EMERGING TECHNOLOGY
(ETEC)

ETEC 110  Energy Master Planning for Commercial Facilities  2 Units
Students will learn and apply methods of energy master planning for
commercial and institutional facilities for increased user comfort, lower
operating costs, and climate resiliency. They will learn how to develop
metrics in support of energy master planning and design investments.
Integration of renewable energy and high performance solutions will be
covered as well as related subject areas of efficient water use and waste
reduction strategies. Students will receive training in performing energy
master planning audits for facilities and prepare an energy systems
retrofit proposal.
Lecture Hours: 1.5  Lab Hours: 1.5  Repeatable: No  Grading: L
Advisory Level: Read: 3  Write: 3  Math: None
Transfer Status: None  Degree Applicable: AS
CSU GE: None  IGETC: None  District GE: None

ETEC 116  Introduction to Computer Integrated Manufacturing  3
Units
Students will receive theory, practical knowledge, skills, and abilities
that will readily apply to automation technology. They will gain skills in
automation control including sensors, actuators, programmable logic
controllers (PLCs), industrial robotics, and computerized numerical
control (CNC) technology.
Lecture Hours: 3  Lab Hours: None  Repeatable: No  Grading: L
Advisory Level: Read: 2  Write: 2  Math: 3
Transfer Status: None  Degree Applicable: AS
CSU GE: None  IGETC: None  District GE: None

ETEC 150  Commercial Wiring and Lighting Facilities  4 Units
Students are introduced to commercial and industrial wiring, including
conduit bending, wire fill, load calculations, raceways, LED lighting,
high pressure sodium lighting, metal halide and fluorescent lighting.
The students will be bending conduit, pull wires and learn how to wire
commercial and industrial lighting circuits.
Lecture Hours: 3  Lab Hours: 3  Repeatable: No  Grading: L
Prerequisite: AIRC 121 with C or better
Advisory Level: Read: 3  Write: 3  Math: 2
Transfer Status: None  Degree Applicable: AS
CSU GE: None  IGETC: None  District GE: None

ETEC 151  Motor Controls Facilities  5 Units
Students will acquire knowledge and skills working with various types
of motor controls used in a commercial or industrial facility. They will
wire multiple commercial projects using ladder and schematic diagrams,
including timer circuits, motion sensors, photo cells, pilot duty relays,
safety and overload controls.
Lecture Hours: 4  Lab Hours: 3  Repeatable: No  Grading: L
Prerequisite: AIRC 121 with C or better
Advisory Level: Read: 3  Write: 3  Math: 2
Transfer Status: None  Degree Applicable: AS
CSU GE: None  IGETC: None  District GE: None