

# CURRICULUM STANDARD

Effective Term  
Spring 2005  
[2005\*01]

Curriculum Program Title

**Computer-Aided Drafting Technology**

Code

**A50150**

Concentration

**(not applicable)**

## Curriculum Description

This curriculum prepares individuals for employment as computer-aided drafting technicians. Graduates should be prepared for a wide variety of jobs that involve managing the hardware and software of a CAD system. Emphasis is placed on developing the student's ability to interface with computer hardware and software in a CAD office.

Students will use CAD workstations to create and manage two and three-dimensional models for a wide variety of fields. Students will link CAD documents to other applications such as a database, GIS maps, spreadsheets, word processing, or CNC machining systems. Course work includes the study of drafting, computer hardware and operating systems, two- and three- dimensional computer models, solid modeling, rendering, and engineering systems.

Graduates should qualify for CAD jobs in a wide variety of fields that use computer-aided drafting technology. Job titles include CAD technician, CAD manager, CAD drafter and detail drafter.

## Curriculum Requirements\*

*[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]*

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	<b>AAS</b>	<b>Diploma</b>	<b>Certificate</b>
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
<b>Total Semester Hours Credit (SHC)</b>	<b>64-76</b>	<b>36-48</b>	<b>12-18</b>

*\*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

# *Major Hours*

*[ref. 23 NCAC 02E.0204 (3)]*

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** (if applicable). A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

## Computer-Aided Drafting Technology A50150

	AAS	Diploma	Certificate																				
<b>Minimum Major Hours Required</b>	<b>49 SHC</b>	<b>30 SHC</b>	<b>12 SHC</b>																				
<p><b>A. CORE</b>            Courses required for the diploma are designated with *</p> <p><b>Required Courses:</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">* DFT 151 CAD I</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td>* DFT 152 CAD II</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>* DFT 153 CAD III</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>* DFT 251 Customizing CAD Software</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p><b>Required Subject Areas:</b></p> <p><b>*Basic Drafting. Select One.</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">DFT 110 Intro to Drafting Technology</td> <td style="width: 20%; text-align: right;">2 SHC</td> </tr> <tr> <td>DFT 111 Technical Drafting I</td> <td style="text-align: right;">2 SHC</td> </tr> <tr> <td>DFT 170 Engineering Graphics</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>ARC 111 Intro to Arch. Drafting</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p><b>*Solid Modeling. Select One.</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">DDF 252 Advanced Solid Modeling</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td>DFT 154 Intro to Solid Modeling</td> <td style="text-align: right;">3 SHC</td> </tr> </table>	* DFT 151 CAD I	3 SHC	* DFT 152 CAD II	3 SHC	* DFT 153 CAD III	3 SHC	* DFT 251 Customizing CAD Software	3 SHC	DFT 110 Intro to Drafting Technology	2 SHC	DFT 111 Technical Drafting I	2 SHC	DFT 170 Engineering Graphics	3 SHC	ARC 111 Intro to Arch. Drafting	3 SHC	DDF 252 Advanced Solid Modeling	3 SHC	DFT 154 Intro to Solid Modeling	3 SHC	<b>17-18 SHC</b>	<b>17-18 SHC</b>	
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<b>B. CONCENTRATION</b> (Not applicable)																							
<p><b>C. OTHER MAJOR HOURS</b>            To be selected from the following prefixes:</p> <p>ARC, ART, BPR, BUS, CET, CIS, CIV, COE, CSC, CST, DDF, DFT, EGR, GIS, INT, LAR, MAC, MEC, and SRV</p> <p><i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i></p>																							