



Program Map 2018-2019 College Credit Catalog

Architectural & Engineering Computer Aided Design: Mechanical Specialization



Degree: Mechanical Specialization Associate of Applied Science (AAS)

Certificate: Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) Level 1 (C1)

DESIGN, MANUFACTURING, CONSTRUCTION & APPLIED TECHNOLOGY

Program Description: This program is intended for students pursuing careers in the Mechanical CAD Graphics Specialization. Mechanical drafters work with mechanical engineers and designers to prepare detail and assembly drawings of a wide variety of machinery and mechanical devices. They may be involved in specifying design elements such as the types of fasteners (nuts, bolts, screws) needed to assemble the machine. Mechanical drafters are usually trained in engineering techniques as well as manufacturing theory and standards.

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Department Website:
 www.cadlearningcenter.com

Students who choose the Mechanical Specialization career track are employed by those who offer services to the Mechanical Engineering, Fabrication, Automotive, and/or other Mechanical type industries. These may include working for a Professional Engineer, an industrial design firm, or assembly/fabrication enterprises. Students are strongly encouraged to meet with the Architectural and Engineering Computer Aided Design faculty advisor before pursuing this degree program.

The Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) Level 1 Certificate program is offered to those students interested in pursuing a career in Computer Aided Design and Drafting, but who do not wish to take the academic courses involved in obtaining an Associate of Applied Science degree. Students wishing to focus in a particular field (architectural/civil, mechanical, electronic, etc.) are strongly encouraged to meet with an Architectural and Engineering Computer Aided Design faculty advisor before pursuing this certificate program.

Use this Program Map to choose courses with your college advisor and track your progress towards milestones and completion of program.

Pre-Degree Requirements		
Program Specific	Reading and Writing Placement <i>Placements based on TSI</i>	Mathematics Placement <i>Placements based on TSI</i>
	<input type="checkbox"/> Basic Developmental Courses <input type="checkbox"/> ESOL Courses <input type="checkbox"/> INRW Courses	<input type="checkbox"/> NCBM and MATD courses paired with MATH courses <input type="checkbox"/> NCBM and MATD courses
SEMESTER-BY-SEMESTER PROGRAM PLAN FOR FULL-TIME STUDENTS <i>Plans can be modified to fit the needs of part-time students by adding more semesters</i>		

D=Degree
 C1=Level 1 Certificate

C1	D	Semester 1	CR	Advising Notes
	●	EDUC 1300 - Effective Learning: Strategies for College Success	3	All first-time Austin Community College (ACC) students with fewer than 12 SCH of successful college credit must take the EDUC 1300 course in their first semester at ACC. All other students can choose a speech course from the Component Area Option section of the Core Curriculum Course List.
	●	ENGL 1301 - English Composition I OR ENGL 2311 - Technical and Business Writing	3	Prerequisite(s): TSI complete in reading and writing or exempt.
	●	Mathematics	3	Select from the appropriate section of the Core Curriculum Course List.
	●	Social and Behavioral Sciences	3	Select from the appropriate section of the Core Curriculum Course List.
●	●	DFTG 1405 - Technical Drafting	4	
			16	Program Semester Hours / Meet with your advisor
		Semester 2		
●	●	DFTG 1433 - Mechanical Drafting	4	Prerequisite(s): DFTG 1405.
	●	DFTG 2431 - Advanced Technologies in Architectural Design and Drafting	4	Prerequisite(s): DFTG 1405.
	●	DFTG 2430 - Civil Drafting	4	Prerequisite(s): DFTG 1405.

