

# BIOLOGY-HUMAN (BIOH)

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## **BIOH 108 - Basic Anatomy. 4 Credits.**

Offered intermittently. Offered at Missoula College. A one semester course with laboratory focusing on learning the scientific principles of anatomy leading to a general understanding of the functional anatomy of the body's architecture and systems.

## **BIOH 112 - Human Form and Function I. 3 Credits.**

Offered autumn. Explores the fundamentals of structure and function at basic cellular and tissue levels, in addition to the anatomy and physiology of the integumentary, musculoskeletal, and nervous systems.

## **BIOH 113 - Human Form and Function II. 3 Credits.**

Offered spring. Explores the fundamental structures and functions of the endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems.

## **BIOH 191 - Special Topics. 1-6 Credits.**

Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## **BIOH 201N - Human Anat Phys I (equiv 301). 4.000 Credits.**

Offered autumn and spring. Offered at Missoula College. Introductory science course or college-prep high school biology course recommended. Comprehensive knowledge of human form and function necessary for students preparing for health-related professions. Emphasis on structure, function and homeostatic regulation of body systems with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers tissues through nervous system. Required, integrated laboratory includes some dissection. Gen Ed Attributes: Natural Science Lab Course (N)  
Gen Ed Attributes: Natural Science Course (N)

## **BIOH 202N - Human Anat and Phys I Lab. 4.000 Credits.**

Offered autumn and spring. Offered at Missoula College. Coreq., BIOH 201N. Basic knowledge necessary for students in health-related programs. Emphasis on normal anatomy and physiology with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers tissues through nervous system. A cadaver lab is included. Gen Ed Attributes: Natural Science Lab Course (N)  
Gen Ed Attributes: Natural Science Course (N)

## **BIOH 211N - Human Anat Phys II (equiv 311). 4.000 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., BIOH 201N/202N. Comprehensive knowledge of human form and function necessary for students in health-related programs. Emphasis on structure function and homeostatic regulation of body systems with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers endocrine through reproductive systems. Required integrated laboratory includes frequent dissection. Gen Ed Attributes: Natural Science Lab Course (N)  
Gen Ed Attributes: Natural Science Course (N)

## **BIOH 212N - Human Anat Phys II Lab. 4.000 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., BIOH 201N/202N. Coreq., BIOH 211N. Continuation of 201N. Basic knowledge necessary for students in health-related programs. Emphasis on normal anatomy and physiology with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers endocrine through reproductive systems. A cadaver lab is included. Gen Ed Attributes: Natural Science Lab Course (N)  
Gen Ed Attributes: Natural Science Course (N)

## **BIOH 213N - The Biology of Behavior. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., BIOB 101N. An introduction to the biological basis of human behavior, including neuron function and the roles of hormones, heredity, and environmental influences. Behavioral topics include sensation, learning, emotion, and issues such as obesity, addiction, and stress. Intended for students to satisfy the science with a lab general education requirement.

## **BIOH 261 - Human Physiology lab. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., BIOH 201N/202N, 211N/212N. In-depth exploration of principles and clinical consequences of the physiology of selected human organ systems. Building upon basic concepts covered in BIOH 201N/202N, and 211N/212N, students study membrane functions, neural physiology, nervous system integration, endocrine and peripheral nervous system function and coordination, circulatory, respiratory, renal, digestive, and reproductive physiology.

## **BIOH 280 - From Molecules to Mind - Fundamentals of Neuroscience. 3 Credits.**

Course will focus on the molecular and cellular underpinnings of the functions of the brain and nervous system. The topics will range from the basis of electrical and chemical signaling to the organization of the sensory systems and mechanisms involved in learning, memory, and complex behaviors.

## **BIOH 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## **BIOH 295 - Student Teaching. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Organized student teaching.

## **BIOH 330 - Anat & Phys Speech Mech. 3 Credits.**

Offered autumn. Introduction to anat-omy and physiology of the speech and hearing mechanisms including the anatomical orientation and embryological development, the breathing mechanism, structures of phonation, articulators, audition and the nervous system.

