WEST POINT

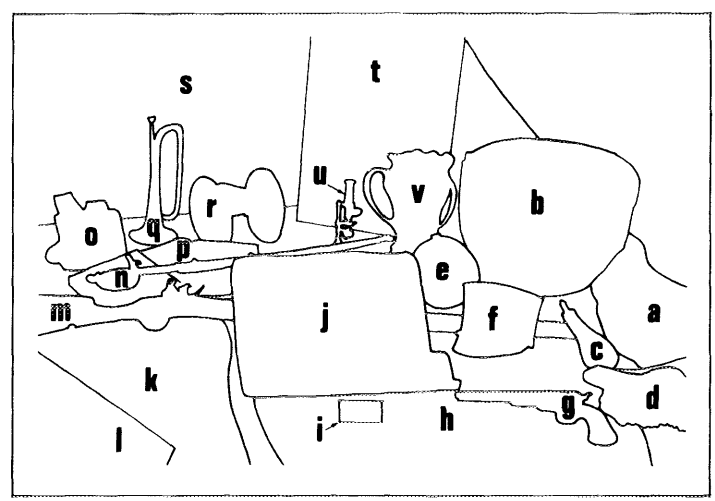
UNITED STATES MILITARY ACADEMY

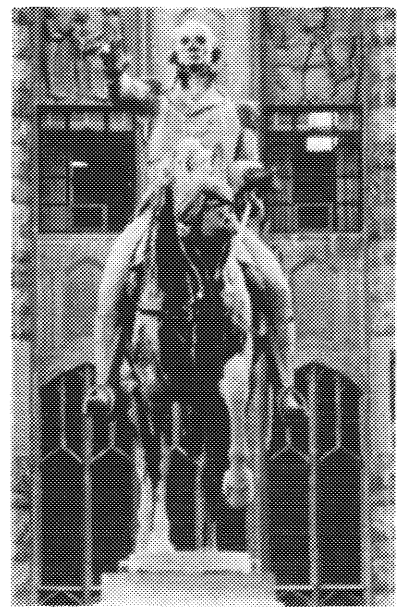
About The Cover

In this year of nationwide Bicentennial observations, Americans are re-establishing contact with their country's rich heritage. The artifacts featured on the USMA Catalog cover serve as poignant reminders of the roles West Point has played in America's history, first as a major Revolutionary War fortress, and then as a prominent college and training ground for national leaders.

On the cover are:

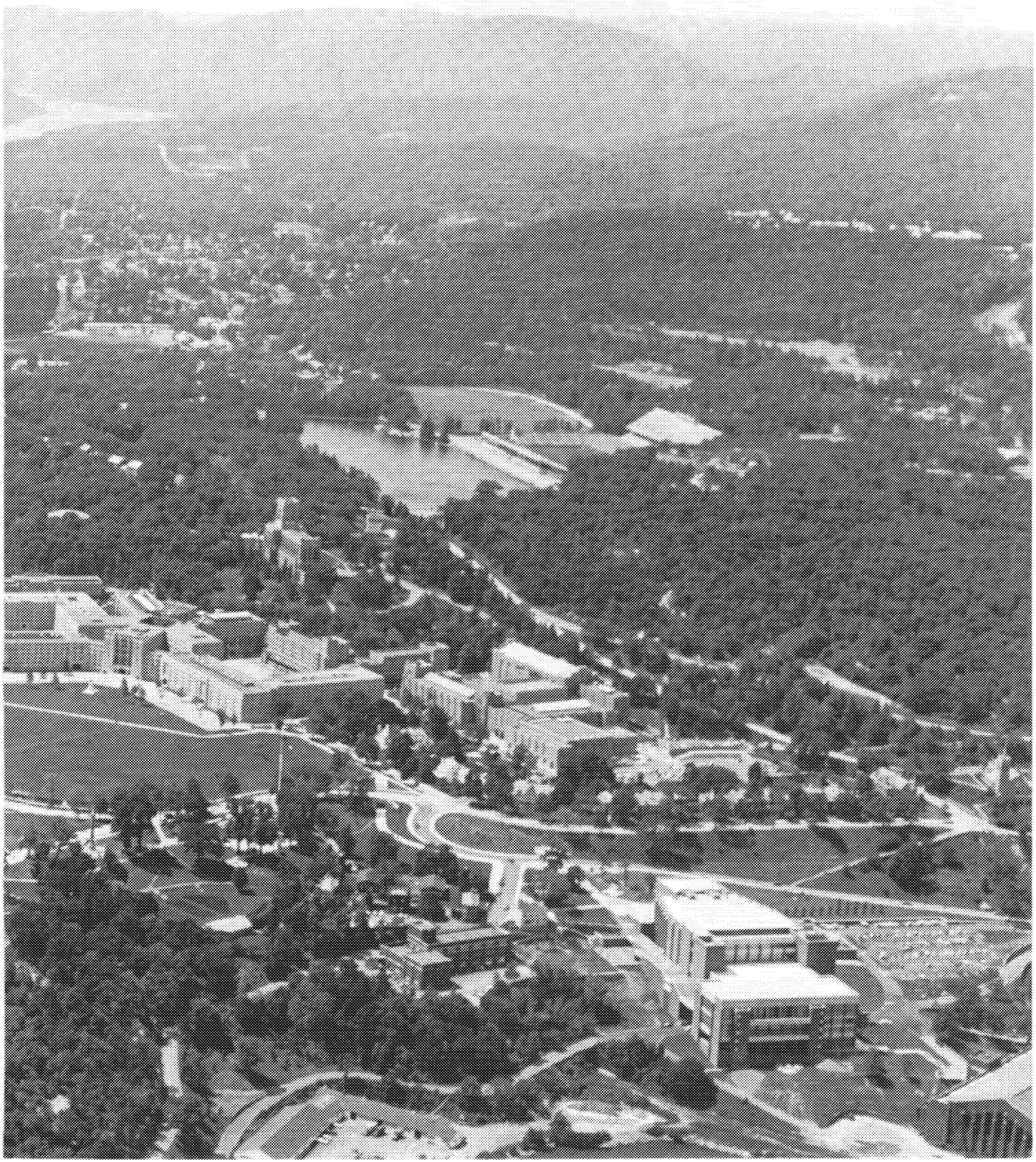
[a] *Grand Union Flag, first official American flag;*
[b] *British kettle drum captured at the Battle of Saratoga [1777];*
[c] *brass powder flask, 19th century;*
[d] *epaulettes worn by a lieutenant of engineers, ca. 1860;*
[e] *military canteen, ca. early 19th century;*
[f] *cadet full dress hat, ca. 1900;*
[g] pistol belonging to LTG John M. Schofield, USMA Superintendent [1876-81];
[h] saddle blanket worn by the Army Mule [official USMA mascot], *ca. early 20th century;*
[i] *class rings of Generals Douglas MacArthur and Dwight D. Eisenhower;*
[j] *Ulysses S. Grant's diploma;*
[k] *cadet full dress coat, ca. 1840;*
[l] *photograph of the USMA Class of 1871;*
[m] *Hessian musket captured at the Battle of Saratoga [1777];*
[n] *presentation sword of BG James B. McPherson, who fell during the Battle of Atlanta [1864];*
[o] *military cartridge box, Civil War;*
[p] *textbooks—which formed the nucleus of the USMA Library—purchased in France [1815-16] by COL Sylvanus Thayer, USMA Superintendent [1817-33];*
[q] Civil War bugle;
[r] *model cannon used in classroom artillery instruction at West Point, ca. Civil War era;*
[s] *painting of Federal artillery near Petersburg, Virginia [1864];*
[t] *Army football poster, ca. 1902;*
[u] *USMA student microscope, ca. 19th century;*
[v] *Army-Navy football trophy [1899-1902].*

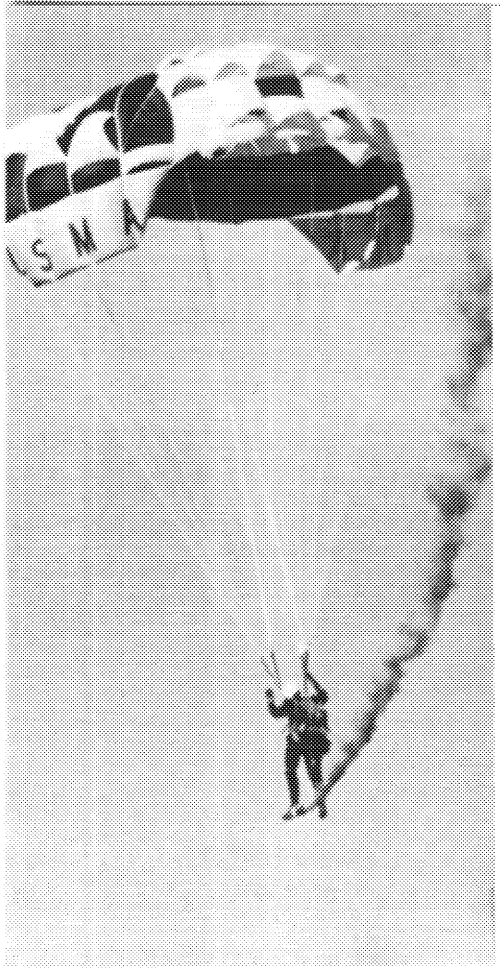




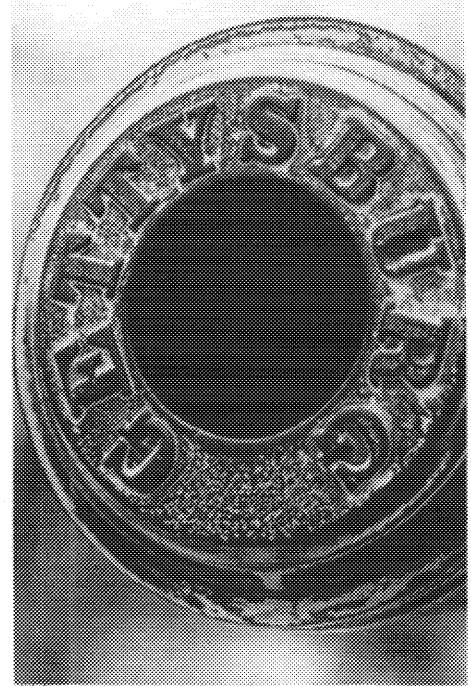
"The establishment of [a Military Academy], upon a respectable and extensive basis, has ever been considered by me as an object of primary importance to this country. . . ."

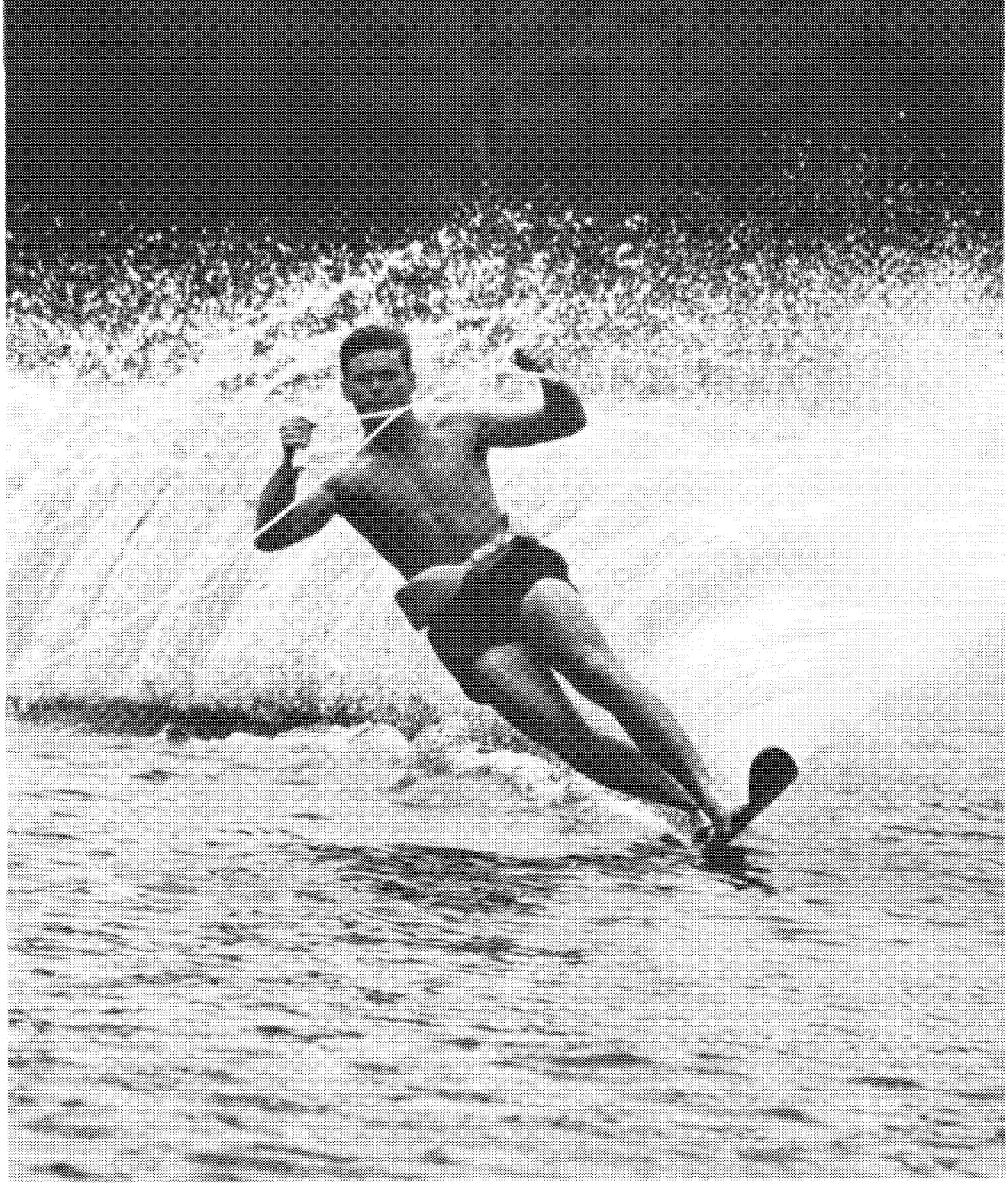
George Washington (two days before his death in 1799, in a letter to Alexander Hamilton)






BEAT NAVY
BEAT NAVY





West Point

UNITED STATES MILITARY ACADEMY

1975-1976 CATALOG

One Hundred Seventy-Fourth Year

A Special Place

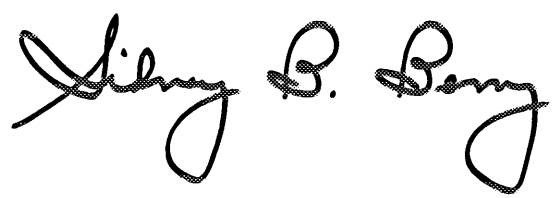
West Point is a special place.

During the American Revolution George Washington found West Point a strategic location and made it a key fortress. Early in Thomas Jefferson's presidency Congress established at West Point the United States Military Academy, the country's first and thus oldest service academy. Since 1802 West Point has given the country thousands of United States Army officers and public servants. Today the Academy is a vital part of our national defense and a major source of our nation's leadership.

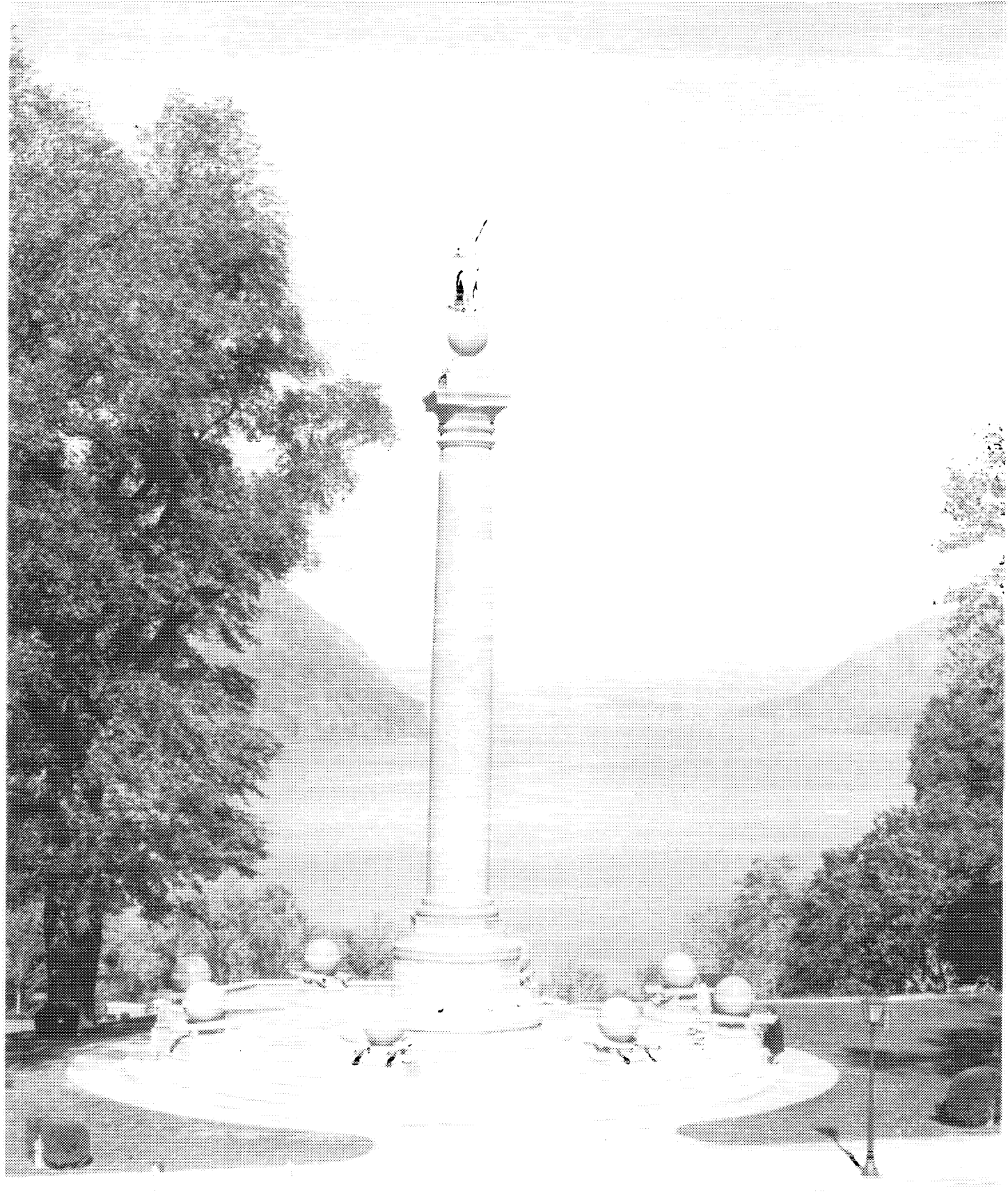
West Point offers qualified young men a special opportunity—a first-rate college education leading to varied, significant service. The Academy allows the individual to realize and develop his abilities in a wide variety of pursuits. Cadets undertake a gamut of studies and activities from biology to boxing, calculus to choir, history to hockey, literature to leadership, physics to parachuting. The West Point graduate is awarded a bachelor's degree and commissioned an officer in the United States Army.

The West Point experience provides a unique set of rewards. West Pointers acquire the strong sense of purpose, pride, and personal satisfaction that comes from meaningful service to others.

West Point is a special place. It may be for you.



SIDNEY B. BERRY
Lieutenant General, U.S. Army
Superintendent



Contents

I. Your Military Academy

You are interested in the possibility of a superior, fully funded education leading to service of your country as an Army officer. You may suspect that the popular, late-movie view of the West Point cadet aglitter in uniform, pivoting his way gracefully through parades by day and dances by night, is somewhat incomplete. Understandably, you want to know more about the United States Military Academy before making a decision about something as important as where to go to school. You are probably asking: what can I expect of West Point? What will West Point expect of me? What makes West Point unique?

THE ACADEMY'S PURPOSE

We will be frank. The nation has charged the Military Academy with educating and training professional officers for the Regular Army. This is exactly what we do. The Academy develops combat leaders with a sound basis for the intellectual growth essential to high-level responsibility.

SERVICE TO COUNTRY

What does this mean for you? It means you should be interested in the challenge of serving the nation as an Army officer. While we do not expect you to come here with your mind completely made up that you want to spend twenty or more years as an officer, commitment to the idea of service should be high among your priorities. Your experience here will not be a picnic in uniform. It cannot be if Army officers are to be able to react to stress and are to earn the respect of the men they command and the country they serve. The stakes are high, as they always are when a worthwhile goal is sought. If you are to be prepared for the rigors of commissioned service, then you will have to expect a number of demands on your time, a degree of pressure and stress, and some limitation of your personal freedom. In turn, the Academy will help you develop academically, physically, and as a leader.

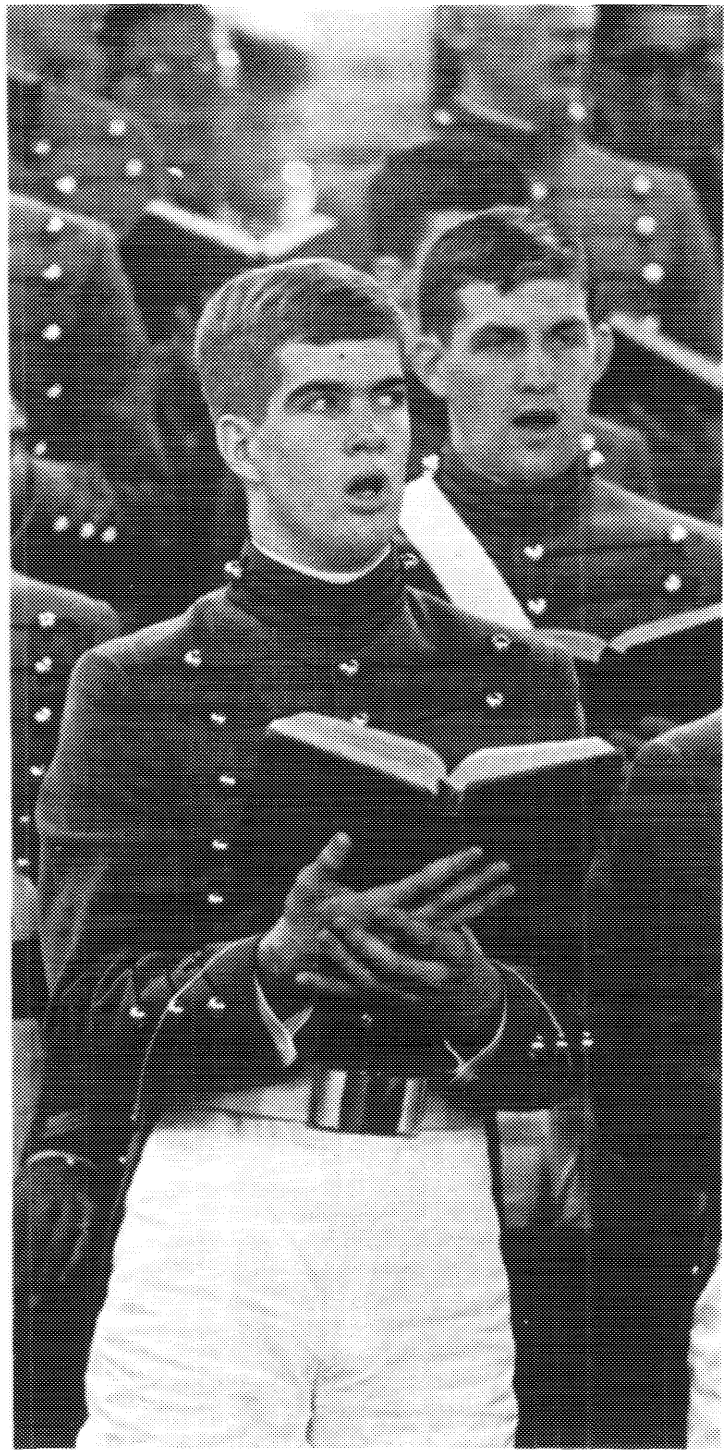
Education

The United States Military Academy thrives on the "whole man" concept. We are not interested in educating experts in the color vision of the tree frog. Instead, the Academy gives you the broad college preparation demanded by the military profession, helping you develop simultaneously on four fronts.

The academic curriculum will challenge you intellectually. Accredited by the Middle States Association of Colleges and Secondary Schools, West Point will provide you with a collegiate education in the arts and sciences, a Bachelor of Science degree, and a basis for future intellectual growth. A wide variety of physical and athletic programs will build your strength, endurance, and confidence. Extensive military training will thrust you into leadership within the Corps of Cadets, prepare you for the responsibilities of a junior officer, and form the basis for later professional development. Finally, the high sense of discipline, integrity, and loyalty within the Corps of Cadets will encourage devotion to "Duty, Honor, Country." The range of personal traits and abilities you will have at the end of four years will open the door to a rich array of opportunities for service and the satisfactions that come with it.

Army Opportunities

When you enter West Point you are also beginning a profession. Upon graduation you will be commissioned a second lieutenant in the Regular Army and will serve in the United States Army for at least five years in a variety of assignments. As many before you have discovered, two obvious features distinguish your professional life from that of most civilians—early responsibility and diversity. A second lieutenant sometimes finds himself responsible for more men, money, and sophisticated equipment in his



initial duty assignment than most civilians oversee in a lifetime. Each new assignment brings added responsibility—and increased satisfaction. You will never be locked into any single position long enough to grow stale. You will develop a degree of specialization in your basic branch of the Army—infantry, artillery, armor, signal corps, or engineer. Succeeding assignments will both draw upon and add to expertise in your branch. Other assignments augment service in your basic branch, helping you to broaden your perspective of the Army and its responsibility to society. Moreover, service within the United States is interspersed with experience overseas, allowing cross-cultural understanding. Service life demands versatility; variety of experience is the result. The Army is a place for a man of merit to make a significant contribution to his countrymen.

Non-Military Contributions

Clearly, military preparedness is the Army's main task. Yet Army officers have served in capacities as varied as a growing nation's needs. Because of the breadth of their education and leadership experience, Academy graduates have repeatedly been sought for high-level civilian leadership. Their number includes two Presidents: Ulysses S. Grant and Dwight D. Eisenhower. Others have been ambassadors, state governors, legislators, judges, cabinet members, educators, and corporation executives.

Early West Pointers ventured into the American West, exploring and mapping vast unknown regions before the settlers came. Captain Bonneville explored the Great Salt Lake and the Green, Snake, Salmon, and Yellowstone Rivers. Major Long's party explored the Platte, Arkansas, and Canadian Rivers. Others surveyed the Great Lakes and explored the source of the Mississippi. More recently, six West Point graduates reached out into space, among them Edwin (Buzz) Aldrin, second human to walk on the moon.

The academy itself was established in response to the need that emerged during the Revolution for qualified engineers. The first civil engineering school in the country (as well as the first public college), it remained the leading center of civil engineering instruction for dec-

ades. As one cadet explained to an Academy visitor in 1854, "We must get up early, for we have a large territory; we have to cut down the forests, dig canals, and make railroads all over the country." Paving the way for early communication and commerce, West Point engineers designed and built hundreds of railroads, canals, roads, harbors, lighthouses, water systems, and other improvements. Construction remains an important Army function; today, Army engineers can take credit for 20,000 miles of waterways, the Panama Canal, the Alaska Highway, some fifty hydroelectric plants, and hundreds of flood control projects.

The list of Army contributions to American society is long and by no means limited to the work of West Point graduates. It includes innovations in medicine and public health, aerotechnology and space flight, industry and technology, transportation, disaster relief, communication, and education. It includes planning and support of the Civilian Conservation Corps during the Great Depression. It includes racial integration of the Army in 1948 and subsequent equal opportunity hiring, affirmative action programs for minorities and women, and race relations training.

HISTORY: CHANGE WITHIN TRADITION

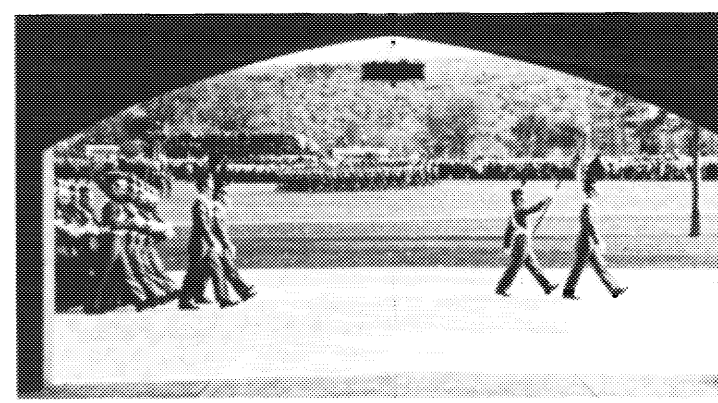
When you step into the United States Military Academy you become part of a tradition as old as the United States itself. The first of the service academies, West Point has trained leaders since its foundation in 1802. Yet the Academy has continually changed in response to the needs of the nation.

West Point's role in the nation's history dates back to the Revolutionary War, when both sides realized the strategic significance of the commanding plateau on the west bank of the Hudson River. To control the Hudson was to control an artery linking New England with the other colonies. George Washington had a hand in fortifying West Point in 1778, transferring his headquarters there in 1779. Continental soldiers built batteries, redoubts, and extended across the river a 150-ton iron chain to control river traffic. Fortress West Point remained a place the British could not capture. Even their attempt to buy it—from the tragic Benedict Arnold—failed.

Plagued by reliance on foreign drillmasters, artillerists, and engineers during the war, several soldiers and legislators—including Washington, Knox, Pickering, Hamilton, and John Adams—urged the creation of an institution devoted to the arts and sciences of warfare. Washington stated that such a school "has ever been considered by me as an object of primary importance to this country." President Jefferson signed legislation in 1802 establishing the Academy. The United States Military Academy at West Point opened on Independence Day of that year with ten cadets.

