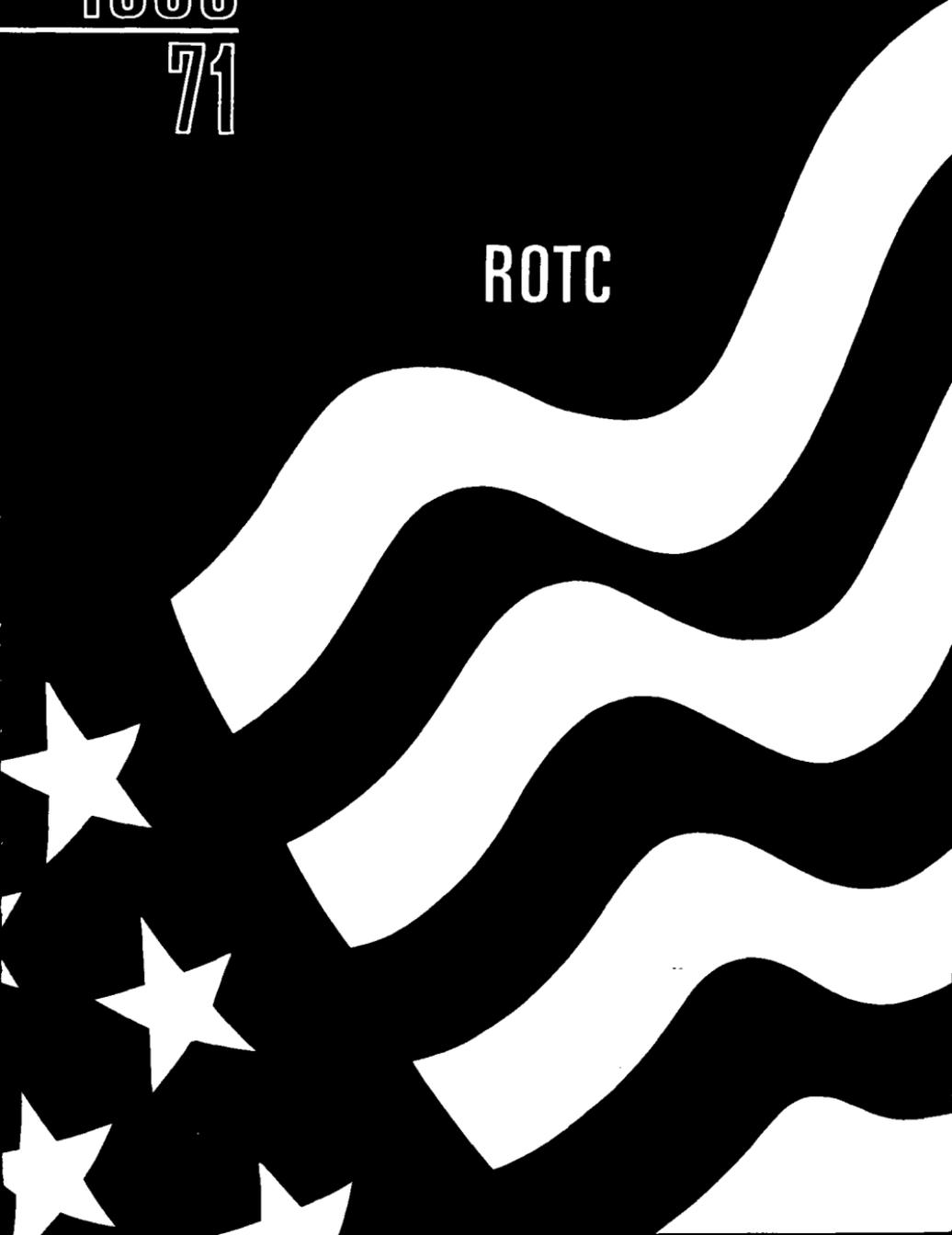


ROTC



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Army-Navy-Air Force ROTC

MILITARY SCIENCE

(Army ROTC)

GENERAL INFORMATION

Military science is the Army ROTC program offered at all the nation's land grant colleges, including the University of Minnesota. The purpose of this program is to provide officers for the United States Army.

