

Engineering Technology (ETEC)

ETEC 310 Material Science for Engineering Technology 3 Credits (3,0)

Introduction to material science and engineering; material classes; development from processing, structure, properties, performance.

Prerequisites: CHEM 110 and PHYS 160 and ESCI 202

Course Offered at: Worldwide

ETEC 315 Circuits for Engineering Technology 3 Credits (3,0)

DC and AC circuits; analysis of current, voltage, power. Three-phase transmission lines, AC transformers. Circuit analysis using linear algebra and calculus.

Prerequisites: MATH 242 and CESC 220L

Corequisites: ETEC 315L

Course Offered at: Worldwide

ETEC 315L Circuits Laboratory for Engineering Technology 1 Credit (0,1)

Lab course for ETEC 315; hardware and software simulation of DC and AC circuits, transformers, three-phase circuits.

Corequisites: ETEC 315

Course Offered at: Worldwide

ETEC 399 Special Topics in Engineering Technology 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in engineering technology.

Course Offered at: Daytona Beach, Prescott, Worldwide

ETEC 409 Applied Aeronautics 3 Credits (3,0)

Aerodynamics, performance, stability; airfoil and wing theory; lift and drag generation; high-lift systems; propulsion performance; Reynolds and Mach number effects; aircraft performance in flight stages; weight and balance effects on stability.

Prerequisites: ASCI 309 and ENGR 115 and MATH 241

Course Offered at: Worldwide

ETEC 410 Thermodynamics for Engineering Technology 3 Credits (3,0)

Review of thermodynamics; heat, work, kinetic theory of gases; equation of state; thermodynamic systems; control volume; first and second laws of thermodynamics; reversible and irreversible processes; thermodynamic cycles.

Prerequisites: ESCI 206

Course Offered at: Worldwide

ETEC 415 Control Systems 3 Credits (3,0)

Analysis of closed-loop systems; frequency response, root locus, state variable techniques; analytic and computer methods; continuous and discrete linear systems.

Prerequisites: ESCI 204 and ETEC 315

Course Offered at: Worldwide

ETEC 490 Engineering Technology Capstone I 3 Credits (3,0)

First senior design course for engineering technology students; project definition, conceptual and preliminary design.

Prerequisites: ENGR 115 and ENGR 120 and ETEC 310 and ETEC 410 and ETEC 415 and ECON 210 or ECON 211 or ECON 225

Course Offered at: Worldwide

ETEC 491 Engineering Technology Capstone II 3 Credits (3,0)

Second senior design course for engineering technology students; detailed design and testing against project requirements.

Prerequisites: ETEC 490

Course Offered at: Worldwide

ETEC 499 Special Topics in Engineering Technology 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in engineering technology.

Course Offered at: Daytona Beach, Prescott, Worldwide