

This is the Policies and General Information sections of the 1997-1999 University of Minnesota ROTC Bulletin.

Army - Navy/Marine - Air Force ROTC

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University of Minnesota Mission Statement

The University of Minnesota, founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to benefit the people of the state, the nation, and the world.

The University's mission, carried out on multiple campuses and throughout the state, is threefold:

- **Research and Discover**—Generate and preserve knowledge, understanding, and creativity by conducting high-quality research, scholarship, and artistic activity that benefit students, scholars, and communities across the state, the nation, and the world.
- **Teaching and Learning**—Share that knowledge, understanding, and creativity by providing a broad range of educational programs in a strong and diverse community of learners and teachers, and prepare graduate, professional, and undergraduate students, as well as non-degree-seeking students interested in continuing education and lifelong learning, for active roles in a multiracial and multicultural world.
- **Outreach and Public Service**—Extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.

In all of its activities, the University strives to sustain an open exchange of ideas in an environment that embodies the values of academic freedom, responsibility, integrity, and cooperation; that provides an atmosphere of mutual respect, free from racism, sexism, and other forms of prejudice and intolerance; that assists individuals, institutions, and communities in responding to a continuously changing world; that is conscious of and responsive to the needs of the many communities it is committed to

serving; that creates and supports partnerships within the University, with other educational systems and institutions, and with communities to achieve common goals; and that inspires, sets high expectations for, and empowers the individuals within its community.

Policies

Bulletin Use—This biennial bulletin, the basic source of information about Reserve Officers Training Corps (ROTC), should be kept handy for repeated reference. Separate bulletins are also published for various University colleges. Most may be obtained by contacting the Office of Admissions, University of Minnesota, 240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455-0213 (612/625-2008).

The University of Minnesota will change to a semester-based academic calendar beginning academic year 1999-2000. This bulletin is the last quarter-based bulletin that will be produced for Army-Navy/Marine-Air Force ROTC. It covers academic years 1997-98 and 1998-99. Information about semester-based academic programs will be provided in the fall of 1998 in semester-transition publications.

The information in this bulletin and other University bulletins, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.

This publication is available in alternative formats upon request. Please contact the Office of Admissions, University of Minnesota, 240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-2008; e-mail admissions@tc.umn.edu).

This bulletin also is available in electronic format on the Internet and may be accessed at <http://www.umn.edu/commpub> on the World Wide Web.

Equal Opportunity—The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act,

Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans With Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Stephanie Lieberman, Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547).

Access to Student Educational Records—In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, electronic (e-mail) address, telephone number, dates of enrollment and enrollment status (full time, part time, not enrolled, withdrawn and date of withdrawal), college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. Students may prevent the release of public information. To do so, they must notify the records office on their campus.

Students have the right to review their educational records. The regents' policy is available for review at 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

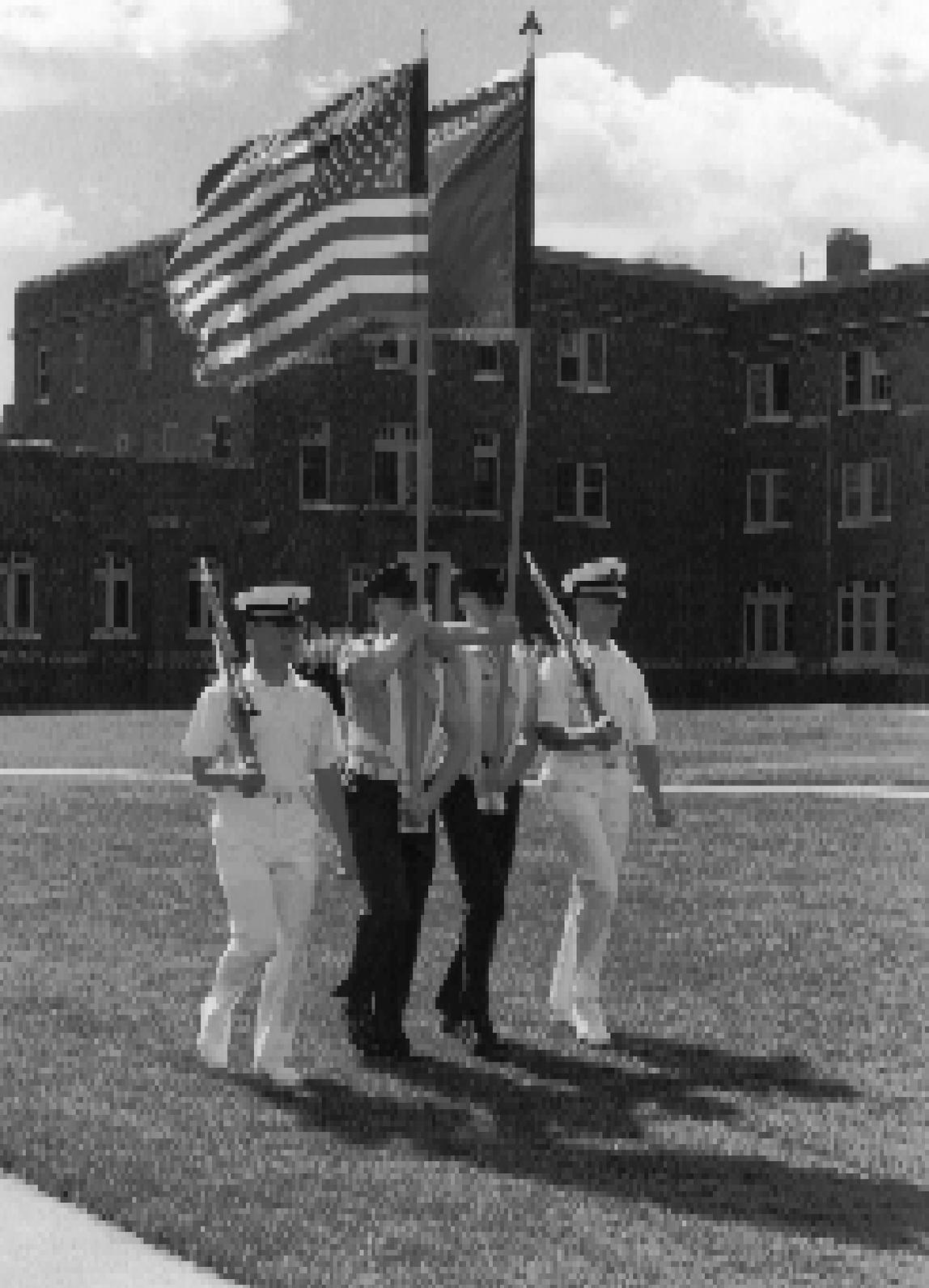
Immunization—Students born after 1956 who take more than one University class are required under Minnesota law to submit an Immunization Record form.

