

Pre-Optometry Course Descriptions

BIOL 220: Anatomy & Physiology/Lab I (4)

Prerequisite: General Biology/Lab BIOL 150, General Chemistry CHEM 115 or 121, This course is an introductory study of the basic chemistry, cellular biology, integument system, skeletal system, muscular system, and nervous system.

BIOL 221: Anatomy & Physiology/Lab II (4)

Prerequisite: BIOL 220 Anatomy and Physiology I or instructor approval

This course is a continuation of the study of human anatomy and physiology that began with BIOL 220. This course deals with the endocrine, cardiovascular, digestive, urinary and reproductive systems of the human body.

CHEM 121: General Chemistry/Lab I (4)

Prerequisite: One year of high school chemistry (or some college chemistry) and two years of high school algebra (or one year of college algebra).

This course is the study of matter, measurement, atoms, ions, molecules, reactions, chemical calculations, thermo chemistry, bonding, molecular geometry, periodicity, and gases.

CHEM 122: General Chemistry/Lab II (4)

Prerequisite: CHEM 121 General Chemistry/Lab I

This course is the study of intermolecular forces, liquids, solids, kinetics, equilibria, acids, and bases, solution chemistry, precipitation, thermodynamics, and electrochemistry.

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.