UNC- CH PT PREREQUISITES

*THE FOLLOWING ARE THE PREREQUISITES REQUIRED BY THE DIVISION OF PT AT UNC-CH. ALSO LISTED ARE THE COURSE DESCRIPTIONS OF THESE COURSES OFFERED AT UNC. USE THESE DESCRIPTIONS AS A GUIDE. THESE ARE EXAMPLES TO HELP GUIDE YOU IN YOUR COURSE SELECTION. COURSES CAN BE TAKEN AT COMMUNITY COLLEGES AND ONLINE.*

**1) General or Intro Biology**

Principles of Biology I with Lab (BIOL 101 & 101L)

An introduction to the fundamental principles of biology, including cell structure, chemistry, and function, genetics, evolution, adaptation, and ecology. The lab is an examination of the fundamental concepts in biology with emphasis on scientific inquiry. Biological systems will be analyzed through experimentation, dissection, and observation.

**2) Second Course in Human Biology**

Second course in human biology. (lab recommended) (minimum 3.0 credit hours). Examples of potential courses include Microbiology (MCRO 251), Genetics (BIOL 202), and Cell Biology (BIOL 205), and Immunology (MCRO 449).

**3/4) Human Anatomy and Physiology – Students can fulfill this requirement one of three ways**.

A) By taking a single combined A/P course such as UNC Chapel Hill’s Fundamentals of Human Anatomy and Physiology (BIOL 252/252L) that gives a minimum of 4 credit hours.

BIOL 252 Fundamentals of Human Anatomy and Physiology (3). Prerequisite, BIOL 101. Corequisite, BIOL 252L. One biology course over 200 recommended. An introductory but comprehensive course emphasizing the relationship between form and function of the body's organ systems. Three lecture hours each week.

BIOL 252L Fundamentals of Human Anatomy and Physiology Laboratory (1). Prerequisite, BIOL 101 and 101L. Corequisite, BIOL 252. Organ level human structure and function. Three laboratory hours a week.

or

B) Taking separate Anatomy/Anatomy Lab and Physiology courses such as

Human Anatomy & Human Anatomy Laboratory ,EXSS 175 & 275L, + Physiology EXSS 276

EXSS 175 Human Anatomy (3). The study of the structure of the human body with special emphasis on the musculoskeletal, articular, and nervous systems. Prosected cadaver materials are utilized to study the skeletal muscles and body viscera

EXSS 275L Human Anatomy Laboratory (1). Required preparation, a grade of B or better in EXSS 175. EXSS 275L is a basic human anatomy laboratory course designed to accompany EXSS 175. For students endeavoring to major in the allied health professions.

EXSS 276 Human Physiology (3). Prerequisite, EXSS 175. Instructor may approve equivalents for prerequisite. A lecture course in elementary physiology, covering the various systems of the bod

or

C) taking an Anatomy/Physiology I and II sequence such as BIO 352/352L + BIO 353/353L.

BIOL 352 Human Anatomy and Physiology Part I (3). Prerequisites, BIOL 101 and 101L; corequisite, BIOL 352L. BIOL 205 recommended. A comprehensive study of the structure and function of the human body. Includes comprehensive study of tissues and the integumentary, skeletal, muscular, and nervous systems. Three lecture hours each week. May not be taken in addition to BIOL 252.

BIOL 352L Human Anatomy and Physiology Part I Laboratory (1). Prerequisites, BIOL 101L; corequisite, BIOL 352. A hands-on study of the structure and function of the human body. Includes comprehensive study of the skeletal, muscular, and nervous systems. Three laboratory hours each week.

BIOL 353 Human Anatomy and Physiology Part II (3). Prerequisite, BIOL 352; corequisite, BIOL 353L. Studies the structure, function, and development of the human body: endocrine, cardiovascular, lymphatic/immune, respiratory, digestive, urinary, reproductive systems. Three lecture hours each week. Can be used as an allied science elective but not a biology course for the major. Cannot be taken in addition to BIOL 252.

BIOL 353L Human Anatomy and Physiology Part II Laboratory (1). Prerequisite, BIOL 352L; corequisite, BIOL 353. A hands-on study of the structure and function of the human body. Includes study of the cardiovascular, respiratory, digestive, urinary, reproductive systems. Three laboratory hours each wee

Chemistry

**5) General Descriptive Chemistry I with Lab (CHEM 101 & 101L)**

Atomic and molecular structure, stoichiometry and conservation of mass, thermochemical changes, and conservation of energy.

