

APPENDIX B

PhD students are required to take 3 credits of Physiology, Biochemistry, or Cell Biology. The following courses are preapproved Physiology courses that will fulfill this requirement. Other Physiology courses may be used with approval.

Visit the [UGA Bulletin](#) for more details on each course. * Indicates Graduate Level Only

Course Number	Course Title	Credit Hours	Description
NUTR 6590	Metabolism and Physiology of Energy Balance and Obesity	3	The mechanisms involved in regulating food intake and energy balance. Nutritional, endocrine, genetic, and epigenetic processes and their impact on obesity will be covered. Specific attention will be given to human obesity.
KINS 6690/L	Neuromuscular Physiology	4	Mechanics, energetics, and motor unit recruitment during skeletal muscle contraction; regulation of energy metabolism during exercise; mechanisms underlying oxygen delivery to muscle during exercise
VPHY (KINS) 7690/L	Skeletal Muscle and Mitochondria Physiology	4	This advanced muscle physiology course will focus predominantly on the biology of mitochondria and the physiology of one cell type in which the mitochondria live, skeletal muscle. Topics and discussions will range from mitochondrial biogenesis during skeletal muscle adaptation to mitochondrial dysfunction in diseases such as aging, diabetes, and Alzheimer's.
*KINS 7310/L	Clinical Exercise Physiology	4	Provides knowledge and skills necessary for conducting diagnostic and functional cardiopulmonary evaluations and conditioning programs for chronically diseased patients with an emphasis on the cardiopulmonary patient.
*KINS 7330/L	Metabolic and Cardiorespiratory Aspects of Exercise	4	Metabolic and cardiovascular-respiratory responses to exercise and adaptations to training, with emphasis on applications to human physical performance and fitness.
*KINS 8300	Exercise, Obesity, and Cardiometabolic Disorders	3	Advanced study of mechanisms responsible for exercise-induced effects on cardiovascular and metabolic health through reading and discussion of current research literature.
*KINS 8420	Muscle Energetics and Oxygen Transport During Exercise	3	Reading and discussion of current topics in skeletal muscle biochemistry and oxygen transport relating to exercise. Topics will include contractile protein energetics, ATP production pathways, blood flow to muscle, and oxygen delivery. Emphasis will be placed on acute changes with exercise, and plasticity of skeletal muscle in response to increases and decreases in physical activity.
*PHRM 6400	Human Physiology I	4	Physiology of the human body with emphasis on the central nervous system, autonomic nervous system, and digestive system.
*PHRM 6450	Human Physiology and Pathophysiology I	6	Physiology and pathophysiology of the human body with emphasis on cellular function, the immune system, the nervous system, including the special senses. Diseases of each of these systems will be covered in detail. Additional emphasis will be placed on reviewing current scientific literature emphasizing recent advances in both fields.
*PHRM 6500	Human Physiology II	4	Human physiology of the cardiovascular, renal, endocrine, respiratory, immune, and reproductive systems, including selected topics in integrated physiological regulation. Directed literature studies in human physiology.
*PHRM 6560	Human Physiology and Pathophysiology II	6	Human physiology and pathophysiology of the endocrine, muscle, gastrointestinal, cardiovascular, renal, and respiratory systems.
VPHY 7111	Principles of Physiology I	4	Veterinary professional and graduate training in general physiology.
VPHY 7112	Principles of Physiology II	3	Veterinary professional and graduate training in general physiology. This is a lecture-based course with additional reading and reports required for graduate student credit.
*VPHY 6090	Comparative Mammalian Physiology	3	The animal body as a single functioning organism, including neurophysiology, cardiovascular, and respiratory physiology.
*VPHY 8000	Cardiovascular Physiology	2	Advanced study of current concepts in cardiovascular physiology.
*VPHY 8010	Mammalian Cell Physiology	3	The physiology of the mammalian cell.
*VPHY 8120	The Molecular Basis of Renal Physiology	2	Current concepts in fluid-electrolyte physiology and renal function.
*VPHY 8400	Neurophysiology	3	The nervous system stresses cellular physiology of the nervous system and how changes in cellular physiology impact behavior.
VPHY 8600	Current Topics in Synaptic Physiology	3	An overview of synaptic structure/function followed by in-depth discussions and analyses of current and emerging topics in synaptic physiology. Open to graduate students from multiple disciplines with interests in neurotransmission. Although not required, a previous graduate course in physiology or neuroanatomy will be beneficial.