



Program of Study:

Physical Therapy Assistant to Bachelor of Science in Biology: Pre-Physical Therapy

Program Description

The Physical Therapy Assistant to Bachelor of Science in Biology: Pre-Physical Therapy Program is a degree completion program that allows Physical Therapy Assistants to receive a Bachelors degree and skills that are relevant to their current vocation. It also provides the prerequisite requirements necessary for the student to pursue admission into graduate level Physical Therapy programs.

Additional Admission Requirements

In addition to the general Standards for Undergraduate Admission, all PTA to Biology: Pre-PT program applicants must meet the following set of admission requirements:

1. Possess a Physical Therapy Assistant Associate degree from an accredited, GCU-approved college or university
2. Possess a non-encumbered license as a Physical Therapy Assistant.
3. Submit official transcripts bearing evidence of a cumulative GPA of 2.80. No transferable credits may have a grade below a "C" (2.00).

Pre-Physical Therapy Core:

MAT 121	College Algebra	A precalculus course on algebraic topics and the properties of basic functions. Prerequisite: MAT 120.	3
CHM 113	General Chemistry I	An exploration of the principles and practice of modern chemistry. Topics include the chemical and physical properties of elements and compounds, reaction stoichiometry, energetics, and atomic and molecular structure. Prerequisites: MAT 121 or equivalent. Co-requisites: CHM 113L.	3
CHM 113L	General Chemistry I Lab	A laboratory course designed to complement and support the principles being learned in CHM 113 lecture. Prerequisite: MAT 121 or equivalent. Co-requisites: CHM 113.	1
CHM 115	General Chemistry II	Continuation of CHM 113. Topics include thermodynamics, kinetics, descriptive chemistry, analytical chemistry, electrochemistry, and nuclear chemistry. Prerequisites: CHM 113, CHM 113L. Co-requisites: CHM 115L.	3
CHM 115L	General Chemistry II Lab	A laboratory course designed to complement and support the principles being learned in CHM 115 lecture. Prerequisites: CHM 113 and CHM 113L. Co-requisites: CHM 115.	1
PHY 111	General Physics I	Survey of physical principles and concepts using mathematical descriptions based on algebra and trigonometry. Topics covered include force and motion, physical properties of materials, and thermodynamics. Prerequisites: MAT 121. Co-requisites: PHY 111L.	3
PHY 111L	General Physics I Lab	Laboratory experiments demonstrating the physical principles in the PHY 111 lecture. Prerequisites: MAT 121. Co-requisites: PHY 111.	1

