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

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

827. Immunology
Spring. 3(3-0). 427; BCH 423, or ZOL 441, and CEM 365 recommended.
Structure and reactivity of antigens and antibodies; synthesis of immunoglobulins. Emphasis is on current advances and research concepts.

828. Immunology Laboratory
Spring. 2(0-4). 427; 927 or concurrently.
Laboratory based primarily 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 subdisciplines such as bacteriology, virology, prototaxiology, mycobacteriology, and hemovirology; and from transacting 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 8 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

All University

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. Military Traditions—M S I
Winter, 0(0-2) Approval of department.

B. Evolution of Military Leadership—M S II
Fall, 0(0-1) Approval of department or M S II standing. HST 235 concurrently.

C. Military Career Preparation—M S III
Spring, 0(0-1) Approval of department or M S III standing.

D. Advanced Camp Preparation—M S III
Winter, 0(0-1) Approval of department or M S III standing.

E. Military Staff Organization—M S IV
Fall, 0(0-1) Approval of department or M S IV standing.

121. Preview of Military Science
Fall, Winter, Spring, Summer. 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 sensory sensors employed by defense agencies as they relate to tactical operations.

324. Military Teaching
Fall, Winter, Spring. 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.

326. 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 warfare.

427. Seminar
Spring, 1(1-0) Approval of department.
Precommissioning orientation stressing current military policies, procedures, customs and traditions.

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 junior. Individual research and study in an area related to military science as approved and directed by the Department of Military Science.

MUSIC

College of Arts and Letters

100. Theory Review
Fall, Summer. 2(2-1) For majors who need theory review.
Basic course in fundamentals and ear training.

112. Chamber Music
Fall, Winter, Spring, Summer. 1(2-0) May re-enroll for a maximum of 18 credits. Approval of department.
Performance of works for small ensembles.

115. 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 performance in performance ability is required.
Orchestra are scheduled both on and off campus.
E. Wind Ensemble
Fall, Winter, Spring, 1 credit. May re-enroll for credit. Membership determined by audition. A high 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.
Basic, 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.

142. Class Instruments and Voice
Winter. 1(0-2) 141.
Continuation of 141.

143. Class Instruments and Voice
Spring. 1(0-2) 142.
Continuation of 142.