The Reserve Officers' Training Corps is not a direct component of the Army. It does, however, play an important part in the national defense framework of our nation. In its primary role of producing Reserve officers, it is a vital element in fulfilling the traditional American concept of dependence on a well-trained Reserve rather than a large standing Army.

ROTC at the University

At the University of Minnesota, military science is an elective 2- and 4-year college course which the student may schedule in the same manner as any other elective course in his curriculum. The program, although laid out by the Army is administered by the University, and academic credits applicable to graduation are given in colleges of the University. Instruction encompasses military fundamentals common to all branches of the Army. The aim is to provide a basic military education and, in conjunction with other college curricula, to develop individual characteristics and attributes of leadership essential to an officer.

Reserve Commission

Completion of the 2- or 4-year course qualifies the student for appointment as a second lieutenant, United States Army Reserve, concurrently with the granting of his academic degree. The appointment includes an obligation to serve on active duty for a period of 2 years. The student can be draft-deferred while enrolled in Army ROTC.

Scholarships and Regular Army Commissions

Military science students may receive either a 2-year or a 4-year scholarship if he meets the requirements. Four-year competitive scholarships are offered annually for outstanding high school students. Applications for the

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4-year scholarships are accepted and processed by Fifth Army Headquarters during the applicant's senior year in high school.

Army ROTC students who enroll in the 4-year course become eligible for the 2-year scholarship after completion of the basic course. Selection for the 2-year scholarship is determined by the student's standing in both his military and academic subjects. Applications for the 2-year scholarships are accepted and processed by the Department of Military Science.

Those awarded either scholarship are paid tuition, books, and fees and receive \$50 per month retainer pay. Upon graduation and commissioning the scholarship student is obligated to serve 4 years on active duty.

Regular Army commissions are also offered to outstanding students in the 2- or 4-year programs. Further information concerning these opportunities may be obtained from the Department of Military Science.

Obligations

Enrollment in Military Science I and II, other than the scholarship program, entails no personal military obligation nor special University obligation for the student. Upon selection and enrollment in Military Science III and IV, the student must enlist in a Reserve Component and agree to complete the remaining 2 years of ROTC if he continues to be enrolled in the University, and to accept a commission as second lieutenant, if offered, upon completion of the course.

Allowances

All texts and uniforms are furnished by the department. There is no expense attached to the course. In addition, students who have been accepted for Military Science III and IV receive retainer pay of approximately \$50 per month during the 2 academic years, and \$171.60 per month during the 6-week summer camp.

Qualifications for Enrollment

The following qualifications for enrollment for commission are required. Students who do not meet these qualifications may enroll in the course and receive University credit but will not receive financial benefits or a Reserve commission. Students enrolled at another institution that does not offer ROTC are eligible, if otherwise qualified, to be members of the Army unit at the University of Minnesota. The student must:

1. Be enrolled as a regular student.
2. Be a male citizen of the United States.
3. Successfully complete the requirements for commissioning prior to his 28th birthday.
4. Have sufficient time remaining in college curriculum to complete the ROTC course.
5. Be physically qualified as determined by Department of Army standards.
6. Not be previously commissioned in one of the armed services.

Transfer of ROTC Credit

Students who have had ROTC at other institutions on the college level will be given quarter-for-quarter credit for such prior ROTC instruction successfully completed. Students who have completed ROTC at military schools and high schools will be granted such credit for ROTC successfully completed, as may be determined by each individual case.

Registration

Formal registration for military science is effected in the same manner as registration for other academic courses of the University. Students registering for these courses secure prior acceptance by personal application at the Department of Military Science, 108 Armory Building, Minneapolis Campus.

Branch Assignment

The curriculum provides the student with a broad general military background without emphasis on a particular branch. The branch in which the student will be commissioned is selected during the Military Science IV year. Factors considered are the relationship of the course of academic study pursued by the student to a particular branch, his personal desires, and the needs of the service.

