

Computer Aided Design (CAD)

Associate in Applied Science
61–62 Semester Hours

General Education Requirements

COMM 101	Intro to Oral Communication	3 hrs.
ENGL 101	Composition I	3
MATH 109	College Algebra	4
Or		
TMAT 103	Technical Mathematics I	4
MATH 128	Trigonometry	3
Or		
TMAT 105	Technical Mathematics II	4
	Physical Science	<u>4</u>
TOTAL 17-18		

Technical Requirements

CAD 101	Introduction to AutoCAD	3
CAD 222	Advanced AutoCAD	3
CSCI 101	Intro to Computer & Info Science	4
MAIN 101	Industrial Electricity & Systems	3
TECH 114	Intro to Technical Graphics	<u>3</u>
TOTAL 16		

Mechanical Drafting Option

CAD 203	Geometric Modeling	3
CAD 204	Product Design	3
CAD 212	Technical Drawing	3
CAD 214	Technical Drawing Applications	3
CAD 224	Geometric Dimensioning and Tolerancing	3
CAD 254	Capstone Portfolio	3
DMED 120	Computer Imaging & Design	3
MFTG 110	Manufacturing Processes Technical Electives	<u>3</u>
TOTAL 27		

Architectural Drafting Option

CAD 203	Geometric Modeling	3
CAD 212	Technical Drawing	3
CAD 233	Residential Architecture	4
CAD 234	Commercial Architecture	3
CAD 244	Computer Applications in Architecture	3
CAD 254	Capstone Portfolio	3
CNST 101	Building Construction Basics	3
CNST 113	Construction Documents and Quantity Takeoff	3
DMED 120	Computer Imaging & Design	<u>3</u>
TOTAL 28		

Building Construction Option

CAD 233	Residential Architecture	4 hrs.
CAD 234	Commercial Architecture	3
CAD 244	Computer Applications in Architecture	3
CNST 101	Building Construction Basics	3
CNST 113	Construction Documents and Quantity Takeoff	3
CNST 224	Construction Estimating and Scheduling	3
MAIN 104	Air Conditioning & Refrigeration	3
MAIN 221	Heating Systems	<u>3</u>
TOTAL 28		

Note: Students who take TMAT 103 should also take TMAT 105 and TPHY 103.

Program Description

The Computer-Aided Design curriculum introduces students to a broad realm of technical and architectural modeling and imaging, visualization techniques, projection principles, and concepts that typify engineering and architectural drawings. The program also develops the ability to use CAD systems to create drawings and models that reflect a thorough understanding of the standard practices used in the field. Students are guided through problem-solving activities and design projects that promote team effort and foster creativity. The program requires the student to select an area of specialty. Upon completion of the program, students will be able to seek entry-level employment as CAD technicians, CAD operators, and engineering or architectural assistants.

Career Opportunities & Earning Power

The Occupational Wage Survey for Illinois indicates that average salaries for drafting technicians range from \$29,500-\$38,500/year. Salary levels tend to vary by regions in the state. The national average salary for drafting occupations was \$36,780 in 2003.

Nationally, a slower than average employment growth is expected for drafters through the year 2012. The best opportunities will exist for those trained in the use of computer-aided drafting systems and industry specific skills such as construction, CAD/CAM, or machining.

Junior drafting technicians may advance to positions that require more skill and experience such as checkers, detailers, senior technicians, designers or supervisors. Drafters often move into related positions such as production supervisors, report writers, sales engineers and installation technicians. Continuing education is likely to enhance advancement opportunities for drafters.