CENTRAL CAROLINA COMMUNITY COLLEGE

Applied Technologies

Program Planning Guide

Automotive Systems Technology Certificate (C60160)

Program Length: 1 semesters
Program Sites: Lee Main Campus - Day Program
Career Pathway Options: Associate in Applied Science Degree in Automotive Systems Technology; Diploma in Automotive Systems Technology, Certificate in Automotive Systems

Suggested Course Schedule		Class	Lab	Work	Credits	Notes:
1st Semester (fall)						
TRN 110	Intro to Transport Tech	1	2	0	2	
TRN 170	PC Skills for Transp	1	2	0	2	
AUT 151	Brake Systems	2	3	0	3	
AUT 151A	Brake Systems Lab	0	3	0	1	
TRN 120	Basic Transp Electricity	4	3	0	5	
	Total Semester Hours	**8**	**13**	**0**	**13**	
Total Semester Credit Hours Required for Graduation: 13						

Effective Term: 2026Fall

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Course Descriptions

AUT 151 Brake Systems
This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

AUT 151A Brakes Systems Lab
Corequisite: Take AUT 151
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

TRN 110 Intro to Transport Tech
This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.

TRN 170 PC Skills for Transp
This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.

TRN 120 Basic Transp Electricity
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.