PHY 112	General Physics II	Continuation of PHY 111. Topics covered include wave motion, electrostatics, optics, and magnetism. Prerequisite: PHY 111 and PHY 111L. Co-requisites: PHY 112L.	3
PHY 112L	General Physics II Lab	Laboratory experiments demonstrating the physical principles in the PHY 112 lecture. Prerequisites: PHY 111 and PHY 111L. Co-requisites: PHY 112.	1
BIO 363	Biostatistics	Introduction to experimental design, and basic concepts of descriptive and inferential statistics including descriptive methods and graphing, binomial and Gaussian probability theory, estimation, confidence intervals, hypothesis testing, correlation, and regression. One-, two- and multi-group parametric and nonparametric methods will be introduced. Sampling distributions covered include the Z, t, F, and Chi-squared distributions. Prerequisite: MAT 121 or higher.	3
BIO 340	Genetics	A comprehensive examination of the principles of heredity and variation, including Mendelian genetics, molecular genetics, and population genetics.	3
HLT 310	Spirituality in Healthcare†	This course explores the concept of spirituality as it relates to the person who is involved in the health-care system. Since illness and stress can amplify spiritual concerns and needs, health-care professionals are in a unique position to assist the patient/client in meeting those needs. This course explores the relationship between health-care professionals and those they serve. Topics include performing spiritual assessment, identifying those experiencing spiritual well-being as well as those experiencing a threat to spiritual well-being, and planning and evaluating care related to spiritual wellness. A spiritual care framework is used to apply these concepts to a variety of populations in diverse clinical settings.	3
HLT 322	Medical Ethics†	An introduction to medical ethics which examines several approaches to ethics within the interrelated contexts of medicine, health care and the law. Topics investigated may include: professional patient relationships; institutional and social settings of care delivery; informed consent, confidentiality, and truth-telling; abortion; critically ill neonates; death and dying; mental illness; human experimentation; resource allocation; and justice and health care.	3
EXS 314	Care and Prevention of Athletic Injuries	A course designed to provide the student with a basic knowledge and understanding of the principles of sports medicine, the care and treatment of athletic trauma, and the use of proper conditioning principles of the prevention of injury.	3
EXS 340	Physiology of Exercise	A study of the effects of exercise on the body. It includes the study of responses and adaptations to exercise at the systemic as well as the subcellular level. Prerequisites: BIO 160 or BIO 201 and BIO 202.	3
EXS 365	General Medicine	Covers the competencies related to recognition, detection and referral and understanding treatment approaches for medical condition and disabilities associated with the physically active. These competencies covered are related to the derma, head, face, thorax, abdomen, eyes, ears, nose and throat. The student will also learn pharmacologic applications and governing pharmacy regulations relevant to treatment of injuries, illnesses and diseases. Prerequisites: EXS 314	3
BIO 372	Biomechanics	This course introduces students to concepts of mechanics as they apply to human movement, The student should gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective. At the completion of this course it is desired that each student be able to: 1) describe motion with precise, well-defined mechanical and anatomical terminology; 2) understand and quantify linear and angular characteristics of motion; 3) understand the quantitative relationships between angular and linear motion characteristics of a rotating body; and 4) understand and quantify the cause and effect relationship between force and linear and angular motion. Prerequisites: BIO 202 and BIO 202L or BIO 360 and BIO 360L.	3

BIO 462	Neuroscience for Rehabilitative Therapies	This course expands on previous science courses to provide a more in-depth understanding of the structure and function of the human nervous system. Changes in the structure of the nervous system that occur with development, responses of the nervous system to injury, blood supply of the central nervous system, the ventricular system, and regional anatomy of the brain and spinal cord are examined. Basic function of the nervous system is examined at the molecular, cellular, and systems level. In addition, the course introduces the basis for complex human functions and introductory material on the medical, surgical and physical therapeutic management of neurological disorders. Prerequisites: BIO 160, BIO 201, or BIO 360.	3
EXS 426	Theory of Prescribing Exercise	The specific and applied use of exercise in prevention of injury, improvement of performance, and recovery from disability and dysfunction. Included are specific exercise routines, muscle testing, kinesiological principles, history and scope of rehabilitating exercise, abnormal clinical kinesiology, examination procedures, and reconditioning of specific disorders. Prerequisites: BIO 160 or BIO 201; and EXS 330 or EXS 340.	3
BIO 317	Science Communication	Science Communication studies how to gather, analyze, and communicate scientific information. Students will be able to effectively communicate clearly organized scientific thoughts across a wide array of platforms. Topics covered include recognizing the various forms of written communication, utilizing research papers to conduct individual research, organizing and writing journal papers, producing and giving scientific oral presentations, producing poster presentations at scientific meetings, understanding the funding process for professional scientific research, and writing proposals for federal funding agencies. A writing-intensive course.	3
HLT 490	Professional Capstone Project	Content is designed to aid in the development of inquiry and research skills. Learning research skills and conducting research projects benefits the individual and the profession. The individual benefits by learning new knowledge and skills: the profession benefits by adding to the professional body of knowledge.	3

† Course satisfies a Christian Studies Requirement. Check the Academic Catalog for details.

Total Pre-Physical Therapy Core Credits: 55

Other Transfer, General Education, Elective, or Certification Credits: 65

Total Physical Therapy Assistant to Bachelor of Science in Biology: Pre-Physical Therapy Credits: 120