The form, which is sent along with the official University admission letter, must be filled out and returned to Boynton Health Service within 45 days of the first term of enrollment in order for students to continue registering for classes at the University. Complete instructions accompany the form.

Extracurricular Events—No extracurricular events requiring student participation may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty that any exemption granted pursuant to this policy shall be honored and that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

Smoke-Free Campus Policy—Smoking is prohibited in all facilities of the University of Minnesota, Twin Cities campus except for designated private residence hall rooms.

General Information



History and Philosophy

The Reserve Officers Training Corps (ROTC) has an important role in the national defense framework of our nation. The American tradition of military instruction on civilian college campuses began in 1819 when a former superintendent at West Point established the American Literary, Scientific, and Military Academy, which later became Norwich University. Military instruction soon spread to other institutions—Virginia Military Institute in 1839, the University of Tennessee in 1840, and The Citadel in 1842.

In 1862 the U.S. Congress, foreseeing the dual necessities of creating additional institutions of higher learning as well as providing a means of schooling in the military arts, passed the Morrill Land Grant Act. This act provided money from the sale of government lands to establish colleges and universities and specified that courses in the military arts should be offered at these institutions.

The University of Minnesota opened its doors in 1869 through the benefits made available by the Morrill Act. One of the original nine faculty members was the University's first professor of military science, Major General Richard W. Johnson. For 70 years, on-campus military training and, after 1916, ROTC programs at the University prepared students to enter the Army. In 1939 a Naval ROTC unit was established, and in 1949 an Air Force ROTC program began.

For more than 150 years, on-campus military training and ROTC programs have provided intelligent, well-educated leaders for the nation's defense. In keeping with the typically American concepts of the citizen-soldier and civilian control of military forces, these programs produce military officers from all geographic and social strata whose leadership is characterized by initiative, ingenuity, and flexibility. And because ROTC officers may return to civilian status when they have fulfilled their military obligation or choose to serve as reserve officers, ROTC programs provide leadership resources not only for national defense but also for civilian enterprise.

Programs

At the University of Minnesota, ROTC programs are offered by the U.S. Army, Navy/Marine Corps, and Air Force. ROTC coursework is completed concurrently with degree work so that participants qualify for officer commissions in one of the four military services—Army, Navy, Marine Corps, or Air Force—as they complete requirements for a University degree. ROTC coursework offers students the opportunity to widen their perspective; sharpen their sense of responsibility; develop their ability to organize, motivate, and lead others; and acquire a maturity of judgment that can be a source of strength and self-confidence throughout their careers.

Four-year and two-year programs are available, each offering a different approach toward earning an officer's commission for students who meet selection requirements. Four-year programs consist of a basic course and an advanced course. The basic course is taken during the freshman and sophomore years, and the advanced course normally comprises the junior and senior years. Two-year programs consist of only the advanced course. Enrollment in an advanced course normally obligates students to a service commitment.

Curricula

ROTC courses prepare students for military service as junior officers. Students learn to exercise self-discipline, organize time and effort efficiently, perform effectively under stress, analyze and react quickly and with good judgment, and consistently exhibit exemplary military bearing and appearance. Seniors are placed in positions of command, able to apply the leadership skills they have developed during their preceding years of ROTC training. Following this final year of practical experience, these men and women are well prepared to assume leadership responsibilities as commissioned officers.

The ROTC curricula are administered by the University's Office of the Vice President for Student Development & Athletics and Departments of Military Science (Army ROTC), Naval Science (Navy/Marine ROTC), and Aerospace Studies (Air Force ROTC).

Benefits

ROTC scholarship programs provide up to four years (five years under specific circumstances) of subsidized education, paying all tuition costs, instructional fees, and textbook expenses. Additionally, scholarship students receive a subsistence allowance of \$150 per month. Nonscholarship students in their junior and senior years receive the \$150 per month subsistence allowance for a maximum of 20 months. While attending summer training, all ROTC students receive approximately \$700 plus housing, travel, and allowances. Students attending summer training to qualify for a two-year program receive the same pay and allowances as ROTC students (see Scholarships).

Obligations

Students who complete all requirements are commissioned as second lieutenants (Army, Air Force, and Marines) or ensigns (Navy). Upon commissioning, Naval ROTC scholarship students incur a four-year active duty service obligation; nonscholarship students incur a three-year active duty service obligation. Extended commitments to active duty are required for all pilots (eight years after qualification), naval flight officers (six years after qualification), and Nuclear Propulsion Program officers (five years after commissioning). Air Force pilot and navigator program students incur a commitment of eight and six years, respectively, after completing their training; all other Air Force students incur a four-year active duty service commitment (students who receive five years of scholarship incur a five-year commitment). Army students selected for active duty serve for three years; Army scholarship students selected for active duty serve four years. Army students commissioned into the National Guard or Army Reserve serve on active duty for initial schooling and then assume reserve obligations of varying lengths.

Admission

The three ROTC programs are open to all students. Young men and women are selected on the basis of their own merits. Certain qualifications and eligibility criteria for enrollment and commissioning must be met,

however, as set forth in the laws and regulations that govern the programs. Students who do not meet these criteria may enroll in a course for its educational value but do not receive financial benefits or an officer's commission. Basically, to be eligible for admission to a University of Minnesota ROTC program, applicants must

- be full-time college students;
- have reached their 17th birthday by June 30 of the year they plan to enroll;
- be of sound physical condition;
- show evidence of moral integrity, satisfactory scholarship and extracurricular activity, and potential officer capabilities; and
- have no moral or personal convictions that will prevent them from conscientiously bearing arms in support and defense of the U.S. Constitution.

Transfer Students—Students who have participated in ROTC training at another college or university may request transfer if they were honorably released by the first institution and are accepted by a University of Minnesota ROTC program.

Advanced Standing—Students who have participated in ROTC training at another institution may be granted advanced standing for military courses successfully completed.

Veterans—Veterans may take advantage of their military service and experience by seeking advanced placement in a ROTC program. G.I. Bill educational benefits and ROTC benefits may be received concurrently. Army students may receive advanced standing for membership in the National Guard or Army Reserve through the Simultaneous Membership Program. After commissioning, veterans can count their prior service for longevity pay and retirement.

Residence—Because the University is a state institution, Minnesota residents pay lower tuition than nonresidents and, in many programs, receive priority consideration for admission. To qualify for resident status, students must reside in Minnesota for at least one calendar year before the first day of class attendance. For more information, contact the Resident Classification and Reciprocity Office,

240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-6330), or the residency office on your campus.

