

**Descriptions — Microbiology and Public Health
of
Courses**

531C. Medical Microbiology: Virology
Fall. 3(2-2) *Fourth-term Veterinary Medicine students or approval of department.*
General properties of animal viruses; pathogenesis, immune response and immunoprophylaxis in viral diseases; principles of clinical virology.

531D. Medical Microbiology: Parasitology
Winter. 4(3-3) *Fifth-term Veterinary Medicine students or approval of department.*
Basic principles of parasitology (protozoology, helminthology, and entomology) and their relation to disease in animals.

618. Infectious Disease Clerkship
Fall, Winter, Spring, Summer. 1 to 17 credits. *May reenroll for a maximum of 34 credits. H M 602 and MED 608 or PHD 608. Interdepartmental with and administered by the Department of Medicine.*
The clerkship emphasizes acquisition in depth of knowledge and skills essential in solution of clinical problems in infectious and immunologic diseases. Integrated basic science input is afforded through relevant seminars.

800. Seminar
Fall, Winter, Spring, Summer. 1(1-0)
May reenroll for a maximum of 9 credits. Approval of department.

810. Topics in Microbiology
Fall, Winter, Spring, Summer. 2 to 4 credits. *May reenroll for a maximum of 10 credits if different topic is taken. Approval of department.*
Topics will be selected from taxonomic subsciences such as bacteriology, virology, protozoology, mycology, and helminthology; from transecting disciplines such as microbial genetics, immunology, physiology, and ecology.

813. Molecular Virology
Winter. 4(4-0) *Background in biochemistry, and approval of department.*
Molecular nature and biochemistry of replication of bacterial and animal viruses. Emphasis is on current advances, research concepts, and the role of viruses in molecular biology research.

821. Advanced Microbial Physiology
Spring of even-numbered years. 4(4-0) MPH 303.
Mechanism and regulation of physiologic and metabolic activities unique to prokaryotes including fermentation, photosynthesis, respiration and autotrophy.

823. Microbial Genetics
Fall. 3(3-0) BCH 811.
Gene structure, gene function, and genetic regulation at the classical and molecular levels in prokaryotes and lower eukaryotes.

827. Immunochemistry
Spring. 3(3-0) MPH 427; BCH 452, or ZOL 441, and CEM 383 recommended.
Structure and reactivity of antigens and antibodies; synthesis of immunoglobulins. Emphasis is on current advances and research concepts.

829. Host-Parasite Relationships
Fall. 3(3-0) MPH 427, MPH 429 or approval of department.
Pathogenesis and host responses to selected bacterial, parasitic, and fungal pathogens. Emphasis is on current research models which exemplify a variety of host-parasite relationships.

831. Bacterial Diversity
Spring of odd-numbered years. 3(3-0) MPH 303, MPH 304; BCH 401 or BCH 453 or concurrently.
Morphological and physiological properties of diverse groups of bacteria and how these properties relate to their ecological niche and importance.

832. Bacterial Diversity Laboratory
Spring of odd-numbered years. 2(0-6) MPH 831 or concurrently.
Representative groups of bacteria will be isolated and studied.

842. Advanced Soil Microbiology
Fall of odd-numbered years. 3(3-0) MPH 425 or approval of department. *Interdepartmental with the Department of Crop and Soil Sciences.*
Biochemistry, biology, and community ecology of microorganisms indigenous to soil. Emphasis on current research problems.

843. Soil Microbiology Laboratory
Fall of odd-numbered years. 2(0-6) MPH 842 concurrently or approval of department. *Interdepartmental with the Department of Crop and Soil Sciences.*
Fundamental techniques of dealing with microorganisms indigenous to soil. Metabolic activity of microorganisms. Interaction between microorganisms and plants.

890. Special Problems in Microbiology
Fall, Winter, Spring, Summer. 2 to 6 credits. *May reenroll for a maximum of 12 credits. Approval of department.*

899. Master's Thesis Research
Fall, Winter, Spring, Summer. *Variable credit. Approval of department.*

900. Topics in Microbiology
Fall, Winter, Spring, Summer. 2(2-0)
May reenroll if different topic is taken. Approval of department.
Topics will be selected from taxonomic subsciences such as bacteriology, virology, protozoology, mycology, algology, and helminthology; and from transecting disciplines such as microbial genetics, immunology, physiology, and ecology.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. *Variable credit. Approval of department.*

MILITARY SCIENCE M S

Office of the Provost

041. General Military Science
Application of leadership techniques, the decision making process and staff planning. Military customs and traditions. Students will concurrently enroll in a selected non-Military Science course to fulfill military professional requirements.

A. Leadership Fundamentals
Winter. 0(0-1) *Approval of department.*

B. Basic Military Skills
Winter. 0(0-1) *Approval of department or M S II standing.*

C. Advanced Military Skills
Winter. 0(0-1) *Approval of department or M S III standing.*

D. Leadership Applications
Winter. 0(0-1) *Approval of department or M S IV standing.*

121. Preview of Military Science
Fall, Winter, Spring. 1(1-0) *Approval of department.*
Role of the ROTC officer in the Army. Assists the student in planning a curriculum to satisfy requirements for a commission.

122. Marksmanship and Weapon Safety
Spring. 1(0-2) M S 121 or approval of department.
Small arms marksmanship and safety. Practical exercises on local firing ranges. Individual basic military marksmanship and the skills necessary to participate in a competitive or recreational shooting program.

221. Leadership and Health Care
Fall. 1(1-0) M S 121, M S 041A, M S 122.
Develop the leadership role in the health and welfare of subordinates and self. Includes injury prevention and emergency first aid techniques.

223. Land Navigation
Spring. 2(2-0) M S 121 and approval of department.
Use of military topographic maps and special use maps. Development of map profiles and overlays for tactical operations. Land navigation with lensatic and Silva compass.

324. Leadership Through Training
Fall. 4(4-2) *Basic course, approval of department.*
Designing, preparing, and presenting effective training for individuals and groups.

325. Military Management
Spring. 4(3-2) M S 324 or approval of department.
Task analysis approach to missions. The subject of tactics is used as a teaching vehicle for the managerial approach to the preparation and execution phases of military operations. Emphasis is placed on physical and moral leadership during the laboratory sections.

426. Military Law and Unit Administration
Fall. 2(2-0) *Approval of department.*
Military legal system and the responsibilities of the commander and junior leaders in the application of military justice. Operation and administration in military units to provide personnel and logistic support.

427. Seminar
Spring. 2(2-0) *Approval of department.*
Military professional ethics. Value inputs, reasoning, and decision making. Current military policies and trends as a pre-commission orientation.

499. Independent Study in Military Science
Fall, Winter, Spring, Summer. 1 to 3 credits. *May reenroll for a maximum of 6 credits. Approval of department and Juniors.*
Individual research and study in an area related to military science as approved and directed by the Department of Military Science.