

800. 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 biochem-
istry, and approval of department.
Molecular nature and biochemistry of replica-
tion 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 Biolog-
ical Station.

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

827. Immunochemistry
Spring. 3(3-0) 427; BCH 452, or ZOL
441, and CEM 383 recommended.

Structure and reactivity of antigens and anti-
bodies; synthesis of immunoglobulins. Emphasis
is on current advances and research concepts.

828. Immunochemistry Laboratory
Spring. 2(0-6) 427; 827 or concu-
rently.

Laboratory based partially on subject matter of
827. Experimental techniques used in immu-
nological 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. *Varia-
ble credit.* Approval of department.

900. Topics in Microbiology
Fall, Winter, Spring, Summer. 2(2-0)
May re-enroll if different topic is taken. Ap-
proval of department.

Topics will be selected from taxonomic sub-
sciences such as bacteriology, virology, pro-
tozoology, mycology, algology, and helminthol-
ogy; 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. Ap-
proval of department.

Experiments, demonstrations, and discussions of
current research programs in various areas of
microbiology.

999. Research
Fall, Winter, Spring, Summer. *Vari-
able credit.* Approval of department.

MILITARY SCIENCE M S

All University

041. General Military Science
Application of leadership techniques, the deci-
sion making process and staff planning. Military
customs and traditions. Students will concu-
rently enroll in a selected non-Military Science
course to fulfill military professional require-
ments.

A. Military Traditions—M S I
Winter. 0(0-1) Approval of depart-
ment.

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 II
Spring. 0(0-1) Approval of depart-
ment or M S II standing.

D. Advanced Camp Preparation—M S III
Winter. 0(0-1) Approval of depart-
ment 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 photo-
graphs 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. Empha-
sis is placed on physical and moral leadership
during the laboratory sections.

426. Military Law
Winter. 4(4-0) Approval of depart-
ment.

Jurisdiction and responsibility of the Army
commander and junior leader in the applica-
tion of military justice. Implications of Army
operations as related to the rules of land war-
fare.

427. Seminar
Spring. 1(1-0) Approval of depart-
ment.

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

**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 re-
lated to military science as approved and
directed by the Department of Military
Science.

MUSIC MUS

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(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 per-
forming 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. Mem-
bership 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. Mem-
bership 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.

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.