

# Biomedical Program- WWAMI (BIOM)

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## Courses

### **BIOM A418 Human Gross Anatomy 3 Credits**

Provides a fundamental working knowledge of normal human gross anatomy and relates anatomy to clinical relevance. Includes dissection laboratory on cadavers.

**Special Note:** Instructor approval required for registration.

**Registration Restrictions:** Instructor approval

### **BIOM A490 Selected Lecture Topics in Biomedicine 1-3 Credits**

Detailed coverage of a selected lecture topic in biomedicine.

**Special Note:** Not available for credit to students who have completed BIOM A690 with the same subtitle. May be repeated for a maximum of 9 credits with change of subtitle.

**Registration Restrictions:** Junior or senior standing and faculty permission

**May Be Stacked With:** BIOM A690

### **BIOM A610 Microscopic Anatomy 3 Credits**

Lectures and laboratories in microscopic anatomy are designed to provide the principles and concepts of histology, to define the morphological characteristics of the cells, tissues and organs of the human body and to relate this information to functional processes studied in concurrent and subsequent courses.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A610

### **BIOM A611 Gross Anatomy I and Embryology 5 Credits**

Provides a broad understanding of the structural organization of the human body, as well as a basis in medical terminology. Goal is to provide foundation for physical examination and function assessment of the human organism. Course deals with organization of the human body at the macroscopic level. Integrates embryological development with study of the human cadaver and with examination of the normal living body. Course concentrates on study of the human torso and its cavities and the viscera they contain.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A611

### **BIOM A612 Mechanisms in Cell Physiology 4 Credits**

Fundamental cellular events underlying the following topics: physiology of the cell membrane including ionic and electrical potential gradients, active transport, excitability and action potentials; biophysics of sensory receptors; neuromuscular transmission; muscle energetics and contractility; spinal reflexes and central synaptic transmission; autonomic nervous system; energy metabolism and temperature regulation; epithelial transport; gastrointestinal motility and secretions.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A612

### **BIOM A613 Introduction to Clinical Medicine I 4 Credits**

Designed to develop clinical medicine skills by teaching physical examination skills, addressing advanced professional and ethical issues, and enhancing clinical reasoning skills by using the medical history and the physical examination in the process of solving problems.

**Registration Restrictions:** Admission to WWAMI Biomedical Program.

### **BIOM A614 Biochemistry I 4 Credits**

Covers molecular and cellular chemistry in humans, with emphasis on molecular genetics, proteins and carbohydrates.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

### **BIOM A615 Medical Information for Decision Making (MIDM) 1 Credit**

An introduction to methods for identifying and retrieving high quality, relevant evidence and for describing and applying rigorous criteria when reading primary studies that report on the effectiveness of therapeutic or preventative interventions. Basic research methodologies and statistics are incorporated to assist students in evaluating the literature.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

### **BIOM A618 Clinical Anatomy 4.5 Credits**

Provides an overview of clinical human gross anatomy and integrates knowledge of anatomy and health conditions. Emphasizes critical relationships and clinical significance. Facilitates an understanding of how anatomy aids in effective clinical interventions.

**Registration Restrictions:** Graduate standing and admission to Creighton Occupational Therapy degree program or instructor approval

### **BIOM A621 Microbiology and Infectious Disease I 5 Credits**

Pathogenesis and immunity of infectious disease and natural barriers. Microbiology, epidemiology, clinical manifestations and control of representative bacterial, fungal, parasitic, and viral infectious diseases. Chemotherapeutics and principles of chemotherapy. Sterilization and principles of asepsis, nosocomial and iatrogenic infections and their presentation.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A621

### **BIOM A622 Introduction to Clinical Medicine II 4 Credits**

Designed to advance clinical medicine skills by adding further physical examination skills, addressing advanced professional and ethical issues, and enhancing clinical reasoning skills by using the medical history and the physical examination in the process of solving problems.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

