Autodesk AutoCAD Civil 3D; Autodesk Revit; Bentley MicroStation; Trimble SketchUp Pro; Adobe Creative Suite; C; Microsoft.NET Framework; Adobe Illustrator; Adobe Photoshop; ESRI ArcGIS software; ESRI ArcView; Geomechanical design analysis GDA software; Topographic map software; Microsoft PowerPoint; Produce drawings, using computer-assisted drafting systems; Draft plans and detailed drawings for structures, installations, and construction projects; Coordinate structural, electrical, and mechanical designs and determine a method of presentation to graphically represent building plans; Analyze building codes, by-laws, space and site requirements, and other technical documents and reports to determine their effect on architectural designs.

Program Outcomes

- Operate a 2D CAD Design program.
- Read and interpret blueprints.
- Design and document in 3D with a parametric modeling program.
- Create construction and manufacturing documents using various CAD programs.
- Operate and maintain a 3D printer.

High School Endorsements

Business and Industry

Expected Salary

Texas wage data: workers on average earn \$54,880; 10% of workers earn \$33,420 or less; 10% of workers earn \$81,880 or more.

Additional Educational Opportunities

Associate in Applied Science, Bachelor of Arts in Applied Science

Career Opportunities

CAD Technician; Architectural CAD Designer; Mechanical CAD Designer; Civil CAD Designer; Pipe CAD Designer; Electrical CAD Designer; Surveyor CAD Technician; Graphics Designer; Rapid Prototyping Technician; Parametric Modeler; Building Information Modeler; Landscape Designer Technician; Interior Designer Technician.