

BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

**Computer Aided Drafting and Design
Associate in Applied Science**

Academic Plan Code - 1513017029

Description:

A computer aided drafter and designer is a technical specialist with broad-based skills for architectural, civil, mechanical, and manufacturing fields. In this program, the students are taught manual drafting techniques and 2D and 3D CAD. Specific skills taught include, but are not limited to, lettering, geometric construction, orthographic projections, dimensioning and tolerancing, and related technical processes. These skills are required to transform specifications and instructions of architects, designers, and engineers into complete and precise drawings. The drafter is a skilled technician with a thorough understanding of the graphic language and is an indispensable contributor to the engineering design team.

Progression in the Computer Aided Drafting and Design program is contingent upon achievement of a grade of "C" or greater in each technical and mathematics course with maintenance of a 2.0 cumulative grade point average or above (on a 4 scale).

	Subtotal Credit Hours	42
	Total Credit Hours	60-63
CAD Technical Electives: (This list is not all inclusive, other courses may be taken as approved by the program coordinator such as courses with prefix ACH, BRX, CAR, SMT, and PLW.)		
CAD 108	Introduction to Surveying	3
CAD 120	Introduction to Architecture	4
CAD 150	Programming in CAD	4
CAD212	Industrial Drafting Processes	4
CAD 222	Mechanical Design	4
CAD 220	Architectural Design	4
CAD 230	Construction Techniques	4
CAD 240	Advanced Dimensioning and Measurement	4
CAD 252	Commercial Detailing	4
CAD 262	Working Drawings	4
CAD 292	Industrial Applications	4
CAD 293	Special Problems	1-4
CAD 298	Practicum	1-3
CAD 299	Cooperative Experience	1-3
SMT 216	Construction Surveying Lab	3

Course Number	Course Title	Credit Hours
General Education Core		
ENG 101	Writing I	3
	Mathematics (MAT 105 or MAT 120 excluded)	3
	Science	3
	Social Interaction	3
	Heritage/Humanities/Foreign Language	3
	Oral Communications	3
	Computer Literacy	0-3
	NOTE: Computer Literacy must be demonstrated either by competency exam or by completing a computer literacy course.	
	Subtotal Credits Hours	18 – 21
Technical Core or Support Courses		
CAD 100	Introduction to Computer Aided Drafting	3
CAD 102	Drafting Fundamentals	4
CAD 112	Engineering Graphics	4
CAD 130	Descriptive Geometry	4
CAD 200	Intermediate Computer Aided Drafting	4
CAD 201	Parametric Modeling	4
	Technical Electives	23
	Note: Choose 19 credits from the list below; other courses may be taken if approved by the program coordinator.	

**Computer Aided Drafting and Design
Diploma**

Academic Plan Code - 1513014039

Course Number	Course Title	Credit Hours
General Education		
Area 1	Writing/Accessing Information, Oral Communications, Humanities/Heritage/Foreign Language	3
Area 2	Mathematics (MAT 105 or MAT 120 excluded)	3
Area 3	Computer Literacy	0-3
	NOTE: Computer Literacy must be demonstrated either by competency exam or by completing a computer literacy course	
	Subtotal Credit Hours	6-9
Technical Core or Support Courses		
CAD 100	Introduction to Computer Aided Drafting	3
CAD 102	Drafting Fundamentals	4
CAD 112	Engineering Graphics	4
CAD 130	Descriptive Geometry	4
CAD 200	Intermediate Computer Aided Drafting	4
CAD 201	Parametric Modeling	4
	Technical Electives	19
	Subtotal Credit Hours	42
	Total Credit Hours	48-51

(Courses are listed by category and not necessarily in the order to be taken)

BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

Course Number	Course Title	Credit Hours
CAD Technical Electives: (This list is not all inclusive, other courses may be taken as approved by the program coordinator such as courses with prefix ACH, BRX, CAR, SMT, and PLW.)		
CAD 108	Introduction to Surveying	3
CAD 120	Introduction to Architecture	4
CAD 150	Programming in CAD	4
CAD212	Industrial Drafting Processes	4
CAD 222	Mechanical Design	4
CAD 220	Architectural Design	4
CAD 230	Construction Techniques	4
CAD 240	Advanced Dimensioning and Measurement	4
CAD 252	Commercial Detailing	4
CAD 262	Working Drawings	4
CAD 292	Industrial Applications	4
CAD 293	Special Problems	1-4
CAD 298	Practicum	1-3
CAD 299	Cooperative Experience	1-3
SMT 216	Construction Surveying Lab	3

Computer Aided Drafting and Design Certificates

Course Number	Course Title	Credit Hours
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Computer Assisted Drafter
Plan Code -

General Education		
Area 1	Writing/Accessing Information, Oral Communications, Humanities/Heritage/Foreign Language	3
Area 2	Mathematics (MAT 105 or MAT 120 excluded)	3
Area 3	Computer Literacy	0-3
	NOTE: Computer Literacy must be demonstrated either by competency exam or by completing a computer literacy course	
	Subtotal Credit Hours	6-9
CAD 100	Introduction to Computer Aided Drafting	3
CAD 102	Drafting Fundamentals	4
CAD 112	Engineering Graphics	4
CAD 130	Descriptive Geometry	4
CAD 200	Intermediate Computer Aided Drafting	4
CAD 201	Parametric Modeling	4
	Technical Electives	1-4
	Subtotal	24-27
	Total Credits	30-36

Drafter Assistant
Plan Code -4801013049

Area 1	Writing/Accessing Information, Oral Communications, Humanities/Heritage/Foreign Language	3
Area 2	Mathematics (MAT 105 or MAT 120 excluded)	3
Area 3	Computer Literacy	0-3
CAD 100	Introduction to Computer Aided Drafting	3
CAD 102	Drafting Fundamentals OR	4
CAD 112	Engineering Graphics	(4)
	Total Credits	13-16

Civil Drafter
Plan Code -

	Mathematics (MAT 105 or MAT 120 excluded)	3
	Computer Literacy	0-3
	NOTE: Computer Literacy must be demonstrated either by competency exam or by completing a computer literacy course	
	Subtotal	3-6
Technical Core		
CAD 100	Introduction to Computer Aided Drafting	3
CAD 102	Drafting Fundamentals	4
CAD 112	Engineering Graphics	4
CAD 130	Descriptive Geometry	4
	Subtotal	15
Surveying Core: Choose 9-12 hours from the following courses.		
CAD 108	Introduction to Surveying	3
SMT 110	Principles of Surveying	3
SMT 130	Land Surveying Graphics	3
SMT 160	Construction Surveying	3
SMT 210	Advanced Surveying Measurement	3
SMT 220	Surveying Lab	3
SMT 230	Land Boundary Location	3
SMT 250	Mine Surveying	3
	Subtotal	9-12
	Total Credits	27-33