**6) General Descriptive Chemistry II with Lab (Chem 102 and 102L)** Minimum combined 4.0 credit hours with lab.

**7/8) General Physics I and II**

**PHYS 114 General Physics I: For Students of the Life Sciences (4).** Prerequisite, MATH 231. Basic principles of physics, including forces, energy, oscillations, sound, diffusion, and heat transfer, and applications to biological systems. Intended to meet the needs of, but not restricted to, students majoring in the life sciences. Students may not receive credit for PHYS 114 in addition to PHYS 104, 116, or 118.

**PHYS 115 General Physics II: For Students of the Life Sciences (4).**Prerequisite, PHYS 114. Basic principles of physics, including fluids, electricity, magnetism, optics, quantum physics, and nuclear physics, and applications to biological systems. Intended to meet the needs of, but not restricted to, students majoring in th

Or

**PHYS 118 Introductory Calculus-based Mechanics and Relativity (4**). Prerequisite, MATH 231; pre- or corequisite, MATH 232. Permission of the instructor for students lacking the prerequisites. Mechanics of particles and rigid bodies. Newton's laws; mechanical and potential energy; mechanical conservation laws; frame-dependence of physical laws; Einstein's Theory of Relativity. Lecture and studio. Students may not receive credit for PHYS 118 in addition to PHYS 104, 114, or 116.

**PHYS 119 Introductory Calculus-Based Electromagnetism and Quanta (4).** Prerequisites, MATH 232 and PHYS 118; pre- or corequisite, MATH 233. Permission of the instructor for students lacking the prerequisites. Unification of the laws of electricity and magnetism; electromagnetic waves; the particle-wave duality; fundamental principles and applications of quantum mechanics. Lecture and studio. Students may not receive credit for PHYS 119 in addition to PHYS 105, 115, or 117.

**9) Psychology**

General Psychology (PSYC 101)

A survey of major principles of psychology and an introduction to scientific modes of thought about behavior. Students participate in ongoing psychological research in the department.

**10) Exercise Physiology**

Physiological Basis of Human Performance (EXSS 376)

The application of physiological principles to sport and physical activity. Both immediate and chronic adaptations to exercise are studied.

ONLINE OPTIONS:

American Public University/American Military University

SPHE 314 – Exercise Physiology (3 credit hours)

<http://www.amu.apus.edu/academic/resources/course-schedule/course/sphe314>

Concordia University – St Paul – has an online undergraduate degree in Exercise Science which includes an Exercise Physiology class. You will need to contact that department to see if non-degree students can take the course.

[http://online.csp.edu/academics/bachelor-of-arts-in-exercise-science](%20http:/online.csp.edu/academics/bachelor-of-arts-in-exercise-science)

North Carolina State University; HESM-478-601 Exercise Physiology and Sports Science

<https://wolfware.ncsu.edu/courses/details/?sis_id=SIS:2016:8:1:HESM:478:601>

University of New Mexico, PT 351 Clinical Exercise Physiology

<http://orthopaedics.unm.edu/pt/admissions/new_course.html>

UCLA Extension; PHYSCIX 450 (this course is a quarter system class so you will need to take an additional class to meet our minimum requirements)

<https://www.uclaextension.edu/pages/Course.aspx?reg=Z4042W>

US Sports Academy

\*\*We will also accept the online course offered through the US Sports Academy- [www.ussa.edu.](http://www.ussa.edu/) The course is SAR 520, Fitness and Exercise Physiology. We will not accept CER 520

**11) Statistics (these can be fulfilled with statistics courses taken as part of an undergraduate or graduate major – i.e. business statistics, quantitative analysis):**

Basic Concepts of Statistics and Data Analysis (STOR 151) or

Elementary introduction to statistical reasoning, including sampling, elementary probability, statistical inference, and data analysis.

Introduction to Statistics (STOR 155) or

Data analysis; correlation and regression; sampling and experimental design; basic probability (random variables, expected values, normal and binomial distributions); hypothesis testing and confidence intervals for means, proportions, and regression parameters; use of spreadsheet software.

Statistical Principles Psychological Research (PSYC 210) or

Consideration of the methodological principles underlying psychological research, descriptive and inferential techniques, and the manner by which they may be employed to design psychological experiments, and analyze behavioral data