Reciprocity—The University has reciprocity agreements with North Dakota, South Dakota, Wisconsin, and Manitoba. If you are a resident of any of these states or this province, you may qualify for reciprocity tuition rates, which are lower than nonresident tuition rates and, in some cases, comparable to resident rates. For more information, contact the Resident Classification and Reciprocity Office, 240 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-6330), or the residency office on your campus.

Scholarships

Scholarships are available through national or regional selection systems. High school seniors may compete for four-year scholarships. Completed applications must be submitted no later than November 15 (Army) or December 1 (Air Force and Navy/Marine) for enrollment the following fall quarter. College freshmen and sophomores may compete for three- and two-year scholarships.

Students accepted into one of the ROTC nonscholarship programs are normally eligible to compete for the scholarship program after one or two quarters of enrollment. Aptitude for military service and academic performance are

major considerations for acceptance. For more information about particular/special scholarship programs, contact the appropriate department.

Student Activities

Each ROTC department offers a wide range of activities for its students. A variety of local and nationally affiliated organizations offer interested and qualified students the opportunity to participate in activities, both on and off campus, that will develop their leadership and managerial skills. Social events and athletic competitions, scheduled throughout the school year, round out the activities available.

University Counseling and Consulting Services

University Counseling and Consulting Services (UCCS), 109 Eddy Hall on the East Bank and 199 Coffey Hall on the St. Paul campus (612/624-3323 for both), offers counseling for academic, career, personal, or relationship concerns. Besides counseling, UCCS features a variety of services. The Career Development Center and the Learning and Academic Skills Center offer workshops, courses, and materials for career development or academic skills improvement. The Organizational Development Program offers consultation, assessment, team



An Air Force ROTC cadet participates in pass in review.

building, conflict mediation, training, and workshops. UCCS's Office of Measurement Services (OMS) scores exams, surveys, and research instruments and provides consultation to University faculty and staff. OMS operates the Minnesota Statewide Testing Program for Minnesota elementary and secondary schools. The Testing Center administers admissions, placement, and national tests. For more information, see <http://www.uccs.umn.edu/uccswww/uccs.html> on the World Wide Web.

Other Publications

Class Schedule—This quarterly publication lists day school courses complete with hours, rooms, instructors, and prerequisites, as well as registration instructions, examination fees, maps, final exam schedules, grading definitions, and other valuable information.

Course Guide—The *Course Guide*, a quarterly publication distributed at the University Bookstores, provides course information in addition to college bulletins and the *Class Schedule*.

Course Symbols

These symbols are used throughout the course descriptions in this bulletin:

§ Credit will not be granted if credit has been received for the course listed after this symbol.

¶ Concurrent registration is required (or allowed) in the course listed after this symbol.

..... Approval of the instructor is required for registration.

Δ Approval of the department offering the course is required for registration.

f,w,s,su

..... Following a course number, indicates fall, winter, spring, or summer.

, The comma, used in prerequisite listings, means "and."

A prerequisite course listed by number only (e.g., prereq 5246) is in the same department as the course being described.

University Regents

Thomas R. Reagan, Gilbert, Chair
 H. Bryan Neel III, Rochester, Vice Chair
 Robert S. Bergland, Roseau
 Julie A. Bleyhl, Madison
 William E. Hogan II, Minnetonka
 Warren C. Larson, Bagley
 David R. Metzzen, South St. Paul
 Michael O'Keefe, Minneapolis
 William R. Peterson, Eagan
 Jessica J. Phillips, Morris
 Maureen K. Reed, Stillwater
 Patricia B. Spence, Rice

University Administrators

Mark G. Yudof, President
 JoAnne G. Jackson, Senior Vice President
 for Finance and Operations
 Marvin L. Marshak, Senior Vice President
 for Academic Affairs
 C. Eugene Allen, Provost for Professional Studies
 Frank B. Cerra, Provost for the
 Academic Health Center
 W. Phillips Shively,
 Provost for Arts, Sciences, and Engineering
 McKinley Boston, Jr., Vice President
 for Student Development & Athletics
 Mark L. Brenner, Vice President for Research
 and Dean of the Graduate School
 Thomas H. Swain, Acting Vice President
 for Institutional Relations
 Mark B. Rotenberg, General Counsel

ROTC Administrators

Department of Military Science
 Lieutenant Colonel Randall G. Banky, USA
 Professor and Head
 110 Armory Building (612/624-7300)
 E-mail: AROTC@maroon.tc.umn.edu

Department of Naval Science
 Captain J. Stephen Fitzgerald, USN, Professor and Head
 203 Armory Building (612/625-6677)
 E-mail: nrotc@tc.umn.edu

Department of Aerospace Studies
 Colonel Jaromir J. Bon, USAF, Professor and Head
 3 Armory Building (612/624-2884)
 E-mail: det415@maroon.tc.umn.edu

The Armory Building is at 15 Church Street S.E., Minneapolis, MN 55455, on the University's East Bank campus.

Liberal Education Requirements

Effective for all freshmen with fewer than 39 credits enrolling from fall 1994 to summer session II 1996. Beginning fall 1996, the liberal education requirements apply to all students entering a baccalaureate degree program, regardless of prior credits.

A liberal education introduces you to the modes of inquiry and subject matter of the major branches of knowledge, including the factual information and theoretical or artistic constructs that form their foundations; the “ways of knowing”—the kinds of questions asked and how insight, knowledge, and data are acquired and used; the changes over time of their central ideas or expressive forms; and the interrelationships among them and with human society in general. To these ends, study by all undergraduate students on the Twin Cities campus is guided by a common framework.

The Diversified Core Curriculum

Physical and Biological Sciences. Comprehension of physical and biological principles; understanding of and ability to use the methods of scientific inquiry—the ways in which scientists investigate physical and biological phenomena; and appreciation of the importance of science and the value of a scientific perspective.

Requirement: A minimum of three courses totaling at least 12 credits, including one course with a laboratory or field experience in the physical sciences and one course with a laboratory or field experience in the biological sciences.

History and Social Sciences. Knowledge of how historians and social scientists describe and analyze human experiences and behavior; study of the interrelationships among individuals, institutions, structures, events, and ideas; understanding of the roles individuals play in their historical, cultural, social, economic, and political worlds.

Requirement: A minimum of three courses totaling at least 12 credits, including one course with historical perspective.

Arts and Humanities. Understanding of approaches to the human condition through works of art, literature, and philosophy; knowledge of how artists create and humanistic scholars think; ability to make aesthetic judgments.

Requirement: A minimum of three courses totaling at least 12 credits including courses in two of the following: literature, philosophical perspective, and visual or performing arts.

Mathematical Thinking. Acquisition of mathematical modes of thinking; ability to evaluate arguments, detect fallacious reasoning, and evaluate complex reasoning chains; appreciation of the breadth of applications of mathematics and its foundations.

