A.S. IN DESIGN AND ENGINEERING DRAWING TECHNOLOGY

The Design and Engineering Drawing Technology Major concentrates on visualizing architecture, engineering, drafting, entertainment, animation and computer-generated imagery (CGI). It is a creative, technical practice and discipline with a balance of a design and technical courses providing students with a diverse foundation of knowledge in the fields above. Emphasis is on proper and efficient methods of engineering drawing, digital production, sketching, story boarding, 3D digital models, animations and multifaceted presentations.

This degree prepares the student for entry level opportunities as a CAD (computer-aided design) / design person or animation modeler.

Formerly known as "Design and Drafting Technology" or "Drafting and Design Technology."

Learning Outcomes

A.S. Degree Level Student Learning Outcomes

Students completing the Design and Engineering Drawing Technology A.S. Degree will:

1. Describe effective engineering drawing, computer-generated imagery (CGI) and visualization techniques including graphic communication of design and technical drawings, orientation of design and technical drawings, and the decision making process for design and technical drawings.
2. Demonstrate the ability to use technology to prepare engineering drawing, architectural, computer-generated imagery (CGI), computer-aided drawings (CAD), and multimedia presentations. Estimate time, material, labor and equipment required for this expertise.
3. Demonstrate planning techniques and administration of engineering drawing, architectural, computer-generated imagery (CGI) and document control for design and technical working drawings.

Requirements

This degree requires meeting the Citrus College General Education and proficiency requirements combined with successful completion (grades of "C" and above) of the following major requirements:

Code	Title	Units
Required courses:		
ARCH 100	Introduction to Architecture and Environmental Design Foundations	3
ARCH 102	Visual Communication	2.5
or DRAF 102	Visual Communication	
ARCH 200	Portfolio Preparation	3

Code	Title	Units
DRAF 160	Foundation Digital Design Tools - Intermediate Computer Aided Design (CAD)	3
DRAF 161	Advanced Computer Aided Design (CAD and Design Tools)	3
DRAF 190	Advanced Digital Design Tools	3
DRAF 290	Introduction to Maya Practices	3
Total Units		**20.5**

Curriculum Map

2-Year Curriculum Map Example
This map represents one possible pathway through the program and is only for reference.

*It is highly recommended that you make an appointment (https://www.citruscollege.edu/stdntsrv/counsel/Pages/ApptSchedule.aspx) to create a customized education plan that fits your needs.

Note: Co-requisite MATH course (2 units) and/or substitute ENGL 101E (5 units) may be needed based on placement.

Course	Title	Units
Fall Term 1		
ARCH 100	Introduction to Architecture and Environmental Design Foundations	3
DRAF 101	Beginning Computer Aided Design (CAD)	3
ARCH 110	Introduction to Design Fundamentals and Communication	4
MATH 144	Technical Mathematics	4
or MATH 165	or Introductory Statistics	
or MATH 165H	or Introductory Statistics - Honors	
or MATH 175	or Pre-Calculus	
or MATH 180	or Calculus for Business and Social Sciences	
	Units	**14**
Winter Term 1		
ENGL 101	Reading and Composition	4
or ENGL 101H	or Reading and Composition - Honors	
	Units	**4**
Spring Term 1		
ARCH 111	Foundation Design	4
DRAF 161	Advanced Computer Aided Design (CAD and Design Tools)	3
SPCH 103	Argumentation and Debate	3
ARCH 102	Visual Communication	2.5
or DRAF 102	or Visual Communication	
	Units	**12.5**
Summer Term 1		
PHYS 110	Physics in Everyday Life	4
or PHYS 110H	or Physics in Everyday Life - Honors	
or PHYS 111	or College Physics A	
or PHYS 111H	or College Physics A - Honors	
	Units	**4**
Fall Term 2		
DRAF 160	Foundation Digital Design Tools - Intermediate Computer Aided Design (CAD)	3
ARCH 250	History of Architecture: Prehistory to Mannerism	3
ARCH 200	Portfolio Preparation	3

Course	Title	Units
DRAF 190	Advanced Digital Design Tools	3
	Units	**12**
Winter Term 2		
HIST 107 or HIST 107H or HIST 108 or HIST 108H or HIST 160	History of the United States before 1877 or History of the United States before 1877 - Honors or History of the United States since 1877 or History of the United States since 1877 - Honors or History of Women in the United States	3
	Units	**3**
Spring Term 2		
DRAF 290	Introduction to Maya Practices	3
ARCH 251	History of Architecture: Baroque to the Present Day	3
KIN 170 or KIN 171 or KIN 171H or KIN 173	Fitness for Life or Health and Wellness in Society or Health and Wellness - Honors or Introduction to Nutrition	3
ETHN 101 or ETHN 116	Introduction to Ethnic Studies or Introduction to Chicano/Latino Studies	3
	Units	**12**
	Total Units	**61.5**

Note: Course selections may affect total unit value.

Career Information

Career Opportunities

There are a variety of careers you can do with this major.

To explore more about this major, schedule an appointment (https://www.citruscollege.edu/stdntsrv/ctcenter/Pages/ApptSchedule.aspx) with a career counselor.