Summer Camp

The "laboratory" for military science is a summer camp conducted during the summer at either Fort Riley, Kansas, or Fort Benning, Georgia. Two 6-week summer camps are conducted for students enrolled in the 2-year program. Prior to being accepted into the 2-year program the student must complete a 6-week summer camp held at Fort Benning which in effect substitutes for 2 years' basic course taken by the students in the 4-year program. Students attending this summer camp will be paid \$154 per month in addition to traveling expenses to and from Fort Benning. Those accepted into the 2-year program will then attend the required advance course summer camp.

Advance course students will attend a 6-week summer camp held at Fort Riley during the summer between Military Science III and IV. The summer camp is part of the school program and attendance is required for full-course credit and commission. Postponements for 1 year may be authorized. Students are paid traveling expenses to and from Fort Riley as well as \$171.60 per month while at summer camp. All accommodations, clothing, and food are furnished at both summer camps.

DESCRIPTION OF COURSES§§

LOWER DIVISION COURSES

MILITARY SCIENCE I

- 11f (1-011). World Military History.** Provides student with basic concepts of military history to include principles of war, military definitions, and relationship of geography, economics, and technology to military history; beginning of discussion on warfare through the ages — rise of Islam and its military institutions. (2 cr; prereq Δ, Leadership Laboratory**)
- 12w (1-012). World Military History.** Warfare through ages; discovery of gunpowder and beginnings of modern armies; limited war of 18th century; great age of sail; nation in arms and Napoleon; armaments race in 19th century. (2 cr; prereq Δ)
- 13s (1-013). World Military History.** Continuation of discussion of warfare through the ages; advent of total war — World War I and World War II; policy of containment and its military implications; Korean War and rearmament; modern Army. (2 cr; prereq Δ, Leadership Laboratory**)

MILITARY SCIENCE II

- 21f (1-021). Foundations of National Power.** Basic factors involved in a nation's capacity for developing force; geographical positions, nature of populations, social organization within a nation, a nation's ideology and economic and technological resources of a nation. (2 cr; prereq Δ, Leadership Laboratory**)
- 22w (1-022). Foundations of National Power.** Discussion of political systems and their influence on national power; force as related to other types of influence; development of various types of influence, presentation of military force as center of the influence concept. (2 cr; prereq Δ)
- 23s (1-023). Foundations of National Power.** Discussion of levels of military force to include various types of military force. (2 cr; prereq Δ, Leadership Laboratory**)

TWO-YEAR SUMMER CAMP

The 2-year summer camp is designed to provide instruction in basic military subjects, in preparation for their entry into the Advanced Course. Students receive training and instruction by qualified military instructors in such subjects as Organization of the Army and ROTC, Military Customs, Courtesies and Traditions, Military History, and Map Reading. In addition, students are given field training in Basic Tactics, Rifle Marksmanship, Physical Training, and Hand-to-Hand Combat during the 6-week period at Fort Benning.

** Leadership laboratory is taught concurrently to all cadets during the fall and spring quarters. Laboratory is designed so that individual students can demonstrate their progressive ability in individual and group drill. Progressive and extensive practice in voice and command, unit formations, exercise of command, bearing, and posture is emphasized. Assists in identification and development of individual leadership traits and qualities of character.

§§ The four-digit number in parentheses after the course number is the new course number which will not be used prior to Fall, 1970.

UPPER DIVISION COURSES

MILITARY SCIENCE III

- 131f (5-131). Problems in Map Reading and Leadership.** Explanation of tactical use of United States and foreign military maps, land navigation and skills utilized in reading and interpreting military maps and aerial photographs; psychology and problem solving techniques utilized in military environment, study of individual and small group leadership problems. (3 cr; prereq Δ, Leadership Laboratory**)
- 132w (5-132). Small Unit Tactics.** Small unit operations in conventional and unconventional battlefield environments, organization and equipment organic to modern army; employment of these units in tactical situations. (3 cr; prereq Δ)
- 133s (5-133). Principles of Military Instruction.** Provides student with working knowledge of principles, methods, and techniques of preparing, presenting, and evaluating military instruction. Practice teaching by student. (3 cr; prereq Δ, Leadership Laboratory**)

