

NATURAL SCIENCE (806)

806-100. Anatomy/Physiology Aesthetics. (1 Credit)

Applying laser treatment protocols, giving face and body treatments, and providing skincare analysis all require complex knowledge of the human body. Focus on advanced facial anatomy, musculature and nervous systems relating to the application of medical aesthetics in this course. See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=100>)

806-114. General Biology. (4 Credits)

Learn general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution and taxonomical relationships. Consideration is also given to diversity among the various kingdoms. See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=114>)

806-139. Survey of Physics. (3 Credits)

Explore basic physics concepts through laboratory investigation and applications. Topics include kinematics, dynamics, work, energy, power, temperature, heat, waves, electricity, magnetism, electromagnetic waves, optics, and atomic and nuclear physics.

Prerequisites: (804-115 with a minimum grade of D- or 804-113 with a minimum grade of D- or 804-110 (may be taken concurrently) with a minimum grade of D- or 804-107 (may be taken concurrently) with a minimum grade of D- or 804-304 with a minimum grade of D- or 834-110 (may be taken concurrently) with a minimum grade of D-)

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=139>)

806-143. College Physics 1. (3 Credits)

Learn the applications and theory of basic physics principles. Emphasis is placed on problem solving, laboratory investigation and applications. Topics include laboratory safety, unit conversions and analysis, kinematics, dynamics, work, energy, power, temperature and heat.

Prerequisites: (804-115 (may be taken concurrently) with a minimum grade of D- or 804-198 (may be taken concurrently) with a minimum grade of D- or 804-114 (may be taken concurrently) with a minimum grade of D-) Credit for prior learning available (<http://wctc.edu/prior-learning/>)

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=143>)

806-144. College Physics 2. (3 Credits)

Learn the applications and theory of basic physics principles. Emphasis is placed on problem solving, laboratory investigation and applications. Topics include periodic motion, wave motion, optics, magnetism, static electricity, DC electricity, AC electricity and electromagnetism.

Prerequisites: 806-143 (may be taken concurrently) with a minimum grade of D-

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=144>)

806-176. Physiology for Healthcare. (2 Credits)

This course is an interactive approach to physiology for students with previous college credit coursework in anatomy and physiology who are entering into a healthcare professional program.

Prerequisites: 806-179 (may be taken concurrently) with a minimum grade of C

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=176>)

806-177. Gen Anatomy & Physiology. (4 Credits)

Examine basic concepts of human anatomy and physiology as they relate to the health sciences. Use a body systems approach to discover the interrelationships between structure and function at the gross and microscopic levels of organization in the human body. Develop the ability as a healthcare professional to apply the basic concepts of whole body anatomy and physiology to decision making and professional communication with colleagues and patients.

Prerequisites: High School chemistry or 806-186 (may be taken concurrently) with a minimum grade of C (806-178 with a minimum grade of C or College Chemistry) and 503-195 with a minimum grade of C) or (503-154 with a minimum grade of C and (COMPASS-Reading Skills with a score of 75 or TABE Advanced Reading with a score of 11.0 or TABE-11 A Reading with a score of 617 or Accuplacer Reading Comp70 or TABE-12 A Reading with a score of 617 or Next-Gen Accuplacer Reading with a score of 248 or College Proficiency - Reading or ACT-Reading with a score of 17 or COMPASS/ESL - Reading with a score of 90 or ASSET-Reading Skills with a score of 40 or Accuplacer ESL Reading with a score of 103 or 838-105 with a minimum grade of C or 858-775 with a minimum grade of S or High School GPA 2.60 or Higher or GED Language Arts-2014 Series with a score of 165)

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=177>)

806-178. Life Science Chemistry. (5 Credits)

Explore a wide range of topics, including inorganic and organic chemistry. During the inorganic portion of the course, study topics including measurements and conversions, matter and the kinetic molecular theory, periodic table, chemical bonding, chemical reactions, solubility, gases, problem-solving and solutions, equilibrium and acid-base behavior. The organic chemistry portion introduces chemical structure as well as physical and chemical behavior of organic molecules. Many of these topics are related to the field of animal science.

