

3D Mechanical Drafting

23-25 unit certificate • 60 unit degree

This certificate includes courses intended to help students qualify for an entry level CAD operator/drafter or help someone already in industry to update their skills.

Required Courses

DFT/ENE-21 Drafting (3 units)*

Fundamentals of mechanical drawing including lettering, instruments and their uses, geometric construction, types of projection, freehand drawing, sectioning, dimensioning, auxiliary views, and pictorial drawing. Recommended for beginners and students with up to one year of drafting in high school.

DFT/ENE-27 Technical Communications (3 units)*

Procedures for organizing and presenting technical data through informal and formal documents and presentations.

DFT/ENE-51 Blueprint Reading (2 units)*

Study of blueprints, interpretation, projection, symbols and abbreviations.

DFT/ENE-42 SolidWorks I (3 units)*

This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks. Students will begin with basic parametric solid modeling techniques and advance into complex assemblies requiring animation.

DFT/ENE-30 Computer Aided Drafting (CAD) (3 units)*

Advisory: CIS-1A

Two-dimensional computer aided drafting class for drafters.

ENE-42B SolidWorks II (3 units)*

Prerequisite: ENE-42 or prior SolidWorks experience.

An advanced course in using the three-dimensional parametric solid-modeler SolidWorks. This course is designed to further 3D parametric solid modeling software techniques learned in SolidWorks I. Students will delve deeper into topics that were introduced in the first SolidWorks course such as extruding, sweeping, lofting, shelling, assemblies, and animation.

DFT/ENE-52 Geometric Dimensioning & Tolerancing (3 units)*

Prepares students to read, interpret, and use ANSI Y14.5 M, the current standard for drafting.

Plus, an additional 3-5 units from the following courses:

MAT-36 Trigonometry (4 units)*

MAN-56 CNC Machine Set-up and Operation (4 units)*

MAN-35 Computer Aided Manufacturing- Mastercam (5 units)*

ENE-41 Engineering Graphics (3 units)*

*This class transfers toward one or more CSUSB or CalPoly majors. Visit www.assist.org or the Counseling office for details.

3D Mechanical Drafting

Tuition \$46/unit • Duration of Study: 12 months

A Certificate in 3D Mechanical Drafting will be awarded upon completion of the required courses (23-25 units). Please refer to the Norco College Catalog or visit the Counseling Center.

Job & Wage Information

- CAD Operator/Mechanical Drafter
Wage Range*: \$23.17-36.62
0% increase expected in CA 2019-2029;
530 openings annually
More info:
<http://bit.ly/MechanicalDrafterNC>
- Engineering Assistant/Engineering Technician
Wage Range*: \$21.83-37.26
6% increase expected in CA 2019-2029;
870 openings annually
More info:
<http://bit.ly/EngineeringTechnicianNC>

*2020, Riverside/Ontario/San Bernardino Metro Area

What type of interests might be a good fit for this career choice?



Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.

What's Your School?

SCHOOL OF
Science, Technology,
Engineering & Mathematics

Visit www.norcollege.edu/STEM
for more information about this program.