ADVANCED COURSE SUMMER CAMP

The purpose of this 6-week summer camp is to provide the ROTC student with practical experience and instruction in the skills and duties required of a second lieutenant in the United States Army. The student will receive practical training designed to supplement institutional instruction. Finally this "laboratory" is designed to develop the physical and mental characteristics desired in an officer and to further develop traits of military leadership so vital to an officer on active duty. The subjects given primary emphasis include training in individual and crew served weapons, signal communications, advanced tactical training, map reading, and arms and services orientations.

MILITARY SCIENCE IV

- 141f (5-141). Military Operations.** Explanation of command and staff organization and functions; discussion of a commander's estimate of situation and his operations order; importance of military intelligence cycle to military team; principles of training management and its application to successful military operations. (3 cr; prereq Δ, Leadership Laboratory**)
- 142w (5-142). Military Logistics and Administration.** Military logistical supply system and its related importance to combat operations; military personnel management procedures, including records, classification and assignment, unit fund accounting, and mess management. (3 cr; prereq Δ)
- 143s (5-143). Military Law and Service Orientation.** History and basic concepts of military justice; emphasis placed on origin, nature, and purpose of Uniform Code of Military Justice and Manual for Courts-Martial; relationship between military justice and military discipline, scope and nature of appellate review; service orientation for newly commissioned officer. (3 cr; prereq Δ, Leadership Laboratory**)

** Leadership laboratory is taught concurrently to all cadets during the fall and spring quarters. Laboratory is designed so that individual students can demonstrate their progressive ability in individual and group drill. Progressive and extensive practice in voice and command, unit formations, exercise of command, bearing, and posture is emphasized. Assists in identification and development of individual leadership traits and qualities of character.

NAVAL SCIENCE

(Naval ROTC)

GENERAL INFORMATION

The Naval Reserve Officers' Training Corps (NROTC) offers the opportunity for qualified young men to earn a commission as a Navy or Marine Corps officer.

Regular NROTC Program — Regular Commission

For those applicants who seek a career in the Regular Navy or Marine Corps, the Navy offers the Regular NROTC program. The Regular NROTC is under the immediate supervision of the chief of naval personnel of the Navy Department. It is a college program for the training and education of Regular naval officer candidates. Successful applicants are appointed midshipmen, United States Naval Reserve, by the Secretary of the Navy and are granted the compensations and benefits authorized by law for a period not exceeding 4 years. The program provides tuition, textbooks, other fees of an instructional nature, plus subsistence pay of \$50 per month. During drill periods and summer-at-sea training, the midshipmen wear government-furnished uniforms. Applications for this program must be submitted prior to mid-November of the year preceding entry into the Regular NROTC program. Instructions for submitting applications are available at the NROTC offices in the Army.

Four-Year Contract NROTC Program — Reserve Commission

Contract students are selected for enrollment in the Naval ROTC by the professor of naval science from among those students already in attendance at, or selected for admission by, the University and who plan to complete at least 4 years of academic work. Students in this program enter into a mutual contract with the Department of the Navy, in which they obligate themselves to take certain naval science courses and drills and two summer training cruises. In return, the Navy provides the required uniforms, gives them a subsistence allowance of \$50 per month during their junior and senior years, and offers a Reserve commission upon graduation. Officers trained in the Contract program may also become career officers if they apply and are selected for a Regular commission.

Two-Year Contract NROTC Program — Reserve Commission

The 2-year Contract program is similar to the 4-year program except that a summer training period is substituted for the first 2 years of academic courses offered at the University. This session, held at one of the NROTC institutions throughout the country, is completely voluntary and is normally taken at the end of a student's sophomore year. After completion of this ses-

sion, the student enrolls in one of the Upper Division sequences for naval science like other junior and senior year NROTC students. Information on application for this program may be obtained from the professor of naval science and should be sought early in the sophomore year.