## **BIOH 365 - Human AP I for Health Profsns. 4.000 Credits.**

Offered autumn. Prereq., CHMY 121N or CHMY 141N; BIOB 160N or BIOH 112 or 113. Introduction to basic cellular structure and function. The fundamental facts and concepts of the anatomy and physiology of cells and tissues, the integumentary, musculoskeletal, nervous and special senses with an emphasis on clinical application for students preparing for careers in health care. Laboratory component includes presentation of cadaver prosections and models.

## **BIOH 370 - Human AP II for Health Profsns. 4.000 Credits.**

Offered spring. Prereq., BIOH 365. The fundamental facts and concepts of the anatomy and physiology of the endocrine, circulatory, respiratory, digestive, urinary and reproductive systems with an emphasis on clinical application for students preparing for careers in health care. Laboratory component includes presentation of cadaver prosections and models.

**BIOH 380 - Cellular and Molecular Neuroscience. 3 Credits.**

Prereq., BIOB 260 and BIOH 280. The material covered will give students a practical knowledge of the subcellular organization and function of the nervous system. Students will learn how brain energy metabolism is a dynamic, and highly regulated process. We will explore the variety forms of neuronal chemical communication that may not conform to basic concepts of synaptic signaling. We will study processes that are involved in the growth and guidance of axons leading to the formation as well as the elimination of synapses. We will learn about the processes that are involved in the regulation of sexual differentiation of the nervous system. We will explore the basic mechanisms involved in learning and memory. Finally, Students will learn about the molecular and cellular mechanisms associated with neurodegenerative disease.

**BIOH 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

**BIOH 405 - Hematology. 3 Credits.**

Offered autumn. Prereq., junior level or consent of instr., BIOM 360. Study of blood and diseases of the circulatory system. Blood banking and serology.

**BIOH 423 - TA: Form & Function I. 1-3 Credits.**

(R-4) Offered autumn. Prereq., "A" or "B" in BIOH 112 and 113 and/or one year upper division anatomy and physiology coursework with cadaver lab. Consent of instr. This select group of students teaches regularly scheduled cadaver lab prosection experiences for students enrolled in BIOH 112; assists in preparation and grading of lecture and laboratory visit teaching materials; and assists with proctoring and grading exams of undergraduate students enrolled in BIOH 112.

**BIOH 424 - TA: Form & Function II. 1-3 Credits.**

(R-4) Offered spring. Prereq., "A" or "B" in BIOH 112 and 113 and/or one year upper division anatomy and physiology coursework with cadaver lab. Consent of instr. This select group of students teaches regularly scheduled cadaver lab prosection experiences for students enrolled in BIOH 113; assists in preparation and grading of lecture and laboratory visit teaching materials; and assists with proctoring and grading exams of undergraduate students enrolled in BIOH 113.

**BIOH 441 - CNS Diseases. 3 Credits.**

This course is designed as a special topics course within the new neuroscience major that focuses on developing an understanding of common diseases affecting the Central Nervous System (CNS), such as stroke, traumatic brain injury, Alzheimer disease, Parkinson's disease, schizophrenia, amyotrophic lateral sclerosis, epilepsy, etc.) For each of the CNS disorders surveyed (which will vary from year to year), an emphasis will be placed on framing the symptoms and etiology of the disease within the context of the normal neuronal function at the anatomical, cellular and molecular levels. Where feasible, lectures will be supplemented with presentations by clinicians with expertise in the field. Students will also develop an appreciation for the linkages between basic and translational research in neurological diseases as well as the importance of disease models in the development of new therapies.

**BIOH 456 - Cadaver Dissection I. 2 Credits.**

Offered autumn. Prereq., "A" or "B" in BIOH 365 and 370 or equivalent with cadaver experience. Consent of instr. This course is a practicum that provides the participant the ability to expand their anatomical knowledge base, professional growth, and public speaking skills. The participant will have the unique opportunity to dissect, within a small group, a region of a cadaver and present visible structures to their peers. The cadavers prepared by these students are used for teaching in DBS A&P offerings. Systems presented in autumn semester include integumentary, musculoskeletal and nervous systems.