Colonel Sylvanus Thayer ("Father of the Military Academy") served as Superintendent from 1817-1833, establishing high academic standards. Mindful of the desperate need for engineers, Thayer made civil engineering the heart of the curriculum. He also emphasized small classes, regular study habits, and the requirement that every cadet must pass every course or make up his failure.

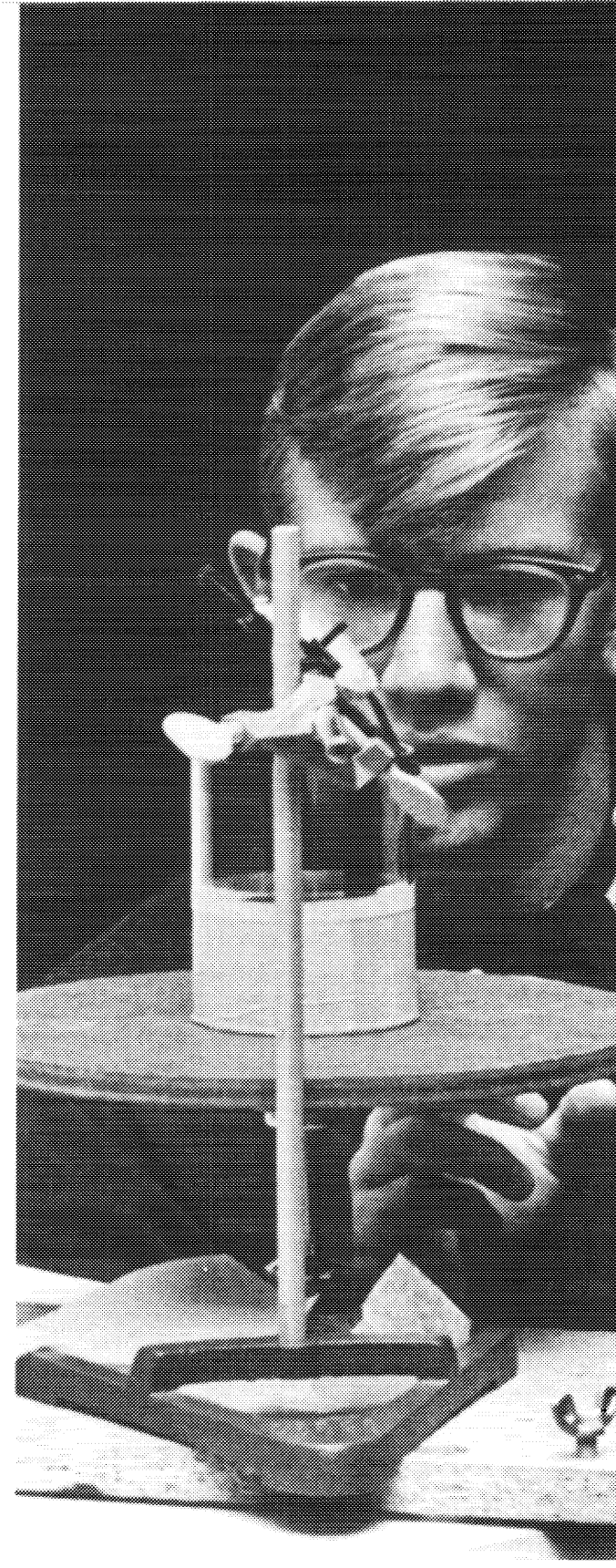
West Point graduates dominated the high commands of both sides during the Civil War, among them Grant, Sherman, Sheridan, Meade, Lee, Jackson, Ewell, Longstreet, and Jefferson Davis. The birth of other technical schools allowed West Point to drop its strict civil engineering emphasis in the postwar period. With the creation of Army post-graduate schools, the Academy came to be viewed as the first step in a continuing Army education. After the Academy's centennial in 1902 a gradual liberalization of the curriculum began. Courses in English, foreign languages, history, and the social sciences were strengthened or added.

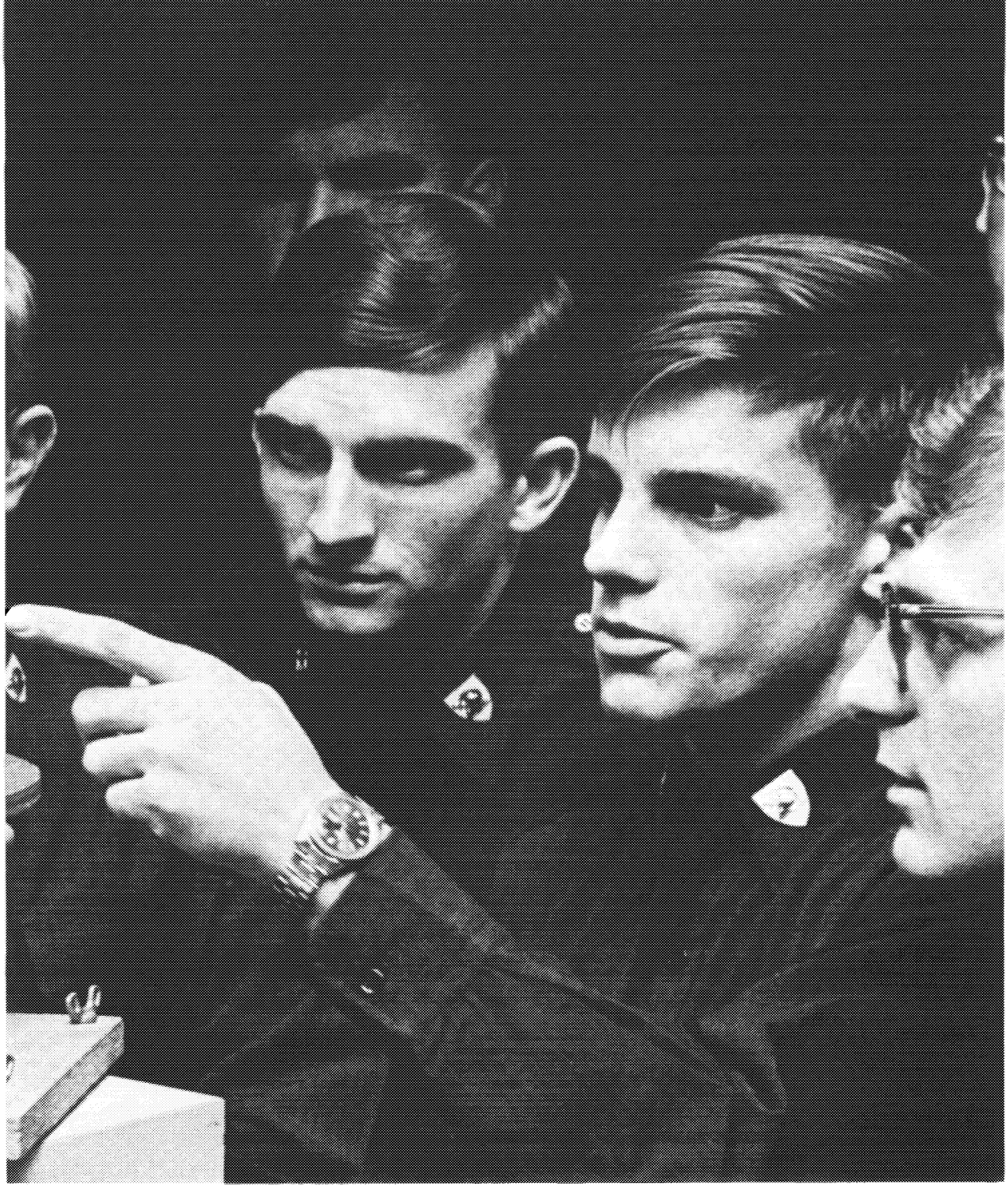


In World War I, Academy graduates again distinguished themselves on the battlefield. Thirty-four of the thirty-eight corps and division commanders in France at the end of the war were West Pointers, as was the commander of the American Expeditionary Forces, John J. Pershing. After the war, Superintendent Douglas MacArthur quickly reinstituted prewar academic standards. In recognition of the intense physical demands of modern warfare, MacArthur directed sweeping changes in the physical fitness and intramural athletic programs. "Every cadet an athlete" became the goal. The administration of the Honor System by the cadets themselves, long an unofficial tradition, was formalized with the creation of the Cadet Honor Committee.

Eisenhower, MacArthur, Bradley, Arnold, Clark, Patton, Stilwell, and Wainwright headed the list of Military Academy graduates who met the challenge of leadership in World War II. The postwar period brought explosive developments in science and technology; the increasing need to understand other cultures and the rising level of general education in the Army resulted in dramatic revision of the curriculum. The Academy began to supplement the basic courses with elective study programs, allowing cadets time to follow more specialized interests. In 1964, President Johnson signed a bill increasing the authorized strength of the Corps of Cadets from 2,529 to 4,417. A major expansion of facilities, to keep up with the growth of the Corps, began shortly thereafter.

Academic and military life at West Point have changed steadily over the years, along with the expansion of knowledge and the changing needs of the Army and the nation. Yet West Point remains linked to its illustrious past, true to the timeless Thayer philosophy—leadership with academic excellence and absolute personal integrity.





CADET LIFE

Daily life at West Point is full of opportunities for discovery and development.

Academic

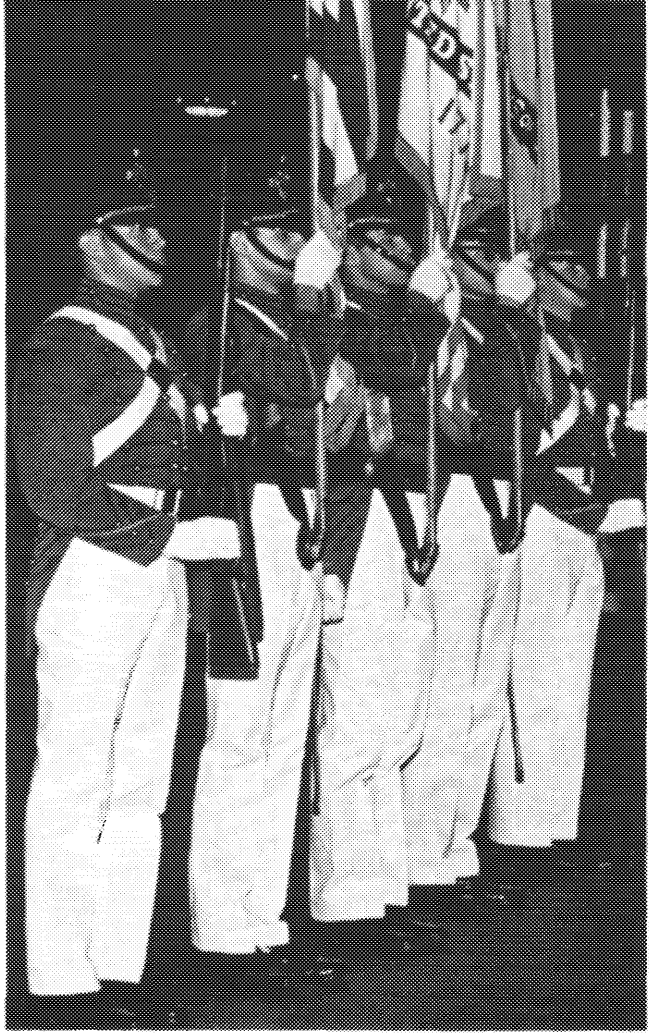
Requiring a minimum of six courses per semester, West Point's broad academic program is tough but not impossible. Many hours are set aside from a cadet's busy class schedule for study, tutoring, and counseling. Each cadet takes the core courses—42 of them—and may develop an area of concentration by choosing from the more than 150 electives offered.

Physical

Upon entering West Point you will suddenly find yourself an athlete—not an intercollegiate athlete, perhaps, but certainly one to be reckoned with in some of the 33 intramural and club sports. The Academy takes pride in what many consider the best athletic program in the country. All cadets participate in four standard physical education courses as well as intramurals.

Military

Let's be clear about this—although military training gets strongest emphasis during the summer, it pervades the four year experience at West Point. Military science courses are required each academic year as are uniforms, salutes, shined shoes, and other military traditions. Summer training ranges from rifle marksmanship to parachuting, from Ranger to Aviation School, from arctic training in Alaska to Jungle School in Panama. Each cadet spends one summer month leading Army soldiers in an active Army unit in Germany, Alaska, Panama, Hawaii, or the continental United States.



Leadership Development

Every cadet is a leader. There is perhaps more student government here than at any other college. The 4,000-man West Point student body, the United States Corps of Cadets, forms a brigade of four regiments. A cadet regiment consists of three battalions, each with three companies, for a total of 36 companies in the brigade. Cadets fill all officer and non-commissioned officer positions in the Corps. Each man not only leads but gets counseling and guidance in the techniques of leading. In addition, an evaluation system rates all cadets on leadership development. Cadets discover themselves organizing everything from a Plebe (freshman) hop to a platoon of enlisted soldiers in the active Army.

The Honor Code

A man's character speaks through all his words, thoughts, and actions. At West Point, strength of character is a prized possession. The Corps of Cadets expects and reveres honesty. The code cadets live by is simple—a cadet will not lie, cheat, steal, or tolerate those who do. Every cadet is responsible for following the code, reporting himself or another cadet for violations. The Honor System belongs to and is administered by the Corps of Cadets, through the Cadet Honor Committee. The exacting standards of the code are rigidly enforced; any intentional violation by a cadet becomes grounds for expulsion.

In short, a sense of honor is expected in all endeavors at West Point.

Typical Daily Schedule

Morning:

6:25	Breakfast formation
6:30- 7:00	Breakfast
7:50-11:50	Class or study
12:15- 1:00	Lunch

Afternoon:

1:05- 3:15	Class or Study
3:15- 6:00	Intramural/intercollegiate athletics, study time, parades, or extracurricular activities
6:15- 7:00	Dinner
8:00-11:00	Study Time
11:00	Taps
1:00	Late lights out

This schedule typifies a cadet's life during the academic year, September through May. Free time allows him to choose among 73 extracurricular activities, 20 intercollegiate sports, study, or just plain relaxing (depending, of course, on his class and privileges). Worship services and other religious activities are also available to the cadet. During the summer months, cadets take vacation and participate in military training.

Vacations and Free Time

The number of vacations ("leave") and the amount of free time a cadet has depend on his seniority as well as his academic and military performance. A First Classman (senior) gets approximately twice as many weekend leaves per semester as a Second Classman (junior). If an upperclassman ranks high militarily or academically, he may earn more free time. On the other hand, a Plebe (freshman) leaves the Academy only during the Christmas holidays, and on authorized athletic, extracurricular activity, or cultural trips. All cadets take Christmas and summer leave; upperclassmen also have spring leave.

Progressively greater amounts of free time allow cadets to be part of the collegiate subculture at the Academy and to mix with students from nearby campuses. Cadets find time to do most of the things other college students do, from simply talking over a cup of coffee, to skiing, dancing, or participating in some of the many extracurricular activities discussed in Chapter VIII.

Pay and Allowances

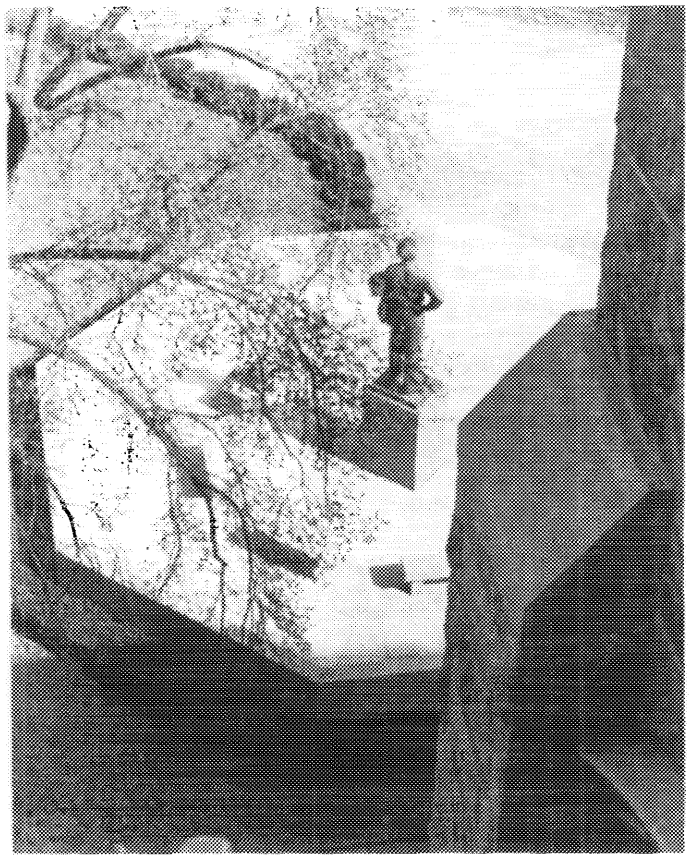
In addition to room, board, tuition, and medical care, cadets receive over $3,600 per year—one-half the basic pay of a second lieutenant. The cadet must pay for his uniforms and textbooks from this amount. As part of the Regular Army, cadets are entitled to a salary and Army benefits.

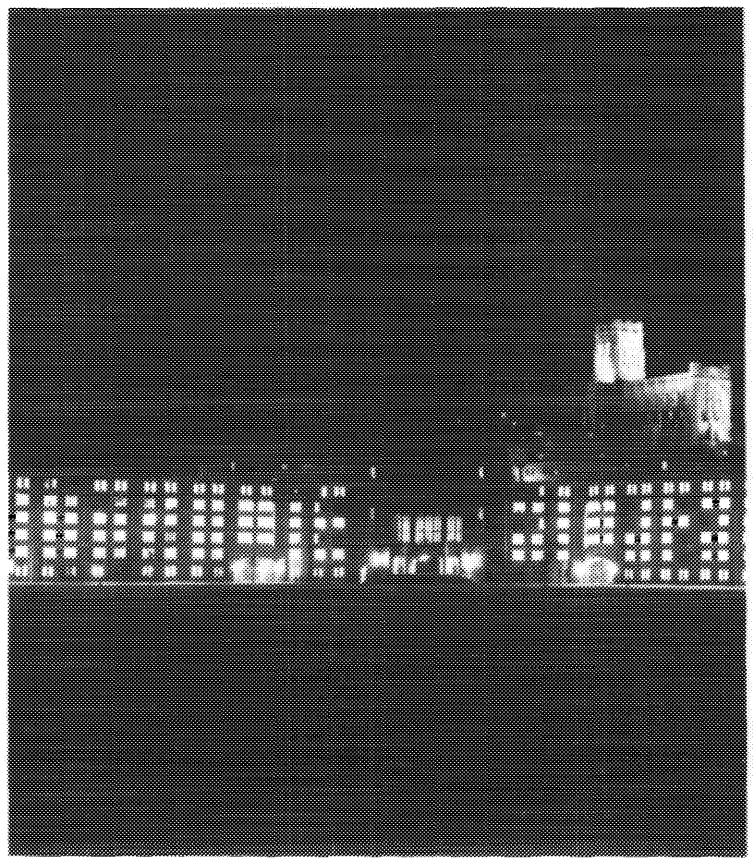
Counseling and Health Care

Academic, military, financial, and other types of personal counseling are available for cadets at all times. Apart from this professional counseling, cadets can always seek advice from their peers in the cadet chain of command.

Professional legal advice and assistance are provided for all cadets by the Legal Assistance Officer, an Army lawyer.

Cadets receive complete medical and dental care. Frequent examinations insure continued excellent health. If hospitalization becomes necessary, cadets receive treatment in the well-equipped West Point Hospital or at facilities such as the renowned Walter Reed Army Hospital in Washington, D.C.





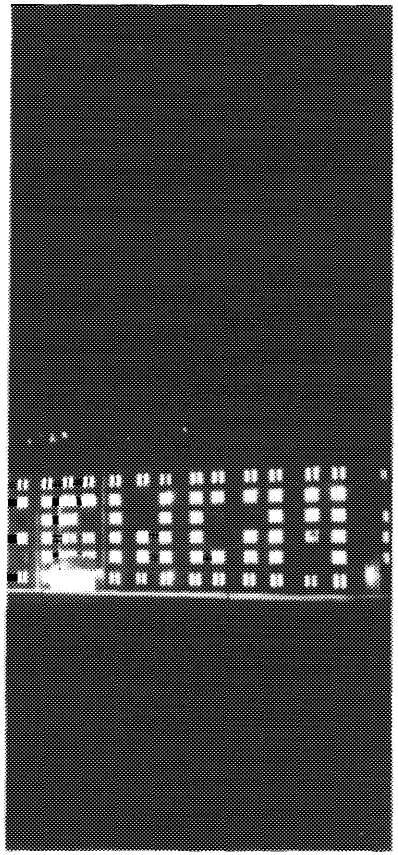
ACADEMY FACILITIES

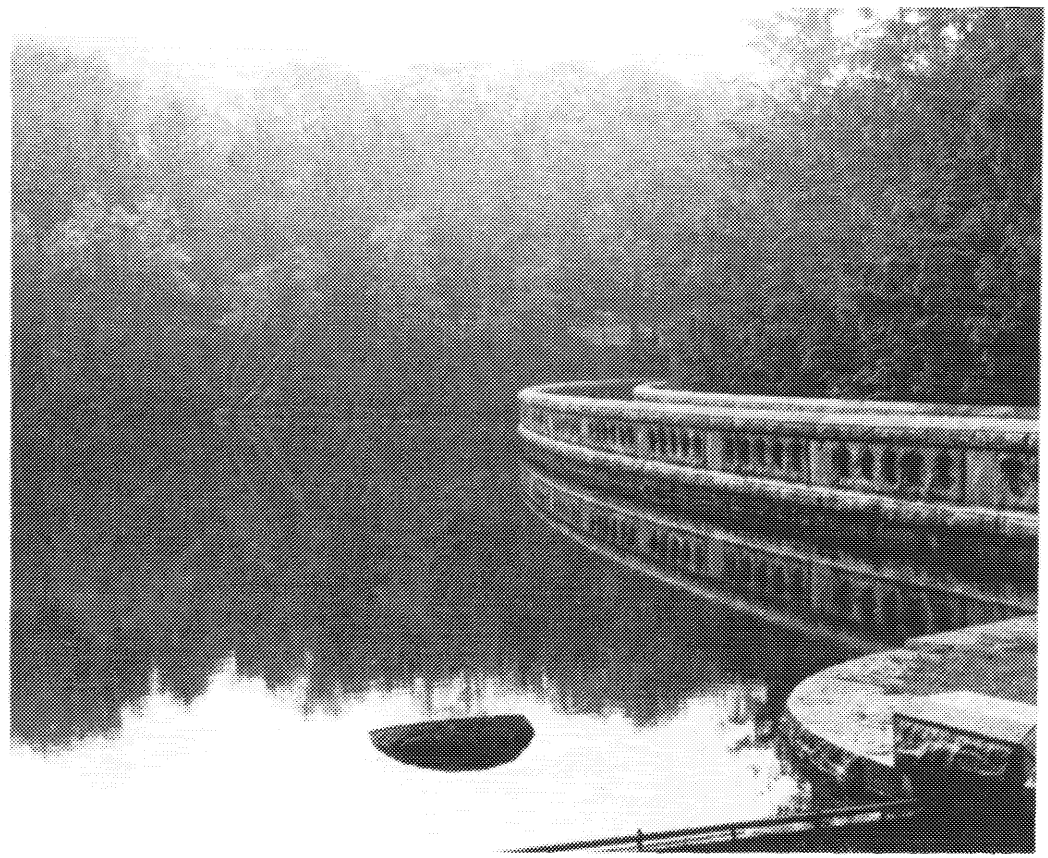
The Academy reservation covers approximately 16,000 acres of Orange County, New York, 50 miles north of New York City. Framed by the Hudson Highlands and poised above the Hudson River on its historic West Point, the massive Gothic structures of the campus blend with the rugged beauty of the surrounding hills.

The hub of the cadet area is Washington Hall, dining hall and headquarters of the Corps of Cadets. Radiating like spokes from Washington Hall are cadet barracks. Over half of the two-man, dormitory-style rooms are only seven years old. Older rooms have been completely refurnished.

Some academic departments, classrooms, and laboratories are right in Washington Hall. Others are located in Thayer, Bartlett, and Mahan Halls adjacent to the cadet barracks. A riding hall in early days, Thayer Hall also houses a computer center, television studio, two large auditoriums, and the Academy Museum. Nine-story Mahan Hall was completed in 1972. Within the academic area, the Cadet Library contains 400,000 volumes, reading rooms, seminar rooms, microfilm and audio-visual facilities, and rare book collections.

West Point's modern academic facilities are matched by its athletic facilities. The gymnasium building embraces five gyms, with a sixth under construction, and three swimming pools including a new Olympic-sized pool. Varsity and intramural athletes display their prowess in a football stadium, hockey rink, field house, or on a baseball diamond, rubberized track, or indoor





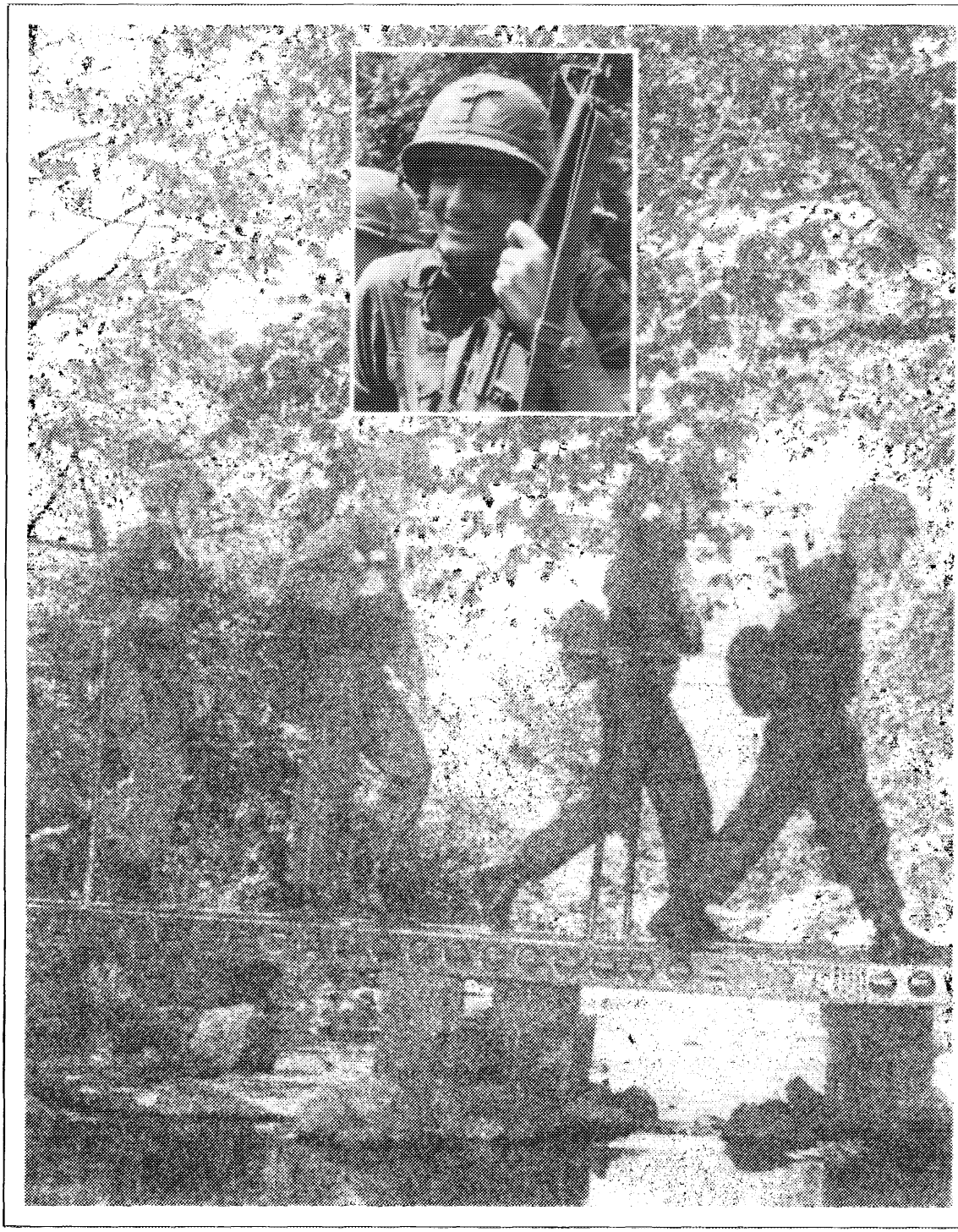
rifle and pistol ranges. There are a number of other athletic fields as well as a ski slope, golf course, multiple tennis courts, and outdoor swimming pools.

Southwest of the campus the reservation's lake-dotted forest provides an extensive military training and recreational area. Camp Buckner and Lake Frederick are nerve centers for field exercises of all descriptions: infantry, engineer, signal, and field and air defense artillery. Members of the West Point community hunt, fish, swim, and hike on the reservation. In addition, Army reserve components perform field exercises, Scouts and other civilian groups camp and hike, and local townspeople enjoy exclusive recreational use of Long Pond, a picturesque lake.

Three separate chapels provide a variety of religious services: Protestant, Catholic, and Jewish. The Cadet Chapel houses the world's largest church organ.

A number of facilities exist just for fun. The recently opened Cadet Activities Center, Eisenhower Hall, contains a 4,500-seat auditorium, a 1,000-seat snack bar, a large ballroom overlooking the Hudson, and a spacious reception foyer for cadets and guests. Grant Hall, Cullum Hall, and the First Class Club provide additional snack and lounge facilities.

The Visitors Information Center and government-owned Hotel Thayer, both just inside the south gate, also help to accommodate the hundreds of thousands of guests who visit West Point each year.



II. The Army as a Profession

Entering the Military Academy is but the first step in a demanding—and rewarding—profession.

The Army officer leads, teaches, guides, builds, counsels, learns—at home and abroad. He works with men and ideas. Responsibilities and satisfying experiences increase with each assignment. He must take in stride the subtle challenge of motivating men to do their best, the complexity of sophisticated weapons systems, and, as he advances to higher levels of leadership, the international implications of some of his decisions. As an officer you will make use of abilities you didn't know you had.

