

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>)

806-134. General Chemistry. (4 Credits)

Explore the fundamentals of chemistry, including the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws. See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=134>)

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 C or 804-113 with a minimum grade of C or 804-107 (may be taken concurrently) with a minimum grade of C or 804-110 (may be taken concurrently) with a minimum grade of C or 804-304 with a minimum grade of C or 834-110 (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=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 C or 804-198 (may be taken concurrently) with a minimum grade of C or 804-114 (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=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 C

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: (806-178 with a minimum grade of C or 806-134 (may be taken concurrently) with a minimum grade of C or 806-186 (may be taken concurrently) with a minimum grade of C or High School chemistry or College Chemistry) or (503-154 with a minimum grade of C and 503-195 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=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: (831-103 with a minimum grade of C or 838-101 (may be taken concurrently) with a minimum grade of C or Accuplacer ESL Sentence Mean with a score of 103 and Accuplacer ESL Language Use with a score of 103 or Accuplacer Sentence Skills82 or ACT-English with a score of 17 or ASSET-Writing Skills with a score of 41 or Completed Intro College Wrtg or COMPASS/ESL - Grammar with a score of 90 or COMPASS-Writing Skills with a score of 59 or College Proficiency - Writing or GED Language Arts-2014 Series with a score of 165 or High School GPA 2.60 or Higher or Next-Gen Accuplacer Writing with a score of 250 or TABE-11 A Language with a score of 631 or TABE Advanced Language with a score of 11.0 or TABE-12 A Language with a score of 631) and (838-105 with a minimum grade of C or 838-101 (may be taken concurrently) with a minimum grade of C or Accuplacer Reading Comp with a score of 70 or Accuplacer ESL Reading with a score of 103 or ACT-Reading with a score of 17 or ASSET-Reading Skills with a score of 40 or Completed Intro College Wrtg or COMPASS/ESL - Reading with a score of 90 or COMPASS-Reading Skills with a score of 75 or College Proficiency - Reading or GED Language Arts-2014 Series with a score of 165 or High School GPA 2.60 or Higher or Next-Gen Accuplacer Reading with a score of 248 or TABE-11 A Reading with a score of 617 or TABE Advanced Reading with a score of 11 or TABE-12 A Reading with a score of 617)

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 C

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 C

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)

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

806-207. Anatomy & Physiology 1. (4 Credits)

Examine basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, this course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare healthcare professionals to apply basic concepts of whole-body anatomy and physiology to informed decision-making and professional communication with colleagues and patients.

Prerequisites: 806-134 (may be taken concurrently) with a minimum grade of C or 806-186 (may be taken concurrently) with a minimum grade of C or 806-178 (may be taken concurrently) with a minimum grade of C or College Chemistry or High School chemistry

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=207>)

806-208. Anatomy & Physiology 2. (4 Credits)

Build on knowledge gained in Anatomy and Physiology 1 within a lecture and laboratory setting. Explore the interrelationships between form and function at the gross and microscopic levels of organization. The included body systems are blood/cardiovascular, lymphatic and immune, respiratory, digestive, urinary and reproductive. Continue to examine the homeostatic mechanisms of cellular metabolism and their relationship to fluid electrolyte and acid-base regulation. Integrate genetics into human reproduction and development.

Prerequisites: 806-207 (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=208>)

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.

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

806-941. Astronomy Science. (1-5 Credits)

This is an Astronomy Science w/o lab elective to recognize transfer credit.

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=941>)

806-951. Geological Science w/o lab. (1-5 Credits)

This is a Geological Science w/o lab elective to recognize transfer credit.

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=951>)

806-961. Chemistry Science w/out lab. (1-5 Credits)

This is a Chemistry Science w/out lab elective to recognize transfer credit.

See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=961>)

806-971. Physical Science Elct. w/o lab. (1-5 Credits)

This is a Physical Science w/o lab elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=971>)

806-981. Biological Science w/out lab. (1-5 Credits)

This is a biological science elective w/out lab to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=981>)

806-982. Astronomy Science w/lab Electv. (1-5 Credits)

This is an Astronomy Science w/lab elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=982>)

806-983. Geological Science w/lab. (1-5 Credits)

This is a Geological Science w/lab elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=983>)

806-984. Chemistry Science w/lab Electv.. (1-5 Credits)

This is a Chemistry Science w/out lab elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=984>)

806-985. Physical Science w/lab Electv.. (1-5 Credits)

This is a Physical Science w/lab elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=985>)

806-986. Biological Science w/lab Elect. (1-5 Credits)

Biological Science w/lab elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=986>)

806-991. Natural Science Elective. (1-5 Credits)

This is a natural science elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=991>)

806-992. Natural Science Elective. (1-5 Credits)

This is a natural science elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=992>)

806-993. Natural Science Elective. (1-5 Credits)

This is a natural science elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=993>)

806-996. Natural Science w/lab Elective. (1-5 Credits)

This is a natural science elective to recognize transfer credit.
See sections of this course (<http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=806&num=996>)