



Belmont University Undergraduate Pre-requisite Courses

Recommended to prepare for

Belmont University Doctorate of Physical Therapy Program

BIO 1110. Principles of Biology I (4). An introductory study of molecular and cellular biology. Topics include the molecular basis of cellular processes, structure and physiology of cells, molecular and Mendelian genetics, and microevolution. Three hours lecture and three hours laboratory per week. (\$50.00 course fee)

BIO 1120. Principles of Biology II (4). *Prerequisite: BIO 1110.* An introductory study of macroevolution, organismal biology and ecology. Topics include the structure and physiology of plants, the structure and physiology of animals, biodiversity, and ecological systems. Three hours lecture and three hours laboratory per week. (\$50.00 course fee)

***CEM 1610, 1620. General Chemistry I, II (4, 4).** *Prerequisite or co requisite: MTH 1110 or the equivalent.* Fundamental concepts and principles are emphasized during the first semester. Emphasis is placed on structure, nomenclature, oxidation numbers and the mole concept. The second semester includes solutions, behavior of electrolytes, ionic and molecular equilibria, and nuclear chemistry. Also, there is a brief introduction to the chemistry of carbon and its compounds included in the second semester. (\$100.00 course fee)

***PHY 1110, 1120. Basic College Physics, I, II* (4, 4).** *Prerequisite: MTH 1110, MTH 1130.* Principles of mechanics, wave motion, electricity, magnetism and modern physics. Quantitative as well as qualitative aspects of the subject are developed utilizing algebra and trigonometry. (\$40.00 course fee)

OR

***PHY 2110, 2120. General College Physics I, II (4, 4).** *Prerequisite or co requisite: MTH 1220.* These courses provide a thorough introduction to the principles of mechanics, thermal physics, wave motion, electricity and magnetism, and atomic and nuclear physics. Concepts are developed and applied utilizing the calculus. This sequence serves as a foundation for students enrolled in physics, chemistry, engineering, mathematics and/or computer science curricula. (\$40.00 course fee)

BIO 2230. Human Anatomy and Physiology I (4). *Prerequisite: BIO 1010 or BIO 1110.* A study of the cells and tissues as well as the skeletal, muscular, neural, and special sensory systems of the human body. Two hours lecture and 4 hours laboratory per week. (\$50.00 course fee)

BIO 2240. Human Anatomy and Physiology II (4). *Prerequisite: BIO 2230.* A study of the endocrine, cardiovascular, pulmonary, gastrointestinal, renal, and reproductive systems of the human body. Two hours lecture and four hours laboratory per week. (\$50.00 course fee)

MTH 1150 - Elementary Statistics* (3 hrs). *Prerequisite: MTH ACT score greater than or equal to 22, Math SAT score greater than or equal to 520, Belmont Math Placement Test score greater than or equal to 20, MTH 1110, or MTH 1130.* An introduction to statistical reasoning. Topics include descriptive measures, elementary probability distributions, sampling distributions, one and two sample inferences on means and proportions, simple linear regression, and correlation. Case studies of real data will relate to various fields of interest. Special emphasis will be placed on communication of statistical results through projects using computer software.

OR

MTH 1151 - Elementary Statistics for the Sciences* (3 hrs). *Prerequisite: Math ACT score greater than or equal to 22, Math SAT score greater than or equal to 520, Belmont Math Placement Test score greater than or equal to 20, or MTH 1110, or MTH 1130.* The study of statistical procedures widely used in the sciences. Topics include, in addition to those taught in MTH 1150, modeling with probability distributions, multiple regression, analysis of variance, chi-square tests, nonparametric statistics, and bootstrapping. Analysis of data using computer software will relate to the sciences. Special emphasis will be placed on the communication of statistical results from scientific research.

Behavioral Sciences – nine semester hours of psychology, sociology, anthropology and/or ethics

*courses include required labs

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