

# COMPUTER AIDED DRAFTING



## NOCTI certification available to all students.

The field of drafting and design within the areas of engineering, architecture and other technical disciplines is rapidly changing. The drawing boards, drafting machines, compasses and other drafting tools that up until recently were the tools of the designer's trade, are today being replaced with high tech equipment. Computers, monitors, digitizers, plotters, printers and software are now taking over and soon almost all drafting and design work will be done using Computer Aided Drafting (C.A.D). Students today must be prepared for the world of work tomorrow.

The intent of the Computer Aided Drafting (C.A.D.) program is not just to expose students to this new technology, but to give them an extensive hands-on experience with this equipment. This experience can then be used to enter the work force or as a stepping-stone to higher education.

## OBJECTIVES OF THE C.A.D. PROGRAM

A student who successfully completes the course will have demonstrated the following:

1. Development of entry-level employability skills in the Computer Aided Drafting field.
2. Knowledge of specific content material necessary to further their education in a post secondary technical degree program.

## UNITS OF STUDY

### First Year

Basic Definitions  
Basic Computer Procedures  
C.A.D. Hardware  
C.A.D. Drawing Commands  
Size Description  
Drawing Management  
Editing  
C.A.D. Exclusive Tasks  
AutoCAD Software

### Second Year

Architectural C.A.D.  
Advanced Mechanical C.A.D.  
Advanced AutoCAD Software  
Shape Description  
Mechanical C.A.D.  
Electrical Drawing  
Welding Drawing  
Survey Drawing

## EMPLOYMENT OUTLOOK

Drafters held about 319,000 jobs in 1988. Drafters work in the engineering and architectural services, manufacturing industries, construction, transportation, communications and utilities industries.

The employment outlook is expected to grow as fast as the average for all occupations through the year 2000. Industrial growth and the increasingly complex design problems associated with new products and processes will greatly increase the demand for C.A.D. services.

## **JOB OPPORTUNITIES**

Architectural Drafters  
Electrical Drafters  
Civil Drafters  
Piping Drafters

Aeronautical Drafters  
Electronic Drafters  
Mechanical Drafters  
Survey Drafters

The Educational Centers provide job placement assistance for all students enrolled in occupational programs.

## **CAREER ADVANTAGES**

The drafting field is expected to have almost all drafters using C.A.D. by the year 2000. A student taking this course will be able to major in mechanical or architectural C.A.D. in their second year.

Most of the students from this program will continue their training at post secondary schools.

Drafters and designers work in a clean and safe working environment and the work is not physically strenuous.

## **COLLEGE BOUND STUDENTS**

The C.A.D. program at BOCES can help prepare students to go on to a two year associates degree program in Drafting Technology, Mechanical, Electrical, Civil, Construction and other technology areas. It can also help prepare students going on to a four-year degree program in Engineering, Architecture or other technical fields.

At this time, Niagara County Community College and Genesee Community College are giving college credits towards an associate's degree for completion of the BOCES C.A.D. program. Other two-year technical programs may also offer this advance credit.

## **COURSE OPTIONS**

There will be two 1/4 unit optional modules of Intro to Occupations taught in this program. If you need the two 1/4 unit required modules (Working Citizen and Personal Resource Management), see your guidance counselor to make arrangements.

## **COLLEGE OPPORTUNITIES**

### **Genesee Community College**

EGR 101      Engineering Drawing I – 4 credits  
EGR 103      Architectural Drawing – 3 credits  
EGR 119      Computer Assisted Drafting II – 3 credits