The satisfactions of service are deep. In America, the Army was one of the first professions to judge a man by his abilities rather than by his social class. A man with imagination and talent can still go a long way. Continuing military and civilian education alternate with on-the-job experience, insuring growth. Many new lieutenants are pleasantly surprised by the quick warmth and camaraderie of neighbors at the typical Army post; shared experiences forge strong personal bonds. Most importantly, a sense of pride comes with being part of the world's finest Army.

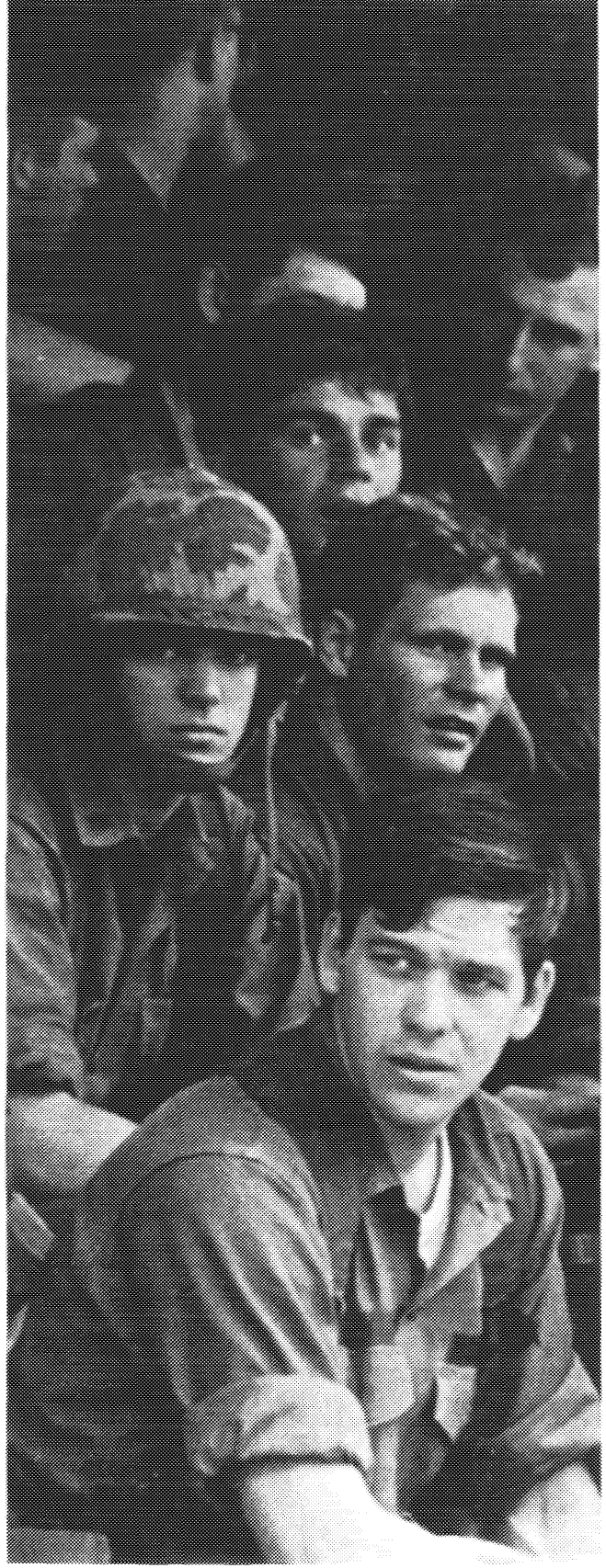
AFTER GRADUATION—WHAT THEN?

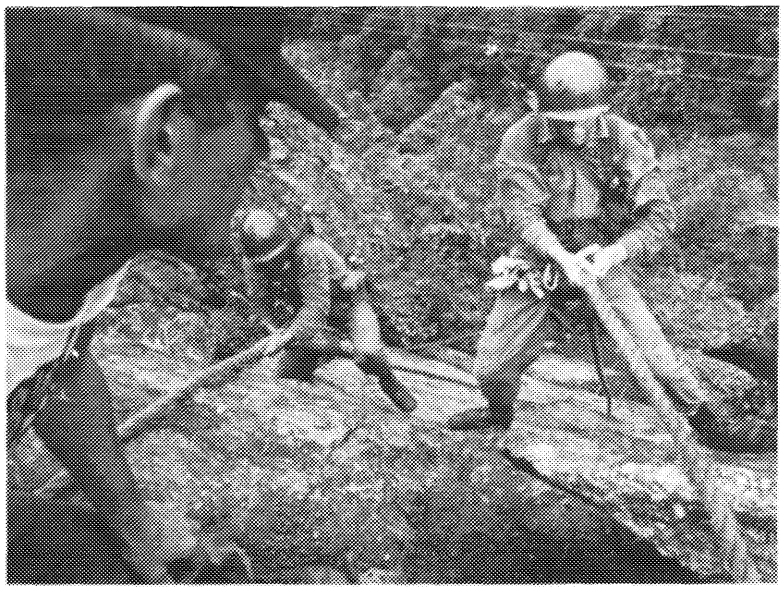
Upon graduation you will be commissioned a second lieutenant in the Regular Army, serving a minimum of five years. Your first duty assignment will put you to the test at platoon and company level leadership. You may work as an artillery forward observer, tank platoon leader, mechanized infantry platoon leader, or in one of 44 other specialty areas. Your preferences, past performance, and the needs of the Army are sifted carefully to determine the nature and locale of this assignment. For the requisite skills, tactics, and technological know-how you first attend your branch's basic course (in armor, infantry, field artillery, signal corps, engineers, or air defense artillery). Most lieutenants then elect specialist schooling, like Airborne or Ranger (commando) training. Throughout your first eight years, troop commands, staff positions, and instructorships are interspersed with additional education and training, both civilian and military. Some go to flight school after a sojourn in the field; all attend a branch advanced course to prepare for higher levels of responsibility and leadership.

ADVANCED PROFESSIONAL DEVELOPMENT

In your ninth to fifteenth years, assignments fan out into primary and alternate specialties, like communications-electronics engineering, atomic energy, education, or foreign areas. Professional patterns in the Modern Army have increasingly come to demand academic specialization. Eligible officers continue to a Staff College and civilian graduate schooling in their specialties; many Academy graduates remaining in the Army earn graduate degrees at civilian universities. Education and experience at this level prepare you for the highly rewarding later years which might find you working in the Pentagon, commanding an infantry brigade, serving as military attache in Moscow or London, or in charge of a professional school training hundreds of junior officers. Outstanding officers attend one of the War Colleges or a foreign equivalent. Many make creative contributions to thought and research on the defense implications of their specialties. Officers of highest excellence are singled out for the rank of general officer. They make their greatest professional contributions commanding divisions or larger units encompassing thousands of men and women, or participating in the highest policy councils of the nation.

It is no small responsibility to lead men in time of national emergency and to guard the nation's readiness in time of peace. Life as an Army officer is full of challenge, satisfaction, and service to country and fellow man.





III. Admissions

Every year the United States Military Academy selects approximately 1,400 young men for admission. These new members of the cadet corps hail from all corners of the United States and represent nearly every race, color, religion, and culture in the country. Encouraged by West Point, this diversity of background helps insure each cadet a rich educational experience.

For a first-hand view of cadet life, try to pay the Academy a visit. Tours and talks with cadets will be arranged if you contact the Admissions Office, USMA, before arriving (phone 914-938-4041). Daily tours of the Academy, for young men interested in admission who are at least high school juniors, start from the Admissions Office (third floor, Building #600, Headquarters) at 10 A.M. Monday through Friday. Saturday tours begin at 11 A.M. If a trip to the Academy is not possible, you could arrange for a cadet speaker to visit your high school or group. Write to the Cadet Public Relations Council, Admissions, USMA, West Point, NY 10996.

To become a cadet you must meet certain general requirements specified by public law and you must be qualified academically, physically, and medically. In addition, each candidate must obtain a nomination from a member of Congress or from the Department of the Army in one of the service-connected categories described later in this chapter.

How to Apply for Admission

Candidates should follow the step-by-step procedure guide below. Each step listed is expanded in the remainder of this chapter.

PROCEDURE GUIDE:

1. *See if you meet general requirements and qualifications*
2. *Start a file at West Point*
3. *Apply for a nomination*
4. *Take ACT or SAT exam*
5. *Take Qualifying Medical Exam*
6. *Take Physical Aptitude Exam*
7. *Fill out USMA forms*
8. *Await notification of acceptance*
9. *Apply to USMA Preparatory School (If in doubt of acceptance or not admitted.)*
10. *Prepare for entrance to USMA*

* * * * * * *

See if you meet general requirements and qualifications

General Requirements
Each Candidate must:

- ☐ be 17 to 22 years of age by July 1 of year admitted.
- ☐ be a male U.S. citizen at time of enrollment (exception: foreign students nominated by agreement between U.S. and another country).
- ☐ be unmarried.
- ☐ be trustworthy, emotionally stable, and motivated.

Academic Qualifications
Each candidate should have:

- ☐ an above-average high school or college academic record.
- ☐ strong performance on the American College Testing (ACT) Assessment Program exam or the College Board Admissions Testing Program Scholastic Aptitude Test (SAT).
- ☐ recommendations from the principal, counselors, teachers, or other officials who can judge the applicant's character and academic potential.

Although West Point does not require a specific number of courses or units of study, recommended areas of preparation are: four years of English—composition, grammar, literature, speech; four years of math—algebra, plane geometry, intermediate algebra, trigonometry; two or more years of a foreign language; two years of laboratory science—physics, chemistry, or biol-

ogy; a standard American history course; and courses in geography, government, economics, and European history are helpful. College courses taken prior to entrance to West Point may be substituted for similar courses in the Academy curriculum (see "Validation" in Chapter IV).

Physical Qualifications
Each candidate should have:
- ☐ above-average strength, endurance, and agility.

- ☐ adequate performance on USMA Physical Aptitude Exam.

Medical Qualifications
Candidates must:
- ☐ be in good physical and mental health.
- ☐ pass a Medical Exam.

Start a file at West Point

West Point will start a candidate file for you upon receipt of your completed Prospective Candidate Questionnaire. You may receive this questionnaire from your inquiry to various USMA programs or by writing to Admissions, USMA, West Point, NY 10996, using one of the inquiry slips at Appendix D. After you complete the questionnaire, have your guidance counselor forward it to Admissions, USMA (NOTE: You must have a social security number—SSN—to establish a file).

Apply for a nomination

Before the Academy can consider a candidate for admission, he must be nominated for a cadetship by an authorized official. Cadetships are allocated by law to the Vice President; members of Congress; Congressional Delegates from Washington, D.C., Virgin Islands, and Guam; Governors of Puerto Rico, Canal Zone, and American Samoa; and to the Department of the Army. A nominating official may select up to ten young men to compete for each cadetship vacancy he may have. Apply for a nomination from each source for which you are eligible.

Congressional and Gubernatorial Cadetships

Vice President	**5**
100 Senators [5 each]	**500**
435 Representatives [5 each]	**2175**
Delegates in Congress from	
District of Columbia	**5**
Virgin Islands	**1**
Guam	**1**
Governor/Resident Commissioner of	
Puerto Rico	**6**
Governors of	
Canal Zone	**1**
American Samoa	**1**
TOTAL	**2695**

This format is intended as a guide. A separate letter must be sent to each Senator and Representative to whom you apply.

FORMAT
REQUEST FOR CONGRESSIONAL NOMINATION

Date _____

The Honorable _____
United States Senate
Washington, DC 20510

OR

The Honorable _____
House of Representatives
Washington, DC 20515

Dear Senator _____

Dear Mr. _____

I desire to attend the United States Military Academy and to be commissioned in the Regular Army. I respectfully request that I be considered as one of your nominees for the class entering West Point in July 1976.

The following data are furnished for your information:

Name: _____
Permanent Address: _____
Telephone Number: _____
Temporary Address and telephone number (if different from preceding):
_____
_____
Date of Birth: _____
High School: _____
Social Security Number: _____
Names of Parents: _____

I have/have not requested that a prospective candidate file be initiated for me at the West Point Admissions Office.

Sincerely,

The Vice President nominates from the United States at large. U.S. Senators and Representatives-at-Large nominate from their states at large. U.S. Representatives not elected at large nominate from their districts. The Washington, D.C. Congressional Delegate nominates from his district. Sons of civilians living in the Canal Zone and the Republic of Panama are nominated by the Governor of the Canal Zone. The Governor of Puerto Rico nominates a native-born Puerto Rican and the Puerto Rican Commissioner nominates five residents of Puerto Rico. Congressional Delegates from Guam and the Virgin Islands, and the Governor of American Samoa nominate sons of U.S. citizens or nationals living on their respective islands.

The nomination process can be lengthy—young men are usually interviewed and tested before being selected as nominees. Consequently, a candidate should apply for consideration as a nominee at least one year before he expects to be enrolled at the Academy.

Congressional nominating authorities specify to the Department of the Army the method of selecting candidates to fill cadetships. The most common methods are:

Congressional Competitor: A slate of nominees is submitted by the nominating authority. The Academy evaluates all nominees and ranks them according to their qualifications. The best qualified nominee is selected.

Principal with Competing Alternates: The nominating authority designates a principal nominee; alternates compete for the cadetship only if the principal nominee is disqualified.

Principal-Alternate: If the selected principal nominee is not fully qualified, each alternate is evaluated in the order designated by the nominating authority until one is found fully qualified.

Department of the Army Cadetships

The Secretary of the Army is annually allocated cadetships in the following categories:

Presidential	**100**
Enlisted Members of the Regular Army	**85**
Enlisted Members of the Army Reserve/ National Guard	**85**
Sons of Deceased and Disabled Veterans [approximately]	**10**
Honor Military, Naval Schools and ROTC	**20**
Sons of Persons Awarded the Medal of Honor	**Unlimited**

Appointments to vacancies are awarded to the best qualified candidates competing in each Army category. Detailed descriptions of the nomination categories and procedures follow.

This format is intended as a guide.

FORMAT

REQUEST FOR SERVICE-CONNECTED NOMINATION

(MUST BE SUBMITTED BY DECEMBER 15, 1975)

Date_____

Military Academy Branch
U.S. Army Military Personnel Center
DAPC-PAP-M
Alexandria, VA 22332

Dear Sir:

I request a nomination under the _____ category for the class entering the United States Military Academy in July 1976, and I submit the following data:

Name of Applicant: _____
Address: _____
Telephone Number: _____
Date of Birth: _____
Social Security Number: _____
Names of Parents: _____
Military Rank of Parent: _____
Service Number of Parent: _____
Component and Branch of Service of Parent: _____

Parent Retired or Deceased: (furnish date and copy of retirement or casualty report)

(Include a brief statement concerning the date, place and cause of death or the details of disability together with the claim number assigned to the veteran parent's case by the Veterans Administration [if appropriate].)

(Include a brief statement of the date and circumstances of the award of the Medal of Honor [if appropriate].)

Sincerely,

(Enlisted applicants are referred to AR 351-12, 10 June 1969.)

Presidential: Sons of career military personnel of the Army, Navy, Air Force, Marine Corps, and Coast Guard—active, retired, or deceased—are nominated through this category. The term "career" includes members of the Reserve Components currently serving eight or more years of continuous active duty, and Reserve retirees receiving either retired or retainer pay. Sons of Reservists retired while not on active duty are ineligible. An adopted son is eligible if adopted prior to his fifteenth birthday. A certified copy of the court order decreeing adoption must accompany the application. These nominations are administered by the Department of the Army Headquarters. Application for a nomination in this category should be made by writing to the Military Academy Branch, at the address shown on sample letter above, no later than December 15.

Regular Army: Active members of the Regular Army are nominated through this category. All Regular Army nominees are required to attend the USMA Preparatory School at Fort Monmouth, New Jersey, the year prior to entering the Military Academy. Active Army enlisted personnel should make application to the Commandant, USMAPS, in accordance with Army Regulation 351-12.

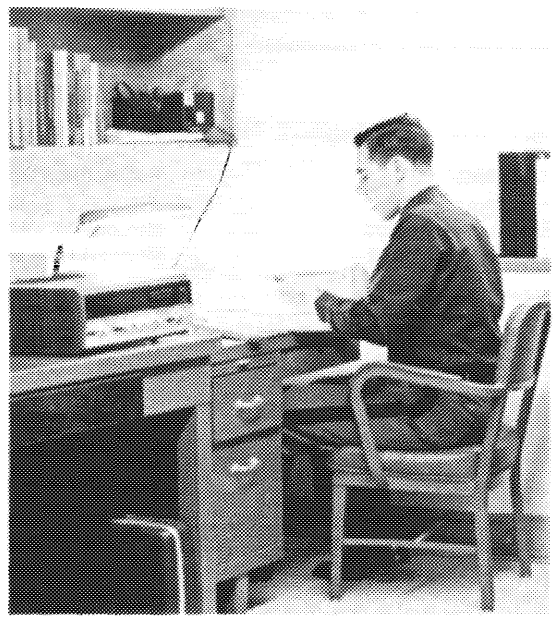
Army Reserve/National Guard: This category is for enlisted members of the Reserve Components and Army National Guard. Procedures are outlined in Army Regulation 351-12. Members not on active duty should apply by writing to the address shown on sample letter.

Sons of Deceased and Disabled Veterans: Nominations are made from among: sons of Armed Forces Veterans who are deceased or 100% disabled as a result of military service; sons of military personnel or federally employed civilians who are officially missing or captured. Apply by writing no later than December 15 to the address shown on sample letter.

Army ROTC: Candidates enrolled in a junior or senior Army Reserve Officer Training Corps program are eligible for nomination in this category. Contact the Professor of Military Science or Senior Army Instructor at your school and apply before December 15. Certain ROTC schools designated by the Department of the Army as Honor Units with Distinction may recommend three of their "honor graduates" for nomination. The best qualified candidates, without regard to schools, are then selected for enrollment. Application should be made through the Senior Instructor at your school prior to December 15.

Sons of Persons Awarded the Medal of Honor: All sons of persons awarded the Medal of Honor who seek admission and are fully qualified will be admitted. Using the format above, apply to the address shown by December 15.

Allied Countries: Young men from the Republic of the Philippines and American republics may be selected by their governments for admission. Requirements for enrollment, advancement from class to class, and graduation are the same as for young men of the United States. However, cadets from allied countries are not entitled to a commission in the U.S. Armed Forces upon graduation. The best qualified Philippine national will be selected for admission from among those nominated by the President of the Republic of the Philippines. Not more than 20 citizens of the American republics may be USMA cadets at one time. No country may have more than three cadets enrolled at the same time.



Take ACT or SAT exam

All candidates must take either the American College Testing (ACT) Assessment Program exam or the College Board Admissions Testing Program Scholastic Aptitude Test (SAT).

ACT

The ACT is given at test centers throughout the world. For information on ACT testing in your locale, consult any high school counselor or write directly to Registration Department, ACT Assessment Program, Box 414, Iowa City, IA 52240. To insure that West Point receives your test results, list the ACT college code number for USMA (2979) on your registration folder. If you are seeking a nomination by a member of Congress also record the special code number 7000 on your registration folder (once for each Congressman) and write to ACT, Records Department, Box 451, Iowa City, IA 52240, requesting that your score report be sent to your Congressmen. In your letter to ACT, give each Congressman's title, name and address; give your name, social security number, birth date, date of testing, and test center. It is your responsibility to see that West Point and your Congressmen receive your test results.

SAT

Candidates taking the College Board exam for admission are required to take the Scholastic Aptitude Test. Register seven weeks in advance to take the exam in one of the many examination centers throughout the world.

To take the examination apply to College Board Admission Testing Program, Box 592, Princeton, NJ 08540. For additional information, consult your guidance counselor. To insure that West Point receives your test results, list the CBATP college code number for USMA (2924) on the registration form. To report your scores to your Congressmen follow one of the procedures below. (1) Contact those Congressmen from whom you are seeking a nomination to obtain their CBATP code numbers. Record each Congressman's number on the registration form. (2) If any of your Congressmen do not have a specific CBATP code number, record 1000 on the registration form (once for each Congresman lacking a code). CBATP will forward your results to you in a sealed envelope. When you receive the results, you must then forward them, unopened, to the Congressmen. You are responsible for insuring that the test results are forwarded to West Point and your Congressmen.

ACT AND SAT TESTING DATES

AMERICAN COLLEGE TESTING (ACT) ASSESSMENT PROGRAM DATES 1975-76

Test Date	Registration Opens	Registration Closes
October 18, 1975	August 18, 1975	September 22, 1975
December 13, 1975	October 20, 1975	November 17, 1975
February 14, 1976	December 15, 1975	January 19, 1976

The FINAL DATE for taking the ACT Test for West Point is FEBRUARY 14, 1976

****

COLLEGE BOARD SCHOLASTIC APTITUDE TEST (SAT) DATES 1975-76

Test Date	Registration Closes	Late Registration Closes [Penalty]
November 1, 1975	September 26, 1975	October 10, 1975
December 6, 1975	October 31, 1975	November 14, 1975
January 24, 1976	December 19, 1975	January 2, 1976

The FINAL DATE for taking the SAT exam for West Point is January 24, 1976

****

If circumstances prevent completion of the SAT or the ACT tests by the indicated dates, the scheduled April 3, 1976, SAT may be accepted as a make-up exam. The candidate should register for the April 3 SAT (registration closes February 27; late registration closes March 12) and write Admissions, West Point, NY 10996, explaining why the testing was not completed by the required date.
Final admissions decisions will be made in April 1976 from the data then present.

Take Qualifying Medical Exam

All candidates planning to enroll in July 1976 must take a Qualifying Medical Examination between June 1, 1975 and July 1, 1976. One Qualifying Medical Examination meets application requirements of all service academies and all nominations a candidate receives. The Department of Defense Medical Review Board will schedule your exam and evaluate the results after you have started an admissions file. You will receive instructions for taking the Medical Examination directly from the Medical Review Board.

Minor disqualifying problems are automatically considered for waiver for the candidate who possesses outstanding overall qualifications. All inquiries about medical qualification should be addressed to Director, Department of Defense Medical Review Board, U.S. Academy, CO 80840.

Detailed USMA medical requirements are covered in Appendix B.

Take Physical Aptitude Exam

Your strength, endurance, and agility are measured by the Physical Aptitude Examination (PAE). The four physical events of this examination are described in Appendix C. You will receive scheduling instructions for completing the exam from USMA Admissions.

The exam you take will be good for any year you apply to West Point. However, a candidate is advised to retake the test if possible, for a higher score will improve his chances of appointment.

Candidates are advised to prepare for this examination by engaging in vigorous activities such as running, general conditioning exercises, and competitive games rather than by practicing specific test items.

The Air Force Academy Physical Aptitude Examination is an acceptable substitute for West Point's exam. If you take the Air Force Academy exam, have the results sent to the Director of Admissions at West Point.

Fill out USMA forms

You will be required to complete, or have completed by others, numerous administrative forms as you progress through your application process. Return promptly all forms you receive from the Military Academy Admissions Office and the Department of Defense Medical Review Board.

Await notification of acceptance

Notification is possible as early as October 15 for fully qualified, outstanding candidates who have completed all admissions requirements and received a nomination. Candidates wishing an early notification should write to Admissions, USMA, and should complete all testing by December 1.

Final admissions decisions will be made in April 1976 from the available data on each candidate. However, it is possible that a few candidates will not be notified of acceptance until shortly before entrance in July. Offers of admission are conditional from the time of offer to date of admission.

Apply to USMA Preparatory School [If in doubt of acceptance or not admitted.]

If you have any doubt about your chances for admission to West Point, request admission to the United States Military Academy Preparatory School (USMAPS) at Fort Monmouth, NJ. The ten-month school prepares selected young men for entrance to the Military Academy. You should bear in mind, however, that each preparatory school graduate must still compete with other candidates for admission to West Point.

The school is open to Army enlisted men on active duty and to civilians who are authorized by the Army's Military Personnel Center to enlist for the purpose of attending the school. Reservists may enroll in the prep school if authorized by the Military Personnel Center and if willing to serve two years in the active Army.

Application procedures depend on a candidate's status—military or civilian—prior to entry. Active Army applicants must follow steps outlined in Army Regulation 351-12. Army Reserve and National Guard personnel not on active duty should write to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Alexandria, VA 22332. Each civilian applicant should begin a file at West Point, indicating that he would like to attend USMAPS if not selected for admission to West Point. The best qualified students will be chosen for enrollment at the preparatory school. For further information on the USMA Preparatory School write to Commandant, USMA Preparatory School, Ft.Monmouth, NJ 07703; or to the Director of Admissions and Registrar, USMA, West Point, NY 10996.

USMAPS candidates must meet the general requirements for admission to West Point and be 17 to 22 years of age on July 1 of the year entering West Point.

Prep school students undergo intensive academic, physical, and military development. The academic program, which includes English and mathematics, is divided into two sections: the preparatory course and the advanced course. The preparatory course is a comprehensive review of high school English and mathematics: literature, basic writing and speaking, algebra, and geometry. The advanced course is an introduction to college level composition, American literature, plane and spherical geometry, solid and analytical geometry, and advanced and matrix algebra.

Rigorous physical training helps condition prep students for the athletic program at West Point. USMAPS currently competes in 11 varsity sports and offers 12 intramural sports.

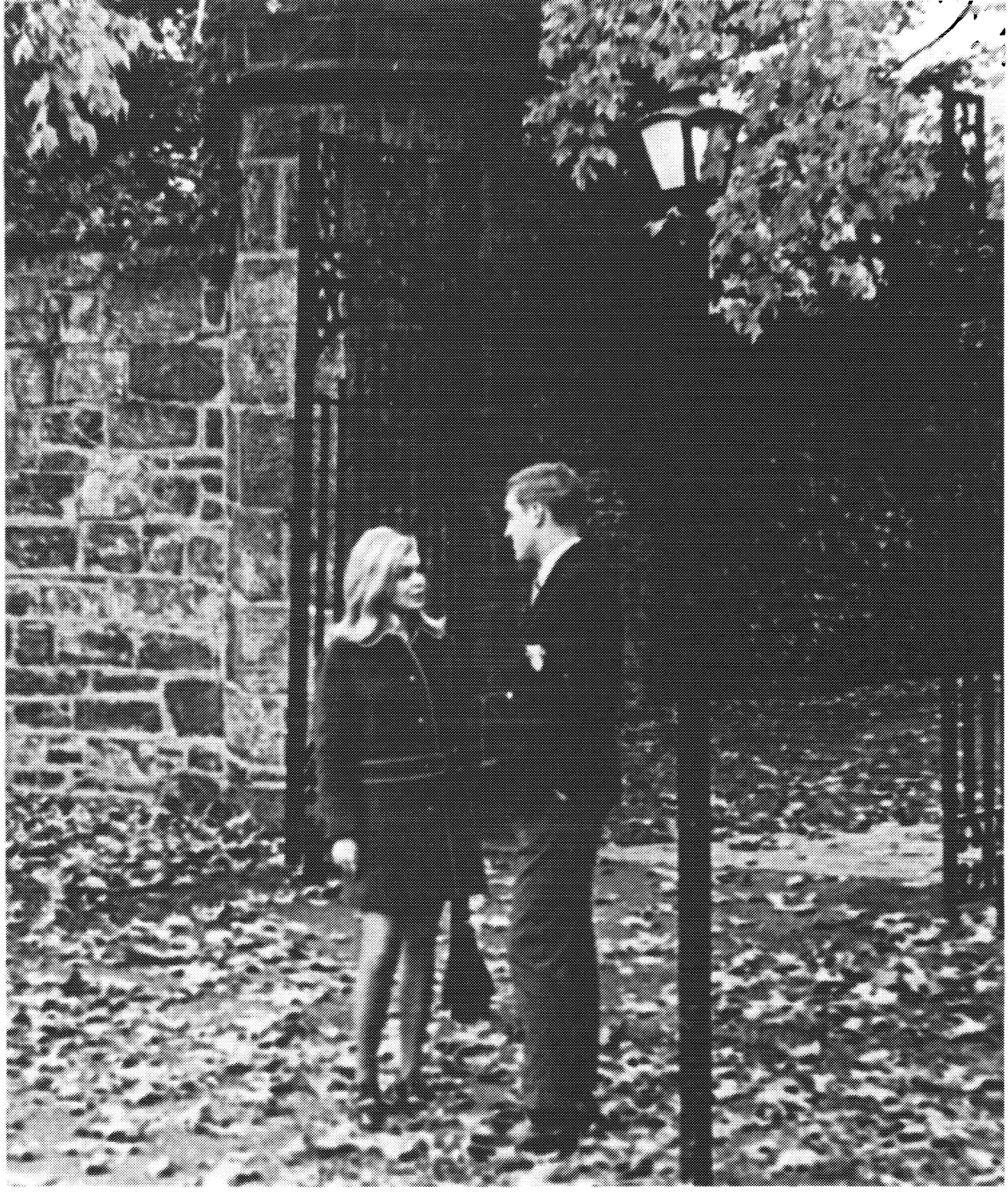
"Prepsters" get some formal military training, although most students have completed all or most of basic military training before entering USMAPS. Frequent counseling and an evaluation system which rates each student on his military, academic, and leadership performance, prepare prep school students for life at West Point.