Requirement: A minimum of one course totaling at least four credits.

The Designated Themes of Liberal Education

The designated themes of liberal education offer a dimension to liberal learning that complements the diversified core curriculum. Each of the themes focuses on an issue of compelling importance to the nation and the world, the understanding of which is informed by many disciplines and interdisciplinary fields of knowledge.

Requirement: A minimum of six courses (or five courses if one includes an approved practicum), including one course in each of the following:

Cultural Diversity. Understanding of the roles gender, ethnicity, and race play in structuring the human experience in and developing the social and cultural fabric of the United States.

International Perspectives. Comprehension of the ways in which you are part of a rapidly changing global environment dominated by the internationalization of most human endeavors.

Environment. Knowledge of the interaction and interdependence of the biophysical systems of the natural environment and human social and cultural systems.

Citizenship and Public Ethics. Reflection on and determination of a clearer sense of your present and future civic relationships and your obligations to the community.

Writing Skills

The ability to communicate effectively is a hallmark of a liberally educated individual and a key to a successful and satisfying life. To encourage refining of writing skills, the liberal education curriculum includes both writing courses and writing across the curriculum.

Requirement: Writing skills requirements are being revised. Until the new requirements are in effect, all students will complete the writing requirement specified by the college awarding their baccalaureate degree.

You may satisfy the liberal education requirements with a number of courses and credits different from those of other students because some courses serve multiple goals in the curriculum; e.g., some courses will satisfy a diversified core requirement and a designated theme requirement, and other courses will satisfy the requirements for each of two themes. Thus, you may satisfy the designated theme requirements with a smaller number of courses than is stated in the requirement. Each quarter, the *Class Schedule* will publish the requirements and list all courses that satisfy them. In addition, the *Class Schedule* will list which of these courses are offered that quarter and which are tentatively scheduled for the subsequent quarters during the academic year.

Minnesota Transfer Curriculum

If you complete the Minnesota Transfer Curriculum at any participating Minnesota college or university, you fulfill the University’s Twin Cities campus liberal education requirements. However, you will still need to complete a portion of the writing skills requirements. Contact your college advising office concerning these requirements. For more information on using transfer credits for the liberal education requirements, contact the Office of Admissions (612/625-2008).

Military Science (Army ROTC)

This is the Military Science (Army ROTC), Naval Science (Navy/ Marine ROTC), and Aerospace Studies (Airforce ROTC) sections of the 1997-1999 University of Minnesota ROTC Bulletin.



The Department of Military Science conducts the Army ROTC program to prepare men and women as officer candidates for the Regular Army, National Guard, and Army Reserve. In addition to instruction in military fundamentals common to all branches of the Army, this program develops in students the leadership attributes essential to their future roles as officers. Military science courses are offered in two- and four-year sequences that students complete concurrently with coursework required for earning a University degree. Students register and earn academic credits for Army ROTC courses in the same manner as for other elective courses in the curriculum. An academic minor in military science is available but not required for commissioning as an officer in the U.S. Army.

Programs

Two programs are available for students to earn their commissions as second lieutenants through Army ROTC.

Four-Year Program—The four-year Army ROTC program is divided into two parts, the basic course and the advanced course. The basic course is normally taken during the first two years of college and covers such subjects as customs, traditions, and organization of the Army; national defense; military history; marksmanship; land navigation; first aid; orienteering; and leadership development. Except for students on scholarship, enrollment in the basic course requires no future military obligation. All full-time University students are eligible to enroll in this course.

After completing the basic course, students who have met the physical and scholastic standards and demonstrated the potential to become Army officers are eligible to enroll in the advanced course. The advanced course is taken during the final two years of college and includes more advanced on-campus instruction and a mandatory six-week advanced camp at Fort Lewis, Washington, held the summer between the two years of the course. Full course credit and recommendation for a commission are not granted without successful camp completion. Qualified students also have the opportunity to receive airborne, air assault, mountain, and northern warfare training. Enrollment in the advanced course requires the

student to agree in writing to complete the two-year course and accept, if offered, a commission as a second lieutenant.

Two-Year Program—The two-year Army ROTC program enables eligible students with acceptable advanced placement credits to bypass the basic course and enroll directly into the advanced course once they are academic juniors.

The primary method of obtaining advanced placement credits is for students to attend a six-week ROTC basic camp at Fort Knox, Kentucky, the summer after their freshman or sophomore years. Veterans and members of the Army National Guard or Army Reserve may use their prior military service to gain advanced placement in the program.

Students who have completed Junior ROTC programs at military schools or high schools are accepted for advanced placement on an individual basis. Students who have ROTC experience at other colleges receive credit for ROTC instruction completed.

Interested individuals must apply in person to the Department of Military Science for advanced placement or participation in the basic camp.

Students attending other colleges in the area may also enroll in Army ROTC at the University of Minnesota through University College and are eligible for the same programs and scholarships available to University students.

A specially designed program for nursing students is also offered through ROTC to students enrolled in either the four-year or the two-year program.

Benefits

The department supplies all ROTC texts and uniforms. Students in the advanced course also receive a \$150 monthly allowance during those two academic years.

Students attending the basic or advanced camps are paid travel expenses and a salary. All food, housing, and clothing are furnished.

Students who have received their bachelor's degree and have been commissioned through the Army ROTC program may request a delay in reporting for duty in order to continue their education. Normally an additional two years are allowed for graduate study.

Scholarships

Many Army scholarship programs are available. Students can receive four-, three-, or two-year scholarships. Four-year scholarships are offered annually to outstanding high school students. Applications must be submitted between July 1 and November 15 of the applicant's senior year in high school.

All students, whether they are enrolled in Army ROTC or not, are eligible to compete for three- and two-year scholarships after completing their first or second years of college. In addition to the national competition, the professor of military science may award three- and two-year scholarships to students on campus.

For those awarded scholarships, the Army pays tuition, fees, and \$450 per year for textbook expenses and supplies. In addition, students receive \$150 per month for the duration of the scholarship. Scholarship students selected for active duty incur a four-year active duty obligation after graduation.

Scholarships are also available from the National Guard, Army Reserve, American Legion, Association of United States Army, Reserve Officers Association, Society of American Military Engineers, ROTC Alumni Association, and Veterans of Foreign Wars.

Commissions and Obligations

Completing the Army ROTC program qualifies graduates for appointments as second lieutenants in the Army, Army Reserve, or Army National Guard. These appointments include an obligation to serve on active duty for three months to four years, depending on Army officer requirements at the time of graduation. Officers commissioned in the Army National Guard or Army Reserve serve for eight years. Nonscholarship and some scholarship students may have a guarantee of reserve forces duty. The branch of service in which students are commissioned depends on such factors as their interests, academic majors, and advanced camp performance and the Army's needs.

