

Design Engineering Technology

Associate in Applied Science Degree

151301 D&D

Available: Shoals Campus
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Design Engineering prepares students for the manufacturing and construction industry. Today, the drafter is a highly skilled technician with an ability to visualize objects three dimensionally before they are physically created. By using traditional manual tools or computer assisted methods, the drafter creates drawings that describe the shape and size of the product or project.

Design Engineering instruction at the College is offered in fundamental, intermediate, and advanced levels of drafting and design. Advanced courses train students for the development of drawings in mechanical and architectural design. Related studies prepare the student academically in mathematics, physics, psychology, and English.

A graduate of the program will generally be qualified to enter the industry as an entry level draftsman, detailer, or apprentice designer. Graduates are encouraged to continue education toward a professional degree in engineering or architecture.

Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.

General Education Requirements	Semester		
	Theory	Lab	Hours
***ENG 101 English Composition I	3	0	3
*ENG 130 Technical Report Writing	3	0	3
MTH 103 Intro to Technical Mathematics	3	0	3
MTH 118 Technical Mathematics	3	0	3
PHY 115 Technical Physics	3	2	4
PSY 200 General Psychology	3	0	3
Humanities or Fine Arts Elective	3	0	3
Total General Education Requirements	22		
Major Requirements			
DDT 104 Basic Computer Aided Drafting and Design	1	4	3
DDT 111 Fundamentals of Drafting and Design	1	4	3
DDT 117 Manufacturing Processes	1	4	3
DDT 122 Advanced Technical Drawing	1	4	3
DDT 124 Basic Technical Drawing	1	4	3
DDT 127 Intermediate Computer Aided Drafting and Design	1	4	3
DDT 128 Intermediate Technical Drawing	1	4	3
DDT 131 Machine Drafting Basics	1	4	3
DDT 132 Architectural Drafting	1	4	3
DDT 134 Descriptive Geometry	1	4	3
DDT 181E Special Topics - Work Ethics	3	0	3
DDT 211 Intermediate Machine Drafting	1	4	3
DDT 231 Advanced CAD	2	3	3
DDT 233 Three-Dimensional Modeling	1	4	3
DDT 227 Strengths of Material Drafting and Design Electives	4	0	4
	X	X	8
Total Major Requirements	54		
Total Semester Credit Hours	76		

Design Engineering Technology Electives

DDT 114	Industrial Blueprint Reading
DDT 115	Blueprint Reading for Machinists
DDT 116	Blueprint Reading for Construction
DDT 118	Basic Electrical Drafting
DDT 125	Surface Development
DDT 126	Sections and Conventional Practice
DDT 130	Fundamentals of Drafting for Related Trades
DDT 133	Basic Surveying
DDT 139	Fundamentals of Drafting for Related Trades Lab
DDT 150	Theory of Residential Drawing and Design
DDT 155	Drawing for Residential Construction
DDT 182	Special Topics in Design Engineering Technology
DDT 191	Drafting Internship (1 cr)
DDT 192	Drafting Internship (2 cr)
DDT 193	Drafting Internship (3 cr)
DDT 212	Intermediate Architectural Drafting
DDT 213	Civil Drafting, Plat Maps
DDT 214	Pipe Drafting
DDT 215	Geometric Dimensioning and Tolerancing
DDT 217	Building Codes, Ordinances, Zoning Restrictions and the A.D.A.
DDT 220	Intermediate Technical and Mechanical Drawing
DDT 221	Advanced Machine Drafting
DDT 222	Advanced Architectural Drafting
DDT 223	Advanced Civil Drafting
DDT 224	Structural Concrete Drafting
DDT 225	Structural Steel Drafting
DDT 226	Technical Illustration
DDT 228	Geographic Information Systems
DDT 229	Inter. Technical and Mechanical Drawing Lab
DDT 232	CAD Customization
DDT 234	3D Graphics and Animation
DDT 235	Specialized CAD
DDT 236	Design Project
DDT 237	Current Topics in CAD
DDT 238	Special Topics in CAD
DDT 239	Independent Studies
DDT 250	Theory of Commercial Drawing and Design
DDT 255	Drawing for Commercial Construction
DDT 267	Co-op Elective
DDT 268	Co-op Elective
DDT 271	Co-op Elective (2-6 cr)
DDT 290	Survey of Aerospace Technology

Note: Three Drafting Electives totaling 8 semester hours are required. Students should consult advisor concerning other possible electives from other program areas.

*Students who have completed ENG 130 prior to Spring 2000, and students substituting ENG 102 must take Speech.

**Computer competency skills are embedded within one or more courses required in this curriculum.

***Keyboarding skills are essential for the successful completion of English 101.

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 Short-Term Certificate - page 102**