



## Automotive Technician (ATEC)

### Student Education Plan – First Semester

First Name:	Last Name:
Solano Student ID#:	Major:
Educational Goal:	GE Option:

Course	Yes	No
ATEC 070 (Required)		
ATEC 131 (Recommended)		
ATEC 132		
ATEC 135		
Other (Please specify)		

Counselor Name (if known):	Date:
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For Counselor Use Only - Notes:

Course descriptions below

#### ATEC 070: Automotive Fundamentals

Provides the knowledge and skills needed to prepare students for entry into the automotive core curriculum. The study of automotive industry fundamentals including careers, safety, fasteners, hand tool identification and usage, vehicle systems, electric fundamentals, service information access and use, automotive chemical and fluid applications, hazardous waste handling, general shop equipment usage, and vehicle servicing. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Maintenance and Light Repair G1 Certification Examination.

#### ATEC 131: Automotive Electrical Systems

Theory and principles of automotive electrical systems including basic electrical theory, Ohm's Law, series and parallel circuits, electrical symbols and schematics, automotive batteries, charging systems, voltage regulation, starting systems, lighting systems, and various accessory systems. Laboratory will place emphasis on diagnosis and testing techniques required to effectively determine the necessary action in an electrical system failure. Use of schematics, technical specifications, voltmeters, ohmmeters, ammeters, and circuit testers will be required. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Electrical/Electronic A6 Certification Examination.

#### ATEC 132: Automotive Brake Systems

The study of modern automotive braking systems. Hydraulic principles, coefficients of friction, and thermodynamics will be discussed. Diagnosis, repair, overhaul, and adjustment procedures of drum, disc/drum, and four-wheel disc systems will be emphasized. Anti-lock Braking Systems (ABS) diagnostics, servicing, and repair procedures will also be covered. The course will cover common domestic and import passenger vehicles, and light trucks only. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Brakes A5 Certification Examination.

#### ATEC 135: Automotive Engine Performance

Operation, troubleshooting and repair of the ignition, fuel and emission control systems of import and domestic passenger vehicles and light trucks. Emphasis is on theoretical knowledge and the proper use of diagnostic tools and equipment. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently, will in part, prepare the student for the ASE Engine Performance A8 Certification Examination.