



CAD Technician Certificate: NIACC

Continuing Education

**Non-credit 60 hours OR
4 credits**

Contact:

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Program Description

A popular program used by drafters and engineers is AutoCAD (ACAD). Due to the required accuracy of blueprints and structural design, CAD professionals typically obtain certification/licensing from national engineering organizations, on top of education obtained from school programs. This program will explore the fundamentals of ACAD; layers, icons, pull-down menus, drawing & editing commands, object snaps, screen menu, filters, text, sketch, basic construction of 2D mechanical drawings. Use of board equipment & instruments, lettering, basic geometric construction, & sketching fundamentals. .

Admission Requirements

A strong math background and mechanical aptitude is recommended

Curriculum

Through the curriculum for this course the student will:

1. Develop drawing skills to identify and develop true length lines and true shapes of surfaces.
2. Demonstrate sketching skills in isometric, oblique, and multi-view drawings.
3. Recognize the difference between first and third angle projection.
4. Use AutoCAD to draw an orthographic, isometric drawings, and included structural features.
5. Apply proper dimensioning techniques.
6. Place finish marks properly on drawings.
7. Calculate the bend allowances in sheet metal.
8. Apply correct sectional and auxiliary views within the drawings.
9. Determine from the tolerancing tables correct tolerances for mating parts.
10. Recognize and apply some basic geometric and surface quality symbols to drawings.
11. Write a revision for an engineering change order.
12. Draw an assembly drawing.
13. Draw working drawings from a design layout.

Program Fees

Tuition & Fees	\$550
Books	included
Other fees	<u>included</u>
Total	\$550

Career Potential

Draftsman, Engineering Assistants,

As technology continues to advance, employers will look for drafters with a strong background in fundamental drafting principles, a high level of technical sophistication, and the ability to apply their knowledge to a broader range of responsibilities. Drafters can expect slower than average employment growth through 2016, with the best opportunities expected for those with 2 years of professional training. Computer Aided Design (CAD) encompasses a broad range of computer-based drafting professions. Trained drafting professionals are experts in electronically laying out the structural plans created by engineers and architects in the design of buildings, bridges, machinery, and other spatial construction .