Course Descriptions (Mil)

Leadership Laboratory

Leadership Laboratory is a series of mini courses, covering military topics, taught to all cadets each quarter. These classes help students develop functional leadership skills in problem solving, decision making, personnel management, and other areas. Progressive and extensive practice in voice command, bearing, and physical fitness is emphasized. (Planned and directed largely by the Cadet Corps; 10 hours required each quarter.)

Lower Division

Military Science I

Mil 1001, 1002, 1003. Basic Course Leadership Laboratory. (1 cr per qtr [3 cr max])
Basic skills and knowledge in drill and ceremonies, first aid, self-defense, land navigation, small-unit operations, communications procedures, and physical conditioning. Builds self confidence and team-building leadership skills.

Mil 1101f. Introduction to ROTC. (2 cr; prereq ¶1001)
Team study and activities in basic drill, physical fitness, rappelling, leadership (in classroom and lab settings), first aid, making presentations, and basic rifle marksmanship. Participation in one one-hour physical fitness session and one weekend exercise strongly encouraged.

Mil 1102s. Introduction to Leadership. (2 cr; prereq ¶1003)
Applying leadership principles. Participate in physically and mentally challenging exercises and develop communication skills. Relate organizational ethical values to leader effectiveness. Participation in one one-hour physical fitness session and one weekend exercise strongly encouraged.

Military Science II

Mil 1201, 1202, 1203. Basic Course Leadership Laboratory. (1 cr per qtr [3 cr max])
Basic skills and knowledge in drill and ceremonies, first aid, self-defense, land navigation, small-unit operations, communications procedures, and physical conditioning. Builds self confidence and team-building leadership skills.

Mil 1221w. Self/Team Development. (2 cr; prereq ¶1201)
Applying ethics-based leadership skills. Develop skills in oral presentations, writing concisely, planning events, coordinating group efforts, advanced first aid, land navigation, and basic military tactics. Required fundamentals of ROTC's Leadership Assessment Program. Participation in two one-hour physical fitness sessions required; participation in one weekend exercise strongly encouraged.

Mil 1222s. Individual/Team Military Tactics. (2 cr; prereq ¶1203)
Military tactics in small-unit operations. Radio communications, making safety assessments, movement techniques, planning for team safety/security, pre-execution check methods. Training others as an aspect of continued leadership development. Participation in two one-hour physical fitness sessions required; participation in one weekend exercise strongly encouraged.

Directed Studies

Mil 3970. Directed Studies. (Cr ar; prereq #)
Provides flexibility so a student can fit an ROTC course into his/her schedule if it might otherwise prohibit participation in ROTC. Instructor and student determine a mutually convenient time to meet. Course content remains the same as for regularly listed military science course.

Upper Division

Military Science III

Mil 3130. Advanced Course Leadership Laboratory. (1 cr per qtr [3 cr max]; prereq #)
Planning, coordinating, implementing, and evaluating training for and activities with basic course students and ROTC program as a whole. Develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Mil 3131f. Leading Small Organizations I. (3 cr; prereq ¶3130, #)
Lead small groups in increasingly complex situations; receive feedback. Uses small-unit defensive tactics and opportunities to plan and conduct training for lower division students. Participation in three one-hour physical fitness sessions and one weekend exercise required; one or two additional weekend exercises may be offered.

Mil 3132w. Leading Small Organizations II. (3 cr; prereq ¶3130, #)
Continuation of 3131. Analyze tasks; prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected in organizations under stress. Apply lessons from leadership case studies. Examine the importance of ethical decision making and creating a positive atmosphere that enhances team performance. Participation in three one-hour physical fitness sessions required.

Mil 3133s. Leading Small Organizations III. (3 cr; prereq ¶3130, #)
Continuation of 3132. Emphasis on field-based training that prepares students to attend advanced camp at Fort Lewis, Washington. Participation in three one-hour physical fitness sessions and one weekend exercise required; one or two additional weekend exercises may be offered.

Military Science IV

Mil 3140. Advanced Course Leadership Laboratory. (1 cr per qtr [3 cr max]; prereq #)
Planning, coordinating, implementing, and evaluating training for and activities with basic course students and ROTC program as a whole. Develop, practice, and refine leadership skills by serving and being evaluated in a variety of responsible positions.

Mil 3141f. Leadership Challenges and Goal Setting. (3 cr; prereq ¶3140, #)
Plan, conduct, and evaluate activities of Army ROTC program. Assess organizational cohesion and develop strategies to improve it. Develop leadership and resource management skills. Apply various Army policies. Participation in three one-hour physical fitness sessions and one weekend exercise required; one or two additional weekend exercises may be offered.

Mil 3142w. Transition to Lieutenant. (3 cr; prereq ¶3140, #)
Continuation of 3141. Identify and solve ethical dilemmas. Refine counseling and motivating techniques. Examine aspects of tradition and law as they relate to Army officer leadership. Participation in three one-hour physical fitness sessions required.

Mil 3143s. Leadership Communications. (3 cr; prereq ¶3140, #)
Continuation of 3142. Participation in three one-hour physical fitness sessions and one weekend exercise required; one or two additional weekend exercises may be offered.



Army ROTC students march in the annual tri-service parade.

Naval Science (Navy/Marine ROTC)



The Naval Reserve Officers Training Corps (NROTC) offers the opportunity for qualified young men and women to earn commissions as Navy, Marine Corps, or Navy Nurse Corps officers as they complete requirements for a University degree. The NROTC program is the nation's largest producer of naval officers.

During their four years of college, NROTC students (midshipmen) complete 41 credits of instruction in naval orientation, naval ship systems, seapower and maritime affairs, nautical navigation, organization, management, leadership, and ethics, plus 120 hours of professional training in military ceremonies, customs, and skills, including computer-based warfare simulations and various "hands-on" training opportunities.

Upon receiving their commissions, graduates move into various careers. A newly commissioned Navy ensign usually receives advanced specialty training and then is assigned to duty aboard a surface ship, nuclear-powered submarine, or with an aviation squadron. Newly commissioned Marine Corps second lieutenants attend The Basic School in Quantico, Virginia, following graduation. They then choose from several occupational fields, such as infantry, armor, aviation, artillery, intelligence, and engineering. Nurse program graduates are commissioned as Navy Nurse Corps officers and assigned to Navy medical facilities throughout the world.

Student Categories

Students who study and train with NROTC can be classified into three categories.

Scholarship Students—NROTC offers many scholarships. Scholarship students are appointed through an annual national selection process before college admittance or through competition with their peers after entering the NROTC program. Once appointed, students are designated as midshipmen in the Naval Reserve and receive a scholarship that covers all tuition, fees, and books plus a subsistence allowance of \$150 per month for up to 40 months. Upon graduation and commission into the Naval or Marine Corps Reserve, they serve a minimum active duty obligation of four years.

