Physiology (PHY)

PHY 452/ANS 452/ANS 552/PHY 552  Comparative Reproductive Physiology and Biotechnology  (3 credit hours)
Comparative approach to examining aspects of reproductive physiology in selected vertebrate species. Detailed examination of current reproductive biotechnologies and ethical issues associated with the application of reproductive biotechnologies. Credit will not be given for both ANS 452 and ANS (PHY) 552.

Prerequisite: ANS 220
Typically offered in Fall only

PHY 503  General Physiology I  (3 credit hours)
Physiology is the study of the how living systems function from the molecular to organismal level. As such, this course will build on your knowledge of anatomy, biochemistry, and cell biology and also assumes a working knowledge of the basics of college level physics and chemistry. Students will learn the fundamental mechanisms underlying normal function of cells, tissues, organs, and organ systems of the human body and be able to integrate knowledge and concepts from various organ systems to explain function in the human body. In this course, we will address cellular, neural, muscular, and gastrointestinal physiology in humans.

P: BCH451 and BCH553 (or equivalents) and one year each of college-level physics and chemistry
Typically offered in Fall only

PHY 504  General Physiology II  (3 credit hours)
Physiology is the study of the how living systems function from the molecular to organismal level. As such, this course will build on your knowledge of anatomy, biochemistry, and cell biology and also assumes a working knowledge of the basics of college level physics and chemistry. Students will learn the fundamental mechanisms underlying normal function of cells, tissues, organs, and organ systems of the human body and be able to integrate knowledge and concepts from various organ systems to explain function in the human body. In this course, we will address cardiovascular, respiratory, and renal physiology in humans.

P: BCH451 and BCH553 (or equivalents) and one year each of college-level physics and chemistry
Typically offered in Spring only

PHY 524/PO 524/ZO 524  Comparative Endocrinology  (3 credit hours)
Basic concepts of endocrinology, including functions of major endocrine glands involved in processes of growth, metabolism and reproduction.

Prerequisite: BIO 421 or PO 405
Typically offered in Spring only

PHY 552/PHY 452/ANS 452/ANS 552  Comparative Reproductive Physiology and Biotechnology  (3 credit hours)
Comparative approach to examining aspects of reproductive physiology in selected vertebrate species. Detailed examination of current reproductive biotechnologies and ethical issues associated with the application of reproductive biotechnologies. Credit will not be given for both ANS 452 and ANS (PHY) 552.

Prerequisite: ANS 220
Typically offered in Fall only

PHY 595  Special Topics in Physiology  (1-6 credit hours)
The study of special problems and selected topics of current interest in physiology and related fields.
Typically offered in Spring only

PHY 601  Physiology Seminar  (1 credit hours)
Weekly seminars on topics of current interest given by resident faculty members, graduate students and visiting lecturers.

Prerequisite: Graduate standing
Typically offered in Spring only

PHY 610  Special Topics In Physiology  (1-6 credit hours)
The study of special problems and selected topics of current interest in physiology and related fields.

Prerequisite: Graduate standing
Typically offered in Fall, Spring, and Summer

PHY 620  Special Problems In Physiology  (1-6 credit hours)
Credits Arranged

Prerequisite: Graduate standing
Typically offered in Fall, Spring, and Summer

PHY 685  Master's Supervised Teaching  (1-3 credit hours)
Teaching experience under the mentorship of faculty who assist the student in planning for the teaching assignment, observe and provide feedback to the student during the teaching assignment, and evaluate the student upon completion of the assignment.

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

PHY 690  Master's Examination  (1-9 credit hours)
For students in non thesis master's programs who have completed all other requirements of the degree except preparing for and taking the final master's exam.

Prerequisite: Master's student
Typically offered in Summer only

PHY 693  Master's Supervised Research  (1-9 credit hours)
Instruction in research and research under the mentorship of a member of the Graduate Faculty.

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

PHY 695  Master's Thesis Research  (1-9 credit hours)
Thesis Research

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

PHY 696  Summer Thesis Research  (1 credit hours)
For graduate students whose programs of work specify no formal course work during a summer session and who will be devoting full time to thesis research.

Prerequisite: Master's student
Typically offered in Summer only
PHY 699 Master’s Thesis Preparation  (1-9 credit hours)
For students who have completed all credit hour requirements and full-
time enrollment for the master's degree and are writing and defending
their thesis.

Prerequisite: Master’s student
*Typically offered in Fall, Spring, and Summer*

PHY 702/ANS 702 Reproductive Physiology of Mammals  (3 credit
hours)
Survey of reproductive strategies among vertebrates; in-depth coverage
of mammalian reproductive physiology; gametogenesis, fertilization,
embryonic and fetal development, parturition, puberty, neuroendocrine
control mechanisms in male and female mammals.

Prerequisite: ZO 421
*Typically offered in Fall and Spring*

PHY 764/CBS 764/NTR 764 Advances in Gastrointestinal
Pathophysiology  (3 credit hours)
This course will focus on advanced gastrointestinal physiology and the
pathophysiology of diseases of relevance to scientists involved in animal-
related research. In particular, the course will cover the pathophysiology
of ulceration, infectious diarrhea, ischemia, motility disorders, and
inflammatory diseases of the gut. An in-depth review paper will be
required based on recent literature regarding a specific gastrointestinal
disease.

Prerequisite: PHY 503, PHY 504
*Typically offered in Fall only*

PHY 780/ANS 780 Mammalian Endocrinology  (3 credit hours)
Mammalian endocrine system with emphasis on ontogeny and anatomy
of key organs; synthesis and action of hormones. Role of hormones
in regulation of physiological processes such as metabolism, exocrine
function, digestion, ion balance, behavior, lactation, growth and
reproduction.

Prerequisite: BCH 451, ZO 421

PHY 795 Special Topics in Physiology  (1-9 credit hours)
The study of special problems and selected topics of current interest in
physiology and related fields.

Typically offered in Fall and Spring

PHY 801 Physiology Seminar  (1 credit hours)
Weekly seminars on topics of current interest given by resident faculty
members, graduate students and visiting lecturers.

Prerequisite: Graduate standing
*Typically offered in Spring only*

PHY 810 Special Topics In Physiology  (1-4 credit hours)
The study of special problems and selected topics of current interest in
physiology and related fields.

Prerequisite: Graduate standing
*Typically offered in Fall and Spring*

PHY 820 Special Problems In Physiology  (1-6 credit hours)
Credits Arranged

Prerequisite: Graduate standing
*Typically offered in Fall and Spring*