Program Map

Nanoelectronics Manufacturing Technology Specialization

Degree: Associate of Applied Science (AAS)
Certificate: Level 1 (C1)

DESIGN, MANUFACTURING, CONSTRUCTION & APPLIED TECHNOLOGY

Program Description: This is an example course sequence for students interested in Electronics and Advanced Technologies Nanoelectronics Manufacturing Technology Specialization. It does not represent a contract, nor does it guarantee course availability. If this pathway is followed as outlined, you will earn an Associate of Applied Science (AAS) degree in Electronics and Advanced Technology or a Certificate in Electronics and Advanced Technology, Nanoelectronics Manufacturing Technology Specialization.

Contact:
Albert Quiñonez
Department Chair
aquinone@austincc.edu
512-223-6407

Department Website:
http://sites.austincc.edu/electronics/

Graduates of this program have the skills and knowledge to work as technicians in semiconductor/nanoelectronics manufacturing. Technicians are responsible for maintaining the equipment and processes used in the production of high-end computer chips. Technicians primarily work in FABs, cutting edge cleanroom factories.

To receive an Associate of Applied Science in Electronics and Advanced Technologies, students must: (a) make a minimum grade of "C" in all required electronic, math, and science courses and (b) have an overall GPA of 2.0 or greater.

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 *Placements based on TSI*	Mathematics Placement *Placements based on TSI*
	□ Basic Developmental Courses □ ESOL Courses □ INRW Courses	□ MATD-0332 - Basic Math Skills □ MATD-042x/032x – ALEKS Sequence □ MATD-0385/0485 – Developing Mathematical Thinking *Not prerequisite for MATH-1314/1324* □ MATD-0370 – Elementary Algebra □ MATD-0390 – Intermediate Algebra □ *Take MATD-0370 and 0390 to prepare for MATH-1314/1324*

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

D=Degree
C1=Level 1 Certificate
C2=Level 2 Certificate

C 1	D	Semester 1	C R	Advising Notes
	•	EDUC 1300 - Effective Learning: Strategies for College Success **OR** Oral Communication	3	New ACC Students with less than 12 SCH of successful college credit must take EDUC 1300. Other students can choose a speech course from the Component Area Option section of the Core Curriculum Course List.
•	•	MATH 1314 - College Algebra	3	Mathematics.
•	•	CETT 1403 - DC Circuits	4	
•	•	PTAC 2314 - Principles of Quality	3	
			13	Program Semester Hours / Meet with your advisor
		Semester 2		
•	•	CETT 1405 - AC Circuits	4	
•	•	CETT 1425 - Digital Fundamentals	4	
	•	ENGL 1301 - English Composition I	3	Communications Core Curriculum.
			11	Program Semester Hours / Meet with your advisor
		Semester 3		
•	•	CETT 1429 - Solid State Devices	4	

	•	COSC 1315 - Fundamentals of Programing **OR** COSC 1336 - Programming Fundamentals I	3	Computer Science Core Curriculum.
•	•	ELMT 2441 - Electromechanical Systems	4	
			11	Program Semester Hours / Meet with your advisor
		Semester 4		
•	•	INTC 2471 - Data Acquisition and Measurement	4	
	•	CETT 1441 - Microprocessor	4	
•	•	SMFT 2474 - Nanoelectronics Manufacturing Technology	4	
			12	Program Semester Hours
		Semester 5		
	•	Language, Philosophy, and Culture **OR** Creative Arts	3	Language, Philosophy and Culture Core Curriculum. Select from the appropriate section of the Core Curriculum.
	•	Social and Behavioral Sciences	3	Social and Behavioral Sciences Core Curriculum. Select from the appropriate section of the Core Curriculum Course List.
	•	Electronics Elective	3	Select Electronics Elective from the following courses: EECT 2388, ELMT 1371, ELMT 2372, ELPT 2371, WIND 2359.
•	•	ELMT 2473 - Electrical, Electronic, and Fluid Schematics	4	**ACHIEVEMENT:** Completion of Associate of Applied Science degree
			13	Program Semester Hours

Total Program Hours: 60

Career & Transfer Resources

ACC's Career & 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.

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Career & Transfer Resources Updated 8/18/17

Career Information

Common Job Titles

Nanotechnology Engineering Technicians, Nanotechnology Engineering Technologists, Semiconductor Processors (includes Engineering Technician, Fabrication Operator, Manufacture Specialist, Manufacturing Technician),

Regional Labor Market Information

Nanotechnology Engineering Technicians: New workers start around $33,945. Normal pay is $59,968 per year. Highly experienced workers can earn up to $82,075 in this region. There are currently 494 Nanotechnology Engineering Technicians that are employed in Austin-Round Rock, TX.
Source: https://austincc.emsicc.com/careers/nanotechnology-engineering-technicians

Semiconductor Processors: New workers start around $23,834. Normal pay is $37,376 per year. Highly experienced workers can earn up to $50,812 in this region. There are currently 1,081 Semiconductor Processors that are employed in Austin-Round Rock, TX.
Source: https://austincc.emsicc.com/careers/semiconductor-processor

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 Nanoelectronics Manufacturing Technology 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 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