Career Technical Education
Computer-Aided Design Programs

In today’s world, everything from toys to gaming consoles, tablets and smart phones, single-story homes and skyscrapers must first be visualized and designed using Computer-Aided Design (CAD) software. By using CAD, architects, engineers, manufacturers and drafters can imagine, invent, and revise detailed drawings used to give physical form to their ideas. This field often appeals to individuals with a construction background who prefer designing projects over physically building them.

The class structure of hands-on exercises and projects with step by-step tutorials, and instructors providing individual assistance, as well as the ability to collaborate and swap ideas with fellow students in an interactive work-like team atmosphere results in faster, more comprehensive learning. The class also provides a platform for experienced students to prepare for the Official Autodesk, Inc. AutoCAD® Certification Exam with practice questions and exams based on Autodesk Inc. testing objectives.
Computer-Aided Design Technician  28 weeks (980 hours)

Elements:
- Manual Drafting Fundamentals
- Manual Drafting Projections and Views
- Manual Drafting Applications
- Computer Keyboarding and File Management
- CAD 2-D Fundamentals 1
- CAD 2-D Fundamentals 2
- CAD 2-D Applications 1
- CAD 2-D Applications 2
- CAD 2-D Industrial Applications 1
- CAD 2-D Industrial Applications 2
- CAD 3-D Fundamentals
- CAD 3-D Industrial Applications
- CAD 3-D Solids Modeling
- Geometric Dimensioning and Tolerancing
- Rapid Prototyping
- Portfolio Development

Optional Course Enhancements
- SolidWorks®, Revit®, Inventor® and AutoCAD Civil 3D®

Course Information:
Designed for students with little or no previous CAD or computer experience, the Computer-Aided Design Technician course prepares students for entry-level employment as CAD Drafters and Technicians. The course covers 2D geometric construction and advanced 3D solid modeling using AutoCAD, the foundational software on which specialized CAD software used for advanced manufacturing, sustainable architecture design and animation are based.

The course also includes manual drafting, a critical part of the design process needed to clearly understand and communicate design ideas, as well as keyboarding, Windows OS basics and file management.

Employment Opportunities:
- CAD Drafter
- CAD Operator
- CAD Designer
- CAD Technician

For Gainful Employment Disclosure Information, visit:  www.adultedventura.edu/gainful.html
## Solid Works Technician

### Prerequisite:
- Computer-Aided Design Certification (or professional equivalent)

### Elements:
- SolidWorks Fundamentals
- SolidWorks 3-D Solids Modeling
- SolidWorks Assemblies
- SolidWorks Production Drawings
- SolidWorks Sheet Metal Design
- SolidWorks Industrial Applications
- Rapid Prototyping
- Portfolio Development

### Course Information:
The Solid Works Technician course is designed for advanced end users, designers or engineers who want to learn the skills needed to design and create working drawings.

SolidWorks 3D is the industry standard solid-modeling software that lets engineers, designers and drafters quickly sketch ideas, experiment with features and dimensions, design parts and assemblies, and produce models and detailed drawings. It uses a parametric feature-based approach meaning that parameters relate and change in relation to one another. Changing one parameter on a part, like a dimension, also changes the size and shape of the part as a whole saving time and reducing manufacturing errors.

Graduating students may study for, and take, the Certified SolidWorks Associate Exam in VACE's in-house testing site.

### Employment Opportunities:
- CAD Drafter
- CAD Operator
- CAD Designer
- CAD Technician

### 10 weeks (350 hours)