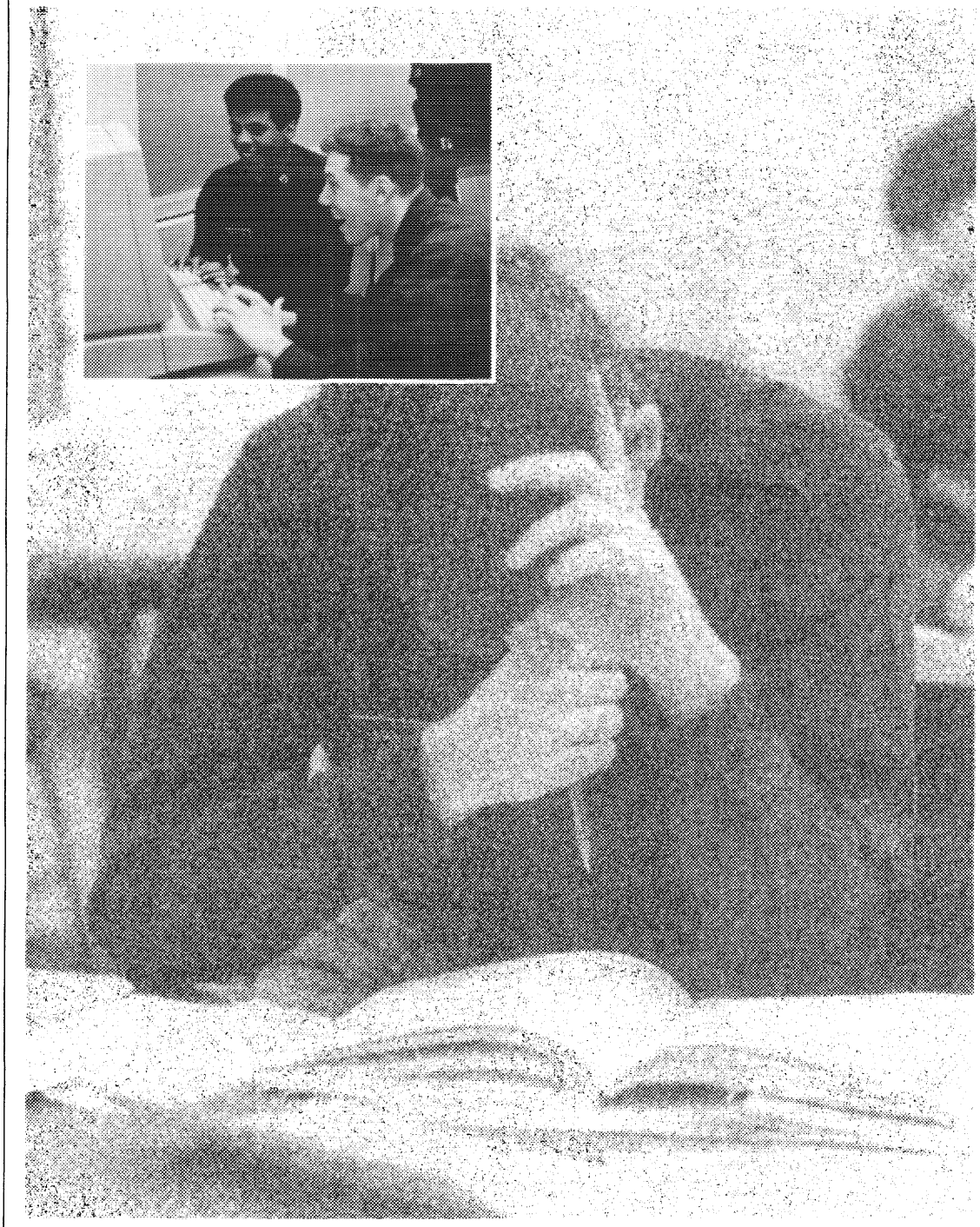
There is plenty of time for just plain fun at USMAPS. Skiing, skeet shooting, photography, writing, dancing, picnicking, and sporting of all kinds abound throughout the year. Students meet young women from local schools and colleges and enjoy entertainment in nearby New York City.

Prepare for entrance to USMA

Candidates should prepare for the academic, physical, and leadership demands a cadet faces at West Point. If you have met the academic qualifications for admission you will most likely be ready for the challenges of the West Point curriculum. Candidates are urged to become physically conditioned before entering the Academy. Vigorous conditioning exercises, cross-country running, and swimming are recommended. It is especially important that a candidate has trained through a variety of strenuous activities and that he know how to swim.

Participation in school and community activities helps a future cadet prepare for leadership positions at West Point. Active members of youth clubs, school class activities, Boy Scouts, civic programs, and athletic teams build leadership experience for themselves. Of course, candidates are not penalized if they are unable to participate in extracurricular activities because of family responsibilities.





IV. Academic Program

A young man entering the United States Military Academy can expect to expand his store of knowledge, to develop more fully the intellectual skills he needs to assume responsibility as a junior officer, and to build a strong foundation for assuming senior officer responsibilities. He can also expect to acquire a sound basis for postgraduate specialization in one of a variety of academic disciplines.

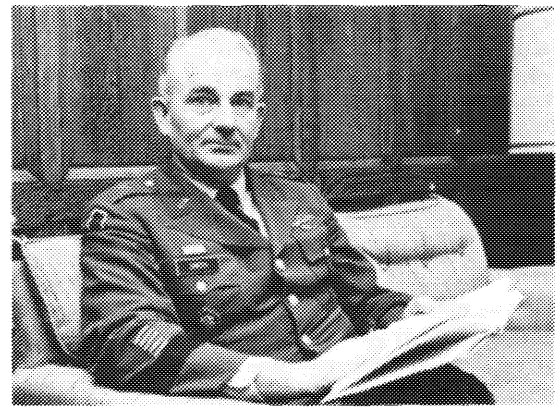
THE EDUCATIONAL PHILOSOPHY

The Military Academy, as the only college specifically charged with preparing young men for service as officers in the United States Army, has a unique educational philosophy. Graduates must be enlightened military leaders of strong moral courage whose minds are creative, critical, and resourceful.

The total curriculum helps develop those qualities an officer needs whether he leads a platoon or works at the highest level of government. Together, the academic curriculum and military training emphasize logical analysis, clear and concise expression, independent thought and action, and readiness to carry out legal orders.

Standard academic courses provide an essential core of knowledge in the arts and sciences. Emphasis is placed on using this knowledge to solve problems. Advanced and elective courses allow the individual cadet to realize his full potential, to concentrate in an area of interest, and to make forays into subjects about which he is simply curious.

Academic exploration blends with physical development, gained through physical education, intramural sports, and intercollegiate athletics. In addition, military education, training, and experience provide basic military principles and techniques and opportunities to test them in real leadership situations. Finally, while the Academy continually adapts itself to the pace of professional, national, and international change, it remains true to the sense of duty, honor, and service to country which has traditionally distinguished its graduates.



The Dean of the Academic Board

Frederick A. Smith, Jr., BG; B.S., USMA; M.S.M.E., Johns Hopkins; M.B.A., George Washington; Ph.D., Illinois.

The observations of Charles Dickens are as accurate now as they were when he visited West Point in 1842. "The course of education is severe, but well devised, and manly."

THE ACADEMIC CURRICULUM

The curriculum reflects 173 years of evolutionary change both in the military profession and in higher education. Today's balanced offering of courses in the arts and sciences leads to a Bachelor of Science degree and builds a foundation for continuing education and professional development.

The two complementary parts of the curriculum are a broad, general core program which is prescribed, and an elective program which is individually tailored. The general curriculum provides a sound educational foundation across the academic spectrum—math, science, engineering, English, history, social sciences, national security, and psychology. The elective program is an extension of the core program, which allows a cadet to achieve a reasonable degree of subject concentration by choosing electives from one of four broad areas: Basic Science, Applied

Science and Engineering, Humanities, and National Security and Public Affairs.

Many graduates who remain in the Army go on to civilian graduate schools. One of the aims of the curriculum at West Point, then, is to give cadets a basis for postgraduate work within one of the above four areas.

Methods of Instruction

Here you will be far more than a mere face in the crowd. Small classes—usually of 12 to 16 cadets—assure discussion and individual attention. Grouping by ability, with periodic adjustments, allows concentration on the fundamentals if that is what you need, or an accelerated pace if you already have a firm grasp of the basics. You will be encouraged to participate daily and you will be evaluated frequently. If you are unsure of the material taught on any given day, or wish to move beyond it, extra one-on-one instruction is available. You always know where you stand in each course: grades go to a computer each week, and you can find out how you are doing by consulting remote terminals in your company area or in an academic building.

Lecture Series

Academic departments and other groups sponsor a comprehensive lecture series which complements the Academy's course of instruction. Guest lecturers include recognized authorities in various academic disciplines, noted authors, playwrights, religious and civic leaders, businessmen, and military leaders. Among recent lecturers have been Ayn Rand, author; Walter Kerr, *New York Times* drama critic; James Farmer, founder of the Congress of Racial Equality; General Andrew J. Goodpaster, former Supreme Allied Commander in Europe; Dr. B.M.W. Knox, eminent classical scholar; Dr. Kay Lathrop of Los Alamos Laboratories in New Mexico; Russell F. Weigley, distinguished military historian; General Maxwell D. Taylor, USA Retired, former Chairman of the Joint Chiefs of Staff and U.S. Ambassador; and United States Senators and Representatives.

THE CORE ACADEMIC PROGRAM

The 42 courses of the Core Academic Program provide a nucleus of knowledge in mathematics, science, engineering, the social sciences, and the humanities—slightly weighted toward the sciences. Each course must be successfully completed. The accompanying table shows the core courses and the sequence in which they are normally taken. Variations may result from the selection of certain areas of concentration, performance in previous college-level courses, and enrollment in advanced or accelerated programs. Electives are listed to show where they are normally scheduled during the four-year program.

Course Designation

First-year courses are numbered in the 100's, second-year in the 200's, third in the 300's, and fourth in the 400's. The second digit indicates the level of the course: 0 = standard, 4 or 5 = advanced, 7 or 8 = elective.

For core courses the third digit indicates the term in which the course is offered: odd digit = first term, even = second term. Electives may be offered in either or both terms as indicated in the course description. A credit hour represents one hour of classroom instruction and associated preparation each week for eighteen weeks (one term).

Validation and Advanced Placement

You may be excused from (validate) certain core courses if you have sufficient knowledge of a subject to meet the appropriate department's standards. Credit earned in other colleges, scores on Advanced Placement Examinations, and tests administered at the Academy are considered in validation decisions. Validation of a core course does not lighten your academic load; rather, it allows you an additional elective in place of the validated course. If you show unusual ability, or have prior knowledge of a

CORE CURRICULUM[x]

Fourth Class (Freshman) Year	First Term	Second Term
y*Mathematics	MA 101	MA 102
*English	EN 101	EN 102
†*Foreign Language	L—101	L—102
*Environment	EV 101	EV 102
*Engineering Fundamentals	EF 101	EF 102
Third Class (Sophomore) Year		
*Mathematics	MA 201	MA 207
Physics (one sequence to be selected)	PH 201	PH 202
	or	
	PH 201	PH 204
*Chemistry	CH 201	CH 204
†*Foreign Language	L—201	L—202
English	EN 201	—
*Psychology		PL 202
History (One sequence to be selected)	HI 201	HI 202
	or	
	HI 203	HI 204
Second Class (Junior) Year		
Electrical Engineering	EE 301	EE 304
*Mechanics	ME 301	**ME 302
*Mechanics	ME 303	—
Physics	—	PH 303
	or	
	—	PH 305
Law	LW 301	LW 302
*Social Sciences	SS 301	SS 302
	Elective	Elective
First Class (Senior) Year		
Engineering (One sequence to be selected)	*CE 401	*CE 402
	or	
	CE 453	CE 454
	or	
	*OE 401	*OE 402
	or	
	EE 401	EE 402
	or	
	GE 401	GE 402
Leadership	PL 401	—
English	—	EN 402
*Social Sciences	SS 401	SS 407
*History	HI 401	HI 402
	Elective	Elective
	Elective	Elective

[x]See Chapter VI, "Courses of Instruction," for course descriptions, including required courses in military science and physical education.

[y]Each term of Fourth Class mathematics is equivalent to two courses.

*Advanced versions of these courses are offered to qualified individuals by the department concerned.

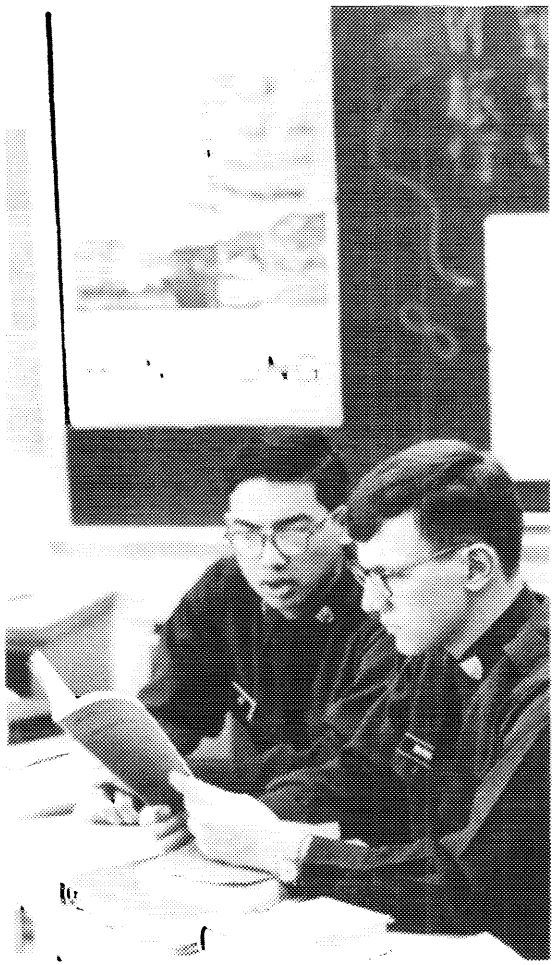
**Cadets concentrating their electives in the Humanities and National Security and Public Affairs areas may substitute an elective for this course.

†The Department of Foreign Languages offers programs in Chinese, French, German, Portuguese, Russian, and Spanish.

subject but cannot validate it, you may be enrolled in an advanced or accelerated program.

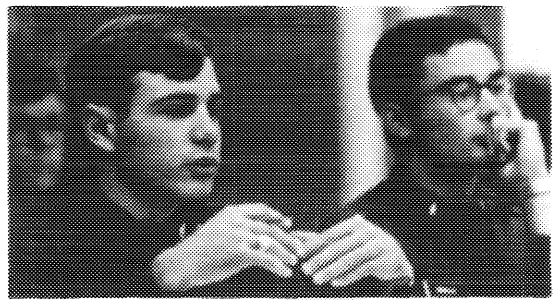
Honors Courses and Advanced Individual Study

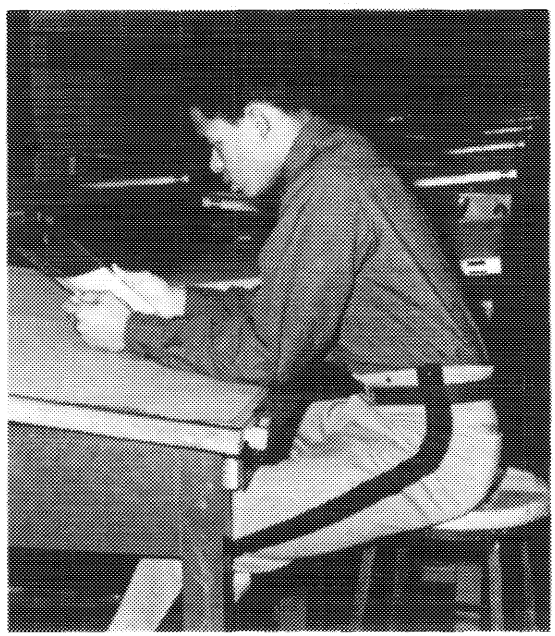
If you are an exceptional student, you may enroll in an honors course or advanced individual study in any of the disciplines taught at the Academy. These programs emphasize independent or tutorial work and are excellent preparation for graduate study.



THE ELECTIVE PROGRAM

Each cadet takes a minimum of six electives. This number may be increased depending on area of elective concentration, number of core courses validated, and enrollment in advanced or accelerated programs. With approval of the Dean, upperclassmen may take overload electives. Careful choice of electives can weight an individual's program toward the humanities or social sciences, or reinforce his scientific orientation. The following table lists all elective courses offered. For a course description of a particular elective, refer to Chapter VI, "Courses of Instruction."





ELECTIVE COURSE OFFERINGS

Course No.	Course Title	Department
CE 381	Soil Mechanics	Engineering
CE 382	Engineering of Environmental Systems	Engineering
CE 481	Design of Concrete Structures	Engineering
CE 482	Advanced Structural Analysis	Engineering
CE 489	Advanced Individual Study in Engineering	Engineering
CH 383	Organic Chemistry I	Chemistry
CH 384	Organic Chemistry II	Chemistry
CH 481	Physical Chemistry I	Chemistry
CH 482	Physical Chemistry II	Chemistry
CH 485	Human Biology I	Chemistry
CH 486	Human Biology II	Chemistry
CH 489	Advanced Individual Study in Chemistry	Chemistry
EE 382	Electromechanical Energy Conversion	Electrical Engineering
EE 383	Electromagnetic Fields	Electrical Engineering
EE 482	Power System Analysis	Electrical Engineering
EE 483	Digital Computer Systems	Electrical Engineering
EE 484	Communication Systems	Electrical Engineering
EE 485	Computer Engineering	Electrical Engineering
EE 486	Solid State Electronics	Electrical Engineering
EE 489	Advanced Individual Study in Electrical Engineering	Electrical Engineering
EF 382	Computer Applications with FORTRAN	Earth, Space and Graphic Sciences
EF 383	Data Processing with COBOL	Earth, Space and Graphic Sciences
EF 384	Principles of Surveying	Earth, Space and Graphic Sciences
EF 488	Advanced Computer Programming	Earth, Space and Graphic Sciences
EF 489	Advanced Individual Study in Computer Science or Geodetic Science	Earth, Space and Graphic Sciences
EN 381	British Literature Survey	English
EN 383	Period Studies in Literature	English
EN 385	Background to American Studies	English
EN 391	Introduction to Fine Arts	English
EN 392	Introduction to Music	English
EN 481	Aspects of Literature	English
EN 482	Aspects of American Studies	English
EN 483	Seminar in American Studies	English
EN 485	Seminar in Major British Authors	English
EN 486	Seminar in Major American Authors	English
EN 489	Advanced Individual Study in English	English
EV 381	Geography of the USSR	Earth, Space and Graphic Sciences
EV 382	Geography of People's Republic of China	Earth, Space and Graphic Sciences
EV 383	Astronomy	Earth, Space and Graphic Sciences
EV 384	Regional Geography of the US	Earth, Space and Graphic Sciences
EV 385	Issues Confronting Man and His Environment	Earth, Space & Graphic Sciences
EV 387	Cartography	Earth, Space & Graphic Sciences
EV 388	Physical Geology	Earth, Space & Graphic Sciences
EV 489	Advanced Individual Study in Environment, Geology or Geography	Earth, Space & Graphic Sciences
GE 381	Scientific Management	Engineering
GE 383	Systems Engineering and Decision Making	Engineering
HI 371	History of Russia	History
HI 372	History of US Foreign Relations	History
HI 373	Topics in American History	History
HI 374	Topics in European History	History
HI 375	History of the Far East	History
HI 376	The Black in American History	History
HI 381	History of Revolutionary Warfare	History
HI 383	Twentieth Century Warfare	History
HI 384	Topics in Military History	History
HI 481	Seminar in History	History
HI 489	Advanced Individual Study in History	History
LC 383	Chinese Literature and Culture I	Foreign Languages
LC 384	Chinese Literature and Culture II	Foreign Languages

Course No.	Course Title	Department
LC 485	Readings in Modern Chinese	Foreign Languages
LC 486	Chinese Military Readings	Foreign Languages
LF 381	French Language through Literature	Foreign Languages
LF 382	Military and Scientific Readings in French	Foreign Languages
LF 483	History of French Civilization I	Foreign Languages
LF 484	History of French Civilization II	Foreign Languages
LF 485	Survey of French Literature I	Foreign Languages
LF 486	Survey of French Literature II	Foreign Languages
LF 487	Directed Studies in French	Foreign Languages
LF 488	Directed Studies in French	Foreign Languages
LG 382	Military and Scientific Readings in German	Foreign Languages
LG 371	German Language through Literature I	Foreign Languages
LG 372	German Language through Literature II	Foreign Languages
LG 483	History of German Civilization	Foreign Languages
LG 484	Contemporary Germany	Foreign Languages
LG 485	Survey of German Literature	Foreign Languages
LG 486	Modern German Literature	Foreign Languages
LG 487	Directed Studies in German	Foreign Languages
LG 488	Directed Studies in German	Foreign Languages
LP 371	Portuguese Language through Literature I	Foreign Languages
LP 372	Portuguese Language through Literature II	Foreign Languages
LP 383	Military Readings in Portuguese	Foreign Languages
LP 475	Survey of Brazilian Literature	Foreign Languages
LP 476	Modern Brazilian Literature	Foreign Languages
LP 487	Directed Studies in Portuguese	Foreign Languages
LP 488	Directed Studies in Portuguese	Foreign Languages
LR 381	Advanced Russian Language	Foreign Languages
LR 382	Russian Language through Literature	Foreign Languages
LR 473	Russian and Soviet Civilization	Foreign Languages
LR 474	Soviet Russian Literature	Foreign Languages
LR 475	Military and Scientific Readings in Russian	Foreign Languages
LR 476	Soviet Expository Writings	Foreign Languages
LR 487	Directed Studies in Russian	Foreign Languages
LR 488	Directed Studies in Russian	Foreign Languages
LS 371	Spanish Language through Literature I	Foreign Languages
LS 372	Spanish Language through Literature II	Foreign Languages
LS 382	Military Readings in Spanish	Foreign Languages
LS 483	Survey of Spanish-American Literature	Foreign Languages
LS 484	Modern Spanish-American Literature	Foreign Languages
LS 485	Survey of Spanish Literature	Foreign Languages
LS 486	Modern Spanish Literature	Foreign Languages
LS 487	Directed Studies in Spanish	Foreign Languages
LS 488	Directed Studies in Spanish	Foreign Languages
LW 481	International Law	Law
LW 482	Seminar in Military Aspects of International Law	Law
LW 488	Business and Procurement Law	Law
MA 471	Linear Algebra	Mathematics
MA 473	Intermediate Probability and Statistics	Mathematics
MA 481	Linear Programming	Mathematics
MA 482	Abstract Algebra	Mathematics
MA 484	Differential Equations	Mathematics
MA 485	Complex Analysis	Mathematics
MA 486	Numerical Analysis	Mathematics
MA 487	Real Variable Theory	Mathematics

Course No.	Course Title	Department
MA 489	Advanced Individual Study in Mathematics	Mathematics
ME 384	Mechanics of Materials	Mechanics
ME 387	Introduction to Applied Aerodynamics	Mechanics
ME 388	Aerodynamics of V/STOL Flight	Mechanics
ME 472	Direct Energy Conversion	Mechanics
ME 474	Propulsion	Mechanics
ME 475	Gas Dynamics	Mechanics
ME 476	Experimental Stress Analysis	Mechanics
ME 477	Experimental Fluid Mechanics & Thermodynamics	Mechanics
ME 478	Analysis of Modern Lightweight Structure	Mechanics
ME 482	Heat Transfer	Mechanics
ME 483	Space Mechanics	Mechanics
ME 485	Continuum Mechanics	Mechanics
ME 486	Mechanical Vibrations	Mechanics
ME 488	Flight Mechanics	Mechanics
ME 489	Advanced Individual Study in Mechanics	Mechanics
OE 383	Engineering Materials	Engineering
OE 385	Management Engineering	Engineering
OE 481	Automotive Engineering	Engineering
OE 483	Helicopter Engineering	Engineering
OE 487	Operations Research	Engineering
PH 383	Introduction to Theoretical Physics I	Physics
PH 384	Introduction to Theoretical Physics II	Physics
PH 483	Solid State Physics	Physics
PH 385	Topics in Physics	Physics
PH 484	Quantum Mechanics	Physics
PH 486	Experimental Physics	Physics
PH 487	Nuclear Reactor Theory	Physics
PH 488	Nuclear Physics	Physics
PH 489	Advanced Individual Study in Physics	Physics
PL 472	Topics in Sociology	Office of Military Leadership
PL 481	Managerial Psychology	Office of Military Leadership
PL 483	Social Psychology	Office of Military Leadership
PL 487	Psychology II	Office of Military Leadership
PL 489	Advanced Individual Study in the Behavioral Sciences	Office of Military Leadership
SS 372	Policy and Administration	Social Sciences
SS 373	Quantitative Analysis in the Social Sciences	Social Sciences
SS 383	Middle Eastern Studies	Social Sciences
SS 384	Government and Politics of Latin America	Social Sciences
SS 385	Comparative Economic Systems	Social Sciences
SS 386	Political Philosophy	Social Sciences
SS 387	Seminar in Public Policy	Social Sciences
SS 388	Macroeconomics	Social Sciences
SS 389	Managerial Economics	Social Sciences
SS 471	Major Political Systems of East Asia	Social Sciences
SS 473	Issues in American Foreign Policy	Social Sciences
SS 475	Government and Politics of the Soviet Union	Social Sciences
SS 476	International Affairs: Theory and Applications	Social Sciences
SS 482	Microeconomics	Social Sciences
SS 483	National Security Seminar	Social Sciences
SS 484	International Economics and Economic Development	Social Sciences
SS 485	Problems of Developing Nations	Social Sciences
SS 486	Political and Cultural Anthropology	Social Sciences
SS 487	Public Policy Decision Making and Debate	Social Sciences
SS 489	Advanced Individual Study in Social Sciences	Social Sciences

The General Elective Program

A cadet following this program can choose electives from the entire list of electives, satisfying his intellectual curiosity in several disciplines while developing a sound basis for future graduate study.

Areas of Elective Concentration and Associated Elective Fields

Some cadets wish to go into greater depth in an area of special interest or aptitude. To help these cadets design their individual academic programs, electives have been grouped into 24 fields under four areas of concentration and an interdisciplinary field, Management.

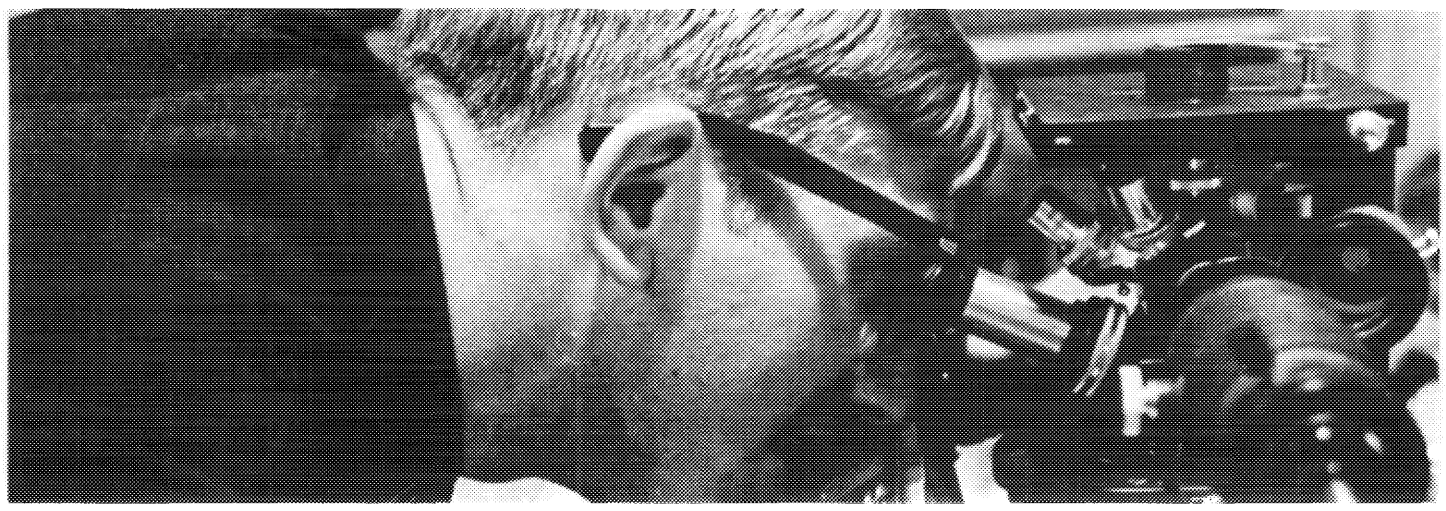
Applied Science and Engineering:
- **Civil Engineering**
- **Electrical Engineering**
- **Engineering Mechanics**
- **Nuclear Engineering**
- **Weapon Systems Engineering**

Basic Science:
- **Chemistry**
- **Computer Science**
- **Mathematics**
- **Physics**

Humanities:
- **American Studies**
- **Foreign Languages:**
  - **Chinese**
  - **French**
  - **German**
  - **Portuguese**
  - **Russian**
  - **Spanish**
- **Literature**

National Security and Public Affairs:
- **Economics**
- **Geography**
- **History**
- **International Affairs**
- **Military Studies**
- **Political Science**

Interdisciplinary Field:
- **Management**



ELECTIVES WITHIN AREAS OF CONCENTRATION

The requirements for each area of elective concentration and its associated fields will be found on this and succeeding pages. Although the Military Academy does not offer a majors program, a cadet, by carefully designing his elective program, can achieve the equivalent of a minor and in some cases approach the course requirements for a major as defined by other academic institutions.

APPLIED SCIENCE AND ENGINEERING AREA

Cadets concentrating in the Applied Science and Engineering Area must satisfy the following requirements:

a. Complete a core program engineering sequence other than General Engineering.

b. Complete six elective courses as follows:

1. Five selected from the Applied Science and Engineering Area list or completion of the requirements of the Civil Engineering, Electrical Engineering, Engineering Mechanics, Nuclear Engineering or Weapon Systems Engineering fields, and

2. One selected from among the entire elective course offerings.

Applied Science and Engineering Area Elective Course List: CE 381, CE 382, CE 481, CE 482, CE 489, EE 382, EE 383, EE 482, EE 483, EE 484, EE 485, EE 486, EE 489, EF 384, GE 381, GE 383, ME 384, ME 387, ME 388, ME 472, ME 474, ME 475, ME 476, ME 477, ME 478, ME 482, ME 483, ME 485, ME 486, ME 488, ME 489, OE 383, OE 385, OE 481, OE 483, OE 487, PH 487.

CIVIL ENGINEERING FIELD

Requirement: Complete four principal electives to include ME 384 and at least one additional course chosen from the combined lists of principal and associated electives. The engineering sequence CE 401-402 or CE 451-452 must be chosen.