### **BIOM A623 Introduction to Immunology 2 Credits**

Introduces basic immunological concepts and the role of these basic concepts in conditions such as immunodeficiencies, hypersensitivities, autoimmunity, blood transfusion, and transplantation.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A623

**BIOM A624 Biochemistry II 3 Credits**

Continuation of BIOM A614 with emphasis on lipid and nitrogen metabolism.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**BIOM A631 Gross Anatomy II (Head, Neck, Ear, Nose, and Throat) 4 Credits**

Gross anatomy of the skull, larynx, and pharynx. Also covers: audition and balance; physiology; clinical evaluation; maxillofacial disorders; diseases of nasal passages; naso- and oropharynx; accessory sinuses; and physical examination.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A631

**BIOM A632 Nervous System 5 Credits**

Integrated approach to the normal structure and function of the nervous system, including the eye. Neuropathological examples are presented as well as clinical manifestations of neurological disease.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A632

**BIOM A634 Microbiology and Infectious Disease II 3 Credits**

Continuation of BIOL A621/BIOM A621.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A634

**BIOM A650 Systems of Human Behavior I 3 Credits**

Selected overview of contributions from behavioral sciences useful to physicians in primary care clinical practice. Emphasizes impact of such factors as cultural background, social role, sexual identity and belief system upon students' future effectiveness as physicians. Presents role of behavioral factors in major management problems faced in medical practice. Teaches useful skills for analyzing behavior, defining behavioral objectives, and designing treatment strategies to obtain these objectives.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** PSY A650

**BIOM A653 Gross Anatomy III: Musculoskeletal System 3 Credits**

Gross, surface, applied and X-ray anatomy of musculoskeletal system including the spine, but excluding head and neck. Also covers histology of bone, cartilage, tendon-myotendinal junction and joints; musculoskeletal trauma and healing; pathology and clinical manifestations of other degenerative, inflammatory, metabolic, nutritional and congenital disorders; and physical examinations.

**Registration Restrictions:** Admission to the WWAMI Biomedical Program.

**Crosslisted With:** BIOL A653

**BIOM A690 Advanced Selected Topics in Biomedicine 1-3 Credits**

Advanced coverage of a selected topic within biomedicine. Students will analyze and evaluate research and clinical data to formulate diagnoses and future avenues of research within biomedicine.

**Special Note:** Students enrolled in BIOM A690 will be required to complete additional work and at a higher level than students enrolled in BIOM A490 with the same subtitle. Not available for credit to students who have completed BIOM A490 with the same subtitle. May be repeated for a maximum of 9 credits with change of subtitle.

**Registration Restrictions:** Graduate standing and faculty permission  
**May Be Stacked With:** BIOM A490

**BIOM A692 Graduate Seminar 1 Credit**

Topical subjects relevant to biomedical or molecular medicine selected from professional seminar series offered in the UMED district.

**Special Note:** May be repeated for a maximum of 4 credits.

**Registration Restrictions:** Graduate standing and faculty permission.

**BIOM A696 Graduate Research Techniques 1 Credit**

Provides training in data collection, analysis, presentation and synthesis techniques, as appropriate to the field of biomedical or molecular medicine research.

**Special Note:** May be repeated for a maximum of 6 credits.

**Registration Restrictions:** Graduate standing and faculty permission

**BIOM A698 Directed Research 1-6 Credits**

Research in biomedical or molecular medicine for graduate students.

Area of research to be approved and directed by a faculty member in the WWAMI School of Medical Education.

**Special Note:** May be repeated for a maximum of 6 credits.

**Registration Restrictions:** Graduate standing and faculty permission.

**BIOM A699 Thesis 1-9 Credits**

Planning, preparation and completion of graduate thesis for which the student's graduate advisor is a faculty member in the WWAMI School of Medical Education.

**Special Note:** May be repeated for a maximum of 18 credits.

**Registration Restrictions:** Graduate standing and permission of graduate advisor.