

- ELMT 2437 Electronic Troubleshooting** 4.3.3
In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, preventive maintenance. Emphasis on safety and proper use of test equipment. May be offered as a capstone course.
- ENTC 1449 Reliability and Maintainability** 4.2.4
A study of equipment reliability and maintainability to improve the efficiency of operations including utilizing the latest equipment and techniques to implement effective prevention and predictive maintenance programs.
- RBTC 1401 Programmable Controllers** 4.3.3
A study in programmable controllers. Topics include processor units, numbering systems, memory organization, relay type devices, timers, counters, data manipulators, and programming. Fee charged.
- RBTC 1451 Robotic Mechanisms (Power Transmission)** 4.3.3
This course will familiarize the student with the fundamentals of power transmission and mechanical drives. Proper component application, troubleshooting, lubrication and preventive maintenance will be emphasized. Hands on laboratory experiments will be conducted with all components. This knowledge, accompanied by detailed study of various types of drive systems will give the student the skills and techniques and objectivity required to analyze, troubleshoot, repair and construct mechanical drive trains. Fundamentals of force, velocity, work, horsepower, torque, RPM, ratios, coefficient of friction, useful formulae, conversion factors and solving for unknowns will be covered.
- RBTC 1459 Pneumatics** 4.2.3
A study of principles of pneumatics, including formulas, functions, and circuits with hands-on experience in these industrial automated systems. Fee charged.
- HYDR 1405 Hydraulics** 4.3.3
An overview of the fundamentals of fluid power as applied to automated systems. Topics include the application, function, construction and operations of pumps, motors, cylinders, valves, and other components. Fee charged.
- RBTC 2441 Hydraulic Servos** 4.3.3
A study of hydraulic servo systems, including the influences of operating pressures in locating, clamping and feedback devices.

Electronics

PJC offers an Associate of Applied Science degree in Electronics Technology. The AAS degree program in electronics is designed to prepare students to work in industry in several related areas. The student will study electricity, electronics, mathematics, schematic reading, digital electronics, microprocessor interfacing, integrated circuits, computer operations, and

programmable controllers. Instructional emphasis is also placed on understanding of and troubleshooting of various electronic systems.

Associate of Applied Science In Electronics Technology (70 Credit Hours)

First Semester	Second Semester
CETT 1403** CETT 1425** ELMT 2433** MATH 1314 ENGL 1301	CETT 1405** CETT 1445 RBTC 1401* ELMT 2437** MATH 1316
Third Semester	Fourth Semester
CETT 1429** GOVT 2306 SPCH 1321 ENTC 1449 Visual/Fine Arts Elective	ELMT 2441* DFTG 1458 CETT 1457 CETT 2449

* Fulfills THECB computer competency requirement.

** Tech Prep courses, which may have been completed in high school.

CERTIFICATE IN ELECTRONICS TECHNICIAN (12 Credit Hour)

First Semester

ELMT 2433 Industrial Electronics**

Second Semester

ELMT 2437 Electronic Troubleshooting

RBTC 1401 Programmable Controllers*

Third Semester

ELMT 2441 Electromechanical Systems

* Fulfills THECB computer competency requirement.

** Prerequisite for other electronic courses.

CERTIFICATE IN ELECTRONICS TECHNOLOGY (42 Credit Hours)

First Semester

CETT 1403 DC Circuits*

CETT 1425 Digital Fundamentals*

ELMT 2433 Industrial Electronics

EEIR 1201 Math for Electronics Technicians

Second Semester

CETT 1405 AC Circuits*

CETT 1445 Microprocessor

CETT 1429 Solid State Devices*

RBTC 1401..... Programmable Controllers*

Third Semester

ELMT 2441Electromechanical Systems (RSLogix 5000)

ELMT 2437 Electronic Troubleshooting

CETT 1457 Linear Integrated Circuits

* Fulfills THECB computer competency requirement.

CETT 1403 DC Circuits 4.3.4

A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements. Prerequisite: concurrent MATH 1314.

CETT 1405 AC Circuits 4.3.4

A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: concurrent MATH 1316.

CETT 1425 Digital Fundamentals 4.3.4

An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits.

CETT 1429 Solid State Devices 4.3.4

A study of diodes and bipolar semiconductor devices, including analysis of static and dynamic characteristics, bias techniques, and thermal considerations of solid state devices.

CETT 1441 Solid State Circuits 4.3.4

A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis.

CETT 1445 Microprocessor 4.3.4

An introductory course in microprocessor software and hardware; its architecture, timing sequence, operation, and programming; and discussion of appropriate software diagnostic language and tools.

CETT 1457 Linear Integrated Circuits 4.3.4

A study of the characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. Application in computation, measurements, instrumentation, and active filtering. Prerequisite: CETT 1403 or equivalent.

CETT 2435 Advanced Microprocessors 4.3.4

An advanced course utilizing the microprocessor in control systems and interfacing. Emphasis on microprocessor hardware and implementation of peripheral interfacing. Prerequisite: CETT 1445.

- CETT 2449 Research and Project Design** 4.1.3
Principles of electrical/electronic design encompassing schematics wiring, diagrams, materials lists, operating characteristics, completion schedules, and cost estimates.
- ELMT 2433 Industrial Electronics** 4.3.3
A study of devices, circuits, and systems primarily used in automated manufacturing and/or process control including computer controls and interfacing between mechanical, electrical, and electronic, and computer equipment. Presentation of programming schemes.
- ELMT 2437 Electronic Troubleshooting** 4.3.3
In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, preventive maintenance. Emphasis on safety and proper use of test equipment. May be offered as a capstone course.
- EEIR 1201 Math for Electronics Technicians** 2.1.2
An applied mathematics course with emphasis on the numbering systems, calculations and problem solving skills needed to solve for electronic circuit parameters. Schematic diagrams and electronic terminology are introduced.

Emergency Medical Services

Paris Junior College offers an Associate's Degree of Applied Sciences in Emergency Medical Services and Intermediate and Paramedic certificates for Emergency Medical Technicians. Careers in this field may be found with fire departments, public and private emergency medical services, hospitals, industrial safety, and flight services. Students in the certificate programs do not need to take the THEA test; students pursuing an AAS degree must take the THEA test. Students seeking admission should contact the EMS faculty, Health Occupations Department of the Counseling Department at PJC. EMSP 1501 and EMSP 1160 (EMT Basic) will be offered in the Fall 2008 and Spring 2009 semesters. Paramedic classes will begin in Fall 2009.

Associate of Applied Science In Emergency Medical Services (66 hours)

First Semester	Second Semester
EMSP 1501* EMPS 1160*	EMSP 1438* EMSP 1356* EMSP 2348* EMSP 1161* BIOL 2401