

COMPUTER AIDED DESIGN AND DRAFTING, CERTIFICATE OF ACHIEVEMENT

Banner code: 2_CN_CADD

Financial aid: Eligible

This is a four-semester program which will prepare the student for an entry-level job in Technical or Mechanical Drafting and 3D Design. First year training concentrates on basic drafting and computer practice, which provide experiences in applying technical skills to practical problems. Acquired skills include precision dimensioning, basic working drawings, and computer-aided drafting. During the second year the training concentrates on 3D modeling and design including assemblies and parts management. Courses are designed and offered to provide completion within two years.

Program Level Learning Outcomes

Upon completion of this program, students will be able to:

1. Describe the purpose, process, and value of interpreting and developing Drafting project drawings for all facets of the project.
2. Use Computer Aided and Manual drafting methods to create a variety of presentation drawings as found in industry.
3. Use Engineering organization standards, technical vocabulary and industry conventions of working drawings for mechanical, structural, and industrial project types.
4. Use current CAD and 3D CAD software applications to create drafting drawings, presentation graphics and 3D design image models.
5. Describe manufacturing material systems, sustainable trends, and manufacturing machinery for a variety of project types
6. Explain professional career and transfer options available for a wide variety of economic applications in many design fields and related disciplines.
7. Conduct project research, historical comparison, sketching, rendering, color media, and 3D concept model-building to industry quality standards.
8. Demonstrate professional abilities in written, verbal, and graphic skills.

Certificate of Achievement Requirements

This certificate goes through the State approval process and requires a minimum of 12 units of coursework in a particular academic or occupational area. The certificate programs normally include only those courses which have a direct bearing upon specialized occupational competency since the objective of earning the career certificate is immediate employment in a specialized area. Upon successful completion of the program and completing the application, the student will receive the certificate and be recognized at the graduation ceremony. In order to earn a Certificate of Achievement all courses that apply to the certificate must be completed with a minimum grade of "C" in each course unless otherwise stated. A minimum of 12 units in residence at GWC is required, and 50 percent of the certificate program must be completed at GWC.

It is suggested that courses be taken in the order they are listed in order to achieve maximum advantage of course content and success in program.

Course	Title	Units
Required Courses		
DRAF G101	Basic Computer Aided Design Drafting	4
DRAF G105	Basic Engineering Drafting I, Computer Aided Drafting	3
MATH G030	Intermediate Algebra	4
DRAF G090	CAD Drafting Laboratory	1
DRAF G110	Basic Engineering Drafting II, Computer Aided Drafting	3
DRAF G170	Advanced 3D Mechanical Design	3
Total Units		18