**BIOH 457 - Cadaver Dissection II. 2 Credits.**

Offered spring. Prereq., "A" or "B" in BIOH 365 and 370 or equivalent with cadaver experience, and a grade of ?A? in BIOH 456. Consent of instr. This course is a practicum that provides the participant the ability to expand their anatomical knowledge base, professional growth, and public speaking skills. The participant will have the unique opportunity to dissect, within a small group, a region of a cadaver and present visible structures to their peers. The cadavers prepared by these students are used for teaching in DBS A&P offerings. Systems prepared and presented in spring semester include endocrine, cardiovascular, lymphatic, digestive, urinary and reproductive.

**BIOH 458 - Neuroscience Research. 4 Credits.**

Prereq., senior standing in Neuroscience. Theory and practical experience in neuroscience experiment design, data collection, results analysis and report creation. Students will generally assist with ongoing research as well as attend formal classroom presentations and discussions. Students will be required to work with the course writing instructor to undertake the writing process and develop a primary literature review, an abstract and final report based on the experiments conducted and the data collected. Students with well-developed research ideas and skills may be allowed to undertake supplemental independent research. Gen Ed Attributes: Writing Course-Advanced

**BIOH 461 - Human Anat/Phys I Tutor/Honors. 3 Credits.**

Offered autumn. Prereq., "A" or "B" in BIOH 365 or equiv. and consent of instr. This select group of students performs tutoring for students enrolled in BIOH 365; assists in preparation and grading of lecture and laboratory course teaching materials to undergraduate students enrolled in BIOH 365. Students enrolled in BIOH 461 have the option of co-enrolling in the cadaver dissection course.

**BIOH 462 - Principles Medical Physiology. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course, C (2.00) or better in BIOH 365, 370, and either CHMY 123 or 143N or consent of instr. An advanced course in human physiology for students preparing for careers in health care. Gen Ed Attributes: Writing Course-Advanced

**BIOH 463 - Human Anat/Phys II Tutor/Honor. 3 Credits.**

Offered spring. Prereq., "A" or "B" in BIOH 370 or equiv. and consent of instr. This select group of students performs tutoring for students enrolled in BIOH370; assists in preparation and grading of lecture and laboratory course teaching materials to undergraduate students enrolled in BIOH 370. Students enrolled in BIOH 463 have the option of co-enrolling in the cadaver dissection course.

**BIOH 470 - Summer Clinical Laboratory. 12 Credits.**

Offered summer. Prereq., successful completion of medical laboratory science 3+1 on-campus curriculum, admittance into one of our affiliated clinical practicum programs, and consent of instructor. Professional training in clinical laboratory sciences (medical laboratory science).

**BIOH 471 - Professional Training I. 13 Credits.**

Offered autumn. Prereq., BIOH 470. Continuation of BIOH 470.  
Professional training at clinical site(s).

**BIOH 472 - Professional Training II. 12 Credits.**

Offered spring. Prereq., BIOH 471. Continuation of BIOH 471. Professional training at clinical site(s).

**BIOH 480 - Tchg Anatomy & Physiology I. 3-4 Credits.**

Offered autumn. Prereq., "A" or "B" in BIOH 365 and 370 or equiv. and consent of instr. This select group of students assists in preparation and grading of demonstrations and laboratory teaching materials; and provides laboratory anatomy and physiology instruction to undergraduate students enrolled in BIOH 365. Students enrolling for the 4 credit option will also provide occasional comparable assistance for BIOH 112.

**BIOH 481 - Tchg Anatomy & Physiology II. 3-4 Credits.**

Offered spring. Prereq., "A" or "B" in BIOH 365 and 370 or equiv. and consent of instr. This select group of students assists in the preparation and grading of demonstrations and laboratory teaching materials; and provides laboratory anatomy and physiology instruction to undergraduate students enrolled in BIOH 370. Students enrolling for the 4 credit option will also provide occasional comparable assistance for BIOH 113.

**BIOH 491 - Special Topics. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.