

AREA: General Engineering Technology:
Computer-Aided Drafting Specialization

DEGREE: Associate of Applied Science Degree

LENGTH: Four semesters (two-year) program

PURPOSE: Skills in computer-aided drafting (CAD) are increasingly valuable and sought in the workplace. This curriculum is designed to provide a thorough preparation in drafting, emphasizing the use of computers and, in particular, computer-aided design and drafting.

Communication skills and problem-solving skills are also emphasized, both of which are critical to success in the workplace. This program is particularly valuable for those who wish to gain employment in technical support careers or for those who need to upgrade skills within their current fields.

OCCUPATIONAL OBJECTIVES: CAD operator, CAD technician, drafting technician, engineer's aid or other related positions

TRANSFER GUIDELINES: Although this program is not designed as a transfer program, it does include many courses which will transfer into engineering technology programs at select four-year institutions. This allows students who eventually develop a desire to transfer the opportunity to transfer about two-thirds or more of the credit earned. How much credit is actually transferable depends on the transfer institution selected. Students should work closely with their advisors if and when they develop an interest in transferring.

PROGRAM REQUIREMENTS: This curriculum integrates courses in civil engineering technology, mechanical engineering technology, drafting, architecture, computer programming and general education. Students entering the program must have algebra I and geometry skills, or be willing to improve those skills through developmental studies. Technical electives should be selected in consultation with an assigned advisor. Upon satisfactory completion of the curriculum, graduates will be awarded the associate of applied science degree in general engineering technology with a computer-aided drafting specialization. Transfer opportunities for associate of applied science degrees, if existing, are very specific in nature. Students enrolling in an applied science degree with plans to transfer should explore opportunities with their faculty advisor.

Course#	Title	Credits
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First Semester

ARC	130	Materials and Methods of Construction	3
EGR	110	Engineering Graphics	3
ENG	111	College Composition I	3
MEC	113	Materials and Processes of Industry	3
MTH		Approved math elective ¹	3
SDV	100	College Success Skills	1
Total			16

Second Semester

ARC	221	Architectural CAD Applications Software I	3
CAD	241	Parametric Solid Modeling I	3
ENG	115	Technical Writing	3
ETR	113	D.C. and A.C. Fundamentals I	3
MTH		Approved math elective ¹	3
		Approved programming/computer Elective ²	3
Total			18

Third Semester

ARC	222	Architectural CAD Applications Software II	3
CAD	242	Parametric Solid Modeling II	3
EGR	206	Engineering Economics	3
		Approved humanities elective ⁴	3
		Approved social science elective ³	3
		Approved technical elective ²	3
Total			18

Fourth Semester

CAD	238	Computer Aided Modeling and Rendering II	2
CAD	280	Design Capstone Project	3
EGR	216	Computer Methods in Engineering and Technology	3
EGR	247	Materials Lab	1
PED/HLT		Physical education (or health)	2
		Approved social science elective ³	3
		Approved technical elective ²	3
Total			17

Program Total **69**

¹ Approved math electives: MTH 115 and MTH 116, or MTH 163 and MTH 164, or MTH 213 and MTH 214 will fulfill the math requirements for the program. Developmental math courses may be required for students to build their math skills before taking any of the approved math electives. Students must take a math placement test to determine their math skill level.

² Requires approval of program advisor.

³ Students may select social science electives from approved list.

⁴ Students may select humanities electives from approved list.

