

# Computer-Aided Drafting and Design Technology, AAS

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Drafting technicians are engineering communication specialists who apply mathematics, computer applications and manual skills to develop specifications and drawings for the manufacturing and construction of virtually everything made in the world. JCCC's drafting technology program offers students up-to-date equipment in facilities located in the Industrial Training Center on the JCCC campus. In addition, the program offers departmental specialty courses. The program provides students with the skills necessary to produce detailed shop drawings, land plats, erection drawings and designs for manufacturing, building, production, commercial building and site construction as well as detailed drawings and designs of components, assemblies and systems used in manufactured products.

Industrial growth and increasingly complex design problems will greatly increase the demand for design and drafting services, particularly using CAD equipment. Employers are most interested in applicants with drafting and mechanical skills, a background in CAD techniques and courses in math, science and engineering technology.

The two-year curriculum enables students to use the latest computer-aided design equipment. Course projects and laboratory procedures are similar to those used in industry.

An associate of applied science degree is awarded upon the successful completion of 64 credit hours.

(Major Code 2220; State CIP Code 15.1302)

Drafting Technology Program web page (<http://www.jccc.edu/academics/credit/drafting-technology/>)

## Associate of Applied Science Degree

### First Semester

Full Semester Course

MATH 130 or MATH 171	Technical Mathematics I* College Algebra*	3
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First Eight Week Session

DRAF 120	Introduction to Drafting	2
DRAF 130	Introduction to CAD Concepts - AutoCAD*	3

Second Eight Week Session

DRAF 123	Interpreting Machine Drawings*	2
DRAF 129	Interpreting Architectural Drawings	2
DRAF 230	Intermediate CAD: AutoCAD*	3

**Total Hours** **15**

### Second Semester

Full Semester Courses

DRAF 135	Graphic Analysis*	3
ENGL 121	Composition I*	3
MATH 131 or MATH 172	Technical Mathematics II* Trigonometry*	3

Humanities Elective <sup>^</sup> 3

First Eight Week Session

DRAF 145	Introduction to Parametric Design: Inventor*	2
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Second Eight Week Session

DRAF 245	Advanced Parametric Design: Inventor*	2
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**Total Hours** **16**

### Third Semester

Full Semester Courses

DRAF 222	Mechanical Design and Drafting*	3
DRAF 225	Civil Drafting*	3

ENGL 123 or ENGL 122	Technical Writing I* Composition II*	3
First Eight Week Session		
DRAF 143	Introduction to BIM Building Information Modeling*	2
Second Eight Week Session		
DRAF 243	Advanced BIM: Revit*	2
DRAF 244	Civil 3D*	2
<b>Total Hours</b>		<b>15</b>

## Fourth Semester

Technical Electives (see below)		4
DRAF 211	Engineering Design Problems*	3
DRAF 238	Architectural Design and Drafting*	3
DRAF 246	MicroStation for AutoCAD users*	2
DRAF 252	Structural Design and Drafting*	3
Social Science and/or Economics Elective ^		3
<b>Total Hours</b>		<b>18</b>

^ See all AAS general education electives (<http://catalog.jccc.edu/degreerequirements/associate-applied-science/>)

### Total Program Hours: 64

## Technical Electives

CMGT 105	Construction Methods	3
CMGT 160	Green Building Fundamentals*	3
COMS 155	Workplace Skills	1
DRAF 152	3D Modeling with SketchUp	2
DRAF 162	3D Printing	2
DRAF 247	Revit Systems MEP (Mechanical, Electrical, Plumbing)*	2
DRAF 271	Drafting Internship I*	3
DRAF 272	Drafting Internship II*	3