ENGINEERING DESIGN GRAPHICS GENERAL, CERTIFICATE OF TECHNOLOGY

Program Information

All successful projects start with a good plan. For architects, engineering designers, CAD drafters, and builders, that plan comes in the form of working drawings produced by technically talented and well-trained individuals. If you have a desire to express your knowledge through computer-aided design software, San Jacinto College can give you the skills you need to make your way into this exciting field. This degree allows you to pursue careers that strike a satisfying balance between creativity, technical proficiency, and attention to detail. You can make yourself an indispensable asset in a variety of fields, such as architecture, manufacturing, engineering, construction, and the oil and gas industry, with a degree in engineering design graphics.

Central campus offers Engineering Design Graphics foundation courses: DFTG 1305 Introduction to Technical Drawing, DFTG 1409 Basic Computer-Aided Drafting, and DFTG 2317 Descriptive Geometry. Classes will be held in Building 45, the LyondellBasell Center for Petrochemical, Energy, & Technology building. Students can check the online Schedule of Classes for days and times.

The Engineering Design Graphics (EDG) program at San Jacinto College:

- Trains students to translate the ideas of designers, engineers, and architects from rough sketches, design layouts, specifications, and calculations into working drawings, maps, plans, illustrations, and 3D models; and
- Offers students the skills needed to prepare technical drawings and/or 3D models using Computer Aided Drafting (CAD), design, and 3D modeling software.

Students must select from one of the four areas:

- Architectural/Civil/Structural,
- General,
- Mechanical, and
- Petro/Industrial.

Career Opportunities

Growth in Houston's diversified job markets has created employment openings for drafters. Career opportunities for drafters are available in:

- Architecture;
- Engineering: Electrical, Instrumentation, Structural, Civil;
- Manufacturing;
- Oil, Energy, and Petrochemical; and
- Public Works.

Earning Potential

Drafter: $57,408 per year[1]

[1] Source: texaswages.com, median salary Gulf Coast region, 2022

For more information, students may contact North campus, 281-998-6350, x7765; Central campus, 281-476-1836; and South campus, 281-998-6350, x3587.

Campuses

Central Campus
North Campus
South Campus

Information

A Certificate of Technology focuses on 41 semester credit hours of technical course work. This is a fast-track award for those wishing to concentrate their studies in Engineering Design Graphics and enter the job market as soon as possible. San Jacinto College offers four Certificates of Technology, including:

1. Architectural/Civil/Structural,
2. General
3. Mechanical, and
4. Petro/Industrial.

Students enrolling into San Jacinto College programs with external learning experiences (i.e., clinical, practicum, externship, cooperative, etc.) will be required to comply with the immunization requirements and policies of the clinical/external learning sites to engage in all clinical/external learning experiences. Vaccination requirements at clinical/external learning sites are implemented pursuant to the independent authority of such facilities and are not mandated by San Jacinto College. Failure to meet the immunization requirements mandated by clinical/external learning sites may limit a student's ability to complete the program and/or may delay the student's graduation date. San Jacinto College does not process exemptions, and students should address potential vaccination exemptions directly with the clinical/external learning site.

Plan of Study

4DFTG-G

First Term		Credits
DFTG 1305	Introduction to Technical Drawing	3
DFTG 1409	Basic Computer-Aided Drafting	4
	Credits	**7**
Second Term		
DFTG 1417	Architectural Drafting-Residential	4
DFTG 1445	Parametric Modeling and Design	4
DFTG 2423	Pipe Drafting	4
	Credits	**12**
Third Term		
DFTG 2407	Electrical Drafting	4
Select one course from the Electives list.		4
Select one course from the Electives list not previously selected.		4
	Credits	**12**
Fourth Term		
DFTG 2317	Descriptive Geometry	3
Select one course from the Electives list not previously selected.		4
DFTG 2386 or DFTG 2338	Internship-Drafting and Design Technology/Technician [1] or Final Project - Advanced Drafting	3
	Credits	**10**
	Total Credits	**41**

Capstone Experience:[1] DFTG 2386 Internship-Drafting and Design Technology/Technician or DFTG 2338 Final Project - Advanced Drafting

[1] The course selected to satisfy the Capstone Experience (DFTG 2386 Internship-Drafting and Design Technology/Technician or DFTG 2338 Final Project - Advanced Drafting) can only be taken during, or after, the term in which the last required engineering design graphics courses are completed.

Courses may be applied to earn the Certificate of Technology, then the Level 2 Certificate, and finally the Associate of Applied Science (AAS) degree.

Courses do not have to be taken in this order unless a course has a prerequisite.

For more detailed information on this program, contact the Department Chair or faculty.

Electives

Code	Title	Credits
ARCE 1415	Structural Steel Detailing	4
ARCE 1421	Architectural Illustration	4
ARCE 1452	Structural Drafting	4
DFTG 1430	Civil Drafting I	4
DFTG 1433	Mechanical Drafting	4
DFTG 2402	Machine Drafting	4
DFTG 2406	Machine Design	4
DFTG 2408	Instrumentation Drafting	4
DFTG 2421	Topographic Drafting	4
DFTG 2428	Architectural Drafting-Commercial	4
DFTG 2431	Advanced Technologies in Architectural Design and Drafting	4
DFTG 2435	Advanced Technologies in Mechanical Design and Drafting	4
DFTG 2440	Solid Modeling/Design	4
DFTG 2445	Advanced Pipe Drafting	4
DFTG 2450	Geometric Dimensioning and Tolerancing	4
DFTG 2457	Advanced Technologies in Pipe Design and Drafting	4
DFTG 2458	Advanced Machine Design	4