College Program Students—These students are enrolled by the professor of naval science and frequently are "walk-ons" who join the NROTC

program from the regular University student population. They are provided with uniforms and naval science textbooks, but pay their own tuition and fees. The college program consists of the basic (freshman and sophomore) and advanced (junior and senior) courses. Advanced course students are selected from the ranks of basic course students. Advanced course midshipmen receive a subsistence allowance of \$150 per month for up to 20 months. Upon graduation and commission into the Naval or Marine Corps Reserve, they serve a minimum active duty obligation of three years.

College program students may apply for NROTC scholarships based on the professor of naval science's recommendation. Special scholarship opportunities may be available for college program students at various points in the program.

Naval Science Students—Naval science students are associated with the Department of Naval Science for academic instruction only, e.g., for courses in navigation or organization and management. They register and pay fees in the same manner as for other University courses. These students do not wear uniforms, participate in summer training programs, or receive NROTC benefits. However, those who are eligible may apply for enrollment as NROTC college program or two-year scholarship program students.

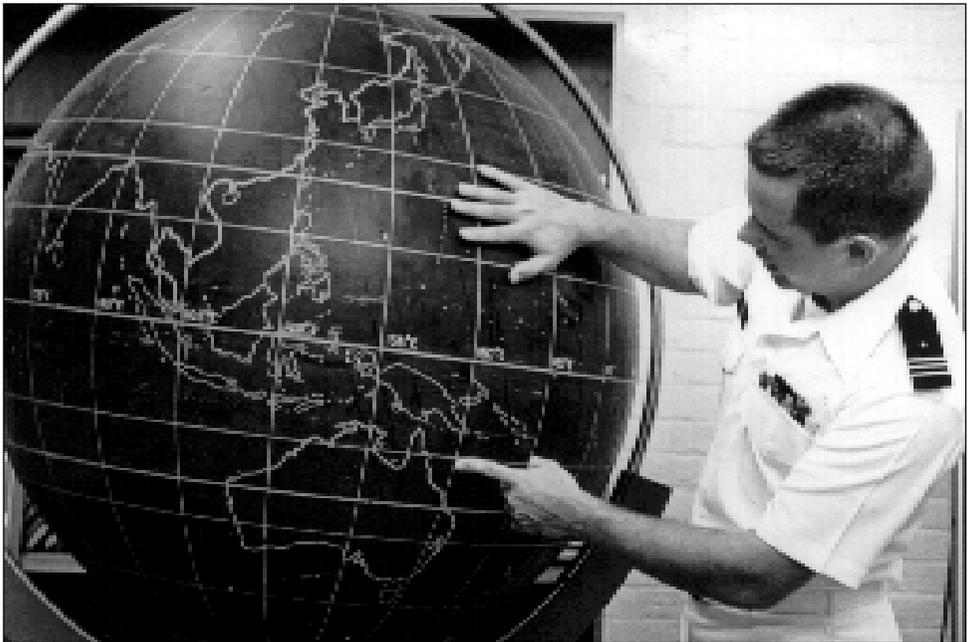
Programs

The following NROTC programs and scholarship opportunities lead to rewarding careers as officers in the Navy or Marine Corps.

Four-Year Scholarship Program—This program educates and trains qualified young men and women for active duty as reserve officers in the Navy or Marine Corps.

Scholarship recipients are chosen by a national selection board and must be accepted by the University. The application deadline is December 1 for enrollment the following fall quarter.

Navy option scholarship students must successfully complete one year each of calculus and calculus-based physics before their junior year. In addition, they must successfully complete one quarter of the calculus requirement before the end of their freshman year. Marine Corps option scholarship students



A midshipman reviews the polar coordinate system for celestial navigation.

have a slightly different sequence of naval science courses and are not required to fulfill the calculus or physics requirements.

Scholarship students are required to complete three summer training periods, for which they receive training pay. After completing naval science requirements and earning a bachelor's degree, students are commissioned as officers in the Naval or Marine Corps Reserve and serve on active duty for a minimum of four years.

Students already enrolled in the college program may apply for the scholarship program if nominated by the professor of naval science and selected by the chief of naval education and training.

Navy Nurse Corps Scholarship—Four-year scholarships are available to students planning to pursue the bachelor of science degree in nursing (B.S.N.). Upon graduation, these students are commissioned as reserve officers in the Navy Nurse Corps. Eligibility and selection procedures are the same as for the regular four-year NROTC scholarship program.

Four-Year College Program—This program is for students who wish to serve their country as reserve officers in the Navy, Marine Corps,

or Navy Nurse Corps. Participants are University freshmen selected by the professor of naval science.

There are almost no restrictions on undergraduate academic courses students may choose, provided they can be applied to a bachelor's degree. Students must complete the basic (freshman and sophomore) and advanced (junior and senior) naval science course sequences and certain University courses before graduation. College program students are *not* required to fulfill the calculus and physics requirements that apply to the scholarship program. Instead, they may take any college-level math course and any science course. In addition, students attend a summer training cruise between their junior and senior years.

After graduation and completion of their naval science requirements, students are commissioned as ensigns in the Naval Reserve or second lieutenants in the Marine Corps Reserve and serve on active duty for a minimum of three years.

Two-Year Scholarship Program—This program provides the same NROTC benefits to college juniors and seniors as the four-year

scholarship program. To qualify, applicants must have a 2.50 cumulative GPA. Navy option applicants must have successfully completed one year of calculus and must complete one year of calculus-based physics before graduation. Interested students should apply before March 1 of their sophomore year. Selected students must complete a six-week course of instruction at the Naval Science Institute (NSI) in Newport, Rhode Island. Following NSI, students enroll in the NROTC advanced course. Commissioning as a Navy ensign or Marine Corps second lieutenant follows successful completion of the program and carries an obligation to serve four years of active duty.

Two-Year College Program—Students attending or transferring to the University should apply to the two-year college program before March 1 of their sophomore year. Students selected must attend a six-week course of instruction at the Naval Science Institute (NSI) in Newport, Rhode Island.

Upon return to the University, they enroll in the college program advanced course. After graduation and commissioning, students incur a three-year active duty obligation. Any student finishing near the top of the NSI class may be offered a two-year NROTC scholarship. This includes full tuition plus the other scholarship program benefits, and also incurs a four-year active duty obligation.

Naval Science Institute (NSI)—Students selected for either of the two-year programs attend the Naval Science Institute (NSI) in Newport, Rhode Island, following their sophomore year. NSI provides a six-week course of instruction in naval science and professional training. While at NSI, students receive pay, uniforms, room and board, and transportation. Successful completion of NSI qualifies students to enroll in the NROTC advanced course.

