

Physical Education/Graduation Requirement	2 hours
Additional Requirements	9 hours
MATH105 College Algebra (3 hrs)	
MATH107 Plane Trigonometry (2 hrs)	
PHY222 Electricity and Light (4 hrs)	
Major Requirements	55 hours
Restricted Elective Courses	6 hours
<i>Select six hours of restricted electives in consultation with an adviser.</i>	
Restricted MFG Elective Courses	15 hours
<i>Select 15 hours at the 300- and 400-level in consultation with an adviser.</i>	
Technical Courses	34 hours
<i>Up to 34 hours of transferred technical courses may be applied to this major.</i>	
Minor Requirements	0 hours
<i>No minor is required.</i>	
University Elective Courses	10 hours
Program Total	124 hours

COMPUTER-AIDED DESIGN MAJOR (CAD)

Students majoring in CAD are prepared for a wide range of CAD-related job opportunities. The applications of CAD are becoming more diverse, and are found in many areas, such as architecture, medicine, geographic information systems, facilities management, product presentation and computer animation.

In the CAD courses, you will gain knowledge and hands-on experience in the following four technical areas:

1. CAD applications involving an extensive knowledge of all major CAD applications;
2. Interactive 2-D and 3-D wire frame drawing, geometric dimensioning and tolerancing, solid modeling and surfacing;
3. Interactive 2-D graphics programming for business graphics, animation and CAD drawings involving menu and icon development along with software customization;
4. Applied mechanics, kinematics and design and finite element analysis;
5. Product data management.

Graduates from our CAD program are employed in industry as CAD engineers, product designers, application programmers, technical support engineers, CAD/CAM systems managers, training consultants and entry-level designers, as well as in equipment sales and support.

General Education Requirements	48 hours
<i>Area I Symbolics and Communication</i>	
1. See page 23	
2. CTAS121 Fundamentals of Speech (2 hrs)	
3. ENGL324 Principles of Technical Communication (3 hrs)	
4. MATH170 Elementary Statistics (3 hrs)	
5. CADM105 Computer Applications for Industry (3 hrs)	
<i>Area II Science and Technology</i>	
1. CHEM117/118 Fundamentals of Chemistry with lab (4 hrs)	
2. PSY101 General Psychology (3 hrs)	
3. PHY221 Mechanics, Sound, and Heat (4 hrs)	
<i>Area III Social Sciences</i>	
1. See page 24	
2. See page 24	
3. ECON201 Principles of Macroeconomics (3 hrs)	
4. ECON202 Principles of Microeconomics (3 hrs)	

<i>Area IV Arts and Humanities</i>
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements	9 hours
MATH105 College Algebra (3 hrs)	
MATH107 Plane Trigonometry (2 hrs)	
PHY222 Electricity and Light (4 hrs)	

Physical Education/Graduation Requirement	2 hours
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Major Requirements	65 hours
Required Courses	57 hours
CADM122 Engineering Graphics I (3 hrs)	
CADM223 Engineering Graphics II (3 hrs)	
CADM231 Computer Graphic Programming for Industry (3 hrs)	
CADM324 3-D Solid Modeling (3 hrs)	
CADM325 Applied Mechanics, Kinematics, and Design (3 hrs)	
CADM331 Product Design Data Management I (3 hrs)	
CADM387 Cooperative Education in CAD/CAM Technology (3 hrs)	
CADM432 3-D Feature-Based Modeling and Surfacing Techniques (3 hrs)	
CADM433 Advanced Computer-Aided Design (3 hrs)	
CADM435 Finite Element Analysis (3 hrs)	
CADM491 Design Capstone (3 hrs)	
COS205 Computer Hardware and Software Systems (3 hrs)	
COS246 Programming in C++ (3 hrs)	
MFG111 Materials (3 hrs)	
MFG123 Manufacturing Processes and Methods I (3 hrs)	
MFG124 Manufacturing Processes and Methods II (3 hrs)	
MFG203 Industrial Operation (3 hrs)	
MFG290 GDNT Metrology (3 hrs)	
MFG316 Design for Manufacturing and Tooling (3 hrs)	
Restricted Elective Courses	6 hours
<i>Eight hours selected in consultation with a CAD adviser.</i>	

Minor Requirements	0 hours
<i>No minor is required.</i>	

Program Total	124 hours
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CONSTRUCTION MANAGEMENT MAJOR (CNST)

The construction major includes course work in general education with specified science and mathematics courses, recommended business courses electives (a list of recommended course electives that require the prior approval of a construction or facility management adviser) and technical courses. A minor is not required. A C- or better is required for all major courses.

The construction management major is designed to prepare men and women for middle- and upper-level management in construction contracting. The major has been developed in cooperation with experts from the construction industry, guidelines established by major construction associations and feedback from employers and graduates. The construction management major reflects the current needs and trends in the construction industry.

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

General Education Requirements	49 hours
<i>Area I Symbolics and Communication</i>	
1. See page 23	
2. CTAS124 Fundamentals of Speech (3 hrs)	
3. ENGL324 Principles of Technical Communication (3 hrs)	
4. MATH170 Elementary Statistics (3 hrs)	
5. CADM105 Computer Applications for Industry (3 hrs)	