

831. Bacterial Diversity
Spring of even-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 even-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. Inter-
departmental 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 depart-
ment. 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. Vari-
able credit. Approval of department.

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

999. Doctoral Dissertation 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 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 depart-
ment.

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

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 Weapon Safety

Fall, Spring. 1(0-2) M S 121 or ap-
proval 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

Winter, Spring. 2(2-0) M S 121 and ap-
proval 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, Winter. 4(4-2) Basic course, ap-
proval 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 depart-
ment.

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 cred-
its. 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

112. Chamber Music

Fall, Winter, Spring, Summer. 1(1-0)
May reenroll for a maximum of 18 credits. Ap-
proval of department.

Performance of works for small ensembles.

118. Band

A. Marching Band

Fall. 1 credit. May reenroll for credit.
Membership determined by audition.

The Marching Band participates at football games.

B. Spartan Brass

Winter. 1 credit. May reenroll for
credit. Membership determined by audition.

The Spartan Brass participates at basketball games.

C. Concert Band

Fall, Winter, Spring. 1 credit. May
reenroll for credit. Membership determined by
audition.

Public appearances are scheduled on campus
each term.

D. Symphonic Band

Fall, Winter, Spring. 1 credit. May
reenroll 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
reenroll for a maximum of 12 credits. Member-
ship determined by audition. The highest level
of performance is required.

Full range of wind literature is performed. Pub-
lic concerts are presented both on and off cam-
pus.

F. Repertory Band

Fall, Winter, Spring, Summer. 1 credit.
May reenroll for a maximum of 12 credits.
Membership determined by audition.

Public appearances are scheduled on campus
each term.

133A. Symphony Orchestra

Fall, Winter, Spring. 1(0-5) May reen-
roll for a maximum of 12 credits. Admission by
audition.

Preparation and performance of symphony and
operatic repertoire under direction of faculty
and guest conductors of international reputa-
tion.

133B. Chamber Orchestra

Fall, Winter, Spring. 1(0-5) May reen-
roll for a maximum of 12 credits. Membership
determined by audition.

A specialized ensemble of advanced performers
concentrating on the repertoire of the classic
composers, and modern repertoire for chamber
orchestra. Rehearsals and performances with
faculty and guest artists.

135. Music in Elementary Education

Fall, Winter, Spring, Summer. 4(3-3)
Elementary education majors.

Study of music learning strategies in the
elementary schools. Music concepts and litera-
ture are developed through listening, perform-
ing, creative and analytical skills. Methods and
materials are emphasized.

141. Class Instruments and Voice

Fall, Winter. 1(0-2) Knowledge of no-
tation. Music majors, or approval of depart-
ment.

Class instruction in piano, voice, violin, cello,
clarinet, and cornet.