# ENGINEERING DESIGN GRAPHICS, LEVEL 2 CERTIFICATE

## Shaping concepts into engineered solutions

The Engineering Design Graphics pathway prepares students for technical careers that support engineering, manufacturing, construction, and product design industries. Through progressive coursework, students develop skills in technical drawing, computer-aided design (CAD), 3D modeling, and industry-standard design practices used to communicate complex engineering concepts. The pathway emphasizes hands-on learning and real-world applications, allowing students to build a strong foundation in design visualization, documentation, and problem-solving. Designed for flexibility, the pathway supports multiple credential options —certificates and an associate degree—allowing students to gain workforce-ready skills while advancing toward higher levels of technical expertise.

### Career Opportunities and Income

Visit sanjac.edu (https://www.sanjac.edu/programs/areas-of-study/stem/engineering-design-graphics/) for information regarding career opportunities and potential earnings in the Greater Houston region.

### Learning & Career Pathway

This learning pathway - a series of related and "stacked" certificates and degrees - includes the following awards. You can start at any point on the path and earn certificates on your way to completing the degree

- Engineering Design Graphics, Certificate of Technology (https://publications.sanjac.edu/areas-study/science-technology-engineering-math/edg-certificate-technology/) (2 years)
- Engineering Design Graphics, Level 2 Certificate (https://publications.sanjac.edu/areas-study/science-technology-engineering-math/edg-certificate-technology/) (2 years)
- Engineering Design Graphics, Associate of Applied Science (https://publications.sanjac.edu/areas-study/science-technology-engineering-math/edg-aas/) (2 years)

### Learning Outcomes and Career Skills

A student completing the last award in the pathway will be able to:

- Students will use industry standards to communicate graphically.
- Students will be able to develop architectural working drawings using architectural standards.
- Students will be able to apply critical thinking to a drawing to determine the best graphical solution.
- Students will be able to utilize National Electric Codes (NEC) safety codes to create plans and diagrams.
- Students will be able to develop and employ industry recognized piping symbols and mechanical equipment in creating flow diagrams, isometrics, piping arrangements, elevation drawings, and/or 3D models.

### External Learning Experiences

This program includes external learning experiences outside of the classroom, e.g., an internship, externship, clinical, practicum, or cooperative learning experience. Those experiences are typically on-site at a business or organization.

All students participating in external learning experiences are required to comply with the immunization requirements and policies of the external learning sites. Some learning sites outside the college have their own vaccination requirements. These rules come from those facilities and are not mandated by the college. Failure to meet those immunization requirements 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 external learning site.

### Locations

- Central (https://www.sanjac.edu/about/locations/central/)
- North (https://www.sanjac.edu/about/locations/north/)
- South (https://www.sanjac.edu/about/locations/south/)