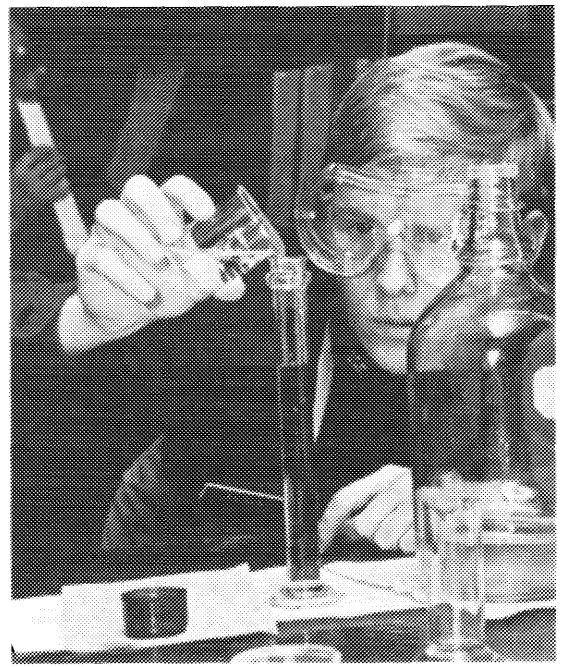
Principal Electives: CE 381, CE 382, CE 481, CE 482, CE 489, EF 384, GE 383, ME 384, OE 385.

Associated Electives: EF 382, EF 489A, EV 385, EV 388, GE 381, MA 471, MA 473, MA 481, MA 484, MA 486, ME 476, ME 477, ME 478, ME 485, ME 486, OE 383.

ELECTRICAL ENGINEERING FIELD

Requirement: Complete all principal electives and at least two associated electives. Electrical Engineering, EE 401-402, must be taken as the required engineering sequence.

Principal Electives: EE 382, EE 383, EE 484.



Associated Electives: EE 482, EE 483, EE 485, EE 486, EE 489, EF 382, EF 489, MA 471, MA 484, MA 485, ME 472, ME 486, OE 383, PH 483, PH 484.

ENGINEERING MECHANICS FIELD

Requirement: Complete four principal electives and at least one course chosen from the combined lists of principal and associated electives.

Principal Electives: ME 384, ME 387, ME 388, ME 472, ME 474, ME 475, ME 476, ME 477, ME 478, ME 482, ME 483, ME 485, ME 486, ME 488, ME 489.

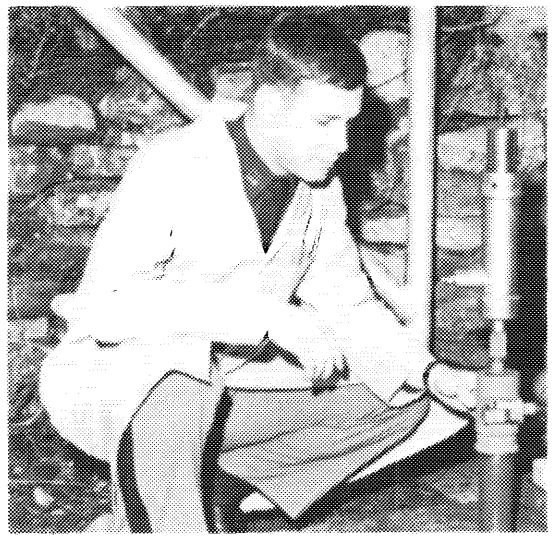
Associated Electives: EE 402, EF 382, CE 381, CE 481, CE 482, MA 485, MA 486, OE 383, OE 481, OE 483, PH 383.

NUCLEAR ENGINEERING FIELD

Requirement: Complete four principal electives to include PH 487 and at least one course selected from the combined lists of principal and associated electives. CE 453-454 must be taken as the required engineering sequence.

Principal Electives: EF 382, GE 383, MA 484, ME 384, ME 482, OE 383, PH 484, PH 487, PH 488.

Associated Electives: CE 382, CE 489, EE 401, EE 402, EF 488, MA 473, MA 485, MA 486, PH 383, PH 384, PH 483, PH 486, PH 489.



WEAPON SYSTEMS ENGINEERING FIELD

Requirement: Complete three principal electives and at least two courses from the combined lists of principal and associated electives. OE 401-402 or OE 451-452 must be taken as the required engineering course sequence.

Principal Electives: CE 489, GE 383, MA 484, ME 384, ME 388, ME 478, ME 483, ME 486, OE 383, OE 385, OE 481, OE 483.

Associated Electives: EE 402, EF 382, GE 381, MA 473, MA 481, MA 485, MA 486, ME 387, ME 474, ME 475, ME 482, ME 488, OE 487.

BASIC SCIENCE AREA

Cadets concentrating in the Basic Science Area must satisfy following requirements:

a. Complete a core program engineering sequence other than General Engineering.

b. Complete six elective courses as follows:

1. Five selected from the Basic Science Area List or fulfillment of the requirements of the Chemistry, Computer Science, Physics, or Mathematics fields, and

2. One selected from among the entire elective course offerings. Basic Science Area Elective Course List: CH 383, CH 384, CH 481, CH 482, CH 485, CH 486, CH 489, EF 382, EF 383, EF 488, EF 489A, EF 489B, EV 383, EV 388, EV 489, MA 471, MA 473, MA 481, MA 482, MA 484, MA 485, MA 486, MA 487, MA 489, PH 383, PH 384, PH 385, PH 483, PH 484, PH 486, PH 488, PH 489.

CHEMISTRY FIELD

Requirement: Complete four principal electives and one course chosen from the combined lists of principal and associated electives.

Principal Electives: CH 383, CH 384, CH 481, CH 482, CH 485, CH 486, CH 489.

Associated Electives: EF 382, EV 385, MA 473, MA 484, MA 486, PH 483, PH 484, PH 488.

COMPUTER SCIENCE FIELD

Requirement: Complete three principal electives, to include EF 382, and EE 483 or EE 485 and two additional courses chosen from the combined lists of principal and associated electives.

Principal Electives: EE 483, EE 485, EF 382, EF 383, EF 488, EF 489A, MA 486.

Associated Electives: GE 381, GE 383, MA 481, OE 385, OE 487, SS 389.

MATHEMATICS FIELD

Requirement: Complete four principal electives and one course chosen from the combined lists of principal and associated electives.

Principal Electives: MA 471, MA 473, MA 481, MA 482, MA 484, MA 485, MA 486, MA 487, MA 489.

Associated Electives: EE 483, EE 484, EF 382, EF 383, EF 489A, EV 383, ME 478, ME 483, ME 485, ME 486, OE 385, OE 487, PH 383, PH 384, PH 484.

PHYSICS FIELD

Requirement: Complete four principal electives and one course from the combined lists of principal and associated electives.

Principal Electives: MA 484, PH 383, PH 384, PH 385, PH 483, PH 484, PH 486, PH 487, PH 488, PH 489.

Associated Electives: CE 453-454, EE 486, EV 383, MA 473, MA 485, MA 486, ME 483, OE 383.

HUMANITIES AREA

Cadets concentrating in the Humanities Area must satisfy the following requirements:

a. Complete a two-term engineering sequence.

b. Complete seven elective courses from the Humanities Area List or satisfy the requirements of the American Studies, Literature, or Language fields.

Humanities Area Course List: EN 381, EN 383, EN 385, EN 391, EN 392, EN 481, EN 482, EN 483, EN 485, EN 486, EN 489, HI 371, HI 372, HI 373, HI 374, HI 375, HI 376, LC 383, LC 384,LC 485, LC 486, LF 381, LF 382, LF 483, LF 484, LF 485, LF 486, LF 487, LF 488, LG 371, LG 372, LG 382, LG 483, LG 484, LG 485, LG 486, LG 487, LG 488, LP 371, LP 372, LP 383, LP 475, LP 476, LP 487, LP 488, LR 381, LR 382, LR 473, LR 474, LR 475, LR 476, LR 487, LR 488, LS 371, LS 372, LS 382, LS 483, LS 484, LS 485, LS 486, LS 487, LS 488.

AMERICAN STUDIES FIELD

Requirement: Complete four principal electives to include EN 385, EN 482A (Expositors of Nineteenth Century American Thought), EN 482B (Social Criticism in Twentieth Century American Prose), and one other seminar, and three other courses from the associated electives.

Principal Electives: EN 383B, EN 385, EN 482A, EN 482B, EN 483, EN 489, EV 384, HI 373, HI 376, SS 387.

Associated Electives: EN 383A, EN 391, EN 392, EN 486, HI 372, HI 383, HI 481, LW 481, LW 482, PL 472, SS 386, SS 483.

CHINESE LANGUAGE FIELD

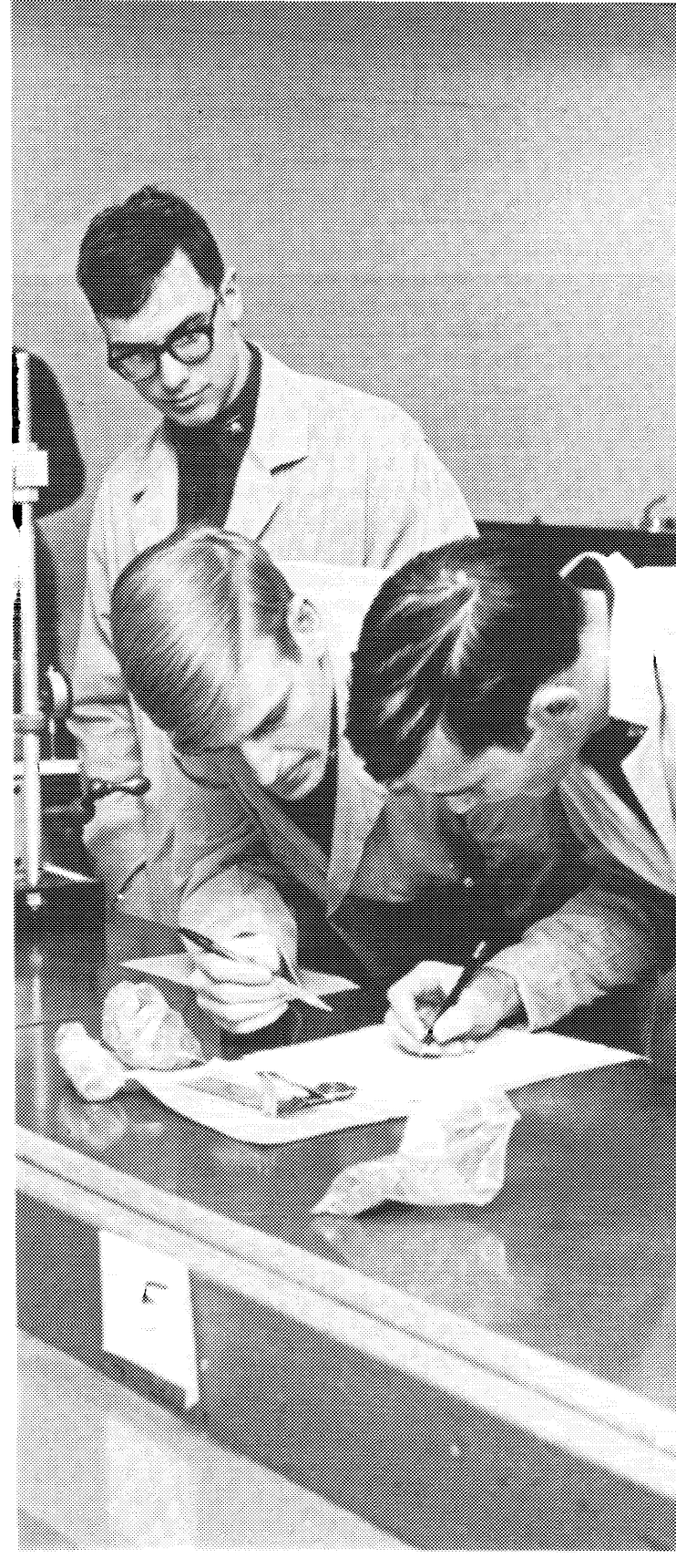
Requirement: Complete four principal electives to include three LC courses and three courses selected from the combined list of principal and associated electives.

Principal Electives: EV 382, LC 383, LC 384, LC 485, LC 486, any English course in the 300 or 400 series except EN 391 and EN 392.

Associated Electives: EN 391, EN 392, HI 375, HI 381, LW 481, LW 482, PL 472, SS 385, SS 386, SS 471, SS 476, SS 484, SS 485, SS 486.

LITERATURE FIELD

Requirement: Complete five principal electives to include three of the following: EN 381A, EN 381B, EN 383B, EN 485Q and two courses from the combined lists of principal and associated electives.



Principal Electives: EN 381, EN 383, EN 481, EN 485, EN 486, EN 489.

Associated Electives: EN 385, EN 391, EN 392, EN 482, EN 483, HI 373, HI 374, HI 481, PL 472, PL 483, PL 487, SS 386, any language in the 300 or 400 series.

FRENCH LANGUAGE FIELD

Requirement: Complete five principal electives to include four LF courses and two courses from the combined lists of principal and associated electives.

Principal Electives: LF 381, LF 382, LF 483, LF 484, LF 485, LF 486, LF 487, LF 488, any English elective in the 300 or 400 series except EN 391 and EN 392.

Associated Electives: EN 391, EN 392, HI 374, Hi 381, HI 481, HI 489, LW 481, LW 482, PL 472, SS 385, SS 386, SS 476, SS 484, SS 485, SS 486.

GERMAN LANGUAGE FIELD

Requirement: Complete five principal electives to include four LG courses and two courses from the combined lists of principal and associated electives.

Principal Electives: LG 371, LG 372, LG 382, LG 483, LG 484, LG 485, LG 486, LG 487, LG 488, any English elective in the 300 or 400 series except EN 391 and EN 392.

Associated Electives: EN 391, EN 392, HI 374, HI 481, HI 489, LW 481, LW 482, PL 472, SS 385, SS 386, SS 476, SS 484, SS 485, SS 486.

PORTUGUESE LANGUAGE FIELD

Requirement: Complete five principal electives to include four LP courses and two courses selected from the combined lists of principal and associated electives.

Principal Electives: LP 371, LP 372, LP 383, LP 475, LP 476, LP 487, LP 488, SS 384, any English elective in the 300 or 400 series except EN 391 and EN 392.

Associated Electives: EN 391, EN 392, HI 373, HI 374, HI 481, HI 489, LW 481, LW 482, PL 472, SS 385, SS 386, SS 476, SS 484, SS 485, SS 486.

RUSSIAN LANGUAGE FIELD

Requirement: Complete five principal electives to include four LR courses and two electives from the combined lists of principal and associated electives.

Principal Electives: EV 381, HI 371, LR 381, LR 382, LR 473, LR 474, LR 475, LR 476, LR 487, LR 488, SS 475, any English course in the 300 or 400 series except EN 391 and EN 392.

Associated Electives: EN 391, EN 392, HI 374, HI 381, HI 481, HI 489, LW 481, LW 482, PL 472, SS 385, SS 386, SS 476, SS 484, SS 485, SS 486.

SPANISH LANGUAGE FIELD

Requirement: Complete five principal electives to include four LS courses and two courses from the combined lists of principal and associated electives.

Principal Electives: LS 371, LS 372, LS 382, LS 483, LS 484, LS 485, LS 486, LS 487, LS 488, SS 384, any English elective in the 300 or 400 series except EN 391 and EN 392.

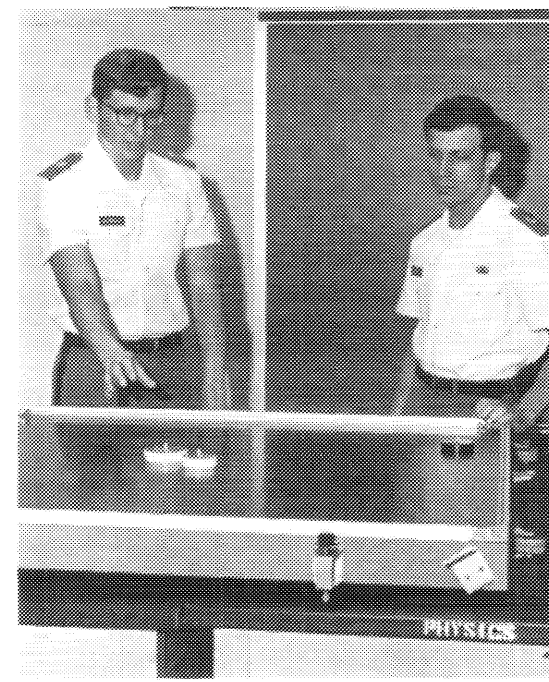
Associated Electives: EN 391, EN 392, HI 373, HI 374, HI 381, HI 481, HI 489, LW 481, LW 482, PL 472, SS 385, SS 386, SS 476, SS 484, SS 485, SS 486.

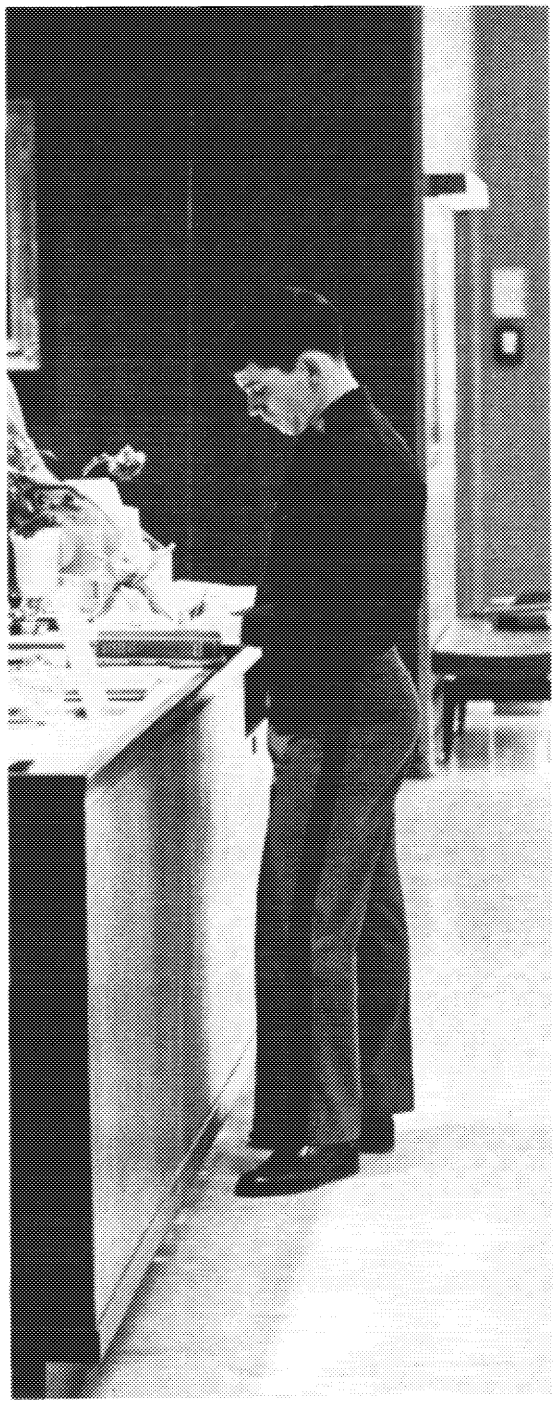
NATIONAL SECURITY AND PUBLIC AFFAIRS AREA

Cadets concentrating in the National Security and Public Affairs Area must satisfy the following requirements:

a. Complete a two-term engineering sequence.

b. Complete seven electives from the National Security and Public Affairs Elective List or satisfy the requirements of the Economics, Geography, History, International Affairs, Military Studies, or Political Science fields.





National Security and Public Affairs Elective Course List: EV 381, EV 382, EV 384, EV 385, EV 387, EV 489, HI 371, HI 372, HI 373, HI 374, HI 375, HI 376, HI 381, HI 383, HI 384, HI 481, HI 489, LW 481, LW 482, LW 488, PL472, PL 481, PL 483, PL 487, PL 489, SS 372, SS 373, SS 383, SS 384, SS385, SS 386, SS 387, SS 388, SS 389, SS 471, SS 473, SS 475, SS 476, SS 482, SS 483, SS 484, SS 485, SS 486, SS 487, SS 489.

ECONOMICS FIELD

Requirement: Complete four principal electives to include SS 482 and three courses from the combined lists of principal and associated electives.

Principal Electives: SS 373, SS 385, SS 388, SS 389, SS 482, SS 484, SS 489.

Associated Electives: EF 382, EN 483, EV 385, GE 381, GE 383, HI 373, LW 488, MA 471, MA 473, MA 481, OE 385, OE 487, PL 472, PL 481, PL 483, PL 487, SS 372, SS 387, SS 483, SS 485, SS 487.

GEOGRAPHY FIELD

Requirement: Complete four principal electives to include at least one course from EV 381, EV 382, and EV 384, and three courses from the combined lists of principal and associated electives.

Principal Electives: EV 381, EV 382, EV 384, EV 385, EV 387, EV 388, EV 489, PL 472, SS 486.

Associated Electives: EF 382, EN 483, HI 371, HI 373E, HI 375, MA 473, SS 373, SS 385, SS 471, SS 475, SS 484, SS 485, any elective language course in Chinese or Russian.

HISTORY FIELD

Requirement: Complete four principal electives to include HI 481 or HI 489 and three courses from the combined lists of principal and associated electives.

Principal Electives: HI 371, HI 372, HI 373, HI 374, HI 375, HI 476, HI 381, HI 383, HI 384, HI 481, HI 489.

Associated Electives: EN 381B, EN 383B, EN 385, EN 482A, EN 482B, EN 483, EV 381, EV 382, EV 384, LW 481, LW 482, PL 472, PL 483, SS 372, SS 383, SS 384, SS 385, SS 386, SS 471, SS 473, SS 483, SS 486, any foreign language elective using historical materials.

INTERNATIONAL AFFAIRS FIELD

Requirement: Complete four principal electives to include HI 372 and three courses from the combined lists of principal and associated electives.

Principal Electives: HI 372, LW 481, SS 373, SS 473, SS 476, SS 483, SS 484, SS 485, SS 486, SS 489.

Associated Electives: EV 381, EV 382, HI 371, HI 373, HI 374, HI 375, HI 381, HI 383, HI 384, HI 481, HI 489, LW 482, PL 472, PL 483, SS 383, SS 384, SS 385, SS 386, SS 471, SS 475, SS 487, one elective language course in the 300 or 400 series.

MILITARY STUDIES FIELD

Requirement: Complete four principal electives to include HI 383 and either HI 381 or HI 384 and three courses from the combined lists of principal and associated electives.

Principal Electives: HI 381, HI 383, HI 384, HI 481, HI 489, PL 472, PL 483, SS 483.

Associated Electives: HI 372, HI 373, HI 374, LW 481, LW 482, PL 481, PL 487, SS 473, SS 482, SS 485, any foreign language elective course in military readings.

POLITICAL SCIENCE FIELD

Requirement: Complete four principal electives to include SS 386 and three courses from the combined lists of principal and associated electives.

Principal Electives: PL 472, SS 372, SS 373, SS 386, SS 387, SS 473, SS 483, SS 485, SS 486, SS 489.

Associated Electives: EN 483, EV 385, HI 371, HI 372, HI 373, HI 374, HI 375, HI 376, HI 381, HI 383, HI 384, HI 481, HI 489, LW 481, PL 483, PL 487, SS 383, SS 384, SS 385, SS 388, SS 471, SS 475, SS 476, SS 482, SS 484, SS 487.

INTERDISCIPLINARY FIELD: MANAGEMENT

Requirement: Complete six elective courses from the combined lists of principal and associated electives.

Principal Electives: EF 382, EF 383, GE 381, GE 383, MA 471, MA 473, MA 481, OE 385, OE 487, PL 481, PL 483, SS 373, SS 389, SS 482.

Associated Electives: LW 488, MA 486, PL 472, PL 487, SS 372, SS 489.

ACADEMIC SUPPORT AGENCIES

USMA Library

Cadets rely on the USMA Library for academic research and recreational reading alike. Cadets, faculty, and other *bona fide* researchers have access to the library's 400,000 volumes and to the 1,600 periodicals and 64 newspapers, domestic and foreign, currently received. A library orientation starts the Plebe (freshman) on his way as an independent researcher; expert librarians and written instructions sharpen his ability to wend through catalogs, bibliographies, and other research tools.

Present library resources are similar to those of a liberal arts college but also reflect considerable strength in mathematics, scientific, and technical fields. Extensive holdings in military subjects have established the library's reputation as a research library of international importance. Special collections include substantial numbers of manuscripts and rare books, many of which concern the history of the Army, the Academy, and military leaders. The personal papers of General of the Army Omar N. Bradley and first editions of William Faulkner's works are among these collections.

The library has room for a half-million volumes and reading areas for over 1,000 individuals. Audio resources include approximately 8,400 records and tapes of language materials, literature, and both classical and popular music. Booths are equipped for stereo listening and recording. Prints, slides, drawings, and mounted pictures provide food for the eye and the mind. Microfilm readers and printers aid effective use of expanding microform holdings. As a partial depository for United States government publications, the library also houses many official documents and studies. United Nations, NATO, SEATO, and regional publications are also collected.

While the library continues to expand its resources through information networks and remote data banks, its history actually predates that of the Academy. The book collection on which the library was based represents the first federal library. The first substantial acquisitions were made by Sylvanus Thayer in Europe during the two years before he became Superintendent in 1817. With the blessings of then Secretary of War James Monroe, Thayer purchased about 1,000 landmark volumes which formed the basis for early engineering education in the United States.

Instruction Support and Information Systems Division

Cadets were the first American students to find their lessons illustrated by the blackboard. The Instruction Support and Information Systems Division keeps West Point at the front edge of instructional technology. Chalk dust still flies, but it is now complemented by the colors of closed-circuit TV and the hum of the computer. Like the blackboard, they supplement straight talk between individuals, rather than substituting for it.

All cadets learn the basics of computer use and have free access to the computer. One hundred and thirty-five remote time-sharing terminals in cadet barracks, computer laboratories, and academic department offices assist both cadet and faculty member. Graphics terminals allow pictorial output as well. Integrating the computer with television facilities, an instructor may present computer output on his classroom TV set, controlling it through a terminal in the classroom. The Division's Academic Computer Center, which operates the third-generation computer, also helps manage data for the academic program. Among other things, this allows cadets to retrieve information regarding their current academic standing at any time.

The Instructional Technology Center provides instructors virtually any teaching aid they desire to vary or liven classroom instruction. Television, multimedia, and multi-screen audio-visual productions, as well as motion pictures, slides, and audio tapes are within the Center's capabilities. The professional quality color TV studio, in conjunction with a 17-channel closed-circuit TV system, produces or rebroadcasts instructional films and tapes, commercial network or PBS educational TV, and special computer graphics. This network serves every classroom and laboratory, cadet barracks study room, the library, and many other locations on campus. Portable videotape recorders, tape recorders, and projectors of all descriptions are also available for cadet and faculty use.

Many members of the academic community are served by the Division's instructional program, from the Dean's Reading Improvement Program to courses in computer and media skills. The Divison also gives academic faculty technical assistance in applying computers, television, and other educational media to the academic program.

Science Research Laboratory

First Classmen (seniors) and Academy faculty conduct original research in the Science Research Laboratory. Ongoing research, much of it supported by grants, includes projects in infrared spectroscopy, reverse osmosis, and high pressure physics. These projects have applications for molecular bonding theories, hydrogen fuel storage, and planetary science.

GRADUATE CIVIL SCHOOLING

The growing complexity of technology, international diplomacy, and world commitments of the Army have increasingly come to demand that Army officers attend civilian graduate institutions. Currently, many Academy graduates who remain in the military attend graduate school

through the Army Civil Schooling program or on a scholarship or fellowship.

Army Civil Schooling Program

Qualified graduates are normally selected for fully funded master's or doctoral programs at civilian graduate schools between their fourth and tenth years of active military service.

Rhodes Scholarships

Fifty-three Academy graduates since 1923 have been awarded Rhodes Scholarships to attend Oxford while on active duty, making West Point the nation's fourth-ranking source of Rhodes Scholars.

Selection is based on four groups of qualities specified in Cecil Rhodes' will: (1) intellectual excellence and attainment, (2) strength of character, (3) demonstrated leadership ability, and (4) athletic success. Emphasis falls on the first two. Rhodes hoped that the scholar would "esteem the performance of public duties as his highest aim."

Olmsted Scholarships

The George Olmsted Foundation annually awards two scholarships to Academy graduates for two years of study at a foreign university where a language other than English is spoken. Under this program graduates have attended universities in Geneva, Grenoble, Heidelberg, Brussels, Tokyo, Freiburg, Paris, Lyons, Madrid, Bonn, and Sao Paulo.

The Foundation considers officers for scholarships after a minimum of three years of active service. Individuals are selected from those recommended to the Department of the Army by the USMA Academic Board. Scholastic ability, character, and leadership at the Academy and in the Army figure into the Foundation's scholarship decisions.

