

# Grayson College Course Catalog

## Overview

The Computer Aided Drafting and Design (CADD) program offers an exciting and profitable future to its graduates. Students who enroll in CADD at Grayson College learn the latest drafting software as well as the essentials for a challenging and satisfying career. Students learn basic drafting techniques, 2D drawing, solid modeling, 3D parametric modeling and 3D printing. As technology expands, the need for technical support people also expands. Over 95% of Grayson College's CADD graduates get a job in the drafting field or continue their education at a four-year institution. 3D modeling is rapidly growing in various industries including; medical, art, food, clothing, film, animation, gaming, architecture, manufacturing, industrial design, and interior design. The CADD curriculum at Grayson College prepares students for jobs in mechanical, electromechanical, architectural, industrial and technical illustration, as well as the previously mentioned areas of interest.

The Computer Aided Drafting and Design program offers an Associate of Applied Science Degree, the Drafting Assistant Certificate and the CADD Technician Certificate.

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## Course Requirements

The Associate Degree, the CADD Technician Certificate and the Drafting Assistant Certificate require a High School Diploma or equivalent. The Associate of Applied Science Degree requires that TSI requirements are met.

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## Capstone Experience

Graduation with a CADD Certificate or an Associate of Applied Science Degree in Computer Aided Drafting and Design requires successful completion of a Comprehensive Exit Exam.

## AAS Degree Requirements

### Associate of Applied Science - Computer Aided Drafting and Design Technology

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Subject	Semester Hours
<a href="#">DFTG 1309</a> (Basic Computer Aided Drafting)	3
<a href="#">DFTG 1317</a> ( <b>Architectural</b> Drafting - Residential)	3
* <a href="#">SPCH 1311</a> or <a href="#">1321</a>	3
<a href="#">DFTG 1405</a> ( <b>Technical Drafting</b> )	4
*Lang, Phil, Culture/Creative Arts Core	3
<a href="#">DFTG 2331</a> ( <b>Adv Technologies in Architectural Drafting</b> )	3
<a href="#">DFTG 1433</a> ( <b>Mechanical Drafting</b> )	4
<a href="#">DFTG 2419</a> ( <b>Intermediate Computer-Aided Drafting</b> )	4
*Social and Behavioral Science	3
<a href="#">DFTG 2402</a> (Machine Drafting)	4
<a href="#">DFTG 2417</a> (Descriptive Geometry)	4
<a href="#">DFTG 1445</a> (Parametric Modeling and Design)	4
<a href="#">ENGL 1301</a> (Composition I)	3
<a href="#">DFTG 2440</a> (Solid Modeling/Design)	4
<a href="#">DFTG 2438</a> (Final Project - Adv. Drafting)	4
<a href="#">DFTG 2450</a> (Geometric Dimensioning & Tolerancing)	4
<a href="#">MATH 1314</a> (College Algebra)	3
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<b>60</b>	

Capstone Experience: All students must complete the capstone requirement. Successful completion of a comprehensive exit exam prior to graduation.

\*Please review your Student Planner or contact your Student Success Coach/Faculty Mentor to review which courses may be used to fill this degree requirement.

# Certificate Degree Requirements

## Computer Aided Drafting Technician - Certificate

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Subject	Semester Hours
<a href="#">DFTG 1309</a> (Basic Computer-Aided Drafting)	3
<a href="#">DFTG 1317</a> (Architectural Drafting - Residential)	3
<a href="#">DFTG 1405</a> (Technical Drafting)	4
* <a href="#">SPCH 1311</a> or <a href="#">1321</a>	3
<a href="#">DFTG 2331</a> (Adv. Tech in Architectural Design & Drafting)	3
<a href="#">DFTG 1433</a> (Mechanical Drafting)	4
<a href="#">DFTG 2419</a> (Intermediate Computer-Aided Drafting)	4
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Capstone Experience: All students must complete the capstone requirement. Successful completion of a comprehensive exit exam prior to graduation.

\*Please review your Student Planner or contact your Student Success Coach/Faculty Mentor to review which courses may be used to fill this degree requirement.

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## Drafting Assistant - Certificate

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Subject	Semester Hours
<a href="#">DFTG 1309</a> (Basic Computer-Aided Drafting)	3
<a href="#">DFTG 1317</a> (Architectural Drafting - Residential)	3
<a href="#">DFTG 1405</a> (Technical Drafting)	4
<a href="#">DFTG 2419</a> (Intermediate Computer-Aided Drafting)	4
* <a href="#">SPCH 1311</a> or <a href="#">1321</a>	3
	<b>17</b>

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Capstone Experience: All students must complete the capstone requirement. Successful completion of a comprehensive exit exam prior to graduation.

\*Please review your Student Planner or contact your Student Success Coach/Faculty Mentor to review which courses may be used to fill this degree requirement.