Active Duty Requirements

NROTC graduates receive commissions either in the Navy Line, or the Navy Supply Corps, or the Marine Corps. A few are commissioned in the Navy Civil Engineer Corps.

Regular NROTC students are currently required to serve 4 years on active duty after commissioning. Contract students are required to serve 3 years on active duty after commissioning.

Naval Science Courses

The NROTC program constitutes a 4-year naval science course which a student schedules in the same manner as any other course in his academic program. Naval science courses are under the supervision of the Department of the Navy and the University, and are taught by Navy and Marine Corps officer instructors. These courses carry full University academic credit as electives and are applicable toward the requirements for a University degree and graduation.

CURRICULUM

The 4-year naval science curriculum leads to a commission in the naval service as an Ensign, USN or USNR, or a Second Lieutenant, USMC or USMCR in the Marine Corps.

All midshipmen study the first- and second-year courses shown below. During the third and fourth years, a midshipman studies the courses of the Line Sequence, or the Marine Corps Sequence.

Male students who are not midshipmen of the NROTC unit but who wish to enroll in a naval science course as an elective may have the prerequisites waived upon application to the professor of naval science, 203 Armory Building.

All courses consist of 3 classroom hours and 2 hours of drill/laboratory per week.

DESCRIPTION OF COURSES§§

LOWER DIVISION COURSES

(All NROTC Students)

1ST YEAR

14f, 15w (1-100, 1-101). Principles of Naval Organization and Management.
Naval organization and management practices: lines of command and control,

§§ The four-digit number in parentheses after the course number is the new course number which will not be used prior to Fall, 1970.

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logistics, functions and services of major components of the Navy and Marine Corps, shipboard organization. Emphasis is placed on management and leadership functions. (3 cr each)

- 16s (1-102). **Naval Ships Systems.** Introduction to the types, structure, and purpose of naval ships. Ship compartmentation, propulsion systems, auxiliary power systems, interior communications, elements of ship design, and stability characteristics. (3 cr)

2ND YEAR

- 24f, 25w, 26s (0-200, 0-201, 0-202). **Seminar: Sea Power and Maritime Affairs.** Selected seminar subjects on current aspects of Sea Power and Maritime Affairs. Conducted in laboratory sessions approximately 1 hour per week. (0 cr; 2nd yr NROTC students will enroll in prescribed University courses in history, political science, mathematics, science [physics, chemistry] and computer science)

UPPER DIVISION COURSES

I. Line Sequence

3RD YEAR

- 51f (3-300). **Naval Operations.** Elements of shipboard operations; relative motion, tactical communications, rules of the nautical road, and naval maneuvering. (3 cr)
- 52w (3-301). **Naval Operations: Introduction to Navigation.** Fleet communications and meteorology. Dead reckoning, piloting, and electronic navigation. (3 cr)
- 53s (3-302). **Celestial Navigation.** Theory and practical application of navigating using the stars, sun, moon, and planets. (3 cr; prereq trigonometry or consent of instructor)

4TH YEAR

- 71f, 72w (3-400, 3-401). **Principles of Naval Systems I.** The principles and concept of defense systems are explored. The technique of linear analysis of ballistics is introduced. The dynamics of the basic components of defense control systems are investigated and stated as transfer functions. This course provides the tools for the further development in the student understanding of the basic principles that underlie all modern naval defense systems. (3 cr each)
- 73s (3-402). **Principles of Naval Systems II.** The principles of selected phases of the defense control problem, including propulsion systems, trajectories, flight paths, and damage criteria. To demonstrate and apply methods of solution of the defense system control problem. Review design and testing of components including warheads, fuses, guidance, and control. Includes procedures for evaluating defense system effectiveness and hit probability. (3 cr; prereq 72, calculus, college physics)
- 74s (3-403). **Principles of Naval Systems III.** A descriptive course of naval defenses scaled for humanities and arts majors not having completed calculus. (3 cr; prereq 72)

