ELECTRICITY/ELECTRONICS/TECHNICAL CALCULATIONS 33

| DIVISION | Applied Technology & Transportation |
|------------------------|-------------------------------------|
| DIVISION DEAN | Gary Kelly, M.S. |
| FACULTY CHAIR | Edward Szumski, M.A. |
| | (909) 384-8501 |
| OTHER FACULTY | Carlos Busselle, B.A. |
| DIVISION OFFICE | Technical 108 |
| | (909) 384-4401 |

The Electricity/Electronics curriculum is designed to provide entry-level job training in this broad and expanding field. These classes lead to trainee positions in maintenance, installation, field service, networking, and apprenticeship in the area of specialization. Students who seek a Certificate or an Associate of Science Degree in the fields of: 1) Electronics Technology, 2) Communication Engineering Technology, 3) Computer Engineering Technology, 4) Electric Power Technology, or 5) Avionics Technology, will complete a series of Electronics Technology courses common to electricity, communications, and computers and then complete the appropriate area of specialization. All classes must be completed with a grade of C or better.

Students planning to transfer to a four-year institution and major in electronics should consult with a counselor regarding the transfer process and lower division requirements.

Core competencies emphasized by courses in this department:

- Read and retain information
- Employ vocabulary of the subject studied
- Find and interpret information

ELECTRICITY/ELECTRONICS ASSOCIATE OF SCIENCE DEGREE

To graduate with a specialization in one of the Electricity/Electronics majors, students must complete all the requirements for the appropriate certificate with a grade of C or better plus the general breadth requirements for the Associate Degree.

ELECTRICITY/ELECTRONICS CERTIFICATES

These certificates are designed to provide students with the fundamentals of electronics technology by offering courses common to electricity, communications and computers. This preparation can be for transfer to the university or for further study in areas of communication, computers, electricity, and aircraft electronics. It can also prepare students for entry-level positions in electronics, maintenance, installation, field service, networking, and apprenticeship in the field of electronics technology. Students should have normal color vision, hand/eye coordination and the ability to lift over 50 pounds.

ELECTRONICS TECHNOLOGY

(Core Courses required for all specializations)

| REQUIRED COURSES | | |
|------------------|-----------------------------------|---|
| TECALC 087 | Technical Calculations | 4 |
| ELECTR 110 | Direct Current Circuit Analysis | 3 |
| ELECTR 111 | Direct Current Circuit Laboratory | 1 |

| ELECTR 115 | Alternating Current Circuit Analysis | 3 |
|-------------|--|----|
| ELECTR 116 | Alternating Current Circuit Laboratory | 1 |
| ELECTR 155 | Electronic Drawing and Assembly | 3 |
| ELECTR 230 | Semiconductor Devices | 3 |
| ELECTR 235 | Solid State Circuit Analysis | 4 |
| ELECTR 265 | Digital Logic Design | 4 |
| ELECTR 266 | Microprocessor Technology | 4 |
| ELECTR 270 | Linear Integrated Circuit Analysis | 4 |
| TOTAL UNITS | 6 | 34 |

COMMUNICATIONS ENGINEERING TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to communications engineering. The curriculum prepares students for entry-level positions in electronics communications maintenance, installation, field service, networking, and apprenticeship in the field of communications engineering technology.

Complete the required courses for Electronics Technology plus REQUIRED COURSES UNITS ELECTR 220B F.C.C. Rules and Regulations 3 ELECTR 250B Radio Transmitters, Receivers, and Antennas 4 ELECTR 255B Telephone Networking 4

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COMPUTER ENGINEERING TECHNOLOGY

TOTAL UNITS

These certificates are designed to provide students with the fundamentals of electronics technology as it applies to computer engineering. The curriculum prepare students for entry-level positions in computer maintenance, installation, field service, networking, and apprenticeship in the field of computer engineering technology.

| Complete the required courses for Electronics Technology plus | | |
|---|-------------------------------------|------|
| REQUIRED COURSES UI | | NITS |
| ELEC 217B | Industrial Electricity | 4 |
| ELECTR 158 | Microcomputer Operation | 2 |
| ELECTR 280B | Computer Operations and Maintenance | 4 |
| TOTAL UNITS | | 44 |

ELECTRIC POWER TECHNOLOGY

These certificates are designed to provide students with the fundamentals of electronics technology as it applies to industrial electricity. The curriculum prepare students for entry-level positions in electrical maintenance, installation, field service, networking, and apprenticeship in the field of electronic power technology.

| Complete the required courses for Electronics Technology plus | | |
|---|--|-------|
| REQUIRED COURSES | | UNITS |
| ELEC 216B | Introduction to Industrial Electricity | 4 |
| ELEC 217B | Industrial Electricity | 4 |
| ELEC 218B | Controlling Industrial Electricity | 4 |
| TOTAL UNITS | | 46 |

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AVIONICS TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to avionics. The curriculum prepare students for entry-level positions in aircraft electricity, maintenance, installation, field service, networking, and apprenticeship in the field of avionics technology.

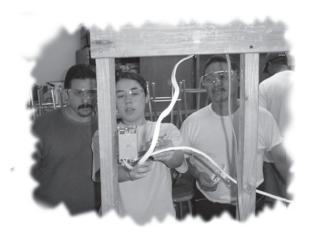
Complete the required courses for Electronics Technology plus REQUIRED COURSES UNITS

| AERO 121* | Aviation Fundamentals | 3 |
|--------------------|--|-----------|
| AERO 140D | Instrument Ground School & | |
| | Flight Simulators | 4 |
| ELECTR 220B | FCC Rules and Regulations | 3 |
| ELECTR 250B | Radio Transmitters, Receivers, & Anter | nnas4 |
| ELECTR 257B | Navigation & Communication System | 4 |
| TOTAL UNITS | | 52 |

^{*}AERO 102 & 103 can be substituted for AERO 121 & 140C

GENERAL ELECTRICIAN CERTIFICATE

This certificate will allow an "Electrician Trainee" to sit for the California State General Electrician Certification examination. These courses also satisfy the continuing education requirement every three years for certified electricians.





| REQUIRED COURSES | | UNITS |
|------------------|--|-------|
| ELEC 216B | Introduction to Industrial Electricity | 4 |
| ELEC 217B | Industrial Electricity | 4 |
| ELEC 218B | Controlling Industrial Electricity | 4 |
| ELECTR 110 | Direct Current Circuit Analysis | 3 |
| ELECTR 111 | Direct Current Circuit Laboratory | 1 |
| ELECTR 115 | Alternating Current Circuit Analysis | 3 |
| ELECTR 116 | Alternating Current Circuit Laboratory | / 1 |
| ELECTR 230 | Semiconductor Devices | 3 |
| ELECTR 235 | Solid State Circuit Analysis | 4 |
| ELECTR 265 | Digital Logic Design | 4 |
| INSPEC 014C | Advanced Construction Inspections: | |
| | National Electric Code | 3 |
| INSPEC 024C | Community Relations for Civil | 3 |
| | Service Employees | |
| PE 231 | First Aid and CPR | 3 |
| TECALC 087 | Technical Calculations | 4 |
| TOTAL UNIT | 5 | 44 |

 ${\tt *Pending approval from the California Community College Chancellor's } \\ Of fice$