Prerequisites: (804-138 with a minimum grade of D- or Accuplacer Arithmetic with a score of 60 or GED Math - 2014 Series with a score of 165 or 804-169A with a minimum grade of D- or 854-752 with a minimum grade of B- or Next-Gen Accuplacer Arithmetic with a score of 258 or 804-107 with a minimum grade of D- or College Proficiency - Math) or ALEKS Math Placement with a score of 14 or 804-110 with a minimum grade of D- or 834-110 with a minimum grade of D- or 834-109 with a minimum grade of D- or ACT-Math with a score of 17 or 804-115 with a minimum grade of D- or COMPASS-Pre-Algebra with a score of 42 or ASSET-Numerical Skills with a score of 38 and (COMPASS-Reading Skills with a score of 75 or TABE Advanced Reading with a score of 11.0 or TABE-11 A Reading with a score of 617 or Accuplacer Reading Comp70 or Next-Gen Accuplacer Reading with a score of 248 or College Proficiency - Reading or ACT-Reading with a score of 17 or ASSET-Reading Skills with a score of 40 or COMPASS/ESL - Reading with a score of 90 or Accuplacer ESL Reading with a score of 103 or 858-775 with a minimum grade of S or 838-105 with a minimum grade of C or High School GPA 2.60 or Higher or GED Language Arts-2014 Series with a score of 165)

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=178>)

806-179. Adv Anatomy & Physiology. (4 Credits)

Use a body systems approach to study normal human anatomy and physiology and the interrelationships between form and function at the gross and microscopic levels of organization. During lab exercises, analyze cellular metabolism and explore the individual components of the nervous, neuromuscular, cardiovascular and urinary body systems. Examine homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Apply genetic concepts to human reproduction and development.

Prerequisites: 806-177 (may be taken concurrently) with a minimum grade of C

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=179>)

806-181. Pathophysiology. (3 Credits)

This course presents concepts of alteration in physiology that serve as the basis for disease. The course begins with the basic functions of the cell and the impact of injury/inflammation, alterations in immunity, fluid and electrolyte imbalances, acid-base imbalances, and abnormal cell growth/neoplasms. The course will also address the impact of physiologic alterations/disease states, in each of the body systems. This is a 3-credit lecture course. There is no lab component.

Prerequisites: 806-179 (may be taken concurrently) with a minimum grade of C

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=181>)

806-186. Intro to Biochemistry. (4 Credits)

Develop the skills and knowledge of organic and biological chemistry that are needed for nursing and other allied health careers. Learn how to recognize the structure, physical properties and chemical reactions of organic molecules, body fluids and acids. Study biological functions and their relationships to enzymes, proteins, lipids, carbohydrates and DNA.

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=186>)

806-187. Calculus Based Physics 1. (3 Credits)

Participate in a calculus-based approach to the study of physics. Topics include units and unit conversions, mechanics, rotational mechanics, work and energy, oscillations and waves.

Prerequisites: 804-198 with a minimum grade of D-

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=187>)

806-188. Calculus Based Physics 2. (3 Credits)

A continuation of Calculus Based Physics 1, this course provides a calculus-based approach to the study of physics. Topics include electric and magnetic fields, Maxwells' equations, electromagnetic waves and optics. Lab activities are related to and support classroom presentations.

Prerequisites: 806-187 (may be taken concurrently) with a minimum grade of D-

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=188>)

806-189. Basic Anatomy. (3 Credits)

Examine concepts of anatomy and physiology as they relate to health careers. Correlate anatomical and physiological terminology to all body systems.

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=189>)

806-197. Microbiology. (4 Credits)

Examine various concepts in microbiology such as microbial structure, metabolism, genetics and growth. Investigate the relationship that exists between humans and microorganisms. Discuss additional topics such as disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Explore the role of microbes in the environment, industry and biotechnology.

Prerequisites: (806-177 (may be taken concurrently) with a minimum grade of C) and (COMPASS-Reading Skills with a score of 75 or TABE Advanced Reading with a score of 11.0 or Accuplacer Reading Comp70 or TABE-11 A Reading with a score of 617 or TABE-12 A Reading with a score of 617 or Next-Gen Accuplacer Reading with a score of 248 or College Proficiency - Reading or ACT-Reading with a score of 17 or ASSET-Reading Skills with a score of 40 or COMPASS/ESL - Reading with a score of 90 or Accuplacer ESL Reading with a score of 103 or 858-197 with a minimum grade of S or 838-105 with a minimum grade of C or High School GPA 2.60 or Higher or GED Language Arts-2014 Series with a score of 165)

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=197>)

806-382. Applied Science. (1 Credit)

Examine the principles related to mechanical, fluid, electrical, and thermal systems while in a laboratory setting. Focus on the measurement and application of force, rate, work, and resistance within each system.

Credit for prior learning available (<http://wctc.edu/prior-learning/>)

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=382>)