



ENGINEERING TECHNOLOGY (A.S.)

SPECIALIZATIONS: ADVANCED TECHNOLOGY, ALTERNATIVE ENERGY, ELECTRONICS

PROGRAM DESCRIPTION:

The Engineering Technology Associate in Science degree program prepares students for employment or provides additional training for persons employed in manufacturing and high technology industries. BCC offers the Electronics, Advanced Technology & Alternative Energy specializations along with four college credit certificates: Applied Technology Specialist, Alternative Energy Systems Specialist, Composite Fabrication and Testing, and Engineering Technology Support Specialist.

The 20 credit hour technical core of this degree is closely aligned with the national Manufacturing Skill Standards Council (MSSC) Certified Production Technician (CPT) industry certification which is endorsed by the National Association of Manufacturers' Skills Certification System. After completing this core, students will be prepared to take the MSSC assessment for the CPT Certification. Students who have already earned the MSSC-CPT will receive 16 articulated credit-hours towards the Engineering Technology degree. The Engineering Technology Associate in Science degree program is fully transferable to four year degree granting institutions.

ASSOCIATE IN SCIENCE and (A.S)

General Education & Engineering Technology Courses

GENERAL EDUCATION (15 credits)	Cr.	ENGINEERING TECHNOLOGY CORE (20 credits)	Cr.
ENC 1101 Communications I	3	CAD ETDC 2320 AutoCAD Fundamentals	4
SPC 2608 Fundamentals of Speech Communication	3	ELECTRONICS EET 1084 Introduction to Electronics	3
MAC 1105 College Algebra	3	MEASUREMENT ETIC 2851 Applied Mechanics	4
Humanities Requirement	3	PROCESSES ETIC 1830 Materials and Processes 1	3
Social/Behavioral Science Requirement	3	QUALITY ETI 2110 Introduction to Quality Assurance	3
		SAFETY ETI 1701 Industrial Safety	3

Specialized Track Courses

ADVANCED TECHNOLOGY (25 credits)

ETIC 2460	Composite Fundamentals	3	ETSC 1240	Fiber Optic Technologies	3
EETC 1610	Through-Hole and Surface-Mount Soldering	3	ETIC 2121	Non-Destructive & Destructive Testing	3
EETC 2620	Advanced Surface-Mount Soldering Tech	3	ETMC 1010	Mechanical Measurements	1
ETS 1520	Instrumentation Fundamentals	3	<i>Technical Electives</i>		6

ALTERNATIVE ENERGY (25 credits)

ETP 1400	Distributed Electrical Power Generation and Storage	3	ETP 1420	Solar Thermal Technology	3
ETPC 2410	Photovoltaic Technology	3	ETP 1401	Alternative/Renewable Energy Technology	3
EETC 1025	Circuit Fundamentals	4	<i>Technical Electives</i>		9

ELECTRONICS (25 credits)

EETC 1025	Circuit Fundamentals	4	CETC 1114	Digital Fundamentals	4
EETC 1141	Analog Devices	4	EETC 1142	Analog Circuits	4
			<i>Technical Electives</i>		9





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COLLEGE CREDIT CERTIFICATES

APPLIED TECHNOLOGY SPECIALIST CERTIFICATE (16 credits):

This certificate program will prepare the student for entry-level employment in electronic assembly field, or to provide supplemental training for individual previously or currently employed in the field. Credits earned in this certificate will transfer into the Associate of Applied Science (A.A.S.) degree in Engineering Technology.

Course Title	Cr.	Cr.
EET 1084 Introduction to Electronics	3	EETC 1610 Though-Hole & Surface-Mount Soldering
EETC 2620 Advanced Surface-Mount Soldering	3	ETSC 1240 Fiber Optic Technologies
ETIC 2851 Applied Mechanics	4	

ENGINEERING TECHNOLOGY SUPPORT CERTIFICATE (20 credits)

This certificate prepare students for entry-level employment with an occupational title such as Engineering Support Specialist or Engineering Specialist to support engineering design, manufacturing processes and production, test and/or maintain product quality, or to provide supplemental training for persons previously or currently employed in these occupational areas.

Course Title	Cr.	Cr.
EET 1084 Introduction To Electronics	3	ETDC 2320 AutoCAD Fundamentals
ETIC 1830 Materials and Processes 1	3	ETI 1701 Industrial Safety
ETIC 2851 Applied Mechanics	4	ETI 2110 Introduction To Quality Assurance

COMPOSITE FABRICATION AND TESTING (19 credits)

This certificate program will prepare the student for entry-level employment in composite material fabrication, composite production or fiberglass lamination and fabrication, or to provide supplemental training for individuals previously or currently employed. Credits earned in this certificate will transfer into the Associate of Applied Science (A.A.S.) degree in Engineering Technology.

Course Title	Cr.	Cr.
ETI 1701 Industrial Safety	3	ETIC 1830 Materials and Processes 1
ETIC 2121 Non-Destructive and Destructive Testing	3	ETIC 2460 Composite Fundamentals
ETIC 2464 Advanced Composites	3	ETIC 2851 Applied Mechanics

ALTERNATIVE ENERGY SYSTEMS SPECIALIST (18 credits)

This certificate program will prepare students to meet the industry-specific skills needed for technicians in the new and emerging alternative and renewable energy fields, including occupational titles such as Electrical Engineering Technician, Industrial Engineering Technician, Solar Photovoltaic Installer and Solar Power Plant Technician, Solar Thermal Installer and Technician, Energy Auditor, and Smart Grid Technician.

Course Title	Cr.	Cr.
EET 1084 Introduction to Electronics	3	ETP1401 Alternative/Renewable Energy Technology
ETP 1400 Distributed Electrical Power Generation and Storage	3	ETI 1701 Industrial Safety
ETPC 2410 Photovoltaic Technology	3	ETP 1420 Solar Thermal Technology