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## DFTG 1309 - Basic Computer-Aided Drafting

An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems, and plot/print to scale.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 2.0

**Lab hours:** 4.0

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## DFTG 1317 - Architectural Drafting – Residential

Architectural drafting procedures, practices, terms, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 2.0

**Lab hours:** 4.0

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## DFTG 1325 - Blueprint Reading

An introduction to reading and interpreting working drawings for fabrication processes and associated trades. Topics to include welding drawing, HVAC, electrical and architectural/construction.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0  
**Lab hours:** 1.0

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### **DFTG 1405 - Technical Drafting**

Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, and auxiliary views.

**Grade Basis:** L  
**Credit hours:** 4.0  
**Lecture hours:** 3.0  
**Lab hours:** 3.0

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### **DFTG 1433 - Mechanical Drafting**

Study of mechanical drawings using dimensioning and tolerances, sectioning techniques, orthographic projection, and pictorial drawings.

**Grade Basis:** L  
**Credit hours:** 4.0  
**Lecture hours:** 3.0  
**Lab hours:** 3.0

**Prerequisites:**

- [DFTG 1309](#) - Basic Computer-Aided Drafting
  - [DFTG 1405](#) - Technical Drafting
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### **DFTG 1445 - Parametric Modeling and Design**

Parametric-based design software for 3D design and drafting.

**Grade Basis:** L  
**Credit hours:** 4.0  
**Lecture hours:** 3.0  
**Lab hours:** 3.0

**Prerequisites:**

- [DFTG 2419](#) - Intermediate Computer-Aided Drafting

**Restrictions:**

- DFTG 2419 or consent of instructor
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### **DFTG 2331 - Advanced Technologies in Architectural Design and Drafting**

Use of architectural specific software to execute the elements required in designing standard architectural; exhibits utilizing custom features to create walls, windows and specific design requirements for construction in residential/commercial and industrial architecture.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 2.0  
**Lab hours:** 4.0

**Prerequisites:**

- [DFTG 1309](#) - Basic Computer-Aided Drafting

**Restrictions:**

- DFTG 1309 or consent of instructor
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## **DFTG 2402 - Machine Drafting**

Production of detail and assembly drawings of machines, threads, gears, utilizing tolerances, limit dimensioning and surface finishes.

**Grade Basis:** L

**Credit hours:** 4.0

**Lecture hours:** 3.0

**Lab hours:** 3.0

**Prerequisites:**

- [DFTG 1433](#) - Mechanical Drafting
  - [DFTG 2419](#) - Intermediate Computer-Aided Drafting
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## **DFTG 2417 - Descriptive Geometry**

Graphical solutions to problems involving points, lines, and planes in space. Create views to show an object's true size, shape/ development.

**Grade Basis:** L

**Credit hours:** 4.0

**Lecture hours:** 3.0

**Lab hours:** 3.0

**Prerequisites:**

- [DFTG 1309](#) - Basic Computer-Aided Drafting
  - [DFTG 1405](#) - Technical Drafting
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## **DFTG 2419 - Intermediate Computer-Aided Drafting**

A continuation of practices and techniques used in basic computer-aided drafting including the development and use of prototype drawings, construction of pictorial drawings, extracting data and basics of 3D.

**Grade Basis:** L

**Credit hours:** 4.0

**Lecture hours:** 3.0

**Lab hours:** 3.0

**Prerequisites:**

- [DFTG 1309](#) - Basic Computer-Aided Drafting
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## **DFTG 2438 - Final Project – Advanced Drafting**

A drafting course in which students participate in a comprehensive project from conception to conclusion. • Identify Problems • Use industry standard research techniques. • Create complete drawing packages

**Grade Basis:** L

**Credit hours:** 4.0

**Lecture hours:** 3.0

**Lab hours:** 2.0

**Prerequisites:**

- [DFTG 2402](#) - Machine Drafting
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## **DFTG 2440 - Solid Modeling/Design**

A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work.

**Grade Basis:** L

**Credit hours:** 4.0

**Lecture hours:** 3.0

**Lab hours:** 3.0

**Prerequisites:**

- [DFTG 2402](#) - Machine Drafting
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### **DFTG 2450 - Geometric Dimensioning and Tolerancing**

Geometric dimensioning and tolerancing, according to standards, application of various geometric dimensions and tolerances to production drawings.

**Grade Basis:** L

**Credit hours:** 4.0

**Lecture hours:** 4.0

**Lab hours:** 1.0

**Prerequisites:**

- [DFTG 2402](#) - Machine Drafting
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### **DFTG 2486 - Internship – Drafting and Design Technology/Technician, General.**

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

**Grade Basis:** L

**Credit hours:** 4.0

**Restrictions:**

- This is a 20 hour per week internship program
  - Consent of Professor
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Last updated: 06/11/2019

**Grayson College**

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