

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

**618. Infectious Disease Clerkship**  
Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602 and MED 608 or H D 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)

**813. Molecular Virology**  
Fall. 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.

**826. Ecology of Animal Parasites**  
Summer. 3 credits. 416, approval of department. Given at W. K. Kellogg Biological Station.

Interaction of parasitic animals (protozoa, helminths, and arthropods) with their natural environment, including host, biotic, and physical aspects.

**827. Immunochemistry**  
Spring. 3(3-0) 427; 423, 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.

**828. Immunochemistry Laboratory**  
Spring. 2(0-6) 427; 827 or concurrently. Laboratory based partially on subject matter of 827. Experimental techniques used in immunological assays and immune systems.

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

**899. Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**900. Topics in Microbiology**  
Fall, Winter, Spring Summer. 2(2-0) May re-enroll 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.

**901. Experimental Microbiology**  
Fall, Winter, Spring, Summer. 3(0-9) May re-enroll for a maximum of 9 credits. Approval of department. Experiments, demonstrations, and discussions of current research programs in various areas of microbiology.

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

**MILITARY SCIENCE M S**

**All University**

**041. General Military Science**  
Fall, Winter, Spring. Zero credit. Approval of department.

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.

**121. Preview of Military Science**  
Fall, Winter. 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 Hunter Safety**  
Fall, Spring. 1(0-2) 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.

**223. Terrain Analysis and Land Navigation**  
Winter, Spring. 3(3-0) 121 and approval of department.

Military maps, map construction, specifications and uses. Includes both a study of aerial photographs and an introduction to remote energy sensors employed by defense agencies as they relate to tactical operations.

**324. Military Teaching**  
Fall, Winter. 4(4-2) Basic course, approval of department.

Methods of teaching manipulative skills to groups with varying educational backgrounds. Emphasis on determination of entry behavior, progress analysis, testing and test construction. Introduction to current teaching aids. Practical experience in simulated field situations is stressed during laboratory.

**325. Military Management**  
Spring. 4(3-2) 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**  
Winter. 4(4-0) Approval of department.

Jurisdiction and responsibility of the Army commander and junior leader in the application of military justice. Implications of Army operations as related to the rules of land warfare.

**427. Seminar**  
Spring. 1(1-0) Approval of department.

Precommissioning orientation stressing current military policies, procedures, customs and trends.

**499. Independent Study in Military Science**

Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll 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.

**MUSIC MUS**

**College of Arts and Letters**

**094. Band**  
Summer. Zero credit. Membership determined by audition. Attendance at all rehearsals and public concerts obligatory. See 118.

**100. Theory Review**  
Fall, Summer. 2(3-2) For majors who need theory review. Basic course in fundamentals and ear training.

**112. Chamber Music**  
Fall, Winter, Spring, Summer. 1(1-0) May re-enroll for a maximum of 18 credits. Approval of department. Performance of works for small ensembles.

**118. Band**  
A. Marching Band. Fall. 1 credit. May re-enroll for credit. Membership determined by audition. The Marching Band participates at football games.

B. Spartan Brass. Winter. 1 credit. May re-enroll for credit. Membership determined by audition. The Spartan Brass participates at basketball games.

C. Concert Band. Fall, Winter, Spring. 1 credit. May re-enroll for credit. Membership determined by audition. Public appearances are scheduled on campus each term.

D. Symphonic Band. Fall, Winter, Spring. 1 credit. May re-enroll for credit. Membership determined by audition. A high level of achievement in performing ability is required. Concerts are scheduled both on and off campus.

E. WIND ENSEMBLE. Fall, Winter, Spring. 1 credit. May re-enroll for a maximum of 12 credits. Membership determined by audition. The highest level of performance is required. Full range of wind literature is performed. Public concerts are presented both on and off campus.

**133. Orchestra**  
Fall, Winter, Spring. 1(0-5) May re-enroll for a maximum of 12 credits. Membership determined by audition. Standard overtures and symphonies studied and publicly performed. Attendance at all rehearsals and public concerts obligatory.

**135. Music in Elementary Education**  
Fall, Winter, Spring, Summer. 4(3-3) Elementary education majors. Basis, scope and sequence of music instruction in the elementary schools with an introduction to basic knowledge and skills used in elementary school music.

**141. Class Instruments and Voice**  
Fall. 1(0-2) Knowledge of notation. Music majors, or approval of department. Class instruction in piano, voice, violin, cello, clarinet, and cornet.