

**ARCHITECTURAL AND CONSTRUCTION TECHNOLOGIES**  
**COMPUTER ASSISTED DRAFTING TECHNOLOGY (CAD)**  
**(HEGIS 5303)**  
 (Applied Academic Certificate)

This program prepares technicians for entry-level positions in the field of drafting. The graduate is qualified for positions in the drafting environment in the areas of both traditional (manual) and computer-aided drafting.

A Certificate is awarded upon completion of the requirements for this program

Upon successful completion of the CAD program, graduates can be expected to have knowledge as detailed below:

- Understanding of the various engineering and architectural environments in which Computer Aided Drafting is used.
- Ability to employ the skill of manual drafting in the mechanical and architectural disciplines in the preparation of assigned drawings.
- Demonstrate effective time management responsibility by completing assignments and projects with the assigned time constraints.
- Ability to apply mechanical and architectural drawing standards through production of assigned drawings.
- Ability to operate Computer Aided Drafting software through the production of assigned computer hard-copy drawings.
- Understand and solve basic descriptive geometry engineering problems including measuring translation between imperial and metric, tolerancing and basic sheet metal developments and transitions.
- Ability to illustrate pictorial axonometric and perspective drawings using pencil techniques and CAD by production of assignments and projects.
- Ability to develop three-dimensional rendered drawings using CAD software and add-on packages.
- Identify advanced methods of design technology such as rapid-prototyping, reverse engineering, and model making.
- Understand the basics of the field of surveying
- Ability to use modern land surveying equipment and perform basic functions required of a surveying technician.

Courses should be selected in consultation with an advisor.

<u>Course No.</u>	<u>Descriptive Title</u>	<u>Cr.Hrs.</u>
<u>FIRST SEMESTER (Fall)</u>		
ENG 101	Composition I	3
MAT 131	Technical Mathematics I	3
CIS 111	Computer Systems and Applications	3
ENT 131	Technical Drawing I	1
ARC 113	Architecture Introductory Seminar	1
ARC 104	Introduction to Computer Graphics	<u>1</u>
	TOTAL	12
<u>SECOND SEMESTER (Spring)</u>		
CAD 102	CAD for Engineering Applications	2
CAD 103	3D AutoCAD and Solid Modeling	2
CAD 104	Advanced CAD for Production	2
MAT 132	Technical Math II	3
ENR 215	Surveying I	<u>3</u>
	TOTAL	12
<u>THIRD SEMESTER (Summer)</u>		
CAD 206	Cooperative Work Experience	<u>5</u>
	TOTAL	5
	TOTAL CREDIT HOURS	29

Students requiring full time status should consider enrolling in CIS 107, CIS 108, CIS 113, or other courses in their area of interest.