Summer Training—NROTC offers exciting training opportunities. Each summer, NROTC midshipmen train around the world at Navy and Marine Corps bases and aboard U.S. Navy and allied foreign navy vessels of all types. Scholarship students participate in four to six weeks of training each summer while college program students attend training during the summer between their junior and senior years.

Cross-Town Agreements—Students who attend certain Twin Cities metro area colleges and universities are eligible to participate in any of the University of Minnesota NROTC programs and earn commissions as Navy or Marine Corps officers.

Curriculum

The naval science curriculum covers basic seamanship to fleet operations and provides intensive education in the art and science of being a naval officer. All midshipmen learn about the background and meaning of our national and naval traditions and the importance of professional and ethical performance. This awareness, combined with the opportunity to develop and practice basic leadership principles, affords them the inner confidence necessary to effectively lead others and assume the responsibilities of a Navy or Marine officer.

Midshipmen take the course sequence described below. During the second and third years, they take either the Navy or Marine Corps sequence. In addition to the specified courses, students attend NROTC professional training for two hours each week. During the junior and senior years, these sessions emphasize command and leadership skills. NROTC students must also take certain University courses specified by the Navy. Mgmt 3001—Fundamentals of Management is required during the senior year for Navy midshipmen.

Students register for NROTC courses in the same manner as for other courses in their academic programs. These courses carry academic credit and may be used to fulfill University degree requirements. Students who are not in the NROTC program may enroll in a naval science course as an elective with the instructor's consent.

Naval Science (Nav) Course Descriptions

All NROTC Students—Each Year/Each Quarter

Nav 0204. Professional Training in Naval Science. (1 cr; prereq enrolled in NROTC; S-N only)

Instruction and training in basic military subjects and professional development, including military leadership, close order drill, marksmanship, honors and ceremonies, personnel inspections, and computer-based war game simulations. Classes and small group seminars on leadership and ethics issues and case studies.

All NROTC Students—First Year

Nav 1101f. Fundamentals of Naval Science I. (2 cr; A-F only)

Navy and Department of Defense organization, naval history and seapower, customs and traditions, officer and enlisted rank and rating structures, uniforms and insignia. Core values of the naval services introduced in the context of military discipline, Navy regulations, and the Uniform Code of Military Justice.

Nav 1102w. Fundamentals of Naval Science II. (2 cr)

Emphasis on the mission, organization, and components of the Navy and Marine Corps. Officer communities, vessel and naval weapons types and characteristics, shipboard duties, seamanship, damage control, and safety. Major challenges facing today's naval officer.

Nav 1103s. Seapower and Maritime Affairs. (3 cr, §Hist 5021, §Hist 5022)

Historical influences on the development of the U.S. Navy from the American Revolution to the present. Examination of several critical, contemporary issues in naval/maritime affairs.

Naval Science—Second Year

Nav 3301f. Naval Engineering I. (2 cr)

Basic thermodynamics, main steam cycle, conventional fossil fuel propulsion systems, and nuclear power. Internal combustion engine and gas turbine fundamentals.

Nav 3302w. Naval Engineering II. (2 cr)

Auxiliary ship support systems. Basic electrical theory and shipboard electrical distribution systems. Ship construction, stability, buoyancy, and compartmentation. Shipboard damage control.

Nav 1203s. Seamanship and Ship Operations. (3 cr; prereq #)

International nautical rules of the road, seamanship, tactical maneuvering and signaling. Relative motion and ship maneuvering. Application of the maneuvering board in solving motion problems.

Marine Corps Sequence—Second Year

Nav 3352f. Evolution of Warfare I. (2 cr; prereq #)

Principles of war. Case studies illustrating art and concepts of warfare from 3500 B.C. through the French Revolution. Interrelationships among political, strategic, operational, tactical, and technical levels of war.

Nav 3353w. Evolution of Warfare II. (2 cr; prereq #)

Case studies illustrating military technology and theory from the Industrial Revolution through the armistice preceding World War II. Interrelationships among political, strategic, operational, tactical, and technical levels of war.

Nav 3354s. Evolution of Warfare III. (2 cr; prereq #)

Case studies illustrating evolution of the art and science of warfare from World War II through Operation Desert Storm. Interrelationships among political, strategic, operational, tactical, and technical levels of war.

Naval Science—Third Year

Nav 1201f. Inland and Coastal Navigation. (3 cr)

Theory and practical knowledge of how to pilot a ship near land. Topics include coordinate systems, chart reading, dead reckoning, fixes, running fixes, tides, currents, and anchoring.

Nav 1202w. Celestial and Electronic Navigation. (4 cr; prereq trigonometry, 1201)

Theory and practical knowledge of positioning and navigation based on observing celestial bodies. Other advanced navigation techniques, including Global Positioning System (GPS). International nautical rules of the road.

Nav 3303s. Science and Technology in the Design, Contraction, and Use of Modern Weapons Systems. (4 cr)

Electromagnetic radiation, acoustics, and ballistics and techniques of applying them to modern naval weapons systems. Weapon propulsion, guidance, launching, command, control, and communications. Characteristics of several advanced weapons platforms.

Marine Corps Sequence—Third Year

Nav 3452f. Amphibious Warfare I. (2 cr; prereq #)

Origins of amphibious warfare through the Gallipoli campaign. Case studies illustrating amphibious warfare's characteristics, requirements, and problems.

Nav 3453w. Amphibious Warfare II. (2 cr; prereq #)

Development of modern amphibious doctrine. Amphibious warfare planning and operations from World War I through World War II. Case studies illustrating amphibious warfare's characteristics, requirements, and problems.

Nav 3454s. Amphibious Warfare III. (2 cr; prereq #)

Post-World War II amphibious operations; present-day concepts of amphibious operational planning. Case studies illustrating amphibious warfare's characteristics, requirements, and problems.

All NROTC Students—Fourth Year

Mgmt 3001f. Fundamentals of Management. (4 cr)

Leadership and management functions required to establish goals, policies, procedures, and plans. Motivation, planning and control systems, concepts of organizational structure and behavior. Fulfills Principles of Naval Management I requirement.

Nav 3402w. Principles of Naval Management II. (3 cr)

Practical management and leadership for the junior officer. Ethics and core values of the naval services. Case studies and problems in leadership, ethics, management, and professional development.

Nav 3403s. Principles of Naval Management III. (2 cr)

Practical knowledge for the junior officer. Ethics and core values of the naval services. Case studies and exercises in administration, leadership, and personnel management. Officer programs and professional development.

