

# Occupations in Computer Aided Drafting

## Precision Production Trades

- |                          |                        |                      |
|--------------------------|------------------------|----------------------|
| > Architectural Drafter  | > Drafting/DAD Teacher | > Mechanical Drafter |
| > Civil Engineer         | > Interior Designer    | > Surveyor           |
| > Computer-Aided Drafter | > Landscape Designer   | > Urban Planner      |

## Drafting Facts

- Julia Morgan, who in 1894 received a degree in civil engineering, opened the door for women being hired as artists and architects, and is known for designing many unique and imaginative buildings. She was the architect of the Hearst Castle in San Simeon, CA and became the principal architect for newspaper tycoon William Randolph Hearst.
- Frank Lloyd Wright's first employee was a woman, Marion Mahony Griffin, who later became the first woman to be officially licensed as an architect.
- Before calculators, the calculation of trig functions, exponentials, and logarithms were done by hand using a device called a slide rule that dates back to the 1600s.
- Before computer-aided design most design, in manufacturing, architecture and engineering was done on a drafting board, using a lead pencil. "AutoCAD" became widely used in the late 1980s after its release in 1982.

Break free of the traditions and barriers that limit your choices.  
What's stopping you? Be different! Try something new!  
Is a nontraditional career in your future?

# Drafting/CAD

A NONTRADITIONAL CAREER PATH FOR WOMEN



Talk to your school counselor  
about a nontraditional career in STS.

*Break free of the barriers that limit your career choices.*

[www.UtahCTE.org](http://www.UtahCTE.org)



UTAH STATE OFFICE OF EDUCATION  
250 East 500 South P.O. Box 144200 Salt Lake City, UT 84114-4200  
Larry K. Shumway, Ed.D., State Superintendent of Public Instruction  
Mary Shumway, State Director of Career and Technical Education



SKILLED AND TECHNICAL SCIENCES EDUCATION

## Nontraditional Careers

Did you know a nontraditional career is any occupation in which women or men comprise 25 percent or less of its total employment?

Women in nontraditional occupations earn more money than those in female-oriented fields.

Choosing a nontraditional career path can mean:

- > Greater job satisfaction.
- > Higher wages and better benefits.
- > Great advancement opportunities.
- > Economic self-sufficiency.
- > Broader job opportunities.
- > Freedom to pursue a career related to your interests and abilities.

**BREAK with tradition and explore a nontraditional career!**

## Computer Aided Drafting as a Career

Architectural drafters use computer-aided drafting (CAD) systems to design and draw the architectural and structural features of modern buildings and houses according to specifications provided by the architect.

These specifications include not only the building designs, but also site, floor, and foundation plans, elevations, building sections and details, cost estimates, specification writing, code and zoning applications, renderings and perspectives, models of building, structural design, environmental system design, and computer applications.

In today's technologically advanced business world, drafters must have excellent drawing and graphic skills along with a high level of computer skills. Pencils, drawing boards, and protractors are tools of the past.

## Career and Technical Education Pathways

High school is a great time to try out a wide range of Career Pathways by enrolling in Career and Technical Education (CTE) courses. As an added bonus, you will be developing work-related skills that can be put to immediate and profitable use.

CTE provides courses and Pathways consistent with industry training and certification, thus providing depth and meaning for both visual and hands-on learning and education that can be applied in today's job market.

Through participation in CTE, Skilled and Technical Sciences Education can guide you as you take courses in your chosen Pathway.

By taking an STS course, you will acquire essential technical and leadership skills, and learn how to properly use tools and equipment that will enable you to successfully work in your area of choice. You will also gain an important foundation of knowledge and skills necessary for continuing your education in STS.

## Employment

An architectural drafter may specialize as a building designer, an independent architectural drafter who designs and drafts buildings on behalf of a client. Architectural drafters and designers are hired by organizations of all sizes, or are self-employed.

In Utah, an entry-level position for an architectural drafter generally starts at an average hourly wage of \$13.80, or \$28,704 per year.<sup>1</sup> Increases in salary are based upon training, education, and experience. In Utah, an architect must be licensed.

## Working Conditions

Architectural drafters sit one-third of the time, and may be indoors most of the time. However, they do spend some time outdoors inspecting sites. Drafters usually work in comfortable offices furnished to accommodate their tasks. They may sit at adjustable drawing boards or drafting tables when doing manual drawings, although most drafters work on computers much of the time. Because they spend long periods in front of a computer doing detailed work, drafters may be susceptible to eyestrain, back discomfort, and hand and wrist problems.

*24.8 percent of architects are women.<sup>2</sup>*

## Outlook

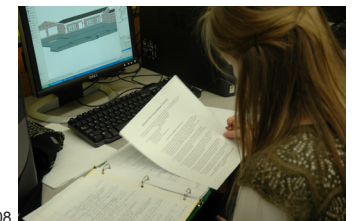
Industrial growth and increasingly complex designs will spur growth in drafting services. As technology advances, opportunities will be best for drafters with at least two years of post-secondary training and computer-aided design systems experience.

In Utah, the annual growth rate in this occupation is expected to be 2.3 percent through the year 2016, with employment totaling 1,740.<sup>1</sup>

## UtahFutures

Log on to UtahFutures.org to learn more about a career in drafting. From the home page, click on the "occupations" option to find an occupation that interests you and link to the description for that occupation. (Refer to the sample list of occupations on the back of this page.) Check out employment opportunities, working conditions, outlook, skills and abilities, and wages for your selected occupation.

**Is a nontraditional career in your future?**



<sup>1</sup> Utah Department of Workforce Services

<sup>2</sup> Department of Labor, Women's Bureau, Nontraditional Occupations for Women in 2008