II. Marine Corps Sequence

3RD YEAR

- 54f (3-350). Evolution of Warfare I.** Evolution of warfare from approximately 300 B.C. to mid-19th century. (3 cr)
- 55w (3-351). Evolution of Warfare II.** Continuation of 54 through a study of the American Civil War to the present time, including a consideration of U.S. military and foreign policy. (3 cr; prereq 54 or consent of instructor)
- 56s (3-352). Development of Modern Strategy.** Theoretical principles of modern strategy and discussions of opposing international political concepts. (3 cr)

4TH YEAR

- 64f (3-450). Amphibious Warfare I.** The development and evolution of amphibious warfare principles and doctrine from Gallipoli through World War II. (3 cr)
- 65w (3-451). Amphibious Warfare II.** Introduction to modern doctrine and concepts and operational planning techniques. (3 cr; prereq 64 or consent of instructor)
- 66s (3-452). Concepts of Leadership.** Principles and techniques of leadership with emphasis on military aspects. Introduction to the military judicial systems. (3 cr)

AEROSPACE STUDIES

(Air Force ROTC)

GENERAL INFORMATION

The Air Force ROTC program at the University of Minnesota enables qualified young men to pursue a course toward a commission as an officer in the United States Air Force while they are completing requirements for a degree from the University. The student blends Air Force ROTC course work with his college curriculum and is commissioned a second lieutenant in the United States Air Force upon graduation.

The emphasis in the Air Force ROTC curriculum is on the development of the student's leadership and management skills and on the improvement of his ability to communicate. The student also receives a solid background concerning the nature and purpose of the military. Since Air Force ROTC is a department of the University of Minnesota, the student enrolls for Air Force ROTC courses as he does for any other University course. Registration is accomplished in Room 3 of the Army.

Programs

The Air Force ROTC department at the University offers both a 4-year and a 2-year commissioning program. Under the 4-year program the student registers for Air Force ROTC in his freshman year and completes a 4-year academic curriculum including a 4-week summer camp between his junior and senior years. The student electing to pursue the 2-year program completes the last 2 years of Air Force ROTC after attending a 6-week camp during the summer immediately preceding his last 2 years at the University. The 2-year program is available to both graduate and undergraduate students.

Admission Requirements

Four-Year Program:

1. Be a male citizen of the United States.
2. Be of sound physical condition.
3. Be of sound moral character.
4. Be at least 17 years old upon entering the program. Applicants qualified for flying training must be able to complete graduation requirements and be commissioned prior to reaching 26½ years of age. Other applicants must be able to complete graduation requirements and be commissioned prior to reaching age 30.

In addition to the above, prior to entering the last 2 years of Air Force ROTC, the student must:

1. Pass the Air Force Officer Qualifying Test (AFOQT).
2. Pass an Air Force medical examination.
3. Be approved by an interview board.
4. Successfully complete the 6-week summer field training course (2-year program applicants only).

Financial Benefits

Students receive \$50 per month plus all Air Force ROTC text books and uniforms during their last 2 years of ROTC. During their summer field training, students receive their food, clothing, housing, medical care, a transportation allowance of 6¢ per mile from their point of departure for camp, and approximately \$100 per month.

In addition, scholarships are available on a competitive basis *to students enrolled in the 4-year program only*. These scholarships cover full tuition, laboratory expenses, incidental fees, and an allowance for books.

Physically qualified cadets who are pilot candidates are provided 36½ hours of flying training conducted by a civilian flying school near the campus at no expense to themselves.

Credits

The aerospace studies course consists of 2 hours a week attendance at lower division classes (General Military Course, or GMC) and 3 hours a week attendance at upper division classes for the last 6 quarters of Air Force ROTC (Professional Officer Course, or POC).

Aerospace studies credits may be substituted for elective credits in the College of Liberal Arts, the School of Business Administration, the College of Education, and the College of Agriculture, Forestry, and Home Economics. Aerospace studies is accepted as a minor in the College of Liberal Arts. IT students who complete Air Force ROTC are allowed 9 credits as electives (free or technical or both) toward graduation.

