

# Advanced Core Medical Science (ACMS)

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Course information contained within the Bulletin is accurate at the time of publication in June 2025 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ACMS 4004. Fundamentals of Physiology for Pre-Health Postbaccalaureates. 4 Credit Hours.**

Fundamentals of Physiology addresses important topics including membranes and membrane transport, excitation and contraction of skeletal, smooth and cardiac muscle, the heart and blood flow, renal physiology and lung physiology. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Postbaccalaureate.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 4005. Fundamentals of Physiology Lab for Pre-Health Postbaccalaureates. 1 Credit Hour.**

This course is designed for pre-Physician Assistant students enrolled in the Advanced Core Health Sciences program and provides hands-on laboratory exercises related to the various body systems. The laboratory exercises will expose students to the cardiovascular, digestive, excretory, hematopoietic, neurological, and respiratory systems. Students will conduct laboratory activities designed to emphasize the function and measurement of outputs of each system. Students are expected to complete both pre- and post-laboratory written exercises.

**Co-requisites:** ACMS 4004.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 4006. Cellular and Molecular Basis of Immunology and Microbiology for Pre-Health Postbaccalaureates. 4 Credit Hours.**

This course is designed for upper level undergraduates and will cover the fundamentals of human immunology and pathogenic microbiology. Students should have taken as prerequisites college level biology and chemistry. The course does not assume any prior knowledge of either microbiology or immunology. Topics will cover the basic material needed to achieve high scores on the MCAT and other standardized tests required for admission to professional degree programs. A wealth of interesting and relevant areas will be covered in the course including the organization, function, and regulation of innate and adaptive immune responses; diseases associated with malfunction of the immune system such as allergy and autoimmunity, and immune-based therapies (for Cancer and Arthritis). The course will also cover the disease syndromes and the molecular and biochemical characteristics of significant pathogenic bacteria, viruses, fungi and parasites. Topics will include, among others, bacterial toxins, Tuberculosis, sexually transmitted diseases, Malaria, and Lyme disease.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Postbaccalaureate.

**Repeatability:** This course may not be repeated for additional credits.