Aerospace Studies (Air Force ROTC)



The Air Force ROTC (AFROTC) program enables qualified men and women to work toward commissions as officers in the Air Force while completing requirements for a University degree. Students are commissioned as second lieutenants upon graduation.

The AFROTC curriculum emphasizes development of leadership and communication skills. Students learn ways in which the Air Force supports national policy. Leadership theory and its practical application in directing personnel and programs are emphasized.

AFROTC courses are offered by the Department of Aerospace Studies. Students register for these courses in the same manner as for other University courses.

Programs

AFROTC offers four-, two-, and one-year commissioning programs. Under the four-year program students register for AFROTC courses beginning in their freshman year and complete a four-year academic curriculum that includes a four-week field training encampment between their sophomore and junior years. Students electing the two-year program complete the last two years of the AFROTC program after attending a six-week field training encampment during the summer immediately preceding their last two years at the University. The one-year program is specifically for nursing, law, and electrical engineering students. Other arrangements are possible on a case-by-case basis.

The vast scope of the Air Force is difficult to portray in the classroom; Air Force cadets have the opportunity to visit bases for firsthand observation of how the Air Force operates. These trips are frequently made on weekends or scheduled to coincide with school vacation periods. Cadets may be flown by military aircraft to an Air Force base to tour facilities, receive mission briefings, and inspect aircraft and other technical equipment.

Scholarship Programs

AFROTC offers many scholarships. These scholarships may cover full tuition, fees, and books plus a \$150 monthly, nontaxable allowance paid directly to the student. Three- and four-year scholarships are available on a competitive basis

to high school seniors. Scholarship recipients are chosen by a national selection board. Applications are usually available early each summer, with a deadline of December 1 for enrollment the following fall quarter. Two- and three-year scholarships are available for current and transferring college students on a competitive basis; requirements for these scholarships vary considerably by academic degree. Two- and three-year noncompetitive scholarships are available to outstanding minority students.

Each AFROTC detachment has one three-year scholarship available to the most deserving freshman in the program. AFROTC also offers a noncompetitive, two-year scholarship (open to all degrees) that pays \$2,000 per year for tuition, books, and fees plus the \$150 monthly, nontaxable allowance. For the most current information about scholarship options and requirements, call (612) 624-2884.

Admission

Entry into the last two years of the AFROTC program is on a competitive basis. Candidates must

- pass the Air Force Officer Qualifying Test (AFOQT).
- pass an Air Force medical examination.
- have a GPA of 2.00 or higher.
- pass a physical fitness test and meet weight standards.
- complete field training (a four-week course for the four-year program; a six-week course for the two-year program).

Applicants selected for flight training must be able to complete graduation requirements and be commissioned before reaching 26[1/2] years of age. Other applicants must be able to complete graduation requirements before age 30, although deserving students may obtain a waiver to complete the requirements up to age 35. *Note:* public law currently prohibits AFROTC from giving scholarships to individuals who will be 27 or older before they graduate unless they are veterans.

Admission to AFROTC academic courses is open to all interested students with the approval of the Department of Aerospace Studies.

Note: Applicants interested in the two-year program should apply during the fall quarter of their sophomore year.

Benefits

AFROTC offers students a challenging position in the U.S. Air Force immediately after graduation in their choice of career fields. All cadets receive uniforms and AFROTC textbooks free throughout the program. All scholarship recipients and all cadets in their last two years of AFROTC receive \$150 per academic month and may travel on any military aircraft (space-available status). All cadets also have the opportunity for orientation flights aboard Air Force aircraft and visits to Air Force bases.

Active Duty Requirements

Students not programmed for flight training incur a four-year active duty commitment. Those who enter the pilot and navigator programs incur a commitment of eight and six years active duty, respectively, after completing their training. Scholarship recipients who receive five years of scholarship benefits incur a five-year commitment.

Curriculum

The first two years of the aerospace studies course, General Military Course (GMC), consists of a one-credit course per quarter. The last two years, Professional Officer Course (POC), consists of a three-credit course per quarter.

In addition to the classroom study, all AFROTC cadets must complete 10 hours of Leadership Laboratory each quarter. Students taking the aerospace studies courses for academic credit only and not enrolled in AFROTC are exempt from the Leadership Laboratory requirement.

Course Descriptions (Air)

Any non-AFROTC University of Minnesota student can enroll in any of the academic courses with instructor approval.

All AFROTC Cadets—Each Year/Each Quarter

Air 1000. Leadership Laboratory. (1 cr; S-N only)
Air Force customs and courtesies; drill and ceremonies; issuing military commands; instructing, directing, and evaluating the preceding skills; career opportunities for commissioned officers. Planning and controlling cadet corps military activities; preparing and presenting briefings and other oral and written communications; providing interviews, guidance, and information to increase the understanding, motivation, and performance of other cadets.

Lower Division

Air 1104f. U.S. Air Force I. (1 cr)
Air Force customs, courtesies, and officership.

Air 1105w. U.S. Air Force II. (1 cr)
Overview of Air Force organization, installations, and basic communication skills.

Air 1106s. U.S. Air Force III. (1 cr)
Overview of military history. Teaches leadership principles through group leadership problems.

Air 1204f. Early History of Air Power and Written Communication Skills. (1 cr)
Beginnings of human flight; early military attitudes toward aviation; development of air doctrine and leaders who inspired it; uses of air power since WW I. Written Air Force communications.

Air 1205w. Development of Modern Employment of Air Power, Introduction to Leadership, Ethics, and Values. (1 cr)

Uses of air power from Cuban Missile Crisis through Vietnam War to the present. Collaboration/competition in group problem solving. Written communication review.

Air 1206s. Quality Air Force, Group Leadership Problems and Presentation Techniques. (1 cr)
Air Force concepts involving quality movement, principles, and practices in management styles. Review oral presentation styles; student briefings. Group leadership problems, developing creative problem-solving skills, brainstorming. Exploring effects of conflicting verbal and nonverbal communication cues.

Upper Division

Air 3301f. Air Force Communication and Leadership. (3 cr)
Air Force writing and military briefing skills. Leadership theory and applied leadership studies.

Air 3302w. Total Quality Management in the Air Force. (3 cr)
Commanding, counseling, officer professional development, establishing standards, ethics in military leadership. Introduction to the Quality Air Force (Total Quality Management).

Air 3303s. Air Force Management. (3 cr)
Role of officer as manager. Decision making, organizing, and staffing. Behavior processes.

Air 3401f. National Security Policy. (3 cr)
Examines U.S. foreign policy development and implementation. Develops military communication skills.

Air 3402w. Military Law and Service Orientation. (3 cr)
History and basic concepts of military justice; emphasis 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 officers.

Air 3403s. Air Force Roles/Active Duty. (3 cr)
Air Force issues, roles, and missions; preparing for active duty.