National Science Foundation Fellowships

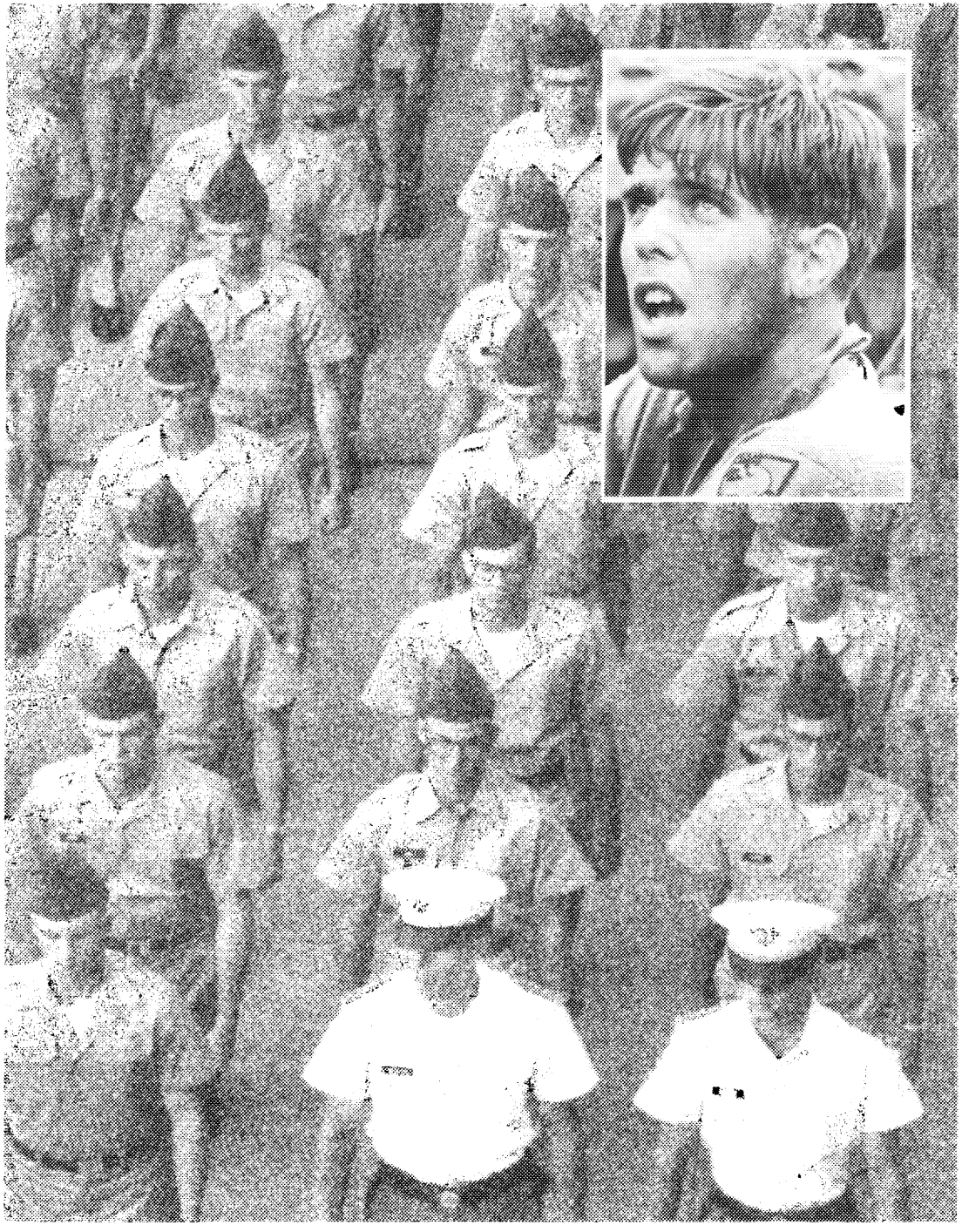
Twenty-six cadets have been awarded National Science Foundation Graduate Fellowships since 1961; another 94 have received honorable mention. Outstanding cadets compete annually for the one- or two-year fellowships, which enable them to pursue graduate study at the university of their choice. Academic records and examinations administered by the Foundation form the basis for selection.

Hertz Foundation Fellowships

Since 1973, three cadets have won three-year Hertz Foundation Fellowships leading to doctorates in Applied Physical Science disciplines. Academic performance, recommendations, and personal interviews are the basis upon which the Foundation awards fellowships.

Daedalian Scholarships

The Order of Daedalians awards one scholarship every four years to a graduate of the Military Academy (alternating with the other three service academies). The scholarship is for two years of study in a field related to aerospace engineering. Since the start of this program, Military Academy graduates have received two scholarships.

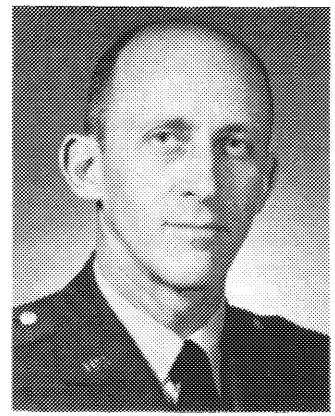


V. Military Program

Each year during July, a new class enters the United States Military Academy. These new West Pointers are designated Fourth Class cadets. In succeeding years, they become Third Classmen, Second Classmen, and finally—in their senior year—First Classmen.

The Military Academy helps these select young men develop into commissioned combat officers of the United States Army. The cornerstone of every Army is discipline, and the daily regimen of cadet life is directed toward that end. West Point seeks to encourage a high degree of self-discipline—the key to success in any profession.

The cadet discovers that he must draw upon something extra within himself, budget his time wisely, and establish a clear sense of priorities. In the tradition of West Point, the cadet becomes aware of and learns to fulfill his responsibilities toward the soldiers he will eventually lead. He strengthens his respect for the human dignity and rights of his fellowmen, essential in his development as an officer and a gentleman. He learns that the soldier's purpose is service of country and fellow citizens.



Commandant of Cadets
Walter F. Ulmer, Jr., BG; B.S., USMA; M.S., Penn. State.

PROFESSIONAL EDUCATION AND TRAINING

Potential officers must also master basic professional military concepts and skills. The Commandant of Cadets, commander of the Department of Tactics, is responsible for this aspect of cadet education and training. Each cadet gets instruction in the fundamentals of small unit tactics through the study of Military Science and Military Leadership. Physical Education and an extensive intramural program (discussed in Chapter VI) ready the cadet for the physical demands of service life and the combat environment. Three summers of field training give each cadet repeated opportunities for the practical application of principles learned, while sustaining the high level of fitness demanded of the Army officer.

The daily regimen, classroom instruction, and practical experience in the field combine to develop in each cadet the leadership traits critical to the profession of arms. A strong sense of duty and responsibility are especially valued. In addition to self-discipline, each man learns to exercise good judgment even when he must think and react under mental, physical, and time demands. The cadet's exemplary decorum, bearing, and appearance are but the visible signs of a deep pride in his profession. Like the Long Gray Line of graduates before him, he comes to share a sense of dedication to "Duty, Honor, Country."

FOURTH CLASS YEAR

During their first day at West Point, the young men of the incoming class quickly make the transition from civilians to cadets. They discover that it is possible to learn to march in formation in one afternoon. After an unforgettable first day, newcomers are whirled into an intensive seven-week training program teaching them to be soldiers and preparing them for cadet life. The new cadet learns to answer to "Mister." He,

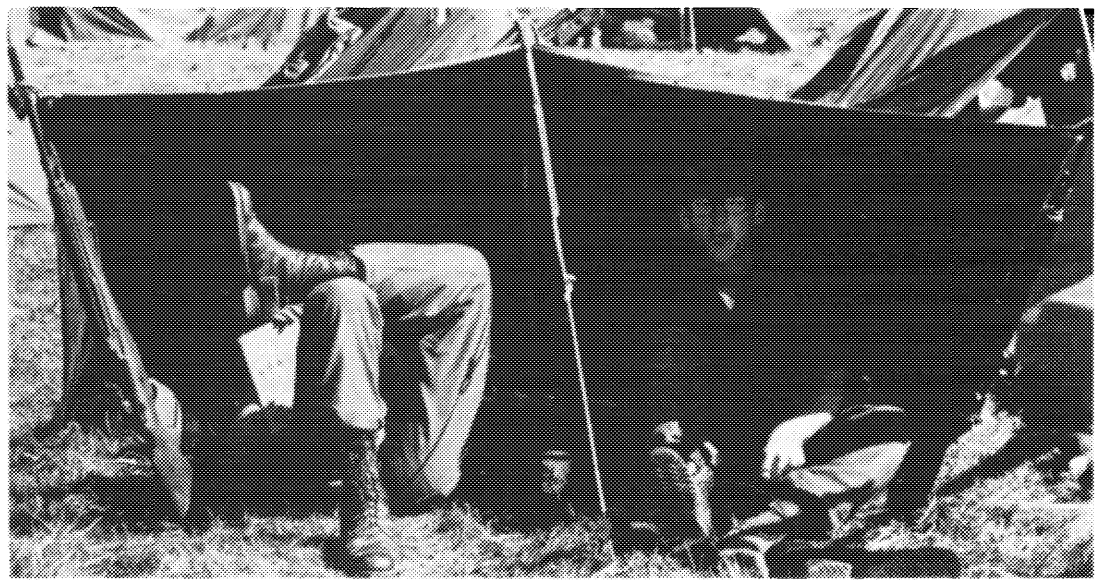
in turn, addresses First Classmen by their common first name—"Sir." Haircuts, uniforms, room inspections, military drill, parades, and physical exercise become part of his everyday life. He learns M-16 rifle marksmanship and land navigation. As a trainee, he must obey his commanders and withstand mental and physical stress. New Cadet Training is similar in many respects to the basic training experience of Army enlistees everywhere. Officers can perform with greater understanding if they themselves have at one time experienced the life of the recruit. Equally important, new cadets sharing a rigorous experience form strong friendships and a team spirit that remain with them for the rest of their lives.

In late August when this first training period is over, new cadets are formally accepted into the Corps of Cadets. These new members of the United States Corps of Cadets have the well-deserved sense of confidence and pride which comes with accomplishment. During the acceptance ceremony, a full dress parade, each new Fourth Classman—traditionally called a "Plebe" —is assigned to one of the 36 companies which make up the Corps.

Military training during the Fourth Classman's academic year focuses on military heritage, map reading, small unit tactics, and physical education. June signals the end of the Plebe year. Fourth Classmen are officially recognized as upperclassmen and, shortly after graduation, depart on summer leave.

THIRD CLASS YEAR

After June vacation, new Third Classmen report to West Point's Camp Buckner for seven weeks of military field training. Infantry patrolling, tank operations, artillery firing, rifle marksmanship, rappelling, hand-to-hand combat, military engineering, field communications, and wilderness survival make up most of this training experience. Emphasis is on small unit ground combat operations which allow Third Classmen to apply principles already learned in military instruction. The Third Classman emerges from the summer a physically fit, skilled troop leader and, as such, a more self-confident young man.



There is also time for swimming, sailing, canoeing, and dating during the summer at Camp Buckner.

Along with more privileges and free time during the second academic year come challenging courses in physical education and modern infantry combat operations.

SECOND CLASS YEAR

Adventure training and troop leadership experience take up most of the Second Classman's summer. With June leave over, these cadets choose among fighting through jungles during training in Panama; cross-country snowshoeing and skiing in Alaskan northern warfare training; night patrolling and survival in Ranger School; parachuting during airborne training; or soaring above the clouds in pilot training. Leadership of an actual platoon of United States Army soldiers comes next in what is called Cadet Troop Leader Training. Second Classmen may go to Germany, Alaska, Panama, Hawaii, or stay in the continental United States for practical experience as officers in the Regular Army. Many feel that this is their most valuable military experience during their four years as cadets.

The summer ends with cadets feeling they are ready to move into the Regular Army. However, still more training is required before they take their place among professionals in the United States Army. Military training during the Second Classman's academic year includes courses in physical education, combined combat arms (mechanized infantry) operations, and added leadership responsibilities within the Corps of Cadets.

FIRST CLASS YEAR

With the long-awaited First Class Year come more privileges and free time, and greater responsibility. Nearly every office in the cadet chain of command is held by a First Classman. "Firsties" also lead much of the training of the Third Classmen at Camp Buckner and the new cadets at West Point. As a result, cadets literally become "First Class" leaders.

Final preparation for the First Classman's

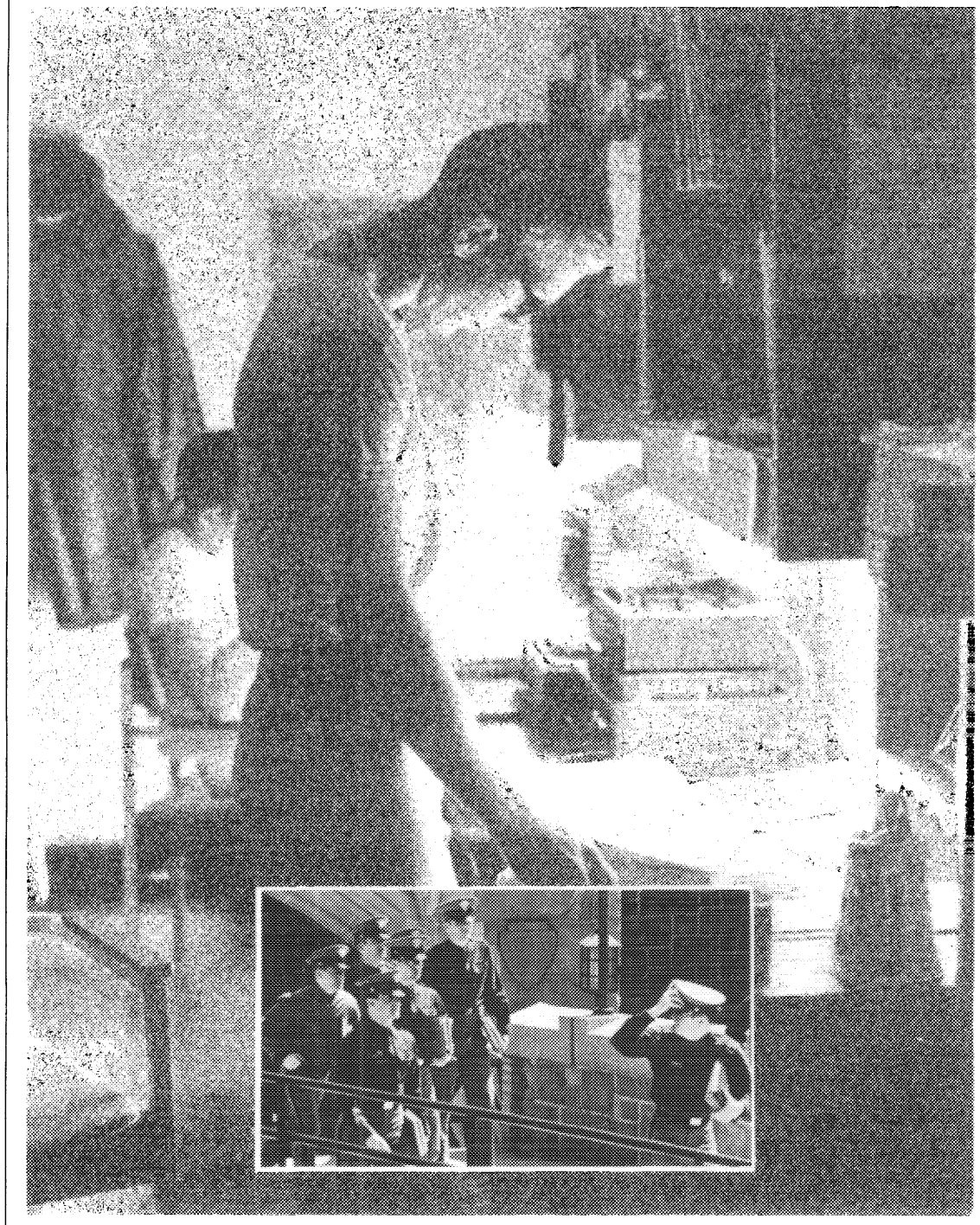
graduation into the Regular Army includes courses in athletic coaching, the training of military units, practical concerns of service life, and advanced military leadership. June Week marks an end that is also a beginning. The white cadet dress cap is thrown to the winds, and the next hat worn is that of the second lieutenant in the United States Army.

ORGANIZATION

The Department of Tactics, overseen by the Commandant of Cadets, provides military education and training in both the classroom and the field. A large part of this instruction is conducted by the Department's Offices of Military Instruction, Military Leadership, and Physical Education.

The Commandant's four regimental commanders and immediate staff of officers—each with a counterpart in the cadet command and staff—supervise the Corps of Cadets. A company tactical officer is assigned to each of the 36 cadet companies. The tactical officer acts as leader, supervisor, and counselor to the 110 or so cadets in his company.

First Classmen fill command and staff positions in the cadet military organization from brigade level to individual companies and their subordinate platoons. The cadet chain of command mirrors that of the Department of Tactics so that a leader-counselor relationship exists between cadet leader and tactical officer. The resulting individual attention, together with the rotation of cadet command positions, helps each cadet grow steadily in leadership skills and confidence.



VI. Courses of Instruction

Courses of instruction at the Military Academy are offered through departments and offices. Academic departments report to the Dean of the Academic Board. The Offices of Military Instruction, Military Leadership, and Physical Education are guided by the Commandant of Cadets.

DEPARTMENT OF CHEMISTRY

Professor and Head of Department

Donald G. MacWilliams, COL; B.S., USMA; M.S., Ohio State; Ph.D., R.P.I.

STANDARD COURSE

CH 201-202 General Chemistry

Prerequisite: None

A general chemistry course that emphasizes the fundamental concepts, principles, theories, and laws of chemistry. Includes an introduction to organic chemistry and an integrated laboratory program.

7 Credit Hours

ADVANCED COURSE

CH 251-252 Advanced General Chemistry with Analysis

Prerequisite: None

A rigorous treatment of the fundamental principles of chemistry. The laboratory program includes experiments of a quantitative nature and a series of semimicro qualitative analysis exercises.

7 Credit Hours

ELECTIVE COURSES

CH 383-384 Organic Chemistry

Prerequisite: CH 202 or CH 252, or validation thereof

A comprehensive study of the nature, preparation, and reactions of carbon compounds. Stresses the relationship of structure to chemical reactivity. The laboratory program includes synthesis, qualitative analysis, and instrumental analysis.

7 Credit Hours

CH 481-482 Physical Chemistry

Prerequisite: CH 202 or CH 252, or validation thereof

This course covers the standard topics in classical physical chemistry as well as an introduction to quantum chemistry and spectroscopy. Laboratory experiments illustrate fundamental topics and includes an independent project.

7 Credit Hours

CH 485-486 Human Biology

Prerequisites: Ch 202 or CH 252, PH 202 or PH 204, or validation thereof

Develops the fundamental principles of human structure and functions to include physiology, elements of cell morphology and functions, and human anatomy.A small number of laboratory exercises are included.

5 Credit Hours

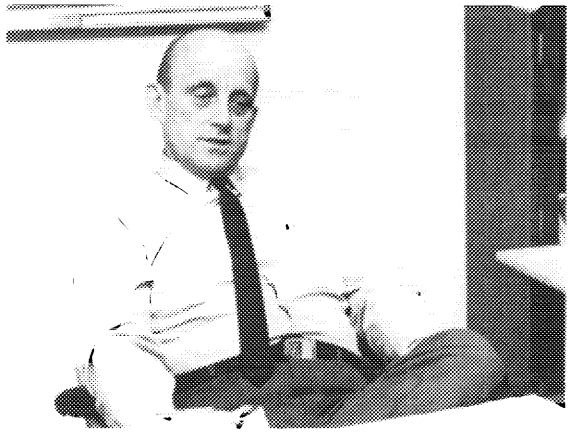
CH 489 Advanced Individual Study in Chemistry

Either Term—Prerequisites: Ch 384 and CH 482

Individual supervised research in a selected problem area approved by the department. The cadet must outline his approach, determine equipment, and develop procedures. Requires the submission of a research paper.

2.5 Credit Hours

DEPARTMENT OF EARTH, SPACE AND GRAPHIC SCIENCES



Professor and Head of Department

Gilbert W. Kirby, Jr., COL; B.S., USMA; M.S., Cal. Tech.; Ed. D., Columbia.

STANDARD COURSES

EF 101 Engineering Fundamentals

First and Second Terms—Prerequisite: None

The use of graphical methods for analysis and the communication of ideas and specifications is emphasized. Orthographic and pictorial representation, dimensioning, conventional practices, empirical relations and vector systems are studied.

2.0 Credit Hours

EF 102 Engineering Fundamentals

First and Second Terms—Prerequisite: None

The course includes the study of FORTRAN IV for programming the digital computer and an introductory treatment of the theory of errors and measurements using applications from field surveying practice.

2.0 Credit Hours

EV 101 Planetary Science

First Term—Prerequisite: None

An introductory study of the solar system and its planetary bodies, the planet Earth and those physical processes acting upon it, and modifications of the Earth's biosphere by nature and by man.

2.5 Credit Hours

EV 102 Regional Geography

Second Term—Prerequisite: None

An introductory study of the variety of physical and cultural phenomena as organized in earth space and of the dynamic man-environment systems and interrelationships in and between developed and developing world regions.

2.5 Credit Hours

ADVANCED COURSES

EF 153 Advanced Engineering Fundamentals

First Term—Prerequisite: Demonstrated ability on placement examination.

Programming for the digital computer using FORTRAN IV and the use of graphical methods for analysis and communication are stressed. Practical field measurements are considered employing surveying methods.

2.0 Credit Hours

EV 151 Advanced Planetary Science

First Term—Prerequisite: Placement by examination and interview. Offered in lieu of EV 101.

The course enlarges upon the subject matter of EV 101 in that coverage is accelerated and in greater depth with additional studies in astronomy, geophysics, and environmental problems.

2.5 Credit Hours

EV 152 Advanced Environment

Second Term—Prerequisite: Placement by examination and performance in EV 101 or 151. Offered in lieu of EV 102.

An expanded treatment of geographic concepts and methods, the course examines the origins, diffusion, and complex spatial organization and interactions of two world culture regions; Western Europe and the Middle East.

2.5 Credit Hours

ELECTIVE COURSES

EF 154 Advanced Engineering Fundamentals

Second Term—Prerequisite: EF 153

Topics related to architecture and computer graphics permit cadets to work individually and within a team to investigate and solve through graphical means basic problems having an engineering focus.

2.0 Credit Hours

EF 382 Computer Applications with FORTRAN

First and Second Terms—Prerequisites: EF 102, EF 153 or validation examination.

Advanced FORTRAN applications develop experiments in using computers as aids to decision making and to solving engineering problems. Emphasis is on programming. A consideration of graphical output is included.

2.5 Credit Hours

EF 383 Data Processing with COBOL

First and Second Terms—Prerequisite: EF 102 or EF 153

A comprehensive introduction to the COBOL programming language and its application to large-scale data processing techniques. Data management, file structure, data control, and information retrieval are emphasized.

2.5 Credit Hours

EF 384 Principles of Surveying

Second Term—Prerequisite: EF 102 or EF 153

The course provides a foundation in the principles of surveying for application to topographic mapping, construction, artillery, and route surveys. Instruments and methods used in modern surveying are studied.

2.5 Credit Hours

EF 488 Advanced Computer Programming

First and Second Terms—Prerequisite: EF 382 or EF 383

A representative assembly language (GMAP) for a large-scale computer is studied. Important course topics include machine code, data movement instructions, Boolean operations, symbolic addressing, and software operations.

2.5 Credit Hours

EF 489A Advanced Individual Study in Computer Science

First and Second Terms—Prerequisite: Permission of Department Head

The course permits advanced or specialized study of problem areas in which the electronic digital computer can be effectively utilized for solution through advanced programming techniques.

2.5 Credit Hours

EF 489B Advanced Individual Study in Geodetic Science

First and Second Terms—Prerequisite: Permission of Department Head.

The course permits advanced or specialized study of significant problems related to the numerous aspects of earth measurement and representation.

2.5 Credit Hours

EV 381 Geography of the USSR

First Term—Prerequisite: EV 102

A comprehensive spatial study of USSR man-land relationships, organized in both topical and regional frameworks and emphasizing the Soviet physical landscape, cultural diversity and potential for economic growth.

2.5 Credit Hours

EV 382 Geography of the People's Republic of China

Second Term—Prerequisite: EV 102

An examination of the cultural landscape of mainland China, stressing the geographic spread and development of Chinese culture, China's resource base, and current population and economic patterns and problems.

2.5 Credit Hours

EV 383 Astronomy

Second Term—Prerequisite: EV 102

A study of the principles of tools of astronomy through detailed examination of planetary motions, stellar evolution and structure, galaxies, the solar system and cosmological models. Celestial telescopic observation is included.

2.5 Credit Hours

EV 384 Regional Geography of the United States
First Term—Prerequisite: EV 102
Study of the significant geographical aspects of the historic settlement process, contemporary population movements, agricultural and urban-industrial patterns which illuminate regional cultural variations and interdependence.

2.5 Credit Hours

EV 385 Issues Confronting Man and His Environment
First and Second Terms—Prerequisite: EV 101-102
A study of the man-environment ecosystem emphasizing technological man's continuing use and misuse of his physical and biotic resources and corresponding concern for environmental quality.

2.5 Credit Hours

EV 387 Cartography
Second Term—Prerequisite: EV 102 or EV 152
Study of the principles of methodologies employed in modern cartographic techniques to include air photo interpretation and computer graphics, with focus on the planning for, gathering, analysis, design and presentation of data in visual form.

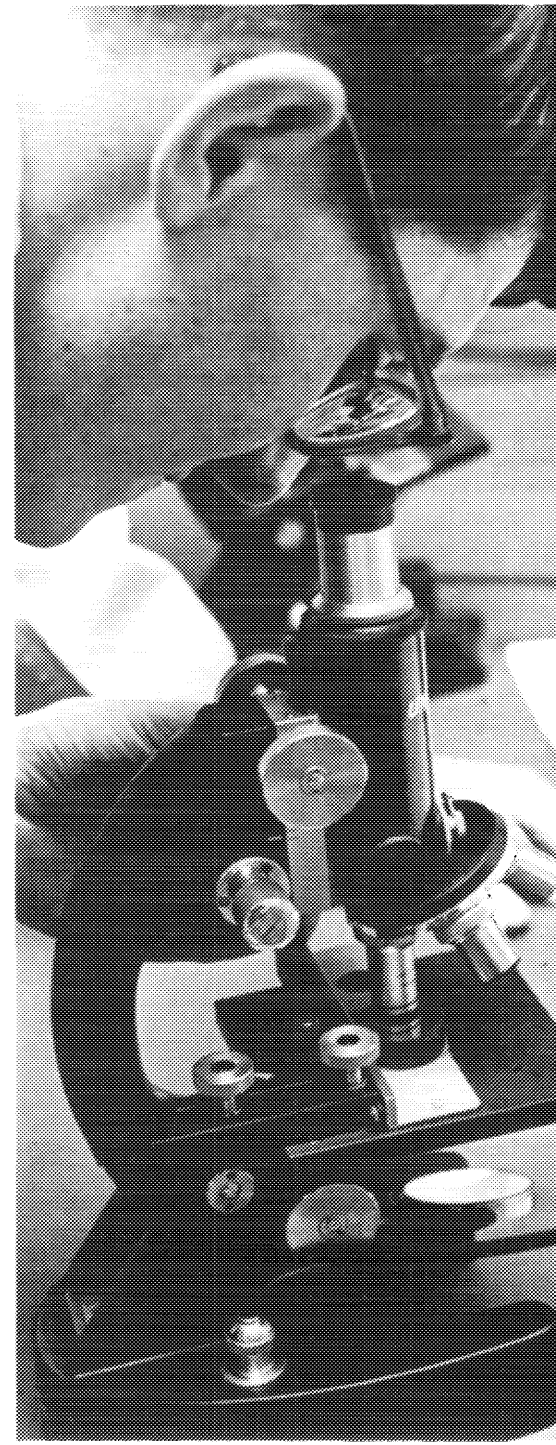
2.5 Credit Hours

EV 388 Physical Geology
Second Term—Prerequisites: EV 101-102
A systematic treatment of principles and methods of physical geology with emphasis on the Earth's primary features and the processes which produce and modify them. Laboratory periods and field trips are included.

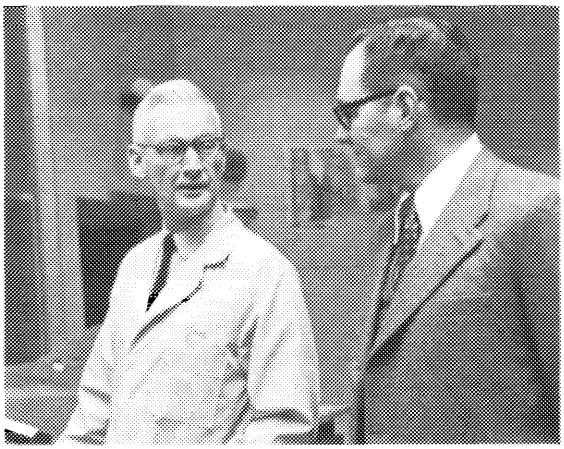
2.5 Credit Hours

EV 489 Advanced Individual Study in Environment
Either Term—Prerequisite: Permission of Department Head
Advanced study in the fields of geography and geology; topic selected by the cadet and approved by the faculty advisor. The study program culminates in a substantive research paper and oral defense.

2.5 Credit Hours



DEPARTMENT OF ELECTRICAL ENGINEERING



Professor and Head of Department

Elliott C. Cutler, Jr., COL; B.S., USMA; M.S.E.E., Ph.D., Georgia Tech.

STANDARD COURSES

EE 301 Electric Circuits
Prerequisites: PH 202 and MA 205.
Fundamental quantities and circuit laws are introduced and applied first to resistive networks. Impedance is then introduced, and the circuit analysis extended to cover general linear networks. Laboratory exercises included.

3.5 Credit Hours

EE 304 Electronics
Prerequisite: EE 301
Frequency selectivity in communication circuits. Characteristics and modeling of electronic devices. Diode circuits, amplifiers, oscillators, and modulation methods. Radio and other electronic systems. Laboratory exercises reinforce key points.

3.5 Credit Hours

EE 401 Electronic Circuits
Prerequisite: EE 304
Starts with discussion of semiconductor devices and uses. Transistor amplifiers, coupled and cascaded amplifiers, feedback oscillator, switching circuits, and integrated circuits studied. Laplace transforms and Bode diagrams utilized. Laboratories emphasized.

3.5 Credit Hours

EE 402 Automatic Control Systems
Prerequisite: EE 304
Emphasizes linear feedback systems. Analysis techniques include root locus, Bode, and Nyquist plots. Mathematical models, stability, steady-state error, and state variable theory studied. Laboratory exercises emphasized.

3.5 Credit Hours

ELECTIVE COURSES

EE 382 Electromechanical Energy Conversion
Prerequisite: EE 301
Relationships between current, magnetic fields, force, and voltage studied. DC motors and generators, AC induction motors, and AC synchronous motors and generators form framework of study. Laboratories throughout.

