



Architectural and Engineering Computer Aided Design: Electronic Graphics Specialization



Degree: Electronic Graphics Specialization Associate of Applied Science (AAS)

Certificate: Integrated Circuit Layout and Design Specialization Level 1 (C1)

DESIGN, MANUFACTURING, CONSTRUCTION & APPLIED TECHNOLOGY

Program Description: This program is intended for students pursuing careers in the Electronic CAD Graphics Specialization and Integrated Circuit Mask design.

Electrical CAD drafters prepare wiring and layout diagrams used by workers who install and repair electrical equipment and wiring in electrical distribution systems and buildings. Electronics CAD drafters draw wiring diagrams, circuit board assembly diagrams, schematics, and integrated circuit layout drawings used in the manufacture, installation, and repair of electronic devices and components.

Students who choose the Electronic Graphics Specialization career track are employed by organizations in the semiconductor and commercial electronics fields. Students are strongly encouraged to meet with the Architectural and Engineering Computer Aided Design faculty advisor before pursuing this degree program.

If this pathway is followed as outlined, you will earn an Associate of Applied Science (AAS) degree in Architectural and Engineering Computer Aided Design Electronic Graphics Specialization and an Integrated Circuit Layout and Design Specialization Level 1 Certificate (C1).

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

Contact:
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 Department Chair
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 512-223-4853

Department Website:
 www.cadlearningcenter.com

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

D=Degree

C1=Level 1 Certificate

SEMESTER-BY-SEMESTER PROGRAM PLAN FOR FULL-TIME STUDENTS

Plans can be modified to fit the needs of part-time students by adding more semesters

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.
	●	DFTG 1405 - Technical Drafting	4	
●	●	DFTG 2413 - Basic Integrated Circuit Design	4	Consult catalog for prerequisite or obtain program approval before enrolling. Prerequisite(s): DFTG 1405 or departmental approval.
●	●	CETT 1403 - DC Circuits	4	Prerequisite(s): MATD 0390 or higher or department approval.
			15	Program Semester Hours / Meet with your advisor
		Semester 2		
	●	DFTG 1458 - Electrical/Electronic Drafting	4	Prerequisite(s): DFTG 1405 or departmental approval.
●	●	DFTG 2433 - Advanced Integrated Circuit Design	4	Prerequisite(s): DFTG 2413.
●	●	CETT 1425 - Digital Fundamentals	4	Prerequisite(s): CETT 1403. MATH 1314 or equivalent recommended.
	●	Social and Behavioral Sciences	3	Select from the appropriate section of the Core Curriculum Course List.
			15	Program Semester Hours / Meet with your faculty advisor

Semester 3			
	●	Restricted Elective	2-4 Select from: ARCE 1452, ARCE 2352, ARCH 1301, ARCH 1302, ARCH 1303, ARCH 1304, ARCH 1307, ARCH 1311, ARCH 1315, ARCH 2301, ARCH 2312, CNBT 1411, DFTG 1402, DFTG 1429, DFTG 1495, DFTG 2402, DFTG 2419, DFTG 2427, DFTG 2428, DFTG 2432, DFTG 2436, DFTG 2440, DFTG 2449, DFTG 2474, DFTG 2476, ENGR 1201, ENGR 1304, GEOG 2470, GISC 1411, IEIR 1271, MCHN 1426, MCHN 2438, SRVY 1301, WLDG 1337.
	●	Mathematics	3 Select from the appropriate section of the Core Curriculum Course List.
	●	DFTG 1494 - Special Topics in Electrical/Electronics Drafting	4 DFTG 1494 topic: Integrated Circuit Layout and Design III. Capstone course for C1.
	●	ITSC 1307 - UNIX Operating System I	3 Prerequisite(s): One semester of programming or ITNW 1325.
	●	DFTG 2405 - Printed Circuit Board Design	4 Prerequisite(s): DFTG 1405 or departmental approval. CETT 1403 is also recommended. ACHIEVEMENT: Integrated Circuit Layout and Design Specialization Level 1 Certificate
			16-18 Program Semester Hours / Meet with your faculty advisor
Semester 4			
	●	DFTG 1491 - Special Topics in Drafting and Design Technology/Technician, General	4 Capstone course for AAS. Prerequisite(s): Advanced students only or instructional program chair approval. Students must attend orientation.
	●	Language, Philosophy, and Culture OR Creative Arts	3 Select from the appropriate 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.
	●	DFTG 1417 - Architectural Drafting - Residential OR DFTG 2431 - Advanced Technologies in Architectural Design and Drafting OR DFTG 1433 - Mechanical Drafting OR DFTG 2430 - Civil Drafting	4 Prerequisite(s): DFTG 1405. ACHIEVEMENT: Associate of Applied Science degree in Electronic Graphics Specialization
			14 Program Semester Hours
Total Program Hours:			60-62

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 & Transfer Resources Updated 8/18/17

Career Information

Common Job Titles

Electronic Drafters (includes Design Drafter, Designer, Drafter, Integrated Circuit IC Layout Designer (IC Layout Designer), Layout Designer, Mask Designer, Printed Circuit Board PCB Designer (PCB Designer), Printed Circuit Board PCB Draftsman (PCB Draftsman), Senior Designer, Senior Printed Circuit Board PCB Designer)

Many career opportunities in this field require completion of a baccalaureate degree or higher.

Regional Labor Market Information

Electronic Drafters: New workers generally start around \$38,669. Normal pay for Electronic Drafters is \$65,779 per year, while highly experienced workers can earn as much as \$113,755 in this region. There are currently 215 Electronic Drafters that are employed in Austin-Round Rock, TX.

Source: <https://austincc.emsicc.com/careers/electronic-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 - Electronic Graphics 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>

Texas Tech University: https://www.depts.ttu.edu/universitystudies/prospective_students/baas.php

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.