•	•	MCHN 1426 - Introduction to Computer-Aided Manufacturing (CAM)	4	Prerequisite(s): DFTG 1405.
			16	Program Semester Hours / Meet with your faculty advisor
		Semester 3		
•	•	DFTG 1429 - Electro-Mechanical Drafting	4	Prerequisite(s): DFTG 1433.
	•	Restricted Elective	1-4	Select from: ARCE 1452, ARCE 2352, ARCH 1301, ARCH 1302, ARCH 1307, ARCH 1308, ARCH 1311, ARCH 1315, ARCH 1404, ARCH 2301, ARCH 2312, BUSG 1193, CETT 1425, CNBT 1411, DFTG 1196, DFTG 1470, DFTG 1494, DFTG 1495, DFTG 2400, DFTG 2405, DFTG 2413, DFTG 2419, DFTG 2421, DFTG 2427, DFTG 2428, DFTG 2432, DFTG 2433, DFTG 2436, DFTG 2449, DFTG 2474, DFTG 2475, DFTG 2476, ENGR 1201, ENGR 1304, GEOG 2470, GISC 1411, IEIR 1271, ITSC 1307, KINE (all), MCHN 1419, MCHN 2438, MUEN 11xx, MUSI 11xx, MUSP 11xx, POFT 1127, SRVY 1301, WLDG 1337.
•	•	Restricted Elective	4	Select from: ARCE 1452, CETT 1425, CNBT 1411, DFTG 1402, DFTG 1458, DFTG 1470, DFTG 1494, DFTG 1495, DFTG 2400, DFTG 2405, DFTG 2413, DFTG 2419, DFTG 2421, DFTG 2427, DFTG 2428, DFTG 2432, DFTG 2433, DFTG 2436, DFTG 2449, DFTG 2474, DFTG 2475, DFTG 2476, GISC 1411, MCHN 1419, MCHN 2438. If pursuing C1, must select MCHN 2438 (Capstone course). ACHIEVEMENT: Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) Level 1 Certificate
	•	DFTG 2440 - Solid Modeling/Design	4	Prerequisite(s): DFTG 1433.
			13-16	Program Semester Hours / Meet with your faculty advisor
		Semester 4		
	•	Language, Philosophy, and Culture OR Creative Arts	3	Select from the appropriate section of the Core Curriculum Course List.
	•	DFTG 1491 - Special Topics in Drafting and Design Technology/Technician, General	4	Capstone course. Prerequisite(s): Advanced students only or instructional program chair approval. Students must attend orientation.
	•	DFTG 2402 - Machine Drafting	4	Prerequisite(s): DFTG 1433 or instructor's approval.
	•	Restricted Elective	4	Select from: ARCE 1452, CETT 1425, CNBT 1411, DFTG 1402, DFTG 1458, DFTG 1470, DFTG 1494, DFTG 1495, DFTG 2400, DFTG 2405, DFTG 2413, DFTG 2419, DFTG 2421, DFTG 2427, DFTG 2428, DFTG 2432, DFTG 2433, DFTG 2436, DFTG 2449, DFTG 2474, DFTG 2475, DFTG 2476, GISC 1411, MCHN 1419, MCHN 2438. ACHIEVEMENT: Associate of Applied Science degree in Mechanical Specialization
			15	Program Semester Hours
Total Program Hours:			60-63	

Please always check online at catalog.austincc.edu or meet with your academic or program advisor to ensure that you are viewing the latest and most accurate information.

Career & Transfer Resources

ACC's Career and Transfer websites provide detailed, guided information on career exploration and transfer.

www.austincc.edu/career
www.austincc.edu/transfer

For further information regarding this specific program, please see the Career & Transfer Resources supplement provided in the next section of this Program Map.

Program Map

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Career Information

Common Job Titles

Mechanical Drafters (includes CAD Designer (Computer Aided Design Designer), CAD Operator (Computer Aided Design Operator), CAD/CAM Specialist (Computer Aided Design/Computer Aided Manufacturing Specialist), Design Drafter, Designer, Drafter, Installation Drafter, Mechanical Designer, Mechanical Drafter, Project Designer)

Many career opportunities in this field require completion of a bachelor's degree or higher.

Regional Labor Market Information

Mechanical Drafters: New workers generally start around \$38,758. Normal pay for Mechanical Drafters is \$54,057 per year, while highly experienced workers can earn as much as \$79,732. Over the last year, 17 companies have posted 43 jobs for Mechanical Drafters in this region. There are currently 263 Mechanical Drafters that are employed in Austin-Round Rock, TX.

Source: <https://austincc.emsicc.com/careers/mechanical-drafter>

Career and labor market research tools (see Quick Reference Guide at <http://www.austincc.edu/career>):

EMSI: <https://austincc.emsicc.com/>, Bureau of Labor Statistics: <http://www.bls.gov/ooh/>, O*NET: <https://www.onetonline.org/>

Career Resources: ACC's career services website provides information on career exploration and employment at <http://www.austincc.edu/career>. Students are encouraged to consult with their [area of study advisor](#) for additional career assistance. The above information is provided as a guide and reference tool for occupations related to this program. This is not a guarantee of job placement in any of these occupations after successful completion of an ACC program. The common job titles listed are representative titles and are provided for career research. These are not the only occupations possible in this area of study.

Transfer Information

The Associate of Applied Science in Architectural and Engineering Computer Aided Design - Mechanical Specialization prepares students to directly enter the workforce. A Bachelor of Applied Arts and Sciences (BAAS) is a degree option for students in AAS programs who want to transfer and complete a 4-year degree.

Transfer Guides: *The universities listed here do not constitute an ACC endorsement. Transfer course evaluations and determination of what courses will count toward a bachelor's degree are made by the receiving transfer institution.*

Texas A&M University Commerce:

http://www.tamuc.edu/academics/colleges/scienceEngineeringAgriculture/departments/appliedSciences/documents_OLD/degreeGuidepdf/austincc/AustinCCBAASCareerFieldCAD20082009.pdf

Tarleton State University: <http://www.tarleton.edu/admissions/transfer>

Texas State University: <http://www.owls.txstate.edu/undergraduate-degrees/applied-arts-sciences.html>

Concordia University Texas: <http://www.concordia.edu/academics/college-of-business-and-communication/baas-in-business.html>

Texas A&M University Central Texas: <https://www.tamuct.edu/degrees/undergraduate/business-management.html>

Additional Transfer Resources: ACC's transfer website provides information on additional colleges & universities:

<http://www.austincc.edu/transferguides>. Students are encouraged to consult with a faculty advisor, area of study advisor, and/or their chosen transfer institution to ensure courses taken at ACC will apply toward their bachelor's degree program.