3.5 Credit Hours

EE 383 Electromagnetic Fields
Prerequisites: Credit for PH 202 and MA 206 or equivalent
Study of electrostatic fields, magnetostatic fields and time-varying fields leads to Maxwell's Equations and electromagnetic wave phenomena. Transmission lines, waveguides, radiation, antennas and arrays, propagation and radar. Microwave laboratories.

3.5 Credit Hours

EE 482 Power System Analysis
Prerequisite: EE 301
Includes calculation of transmission line parameters, current, voltage relationships on high-energy transmission lines; modeling power networks under steady-state, load flow, symmetrical and asymmetrical fault conditions.

2.5 Credit Hours

EE 483 Digital Computer Systems
Prerequisite: EE 304 or Department Permission
Includes block diagram discussion of computer, gates,

flipflops, memory, control, arithmetic, input/output units. Current and future trends discussed. Laboratories using logic modules and computer center emphasized.

2.5 Credit Hours

EE 484 Communication Systems

Prerequisites: EE 304 and MA 206 or equivalent

Includes signal analysis and transmission through noise, by suppressed-carrier, single-side band, amplitude and frequency, phase and pulse modulation, probability theory, Fourier series, and transforms, and laboratory work throughout.

2.5 Credit Hours

EE 485 Computer Engineering

Prerequisite: EE 304

Includes gates and inverters as logic networks, Boolean algebra, Karnaugh maps and various coding methods are discussed. Laboratory exercises throughout emphasize curcuit construction and their interconnection.

2.5 Credit Hours

EE 486 Solid State Electronics

Prerequisites: EE 304 and PH 303

Includes crystalline properties, elementary quantum models, valence bond and energy band models, p-n junctions, transistors, and other devices. Laboratories include conductivity, Hall effect, Shockley Haynes experiment, and planar device fabrication.

2.5 Credit Hours

EE 489 Advanced Individual Study in Electrical Engineering

Prerequisite: Department permission.

Designed to provide qualified cadets with opportunity to pursue study of Electrical Engineering at level beyond standard and regular elective courses. Laboratory work and projects included where appropriate.

2.5 Credit Hours

DEPARTMENT OF ENGINEERING

Professor and Head of Department

Charles H. Schilling, COL; B.S., USMA; M.S., California; Ph.D., R.P.I.

STANDARD COURSES

CE 401 Structural Analysis
First Term—Prerequisite: ME 303 [ME 384 is recommended]
Analysis of stresses and deflections; determination of reactions, shear, and moment. Virtual work, moment area theorems, slope deflection and moment distribution; use of influence lines. Role of analysis in design (engineering decision making).
3.5 Credit Hours

CE 402 Structural Design
Second Term—Prerequisite: CE 401
Determination of structural form and proportions emphasizing systems engineering concepts including modeling and optimization; design of tension members, columns, and beams; a comprehensive design problem requiring applications of the principles of analysis, synthesis, and design.
3.5 Credit Hours

GE 401 General Engineering
First Term—Prerequisites: ME 301 and ME 303
Principles of engineering design. Interior, exterior, and terminal ballistics; recoil and control mechanisms of weapon systems. Economic and reliability considerations; modeling and analog techniques.
3.5 Credit Hours

GE 402 General Engineering
Second Term—Prerequisite: GE 401
Study of engineering design with emphasis on civil engineering systems; covers reactions, shear, flexure, and deflection characteristics of structural elements; use of influence lines; comprehensive design project.
3.5 Credit Hours

OE 401 Weapon Systems Engineering
First Term—Prerequisites: ME 301 and ME 303
Mathematical and analog techniques; principles of material science; fundamentals of synthesis, analysis, and the decision making process combined with other engineering tools in the design of weapon system components.
3.5 Credit Hours

OE 402 Weapon Systems Engineering
Second Term—Prerequisite: OE 401
Weapon systems design and analysis with emphasis on land mobility, internal combustion engines, vehicular power trains, solid propellant rockets, and guidance systems; comprehensive design project.
3.5 Credit Hours

ADVANCED COURSES

CE 451 Honors Course in Structural Analysis
First Term—Prerequisites: ME 303 or ME 353 [ME 384 is recommended], standing in top 100 of class; permission of Head of Department.
Individual tutorial study at an accelerated pace. Advanced work in options which include numerical analysis, Castigliano's Theorem, matrix methods, conjugate beam theory, and application of computer techniques to structural analysis.
3.5 Credit Hours

CE 452 Honors Course in Structural Design
Second Term—Prerequisite: CE 451
Topics cited in CE 402 are covered at an accelerated pace with emphasis on tutorial instruction and individual study. Time gained is used to pursue an advanced analytic and/or laboratory project selected by each cadet.
3.5 Credit Hours

CE 453 Introduction to Nuclear Engineering
First Term—Prerequisites: ME 301 or ME 351; PH303 or PH 353; MA 205-206, or equivalent advanced program. PH 487 [may be taken concurrently].

Reactor systems engineering and optimization, power plant thermodynamics, heat transfer by conduction, convection, and boiling; incompressible fluid flow, and steady-state homogeneous reactor analysis.

3.5 Credit Hours

CE 454 Introduction to Nuclear Engineering

Second Term—Prerequisite: CE 453

Steady-state analysis of heterogeneous reactors; investigation of time-dependent reactor phenomena; biological effects of radiation; radiation shielding design; engineering economics; individual power reactor design project.

3.5 Credit Hours

OE 451 Honors Course in Weapons Systems Engineering

First Term—Prerequisites: ME 301 and ME 303; standing in top 100 of class, permission of Head of Department

Topics cited in OE 401 are covered at an accelerated pace using teaching techniques emphasizing individual tutorial study. Time gained is used to pursue advanced design projects involving weapon system components.

3.5 Credit Hours

OE 452 Honors Course in Weapon Systems Engineering

Second Term—Prerequisite: OE 451

Teaching techniques normally used in graduate studies are employed to cover OE 402 at an accelerated pace. Time gained is used to pursue an individual weapon system design project which incorporates the full range of OE 451 and OE 452 material.

3.5 Credit Hours

ELECTIVE COURSES

CE 381 Soil Mechanics

Either Term—Prerequisite: ME 303 or ME 353 [may be taken concurrently].

Soil is studied as an engineering material. Soil properties—permeability, compressibility, and strength are combined with basic principles of mechanics and hydraulics to solve problems of settlement, seepage flow, earth forces, and slope stability.

2.5 Credit Hours

CE 382 Engineering of Environmental Systems

Either Term—Prerequisite: None [EV 385 is suggested but not required].

Environmental systems analyzed from the engineering, management, and planning viewpoints. Solution techniques for environmental problems stress the systems engineering approach/decision making process. Topics: water-quality engineering and management, air-quality engineering, and land-use planning.

2.5 Credit Hours

CE 481 Design of Concrete Structures

Either Term—Prerequisites: ME 303 or ME 353; CE 401 or CE 451 [May be taken concurrently]; [ME 384 is recommended].

Study of the ultimate strength theory of reinforced concrete; analysis and design of beams, one-way slabs, columns, footings, and retaining walls. Culminates in a comprehensive design problem requiring application of course theory and the design process.

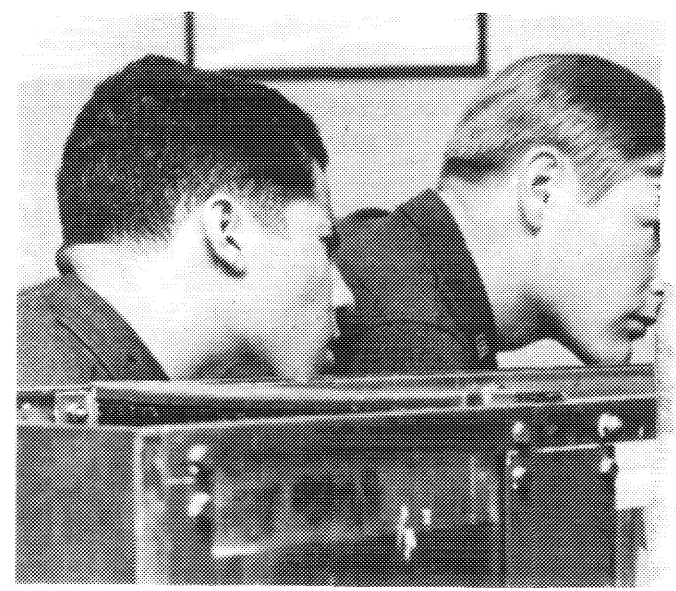
2.5 Credit Hours

CE 482 Advanced Structural Analysis

Second Term—Prerequisite: CE 401 or CE 451 or Permission of Head of Department; [ME 384 is recommended].

Extension of CE 401. Introduced advanced techniques such as finite differences, displacement and direct element matrix methods, and plastic analysis as applied to determinate and indeterminate structures. Independent analysis and design problems emphasize practical applications of the concepts studied.

2.5 Credit Hours



CE 489 Advanced Individual Study in Engineering
Either Term—Prerequisite: Permission of Head of Department
Designed to permit the cadet to concentrate in an area of individual interest dealing with an advanced topic in Civil, Weapon Systems, Automotive, Materials, Nuclear, Decision Making, or Management Engineering. The cadet is required to define and analyze a problem, organize his approach, and achieve a solution.
2.5 Credit Hours

GE 381 Scientific Management
Either Term—Prerequisite: None
An interdisciplinary presentation of the processes and issues of management, unifying the management-related topics presented in the total academic program. A pragmatic approach is emphasized; examples are drawn from industry and the military.
2.5 Credit Hours

GE 383 Systems Engineering and Decision Making
Either Term Prerequisite: First or Second Class Standing or Permission of the Head of the Department
Familiarization with the systems approach to problem-solving. Methodology of solving problems and of decision making related to engineering design and management is considered; optimization techniques.
2.5 Credit Hours

OE 383 Engineering Materials
Either Term—Prerequisites: CH 201-202
Physical and mechanical properties of metals and plastics. Crystal and molecular structures, elastic and plastic behavior, failure, microscopic analysis of materials. Laboratory experiments to determine engineering characteristics of materials.
2.5 Credit Hours

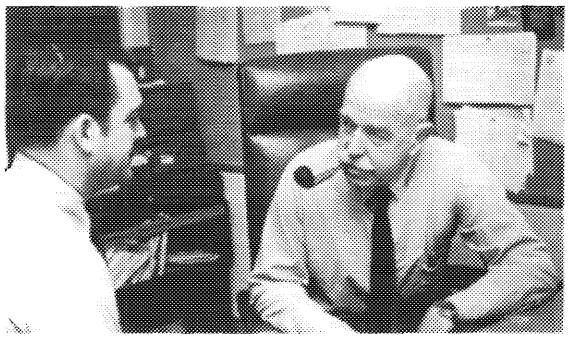
OE 385 Management Engineering
Either Term—Prerequisite: None
Quantitative methods of management that aid decision making and improve managerial abilities: deterministic and statistical techniques, to include decision and cost analysis, forecasting, quality control, analysis of variance, and linear programming.
2.5 Credit Hours

OE 481 Automotive Engineering
Either Term—Prerequisites: ME 301, 303 [ME 303 may be taken concurrently].
Analysis and design of automotive internal combustion engines, power trains, suspension systems, and running gear in the context of total vehicle performance. Laboratory experiments on engine and chassis performance.
2.5 Credit Hours

OE 483 Helicopter Engineering
Second Term—Prerequisite: None [ME 388 is recommended].
Helicopter design course. Design of a rotor blade. Available power, desired payload, and forward speed relationship are optimized. Controls and stability; interaction between helicopter components.
2.5 Credit Hours

OE 487 Operations Research
Either Term—Prerequisite: MA 202, or MA 206, or MA 207.
Quantitative methods used to analyze engineering decision making and managerial problems; Competitive Strategies, Dynamic Programming, Probability Theory, Inventory Theory, Waiting-Line Analysis, Simulation Techniques, and Models of Combat.
2.5 Credit Hours

DEPARTMENT OF ENGLISH



Professor and Head of Department

Edwin V. Sutherland, COL; B.S., USMA; M.A., Columbia; Ph.D., Pennsylvania.

STANDARD COURSES

EN 101 Communication Skills: Logic and Composition
First Term—Prerequisite: None
Instruction in logic, rhetoric, evaluation of ideas, and public speaking. Readings provide basis for practical analysis, discussion, and theme-writing. Emphasis on writing effective argumentative prose.

2.5 Credit Hours

EN 102 Communication Skills: Composition and Imaginative Literature
Second Term—Prerequisite: EN 101 or EN 151
Builds on EN 101 in variety of writing and speaking situations, including research paper and public-speaking requirements. Latter portion of semester devoted to introduction to major literary forms.

2.5 Credit Hours

EN 201 Comparative Literature
Prerequisite: None
Introduces major literary figures of Western civilization, thus providing familiarity with enduring imaginative literature. Writing skills and effective speaking emphasized. Among authors are Homer, Dante, Chaucer, Shakespeare, Cervantes, Ibsen, Tolstoy.

2.5 Credit Hours

EN 402 Readings in Philosophy: Inquiries into Ethical, Aesthetic, and Spiritual Values
Prerequisite: None
Focuses on human values evolved in man's quest for security amidst life's uncertainties. Readings include expository essays, philosophic discourse, and imaginative literature of all ages. Oral and written expression emphasized.

2.5 Credit Hours

ADVANCED COURSES

EN 151 Advanced Composition: Interdisciplinary Study of American Issues
First Term—Prerequisite: Selection by Department
Through concentrated interdisciplinary study, provides extensive knowledge about a current issue in American Studies. Issue serves as vehicle for developing and refining skills in reading, research, oral expression, and writing.

2.5 Credit Hours

EN 152 Advanced Composition: American Literature
Second Term—Prerequisite: EN 151 or EN 101
Through close reading of various genres, lays basis for apprehending American literary genius. Requires analysis and criticism of fiction, poetry, and drama through class discussions and essays.

2.5 Credit Hours

ELECTIVE COURSES

EN 381 British Literature Survey
Prerequisite: Credit for EN 201
Surveys genesis and development of prose, poetry, and drama in English. Two topics offered for 1975-76: British Literature to 1660 (1st Term) and British Literature, 1660-1900 (2nd Term).

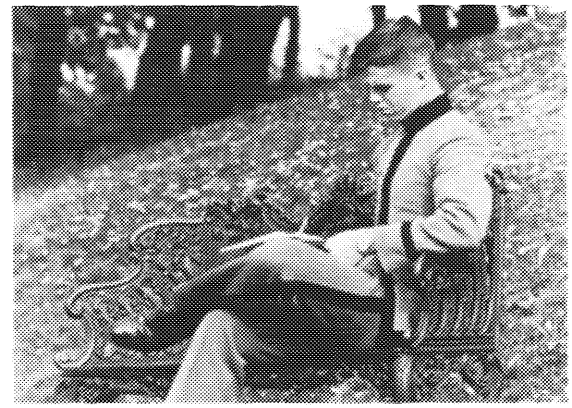
2.5 Credit Hours

EN 383 Period Studies in Literature
Prerequisite: Credit for EN 201
Treats major phases of Western literary tradition. Topics for 1975-76 are 19th-Century American Literature (both terms), Contemporary Literature (2nd Term), and literature of the Renaissance (2nd Term).

2.5 Credit Hours

EN 385 Background to American Studies
Prerequisite: Credit for EN 201. Not open to cadets who have completed EN 152.
Examines genesis and development of American religious, political, and social thought through study of aesthetic ideas and cultural criticism of several authors. 1st Term.

2.5 Credit Hours



EN 391 Introduction to Fine Arts
Overload Elective. Prerequisite: Approval by Office of the Dean
Deals with dominant themes in visual arts from primitive cultures, Eastern and Western, to present. Relates aspects of today's culture to history and meaning of past art. 1st Term.
2 Credit Hours

EN 392 Introduction to Music
Overload Elective. Prerequisite: Approval by Office of the Dean
Discusses tone, instruments, and concepts of rhythm, melody, polyphony, harmony, and form. Discussions correlated with historical development and repertory of music to provide broad musical orientation. 2nd Term.
2 Credit Hours

EN 481 Aspects of Literature
Prerequisite: Credit for EN 201
Conducts specialized examinations of literary genres, topics, relationships, and problems. First Term offering for 1975-76 is The Novel; 2nd Term is Literature and Philosophy.
2.5 Credit Hours

EN 482 Aspects of American Studies
Prerequisites: Credit for EN 201 and EN 151-152 or EN 385
Examines ideas of Americans whose writings have significantly influenced national thought in more than one field or discipline. First Term offering for 1975-76 is Expositors of 19th Century American Thought; 2nd Term is Social Criticism in 20th Century American Prose.
2.5 Credit Hours

EN 483 Seminar in American Studies
Prerequisites: EN 201 and HI 203-204
Focused interdisciplinary study of some particular phase, movement, school, or theme within American culture. Topics for 1975-76 are The Influence of Religious Thought, Past and Present, on American Life (1st Term), and The Influence of Racial and Ethnic Minorities on American Life (2nd Term).
2.5 Credit Hours

EN 485 Seminar in Major British Authors
Prerequisites: EN 201 and one 300-level English elective
Provides opportunity for concentrated study in works of selected major British authors. Emphasis on appreciation and critical understanding. Authors for 1975-76 are Shakespeare (both Terms) and Chaucer (1st Term).
2.5 Credit Hours

EN 486 Seminar in Major American Authors
Prerequisites: EN 201 and one 300-level English elective
Provides opportunity for concentrated study in works of selected major American authors. Emphasis on appreciation and critical understanding. Authors for 1975-76 are Herman Melville (1st Term) and Mark Twain (2nd Term).
2.5 Credit Hours

EN 489 Advanced Individual Study in English
Prerequisite: Selection by Department
Permits student of superior ability and extensive background to develop original project through independent study. Student develops prospectus and then conducts extensive research; findings normally presented in monograph.
2.5 Credit Hours

DEPARTMENT OF FOREIGN LANGUAGES

Professor and Head of Department

Walter J. Renfroe, Jr., COL; B.S., USMA; M.A., Ph.D., Columbia.

The foreign language requirement for graduation from the U.S. Military Academy is satisfied by successful completion of the standard course at the end of the second year of study.

In French, German, Russian, and Spanish, three levels of courses are offered: standard (beginning), accelerated (intermediate), and advanced. Assignment to the two higher level courses is based on placement tests administered at West Point. Assignment to the advanced course, which is of one year's duration, is tantamount to one year of validation credit; the accelerated course covers one and one-half years and corresponds to one semester of validation credit. The courses constituting the Standard, Accelerated, and Advanced Program are summarized below.

In addition, a full two-year validation is possible for cadets with a particularly strong language background. Any validation credit received makes time available for additional elective courses either in foreign language courses or other areas of interest to the cadet.

STANDARD PROGRAM

First Year, **LX 101-102**
Second Year, **LX 201-202**

ACCELERATED PROGRAM

First Year, **LX 141-142**
Second Year, **LX 241**

ADVANCED PROGRAM

First Year, **LX 151-152**

STANDARD COURSES

LC 101-102-Chinese; LF 101-102-French
LG 101-102-German; LP 101-102-Portuguese;
LR 101-102-Russian; LS 101-102-Spanish
Prerequisite: None
A basic course in the language. In keeping with the primary objectives of speaking and understanding, oral work is stressed. Audio-lingual skills are developed by reading aloud, repetition drills, question and answer exercises, prepared and extemporaneous dialogues, individual short talks, and frequent use of the language laboratory. After the first month of the course, classroom work is normally in the foreign language.

5 Credit Hours [2.5 each term]

LC 201-202-Chinese; LF 201-202-French;
LG 201-202-German; LP 201-202-Portuguese;
LR 201-202-Russian; LS 201-202-Spanish
Prerequisites: The 101-102 courses in the appropriate language
A continuation of the 101-102 courses, with increased emphasis on applied grammar through discussions, dialogues, individual talks, and frequent aural comprehension exercises. Periodic themes are used in conjunction with reading and discussion of several literary works and of historical, geographical, and military material of current interest. Lectures are included on the history and civilization of the people whose language is being studied. All work is conducted in the foreign language.

6 Credit Hours [3 each term]

ADVANCED COURSES

LF 141-142-French; LG 141-142-German
LR 141-142-Russian; LS 141-142-Spanish

Prerequisite: One or two years of previous study of the language, and proficiency as shown in placement test

An intermediate course with oral-aural emphasis and a thorough grammar review. Audio-lingual skills are developed by use of pattern drills, question and answer exercises, dialogues, and individual talks. Texts of literary value are read and discussed in class. All classroom work is in the foreign language.

5 Credit Hours [2.5 each term]

LF 151-152-French; LG 151-152-German;
LR 151-152-Russian; LS 151-152-Spanish

Prerequisite: Two or more years of previous study of the language, and proficiency based on oral and written tests administered prior to the beginning of Fourth Class year

An upper intermediate course, with intensive grammar review and aural-oral emphasis. Extensive use is made of pattern drills, question and answer exercises, dialogues, individual talks, and periodic themes. Reading and discussion of several works of drama and fiction by prominent writers. All classroom work is in the foreign language.

5 Credit Hours [2.5 each term]

LF 241-French; LG 241-German;
LR 241-Russian; LS 241-Spanish

Prerequisites: Completion of the 141-142 courses

A continuation of the 141-142 courses, with increased emphasis on grammatical and syntactical accuracy, both in speech and writing. Reading of selected modern works, to include some writings on military subjects. Periodic themes are written, and cadets attend several lectures on various cultural aspects of the people whose language is being studied. All classroom work is in the foreign language.

3 Credit Hours

ELECTIVE COURSES

LG 371-372 German Language Through Literature
LP 371-372 Portuguese Language Through Literature
LS 371-372 Spanish Language Through Literature

Prerequisite: The 152, 202 or 241 courses in the corresponding language

Review of grammar. Increased use of audio-lingual techniques, talks, and debates. Reading in a wider field of literature. Greater emphasis upon the culture and history of the countries concerned. Class discussions, oral and written reports, all in the foreign language.

5 Credit Hours [2.5 each term]

LF 381 French Language Through Literature

First Term—Prerequisites: LF 201-202 or 241 or 152

Readings in literary works by French writers. Class discussions, oral and written reports, all in French.

2.5 Credit Hours

LR 381 Advanced Russian Conversation

First Term—Prerequisites: LR 201-202

A continuation of LR 201-202, with increased emphasis on the contemporary forms of spoken Russian and on the acquisition of a broad, general vocabulary.

2.5 Credit Hours

LF 382 Military and Scientific Readings in French
LG 382 Military and Scientific Readings in German

Second Term—Prerequisites: The 371 or 381 courses in the corresponding language

Military and scientific readings. Class discussions, themes, and translation into and from the foreign language.

2.5 Credit Hours

LR 382 Russian Language Through Literature
Second Term—Prerequisite: LR 381
Studies in Russian and Soviet literature. Class discussions, comparative studies, oral and written presentation of material, all in Russian.

2.5 Credit Hours

LS 382 Military Readings in Spanish
Second Term—Prerequisites: LS 202, LS 241 or LS 152
Selected military readings on Spanish-American armies and their activities. Classroom discussions, oral and written reports, and exercises emphasizing military terminology, all in Spanish.

2.5 Credit Hours

LC 383 Chinese Literature and Culture
First Term—Prerequisite: LC 202
This course utilizes essays on China's culture and civilization and contemporary Chinese writings to increase the student's proficiency in the language. Increased stress is placed on individual talks, writing, group discussions, and the development of rapid character reading skill.

2.5 Credit Hours

LC 384 Chinese Literature and Culture II
Second Term—Prerequisite: LC 383
Continuation of LC 383.

2.5 Credit Hours

LP 383 Military Readings in Portuguese
First and Second Terms—Prerequisite: LP 371
Military readings. Class discussions, themes, translations into and from Portuguese.

2.5 Credit Hours

LF 483 History of French Civilization I
First Term—Prerequisites: LF 381-382 or validation
This course comprises readings in a variety of fields—historical, sociological, cultural, and literary—with the objective of presenting a panorama of French culture in the framework of French history and literary achievement.

2.5 Credit Hours

LF 484 History of French Civilization II
Second Term—Prerequisites: LF 381-382 or validation
Continuation of LF 483.

2.5 Credit Hours

LG 483 History of German Civilization
First Term—Prerequisite: LG 382 or LG 372
This course, a comprehensive survey, is an integrated study of the geography, history, and culture of Germany, introducing the cadet to the most significant political, social, economic, and artistic events of each period in the country's growth and development. Emphasis is placed on the German contributions to Western Civilization. Classroom work is in the foreign language.

2.5 Credit Hours

LG 484 Contemporary Germany
Second Term—Prerequisite: LG 382 or LG 372
This course is a detailed study of contemporary Germany, introducing the cadet to the political, social, economic, and artistic events since the end of World War II. Emphasis is placed on Germany's national problems and on her contribution to the Western community of nations, to the Common Market, and to NATO. Classroom work is in the foreign language.

2.5 Credit Hours

LR 473 Russian and Soviet Civilization
First Term—Prerequisites: LR 381-382
A greater proficiency in the language is acquired through a survey of the historical and cultural elements that have developed the USSR and the Russian people. Classroom work is in the foreign language.

2.5 Credit Hours

LR 475 Military and Scientific Russian
First Term—Prerequisites: LR 381-382
Intensive readings in scientific and military works to prepare the student to read and understand current Russian publications on these subjects.

2.5 Credit Hours

LS 483 Survey of Spanish-American Literature
First Term—Prerequisites: LS 381-382, validation or any other 400 level course
A study of some of the outstanding modern authors of Spanish-American literature. The development and transformation of existing literary genres; new literary forms; Hispanic-American literature as a mirror of history and society of the nations involved. Classroom work is in the foreign language.

2.5 Credit Hours

LS 484 Modern Spanish-American Literature
Second Term—Prerequisites: LS 381-382, validation or any other 400 level course
Continuation of LS 483 with a survey of current Spanish-American literature.

2.5 Credit Hours

LC 485 Readings in Modern Chinese
First Term—Prerequisite: LC 384
This course utilizes articles on a variety of subjects taken from books, magazines, and political treatises, to increase the cadet's skill in speaking, reading, and writing.

2.5 Credit Hours

LP 475 Survey of Brazilian Literature
LF 485 Survey of French Literature
LG 485 Survey of German Literature
LS 485 Survey of Spanish Literature
First Term—Prerequisites: The appropriate 371-372 or 381-382 courses, or validation
A survey course of the literature of France, Germany, Brazil, or Spain. Class discussions, themes, outside reading, reports in the appropriate foreign language.

2.5 Credit Hours

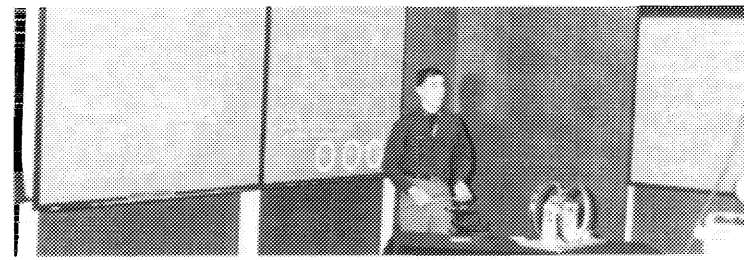
LC 486 Military Readings in Chinese
Second Term—Prerequisite: LC 202
Military readings. Class discussions, themes, translations into and from the foreign language; interpreter exercises.

2.5 Credit Hours

LP 476 Modern Brazilian Literature
LF 486 Modern French Literature
LG 486 Modern German Literature
LS 486 Modern Spanish Literature
Second Term—Prerequisites: The appropriate 371-372 or 381-382 courses, or validation
Advanced studies in the contemporary literature of France, Germany, Brazil, and Spain, with class discussions, themes, etc., in the appropriate foreign language.

2.5 Credit Hours

LP 487 Directed Studies in Portuguese
LF 487 Directed Studies in French
LG 487 Directed Studies in German
LR 487 Directed Studies in Russian
LS 487 Directed Studies in Spanish



First Term—Prerequisites: LP 475-476 or LF 485-486 or LG 485-486 or LS 483-484 or LS 485-486 or LR 473-474 or LR 475-476
These courses are intended for those cadets who have demonstrated language ability and a strong personal desire to accomplish a more detailed study of a particular period of history or literature. All work will be done in the foreign language.

2.5 Credit Hours

LP 488 Directed Studies in Portuguese
LF 488 Directed Studies in French
LG 488 Directed Studies in German
LR 488 Directed Studies in Russian
LS 488 Directed Studies in Spanish
Second Term—Prerequisite: LF 487 or LP 487 or LG 487 or LS 487 or LR 487
Continuation of LP 487, LF 487, LG 487, LS 487, LR 487—Directed Studies in Portuguese, French, German, Spanish, or Russian.

2.5 Credit Hours

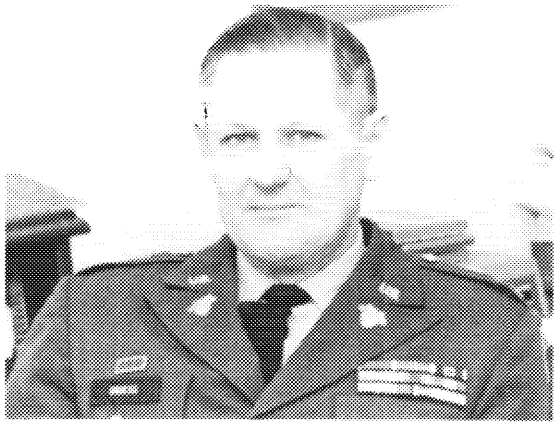
LR 474 Soviet Russian Literature
Second Term—Prerequisite: LR 382 or LR 473 or LR 475
A course on the literature of Soviet Russia. Class discussions, talks, outside reading in Russian.

2.5 Credit Hours

LR 476 Soviet Expository Writing
Second Term—Prerequisite: LR 473 or LR 475
Advanced studies based on readings from Soviet publications, class discussion, talks, outside reading in Russian.

