ARCHITECTURAL COMPUTER AIDED DESIGN

Program Contact:
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Architectural Computer Aided Design

Architectural CAD designers/drafters use computer-aided drafting equipment to produce designs, working drawings, charts, forms and records. They draw plans, lay out interior room arrangements, obtain and assemble data, and visit job sites to compile measurements as necessary.

The Program

Frederick Community College's Architectural Computer-Aided Design (CAD) program provides students the necessary education to pursue employment as an architectural drafter/designer. Employers prefer applicants who have completed training after high school at a technical institute, community college, or four-year college or university. This program provides students with a broad range of knowledge and skills required for success in a career as an architectural CAD drafter, designer, operator, or technician.

Upon successful completion of the degree program, students will be able to:

• Create two-dimensional production and architectural drawings using basic AutoCAD commands. Print/plot to scale using model and layout space. Use layers to organize and separate information.

• Create pictorial views and three dimensional drawings. Create multiview drawings from three dimensional models.

• Describe and recognize the basic features and uses of additional CAD software systems, including AutoDesk Architecture, Revit, Civil 3D, and Micro station.

• Create architectural sketches, drawings, and models.

• Prepare house plans in AutoCAD and plot drawings in paper space.

• Describe the basic properties and uses of materials used in the construction process and evaluate appropriate methods of installation of construction materials. Illustrate the testing methods used to evaluate the performance and installation of construction materials.

• Create and revise civil drawings.

• Demonstrate proficiency in selected elective areas of CAD and construction.

Growth Potential & Estimated Salaries

The median annual wage for drafters was $52,720 in May 2015. Employment of architectural and civil drafters is projected to decline 3 percent from 2014 to 2024, however candidates proficient in CAD and BIM are likely to have better job opportunities.

(Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Drafters)

Financial Assistance

FCC participates in federal, state and local financial aid programs. Students are encouraged to apply for financial aid, and for scholarships offered by the College and community. Financial aid applications are available in the Financial Aid Office, J301, or online at www.fafsa.ed.gov. The scholarship application is available at www.frederick.edu.

Transfer Note

The Associate in Applied Science degree in Architectural Computer-Aided Design is for students who want to work as architectural CAD designers/drafters. It is not a transfer program for students pursuing a bachelor's degree in architecture or engineering. Students interested in transfer options for a bachelor's degree in architecture or engineering should contact an FCC counselor about transfer options in these areas. For students who complete the A.A.S. degree in Architectural Computer-Aided Design, FCC has an articulation (transfer) agreement with University of Maryland University College – B.S. Management Studies. For more information, visit the Career & Transfer Center, Enrollment Services Building, J-201, 301.846.2594.

ARCHITECTURAL COMPUTER AIDED DESIGN

A.A.S. Degree

Course		Credits

English

EN 101 — English Composition 3

Mathematics

Mathematics Elective (GenEd course list) (MA 130 or MA 111 recommended) 3/4

Social & Behavioral Sciences

Social & Behavioral Sciences Elective (GenEd Course List) 3

Arts & Humanities

Arts & Humanities Elective (GenEd Course List) 3

Biological & Physical Sciences

Biological & Physical Sciences Elective (GenEd course list) (PC 103, PY 101, or PC 109 recommended) 3/4

General Education

General Education Elective (Select from GenEd course list) 6

PE/Health Requirement 1

Departmental Requirements

CAD 101	Introduction to AutoCAD I	3
CAD 102	Introduction to AutoCAD II	3
CAD 200	Introduction to Architectural Drawing and Design	3
CAD 201	Residential Architecture I	4
CAD 205	Civil Drafting I with CAD	3
CON 132	Methods and Materials of Construction I	3
CON 133	Methods and Materials of Construction II	3
Electives	Choose from Architecture/Construction, Civil, General, or Electrical Areas (See frederick.edu for full listing of elective options)	16

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For more information on Architectural Computer Aided Design:

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ARCHITECTURAL COMPUTER AIDED DESIGN   Certificate

Course		Credits
Course		*Credits*

Departmental Requirements

CAD 101	Introduction to AutoCAD I	3
CAD 102	Introduction to AutoCAD II	3
CAD 200	Introduction to Architectural Drawing and Design	3
CAD 201	Residential Architecture I	4
CAD 205	Civil Drafting I with CAD	3
CON 132	Materials & Methods of Construction I	3
CON 133	Materials & Methods of Construction II	3

Technical Elective Courses – choose from Architecture/Construction, Civil, General, or Electrical Areas (See frederick.edu for full listing of elective options) ... 8/9

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COMPUTER AIDED DESIGN OPERATOR   Certificate

Course		Credits
Course		*Credits*

Departmental Requirements

CAD 101	Introduction to AutoCAD I	3
CAD 102	Introduction to AutoCAD II	3
CAD 200	Introduction to Architectural Drawing and Design	3
CAD 201	Residential Architecture I	4
CAD 205	Civil Drafting I with CAD	3
CON 132	Methods and Materials of Construction I	3
CON 133	Methods and Materials of Construction II	3

Technical Elective Courses – choose from Architecture/Construction, Civil, General, or Electrical Areas (See frederick.edu for full listing of elective options) ... 3/4

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