Active Duty Requirements

Students not programmed for flying training incur a 4-year active duty commitment. Students who will enter flying training on active duty incur a 5-year obligation after completing flying training.

DESCRIPTION OF COURSES§§

LOWER DIVISION COURSES

WORLD POWER SYSTEMS

- 31f (1-101). Foundations of National Power.** A study of the meaning and scope of war with emphasis on the factors and instruments of national power and how these instruments are employed to attain national objectives. (2 cr; prereq Δ)
- 32w (1-102). Defense Establishments.** A study of the mission of the Defense Establishment showing the relationship and role of each of the armed services in accomplishing this mission. Familiarization with the doctrine and mission of the United States Air Force. (2 cr; prereq Δ)

§§ The four-digit number in parentheses after the course number is the new course number which will not be used prior to Fall, 1970.

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- 33s (1-103). Strategic Forces.** A study of the functions of strategic offensive and defensive forces. (2 cr; prereq Δ)
- 34f (1-201). Limited Conflict Resources.** An examination of the role and functions of U.S. general purpose forces. (2 cr; prereq Δ)
- 35w (1-202). Aerospace Support: Research and Development.** A study of Aerospace Support Forces, concentrating on the contribution of the support functions to the overall military posture. (2 cr; prereq Δ)
- 35s (1-203). Trends and Implications.** A study of the basis of present conflicts. Familiarization with international security alliances. An examination of contemporary actions and proposals in the pursuit of peace. (2 cr; prereq Δ)

UPPER DIVISION COURSES

GROWTH AND DEVELOPMENT OF AEROSPACE POWER

- 131f (3-301). Development of Air Power.** A study of the fundamentals of a nation's power, nature of war, and application of aerospace forces in support of national goals. History of air power. Seminars with oral and written reports. Emphasis on communication skill development. Field trips. (3 cr; prereq Δ)
- 132w (3-302). Aerospace Power Today.** Analysis of the mission and organization of the Defense Establishment; aerospace concepts, doctrine, and use in relation to a nation's resources. Importance of the United States' space program. Seminars developing individual skills in research and oral reporting. Field trips to selected Air Force bases. (3 cr; prereq Δ)
- 133s (3-303). Astronautics and Space Operations.** Intensive examination of space vehicle systems and ground support equipments; space exploration; orbits and trajectories; spatial environment; future development of astronautics and space operations. Seminars stressing research skills and communication techniques. Field trips. (3 cr; prereq Δ)

THE PROFESSIONAL OFFICER

- 141f (3-401). Professionalism.** A study of professionalism including the meaning of professionalism, the foundations of military professionalism and its ethical characteristics and responsibilities, case studies in human relations, the meaning and function of military discipline and cases in military law. (3 cr; prereq Δ)
- 142w (3-402). Air Force Leadership.** A study of leadership including the philosophy and scope of leadership. The interaction of individuals and groups in large scale organizations. Role playing, conference and discussion methods, communication and problem solving. (3 cr; prereq Δ)
- 143s (3-403). Military Management.** A study of management including the functions of the military executive; planning, organizing, directing, coordinating, and controlling. Surveys the application of management functions to the organization. Explores the management tools, concepts, practices, controls, and techniques to assure successful mission achievement. (3 cr; prereq Δ)
- 144fws (3-404). Flight Instruction Program.** Ground school in conjunction with flight training of 36:30 hours leading to FAA certification as a private pilot. Includes instruction and practice on federal aviation regulations, aircraft instruments, meteorology, radio aids, air navigation, flight theory, and other subjects pertaining to the safe and efficient operating of aircraft. (3 cr; prereq Δ)

HUMAN RIGHTS

The University of Minnesota is guided by the principle that there shall be no differences in the treatment of persons because of race, creed, color, or national origin and that equal opportunity and access to facilities shall be available to all. This principle is particularly applicable in the admission of students in all colleges, and in their academic pursuits. It is also applicable in University-owned or University-approved housing, in food services, student unions, extra-curricular activities, and all other student services. It is a guiding policy in the employment of students either by the University or by outsiders through the University and in the employment of faculty and civil service staff.