

COM-Tucson Prerequisites for Physiology

The Physiology Curriculum Committee recommends the following courses in order of priority

Order of priority	Recommendation	Course Descriptions
1	PSIO 201 and PSIO 202 (preferred)	<p>PSIO 201 Human Anatomy and Physiology I (4 credits) Study of structure and function of the human body. Topics include basic anatomical and directional terminology; fundamental concepts and principles of cell physiology; histology; the integumentary, skeletal, muscular and nervous systems; special senses. Primarily for majors in physiology, biology, and health professions.</p> <p>PSIO 202 Human Anatomy and Physiology II (4 credits) Study of structure and function of the human body. Topics include cardiovascular, lymphatic, respiratory, urinary, gastrointestinal, endocrine and reproductive systems. Primarily for majors in physiology, biology, and health professions</p>
2	PSIO 380 and PSIO 201	<p>PSIO 380 Fundamentals of Human Physiology (4 credits) Designed to provide upper-division non-physiology majors with a working understanding of the fundamentals of human biological function, elucidating general principles of human physiology, mechanisms of regulation and the normal variations in human biology, while weaving daily-life applications throughout. A combination of lecture, small and large group discussions, and in-class activities will be utilized to provide an understanding of how the body works from the cellular to the organ system level.</p> <p>PSIO 201 Human Anatomy and Physiology I (see above)</p>
3	PSIO 380 and CMM 401	<p>PSIO 380 Fundamentals of Human Physiology (see above)</p> <p>CMM 401 Human Gross Anatomy (4 credits) This course series is an intensive, dissection-based survey of the gross structure of the human body. CBA401/501 (Summer Session I) will cover the Upper Extremity, Head, Neck, Back, Thorax, Abdomen, Pelvis and Lower Extremity. The course is open to upper-level undergrads and graduate students with instructor permission. Grades will be based on a</p>

		midterm practical and a final practical and written exam. Students taking the course for graduate credit will also have an oral and written presentation requirement.
4	PSIO 380 and one PSIO elective course listed below	<p>PSIO 380 Fundamentals of Human Physiology (see above)</p> <p><u>Approved Physiology Electives</u></p> <p>PSIO 420 Exercise and Environmental Physiology (3 credits) Regulation and adjustment of physiological systems during acute exercise and adaptations with chronic exercise in various populations and environments; emphasizes physiological mechanisms.</p> <p>PSIO 426 Extreme Physiology (3 credits) This course will examine the role of the hypothalamus in regulating homeostasis of a variety of parameters. In particular the response of the body to different environmental stressors such as temperature or altitude that perturb homeostasis will be examined. In addition a variety of environmental insults to the normal physiology of the body such as the effects of ground water pollution or second hand smoke will be considered.</p> <p>PSIO 431 Physiology of the Immune System (3 credits) Focuses on physiology of the immune system, how it functions correctly, and some problems that occur when the immune system does not function properly (immunopathology).</p> <p>PSIO 452 Digestive Physiology (3 credits) This course uses an integrative approach to introduce students to the structure and function of the digestive system, and will survey how the digestive system functions correctly, how it is regulated, and some problems that occur when it does not function properly.</p> <p>PSIO 465 Neurophysiology (3 credits) This course is concerned with how systems of neurons operate together to perform a wide array of functions including the processing of sensory information and generation of motor behaviors. Relevant aspects of neuroanatomy will be covered and some neural diseases will be discussed. A brief review of cellular neurophysiology will be provided at the outset of the course.</p>

		<p>PSIO 467 Endocrine Physiology (3 credits) Mammalian endocrine regulation from an integrative physiology perspective. Primary focus is on calcium and fuel metabolism, stress, fluid balance, reproduction, and growth and development.</p> <p>PSIO 469 Human Reproductive Physiology (3 credits) We will examine contemporary issues in the field of reproductive physiology with particular emphasis on clinical applications and societal concerns. The class structure is designed to encourage application of primary scientific literature and text-book hypotheses to real-world practice and exploration of new issues. Students are encouraged to bring recent articles, newspaper clippings, opinions, ideas and questions to class to promote active learning.</p> <p>PSIO 485 Cardiovascular Physiology (3 credits) Physiology principles of the heart and peripheral vasculature, viewed in an integrative manner, from the cellular to the systems level.</p> <p>PSIO 487 Physiology of Aging (3 credits) In this course we will examine the processes of lifecycle development, normal and pathological aging, senescence, and death from an eco-physiological perspective. Course objectives include understanding the impact of aging on major physiological systems; evaluation of relevant research papers from genetics, ecology, gerontology and geriatrics; understanding the role of the elderly in modern society; and analysis of selected eldercare controversies in the scientific, medical, and political communities.</p>
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