

Pre-Engineering Course Descriptions

ENGR 100: Introduction to Engineering (2)

Prerequisite: None

This course is an introduction to engineering. It presents the duty and role of the professional engineer, phases of engineering activity, computer applications with word processing, and spreadsheets.

ENGR 173: Scientific Computing/MATLAB (3)

Prerequisite: None

This course will give a thorough introduction to the capabilities of the software package MATLAB, which covers a variety of mathematical and engineering topics. It provides hands-on experience with the powerful computing, plotting and help facilities of the MATLAB environment.

ENGR 275: Digital Systems (3)

Prerequisite:

MATH 105: Trigonometry (3)

Prerequisite: MATH 103 College Algebra or MATH 111 College Algebra I

In this course the student will study triangle trigonometry, trigonometric functions, trigonometric identities and equations and applications of trigonometry.

MATH 111: College Algebra I (3)

Prerequisite: Placement based on TMCC Math Placement Test or MATH 102 Intermediate Algebra

In this course the student will cover graphs and technology, equations, inequalities, functions and their graphs, polynomials and rational functions.

MATH 112: College Algebra II (3)

Prerequisite: Prerequisite: MATH 111 College Algebra I

In this course the student will cover exponential and logarithmic functions, systems of equations and equalities, discrete algebra and analytic geometry.

PHYS 251: University Physics I (4)

Prerequisite: MATH 165 Calculus I

This course is the study of Newtonian mechanics of translational and rotational motion, work, energy, power, impulse, momentum, conservation of energy and momentum, periodic motion, waves, sound, heat, and thermodynamics.

PHYS 252: University Physics II (4)

Prerequisite: PHYS 251

This course is the study of electric charge, field, potential, and current, magnetic field, capacitance, resistance, inductance, RC, RL, LC, and RLC circuit, EM waves, optics, and introduction to modern physics.