

# POWER TECHNOLOGIES

## Power Technologies Major (Includes Automotive)

**TECHNOLOGY & WORKFORCE DEVELOPMENT DIVISION**

### Program of Study

The Power Technologies Program offers entry-level and advanced instruction, with an emphasis on the analysis and diagnosis of modern gasoline and diesel vehicles.

Students may select courses in areas of specialization within the Power Technologies Program. Automotive, small engines, fleet, industrial, diesel, recreational vehicle, marine, agricultural and hydraulic and pneumatic technician are available.

The certificate programs on pages 97-103 allow the student to select courses that provide the skills for ASE certification tests.

*The faculty has identified the following Learning Outcomes for all graduates:*

- Troubleshoot electrical, computer, mechanical and emissions systems.
- Operate a Computer Service Information to assist in repair of automotive systems.
- Reinforce ethical business practices in relations with customers and suppliers.
- Use mathematical skills in analytical and practical problem-solving.
- Diagnose electrical, electronic and drive-line systems.
- Use proper test meters, computers and lab scopes.
- Study and test engines for proper operation to meet manufacturer specifications. Perform engine overhaul and perform complete car service.

NOTE: This program is offered primarily evenings; selected courses are offered during the day.

**POTENTIAL OCCUPATIONS:**

- Service Technician
- Diesel Technician
- Small Engine Repair
- Agricultural Equipment Technician
- Marine Equipment Technician
- Service Manager

### Associate of Applied Science

**TECHNICAL CONCENTRATION**

			Credit Hrs.
AAD	1110	Auto Electricity . . . . .	4
AAD	1120	Auto Engines . . . . .	4
AAD	1150	Introduction to Auto . . . . .	3
AAD	1330	Drivability . . . . .	3
AAD	1400	Suspension . . . . .	3
AAD	1500	Braking Systems . . . . .	3
AAD	2440	Automotive Power Train I. . . . .	3
AAD	2450	Electronic Engine Controls . . . . .	4
AAD	2520	Automotive Power Train II . . . . .	4
AAD	2640	Fuel and Emission Systems . . . . .	3
AAD	2660	Air Conditioning and Heating . . . . .	3

Choose:		AAD 2900 Capstone <i>or</i>	
		EBE 2980 Cooperative Education Seminar <i>and</i>	
		AAD 2980 Cooperative Work Experience . . . . .	1-6
<b>Total Technical Credit Hours . . . . .</b>			<b>38-43</b>

**GENERAL EDUCATION AND RELATED COURSES**

GEN	1000	First-Year Seminar . . . . .	1
CIT	1090	Computer Fundamentals . . . . .	3
Choose One:		ENG 1050 College Composition I <i>or</i> ENG 1020 . . . . .	3
ENG	1900	Technical Writing . . . . .	3
MFG	1020	Safety. . . . .	1
MTH	1150	Math for Trades. . . . .	4
PHY	1070	Survey of Physics . . . . .	3
PHY	1075	Survey of Physics Lab . . . . .	1
SPE	2010	Effective Speaking . . . . .	3
		*Humanities Elective . . . . .	3
		*Social Science Elective . . . . .	3

**Total General Education & Related Credit Hours . . . . . 28**

**TOTAL CREDIT HOURS . . . . . 66-71**

\* See page 95 for a listing of specific electives.  
 See your advisor for appropriate course selection.  
 For available Certificate Program options, see catalog pages 97-103.

\*\* All students graduating from Terra State Community College with an Associate degree of any kind will be functionally proficient in common computer operations and applications. Please see your academic advisor or academic division office for further details.

To determine when courses are scheduled, see program curriculum sheet which is available from the Enrollment Services office in Building A/Room 100, from the Technology and Workforce Development Division office, Building E, Room 107 or on the web at [www.terra.edu](http://www.terra.edu).