2.5 Credit Hours

DEPARTMENT OF HISTORY



Professor and Head of Department

Thomas E. Griess, COL; B.S., USMA; M.S., Illinois, Ph.D., Duke.

STANDARD COURSES

HI 201 History of Modern Europe, 1500-1815
First Term—Prerequisite: None
2.5 Credit Hours

HI 202 History of Modern Europe, 1815-1955
Second Term—Prerequisite: HI 201 or equivalent.
A topical survey of European history in modern times. The course considers western civilization in the light of broad historical trends from the Renaissance to the Cold War.
2.5 Credit Hours

HI 203 History of the United States to 1877
First Term—Prerequisite: None
2.5 Credit Hours

HI 204 History of the United States Since 1877
Second Term—Prerequisite: HI 203 or equivalent
A topical survey of American history. The central themes for study are the evolution of a distinctive American character, the U.S. rise to world power, industrialization, and urbanization.
2.5 Credit Hours

HI 401-402 History of the Military Art
Prerequisites— HI 201-202 or HI 203-204
This course examines the evolution of the art of war from ancient to contemporary times. The major themes are generalship, strategy, tactics, and logistical considerations as well as the political, social, economic, and technological factors which affect warfare.
7 Credit Hours

ADVANCED COURSE

HI 451-452 Advanced History of the Military Art
Prerequisites: HI 201-202 or HI 203-204 and approval of the Head of the Department
This course is a survey of man's use of military power from ancient times to the present. The advanced course stresses historical analysis and critique, requiring more reading and student participation than HI 401-402.
7 Credit Hours

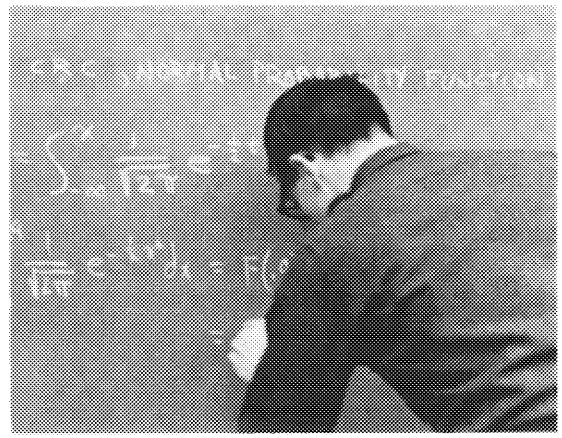
ELECTIVE COURSES

HI 371 History of Russia
Second Term—Prerequisite: HI 201-202 or HI 203-204
A survey of Russian history, with emphasis on the 19th and 20th Centuries. The theme of the course centers on the complex relationships between Russia and the West.
2.5 Credit Hours

HI 372 History of the United States Foreign Relations, 1898-1960
Either Term—Prerequisites: HI 201-202 or HI 203-204
The course studies American diplomacy from the Spanish-American War through the 1960's. The American sense of mission and the policy of isolation provide the essential framework for the course.
2.5 Credit Hours

HI 373 Topics in American History
Either Term—Prerequisites: HI 201-202 or HI 203-204
2.5 Credit Hours

HI 373F The Age of Jackson
First Term, Academic Year 1975-76
The course treats social, political, and economic developments leading to the presidency of Andrew



Jackson. Central themes are: Jacksonian Democracy, development of parties, rise of the Common Man, and sectionalism.

2.5 Credit Hours

HI 373B History of Latin America
Second Term, Academic Year 1975-76
The course studies the historical development of Latin America, emphasizing political, social, and economic factors. Common traditions and patterns of development provide the specific focus.

2.5 Credit Hours

HI 374 Topics in European History
Either Term—Prerequisites: HI 201-202 or HI 203-204
[May not be taken concurrently]

2.5 Credit Hours

HI 374E German Militarism, 1870-1945
First Term, Academic Year 1975-76
A study of the German army's unique and fateful role in national politics, social life, economic organization, and foreign affairs from German unification to the defeat of the Third Reich.

2.5 Credit Hours

HI 374F History of Western Religious Thought
Second Term, Academic Year 1975-76
A survey of the intellectual and philosophical development of Western Religious Thought from the Old Testament Prophets to present day men of religious insight.

HI 375 History of the Far East
First Term—Prerequisites: HI 201-202 or HI 203-204
A survey of East Asian history from 1800 to the present, focusing on the impact of Western penetration upon traditional culture concurrent with the secular modernization of China and Japan.

2.5 Credit Hours

HI 376 The Black in American History
Second Term, Academic Year 1975-76—Prerequisites: HI 201-202 or HI 203-204
The nature of relationships between black and white Americans from 1619 to the present provides the investigative focus for the course. Special topics include: slavery, nationalism, segregation, and integration.

2.5 Credit Hours

HI 381 History of Revolutionary Warfare
Either Term—Prerequisites: HI 201-202 or HI 203-204
The course examines the causes and forms of modern Revolutionary Warfare from the French Revolution to the present through the study of selected theories and recent revolutionary experiences.

2.5 Credit Hours

HI 383 War in the Twentieth Century
Either Term—Prerequisites: HI 201-202 or HI 203-204
This course examines how and why wars have been waged in the 20th Century. It emphasizes military theories and political, social, economic, and technological developments which have affected the conduct of war.

2.5 Credit Hours

HI 384 Topics in Military History
Either Term—Prerequisites: HI 201-202 or HI 203-204 [May not be taken concurrently]

2.5 Credit Hours

HI 384A War and Its Philosophers
First Term, Academic Year 1975-76
A study of the contributions of men who theorized about the nature of war, the manner of waging it, and its relationship to and impact upon societies.

2.5 Credit Hours

HI 384E The American Revolutionary War
Second Term, Academic Year 1975-76
A study of the American Revolution from the close of the French and Indian War to the ratification of the Constitution. Taught by the Visiting Professor of Military History.

2.5 Credit Hours

HI 481 Seminar in History
Either Term—Prerequisites: HI 201-202 or HI 203-204 [May not be taken concurrently]

2.5 Credit Hours

HI 481A Great Western Historians
Second Term, Academic Year 1975-76
A study of the development of philosophies, methods, and styles used by great historians in the analysis of man's past.

2.5 Credit Hours

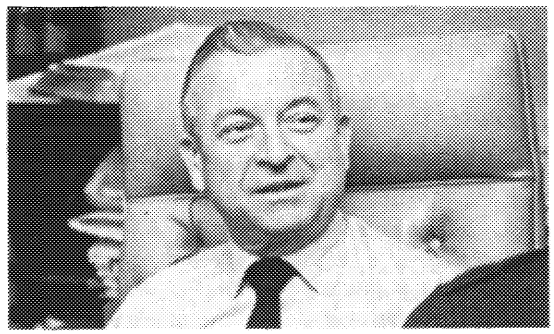
HI481E History of Western Ethics
First Term, Academic Year 1975-76
An examination of the development of major ethical viewpoints in the western past. The course will focus on the tension which exists between the "good" and the "ought."

2.5 Credit Hours

HI 489 Advanced Individual Study in History
Either Term—Prerequisite: First Classmen with approval of Head of the Department
This course offers two options: (1) Guided Reading and Reporting evaluated by oral and written reports and examinations, (2) Research Project producing a major paper. A faculty advisor provides guidance and evaluation.

2.5 Credit Hours

DEPARTMENT OF LAW



Professor and Head of Department

Frederick C. Lough, COL; B.S., USMA; J.D., Columbia.

STANDARD COURSES

LW 301 Introduction to Law and Constitutional Law
First Term—Prerequisite: None
The introduction includes theories of law and court functioning. Constitutional Law examines checks and balances, the federal system, the commerce clause, freedom of speech, equal protection, and criminal law procedures.

2.5 Credit Hours

LW 302 Law for the Military Commander
Second Term—Prerequisite: LW 301
This course studies: Criminal law including criminal acts, evidence, judicial and nonjudicial punishment; administrative law including delegation of power, separation, injury to person or property; and an introduction to international law.

2.5 Credit Hours

ELECTIVE COURSES

LW 481 International Law
Either Term—Prerequisites: LW 301, 302
By case method, students examine the nature, sources and applications of international law while discussing legal problems of recognition, jurisdiction, state responsibility, international agreements and use of force.

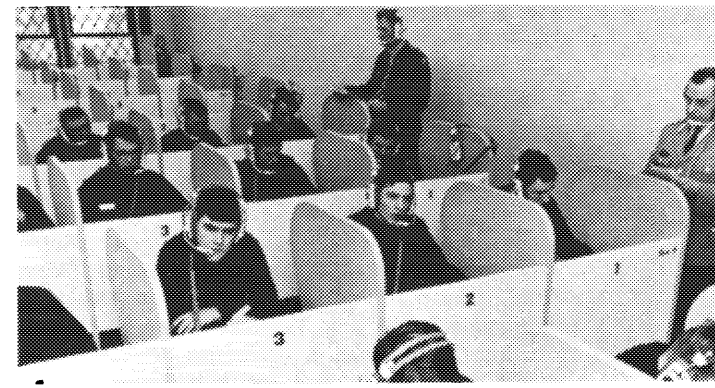
2.5 Credit Hours

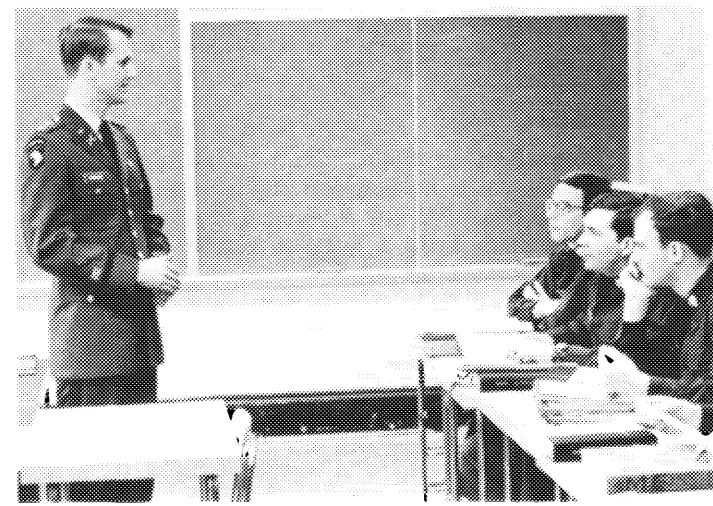
LW 482 Seminar in Military Aspects of International Law
Second Term—Prerequisites: LW 301, 302 and 481
Participants, through research and discussion, analyze case studies of selected modern international law episodes and hypothetical international confrontations. Each cadet prepares a research paper on a current international problem.

2.5 Credit Hours

LW 488 Business and Procurement Law
Second Term—Prerequisites: LW 301, 302
This course covers contracts, agency principles, government procurement and the law of property, using a problem-oriented method of instruction. An understanding of commercial and legal terms is emphasized.

2.5 Credit Hours





DEPARTMENT OF MATHEMATICS

Professor and Head of Department

Jack M. Pollin, COL; B.S., USMA; M.S., Penn.; M.S., R.P.I.; M.A., George Washington; Ph.D., Arizona.

The general requirement in mathematics for graduation from the Military Academy is satisfied by successful completion of the Standard Program at the end of the second year of study or completion of one of the Advanced Programs. Advanced Programs are designed for cadets who, by virtue of outstanding performance demonstrated during the early months of first year mathematics, exceptional aptitude, or above standard preparation before entering West Point, are able to satisfy the Standard Program requirements in less than two years. Cadets meeting the foregoing selection criteria are permitted to volunteer for assignment to an Advanced Program. Correspondingly, if the pace proves too rapid, opportunity for transfer to a slower program without prejudice is provided. Successful completion of either Advanced Program II or III, in addition to providing coverage of enrichment topics, offers opportunity for additional elective courses. The courses constituting the Standard and Advanced Programs are summarized below. Electives chosen by cadets in Advanced Programs during their second year need not be in mathematics, but if mathematics courses are chosen the recommended courses are those listed.

STANDARD PROGRAM: **MA 101-102; MA 201-207**
ADVANCED PROGRAM I: **MA 101-152; MA 201-207**
ADVANCED PROGRAM II: **MA 153-154; MA 207, one elective [MA 484 recommended]**
ADVANCED PROGRAM III: **MA 155-156; two electives [MA 484 and MA 485 recommended]**

STANDARD PROGRAM COURSES

MA 101-102 Calculus
Prerequisite: None
An introduction to set theory and inequalities is followed by a rigorous treatment of differential and integral calculus of single variable algebraic functions coordinated with plane analytic geometry and applications. Included is the study of calculus of transcendental functions, polar coordinates, plane vectors, infinite series and an introduction to matrix algebra covering algebraic operations and systems of equations.
12 Credit Hours

MA 201 Multivariable Calculus
Prerequisite: MA 102 or MA 152
This course covers solid analytic geometry, vector calculus and the calculus of functions of several variables. Topics included are partial differentiation, multiple integration, vector differentiation, line integrals and Green's Theorem.
3.5 Credit Hours

MA 207 Differential Equations and Probability Theory & Statistical Inference
Prerequisite: MA 154 or MA 201
Methods of solution of ordinary differential equations are studied including series solutions, differential operators, and Laplace transforms. Probability fundamentals are followed by the study and applications of distributions, estimation theory, confidence intervals, and hypothesis testing.
3.5 Credit Hours

ADVANCED PROGRAM I COURSE

MA 152 Calculus and Introduction to Linear Algebra
Prerequisites: MA 101 and selection by Head of Department
For cadets doing superior work in MA 101, this course covers the same material as MA 102 and includes an enriched introduction to matrix algebra including vector spaces and eigenvalues.
6 Credit Hours

ADVANCED PROGRAM II COURSES

MA 153-154 Advanced Placement Calculus, Multivariable Calculus, and Introduction to Linear Algebra
Prerequisite: Selection by Head of Department
An accelerated course covering the material in MA 101-152 and MA 201. Successful completion provides for one additional elective.

12 Credit Hours

ADVANCED PROGRAM III COURSES

MA 155-156 Advanced Placement Calculus, Multivariable Calculus, Introduction to Linear Algebra, Differential Equations, and Probability Theory and Statistical Inference
Prerequisite: Selection by Head of Department
An accelerated course covering the material in MA 101-152 and MA 201-207. Successful completion provides for two additional electives.

12 Credit Hours

ELECTIVE COURSES

MA 471 Linear Algebra
Second Term—Prerequisite: Completion of the Mathematics Core Curriculum
An extension of the linear algebra studied in the core curriculum, to include matrix operations, vector spaces, and characteristic values and vectors. Emphasis is on applications in science, engineering, management and economics.

2.5 Credit Hours

MA 473 Intermediate Probability and Statistical Applications
Second Term—Prerequisite: Completion of the Mathematics Core Curriculum
An introduction to modeling and stochastic processes wherein Markov chains, reliability and life testing are discussed. The theory of statistical inference is developed in detail and applied to statistical experiments.

2.5 Credit Hours

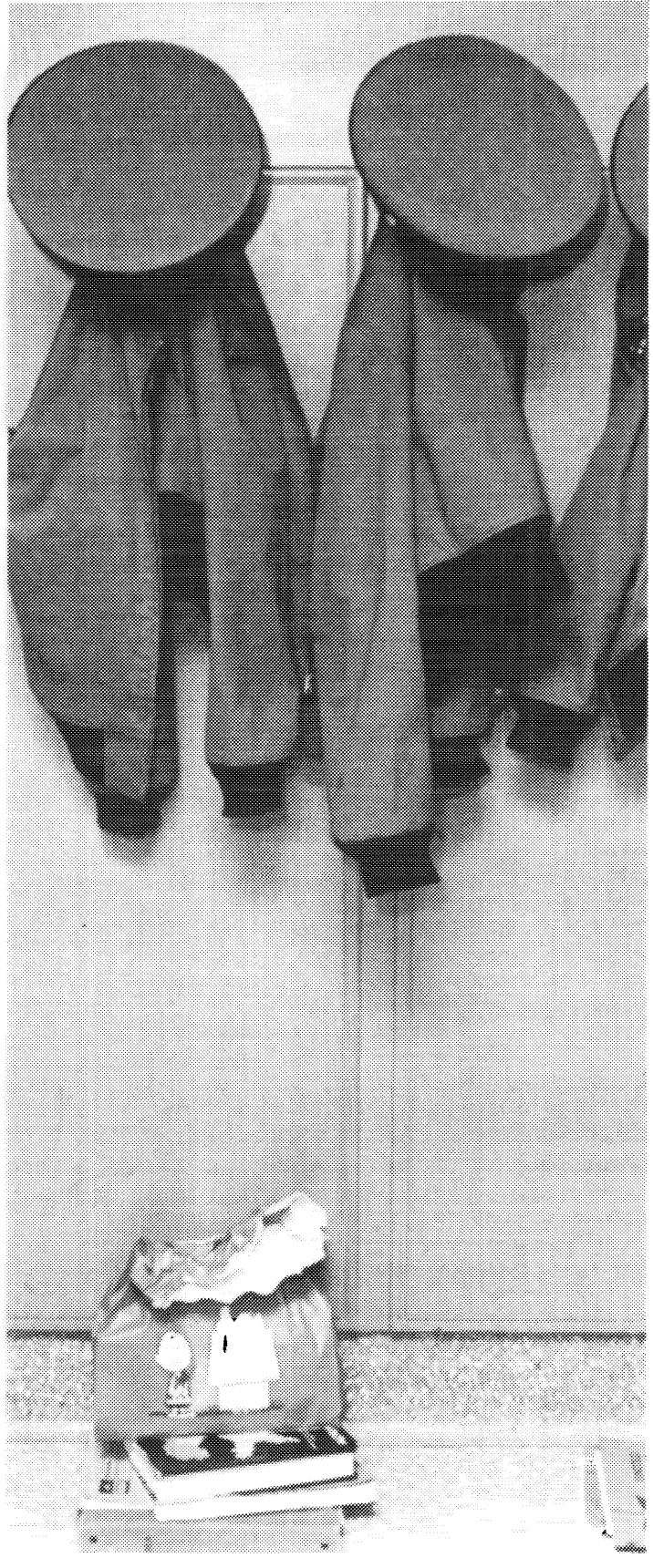
MA 481 Linear Programming
Either Term—Prerequisite: Completion of the Mathematics Core Curriculum
A study of optimal solutions of linear systems using the original and revised simplex methods. Special topics such as the transportation problem, game theory and integer programming are also introduced.

2.5 Credit Hours

MA 482 Abstract Algebra
First Term—Prerequisite: Completion of the Mathematics Core Curriculum and permission of Head of Department
An introductory modern algebra course for cadets planning graduate work in mathematics or theoretical work in science or engineering. Groups, rings, integral domains and fields are studied.

2.5 Credit Hours

MA 484 Differential Equations [Intermediate]
Either Term—Prerequisite: Completion of the Mathematics Core Curriculum
A broad spectrum of subjects is studied, to include



existence and uniqueness of solutions, linear theory, systems of differential equations, non-linear equations, numerical methods, Fourier and partial differential equations.

2.5 Credit Hours

MA 485 Complex Analysis

Either Term—Prerequisite: Completion of the Mathematics Core Curriculum

Development of the classical theory provides a basis for a study of applications including residue theory, contour integrals, conformal mapping and the solution of the Dirichlet and Neumann problems.

2.5 Credit Hours

MA 486 Numerical Analysis with Digital Computation

Second Term—Prerequisite: Completion of the Mathematics Core Curriculum

Investigation of the methods of approximating the solutions of mathematical problems using the digital computer. Analysis of the significance and control of error is studied. Applicatory problems are emphasized.

2.5 Credit Hours

MA 487 Real Variable Theory

Second Term—Prerequisite: Completion of the Mathematics Core Curriculum and Complex Analysis. Permission of Head of Department.

A rigorous approach to the foundations of analysis. Concepts of topology provide a basis for a formal discussion of differentiability, integrability, uniform convergence, bounded variation, monotone functions and Stieltjes integration.

2.5 Credit Hours

MA 489 Advanced Individual Study in Mathematics

Either Term—Prerequisite: Permission of Head of Department

An intensive tutorial course offered to a limited number of highly qualified cadets who have completed available mathematics elective courses. Course work is tailored to meet individual desires.

2.5 Credit Hours

DEPARTMENT OF MECHANICS

Professor and Head of Department

Robert M. Wilson, COL; B.S., USMA; M.S., M.I.T., M.A., Shippensburg State; Ph.D., Lehigh.

ME 301 Thermodynamics
Either Term—Prerequisite: None
The study of energy, entropy and energy transfers in actual and ideal processes to include factors affecting efficiency, performance and pollution.
3.5 Credit Hours

ME 302 Fluid Mechanics
Either Term—Prerequisite: None
A study of the laws of mechanics as they apply to liquids and gases. Course coverage includes Fundamental laws and applications in civil engineering, modeling, and high and low speed aerodynamics.
3.5 Credit Hours

ME 303 Engineering Mechanics
Prerequisite: Credit for PH 202
A static and dynamic analysis of the effects of force systems on both particles and rigid bodies, including an introduction to strength of materials.
3.5 Credit Hours

ME 351 Advanced Thermodynamics
Either Term—Prerequisite: Demonstrated superior ability in Chemistry, Physics and Mathematics, and/or Fluid Mechanics and Engineering Mechanics.
A more sophisticated coverage of the subject matter of ME 301 with the addition of such material as statistical concepts, Maxwell's property relations, availability and irreversibility.
3.5 Credit Hours

ME 352 Advanced Fluid Mechanics
Either Term—Prerequisite: Demonstrated superior ability in Physics, Chemistry, Mathematics, and other Mechanics courses.
An accelerated coverage of the material in ME 302 supplemented by a study of hydrodynamics and applications in mass transportation, fluidics, weather and high speed aerodynamics.
3.5 Credit Hours

ME 353 Advanced Engineering Mechanics
Either Term—Prerequisite: Demonstrated superior ability in Physics and Mathematics.
Coverage of ME 303 is accelerated. Also included are 3-dimensional static analysis, virtual work, stability, gyroscopic motion, general space motion, and a section on dynamics of vibrating systems.
3.5 Credit Hours

ME 384 Mechanics of Materials
Either Term—Prerequisite: ME 303 or ME 353
Evaluation of the performance of structural elements subjected to axial, torsional, bending, and combined loads by determination of internal forces, stresses and deformation. Laboratory exercises verify and apply theory.
3.5 Credit Hours

ME 387 Introduction to Applied Aerodynamics
Either Term—Prerequisite: ME 302 or ME 352
A study of aerodynamics of fixed-wing aircraft and modern aircraft design considerations. Coverage includes airfoil theory, wing theory, performance and compressibility effects. Supplemented by laboratory exercises and aerial flights.
2.5 Credit Hours

ME388 Aerodynamics of V/STOL Flight
Either Term—Prerequisite: ME 302 or ME 352
A study of aerodynamics of vertical and short take-off and landing aircraft. Emphasis is on helicopters but coverage includes tilt-wing aircraft and ground effect machines.
2.5 Credit Hours

ME 472 Direct Energy Conversion
Either Term—Prerequisite: EE 301 and ME 301 or ME 351
Five methods of converting various forms of energy directly to electricity: thermoelectric, photovoltaic,

thermionic, magnetohyrodynamics and fuel cells are studied. Applicable thermodynamics, quantum physics, and solid state physics are reviewed.

2.5 Credit Hours

ME 474 Propulsion

Either Term—Prerequisite: ME 301 or ME 351

Basic thermodynamic and fluid mechanics concepts are applied to study the performance of gas turbines, jets and rocket motors. Emphasis is on current technology and performance limitations.

2.5 Credit Hours

ME 475 Gas Dynamics

Either Term—Prerequisite: ME 302 or ME 352

Basic thermodynamic and fluid mechanics concepts are applied to compressible flow. Coverage includes one-dimensional isentropic flow, shock and expansion waves, supersonic aerodynamics and flow with friction or heat transfer.

2.5 Credit Hours

ME 476 Experimental Stress Analysis

Either Term—Prerequisite: ME 384

After an introduction to experiment planning and execution, each cadet performs several experiments using strain gages, brittle coatings, moire fringe analysis, photoelasticity. Instruction on equipment and laboratory work are integrated.

2.5 Credit Hours

ME 477 Experimental Fluid Mechanics and Thermodynamics

Either Term—Prerequistes: ME 301 or ME 351, ME 302 or ME 352

A study of the science of experimentation to include modern instrumentation, measurement techniques, error analysis and presentation of results. The student performs several comprehensive experiments of his own choosing.

2.5 Credit Hours

ME 478 Analysis of Modern Lightweight Structures

Either Term—Prerequisite: ME 303 or ME 353

A classical mechanics study of the bending and torsion of thin-walled, reinforced structures with applications in aerospace and ground transportation vehicles. Includes introduction to variational and energy methods.

2.5 Credit Hours

ME 482 Heat Transfer

Either Term—Prerequisite: ME 302 or ME 352

Basic principles of conduction, convection and radiation heat transfer are developed. Applications to current engineering and environmental problems are stressed. Similarity between mass, momentum and heat transfer is discussed.

2.5 Credit Hours

Me 483 Space Mechanics

Either Term—Prequisite: PH 201 or PH 251

A study of central force motion, dynamics of two body conic orbits, ballistic missile trajectories, principal coordinate systems, orbit determination, interplanetary trajectories, orbit transfer and rendezvous.

2.5 Credit Hours

ME 485 Continuun Mechanics

Either Term—Prequisite: ME 384

Boundary value problems for elastic materials are solved using Cartesian tensor calculus. Stress-strain relations, equilibrium, and compatibility conditions are examined. Indicial notation is introduced and employed throughout the course.

2.5 Credit Hours

ME 486 Mechanical Vibrations

Either Term—Prerequisite: ME 303 or ME 353

Course examines linear single degree of freedom systems in detail. Approximate, graphical and matrix analysis of multi-degree of freedom systems are studied. Theory often verified by classroom demonstrations.

2.5 Credit Hours

ME 488 Flight Mechanics

Either Term—Prerequisite: ME 387. May be taken concurrently.

A study of aircraft performance, static stability and dynamic stability design considerations.

2.5 Credit Hours

ME 489 Advanced Individual Study in Mechanics

Either Term—Prerequisites: ME 301 or ME 351; ME 302 or ME 352; ME 303 or ME 353; permission of Head of Department.

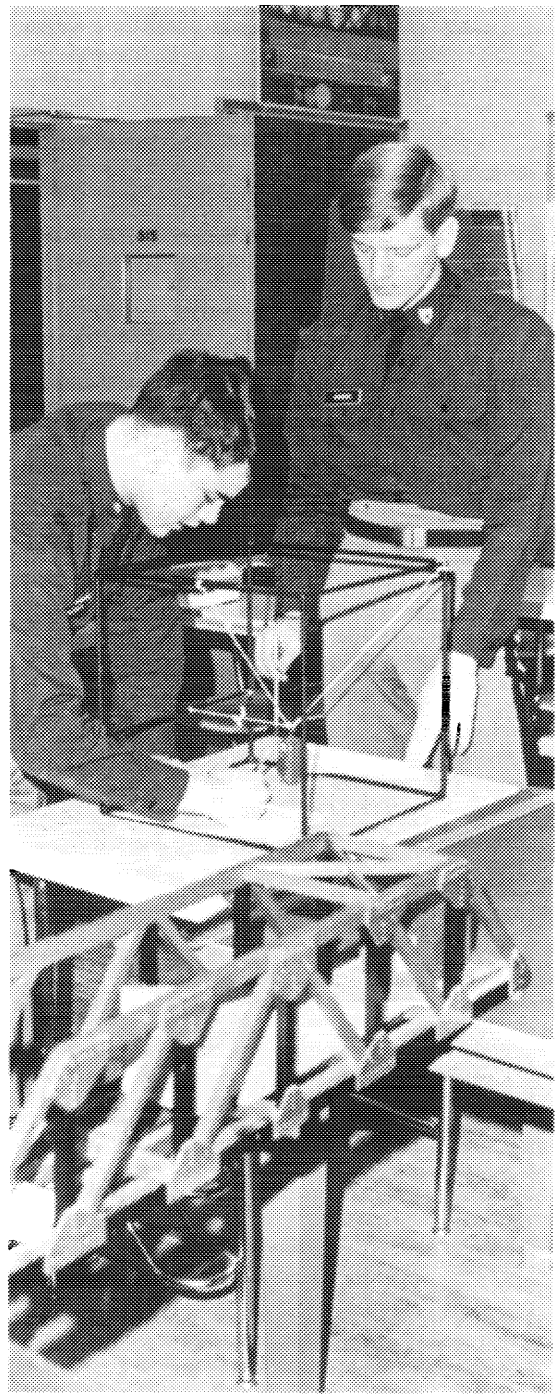
The cadet can do advanced study or an undergraduate research project in Applied Mechanics. The cadet chooses a plan for his program and is individually supervised by a faculty advisor.

2.5 Credit Hours

DEPARTMENT OF MILITARY HYGIENE

Professor and Head of Department

Martin A. Pfotenhauer, COL; B.S., Northwestern; M.D., Illinois.



All four cadet classes receive instruction from the Department of Military Hygiene.

Instruction in personal hygiene, field sanitation, first aid, human sexuality and adverse effects of alcohol, tobacco, and drugs are provided for Fourth Classmen.

Third Classmen are instructed in the effects of the environment on military operations, the organization and the support role of the Medical Department, and the unit commanders's responsibilities for providing first aid.

Third, Second, and First Classmen receive instruction on ways a troop leader can deal with drug abuse among his men. Second Classmen take a course in human sexuality; pre-marital instruction and counseling are available to First Classmen.

OFFICE OF MILITARY INSTRUCTION

Director

John B. Tanzer, COL; B.S., USMA.

The Director of Military Instruction is responsible to the Commandant of Cadets for the development of all military instruction and training conducted by the Department of Tactics.

FOURTH CLASS MILITARY INSTRUCTION

New Cadet Training

Summer

A period of intensive fundamental military training designed to orient and indoctrinate the new cadet in basic soldier skills, the traditions of West Point, and the concepts of duty, honor, and service to country. At its conclusion, the new cadet is prepared for military life and ready to take his place in the Corps when it reassembles in late August.

7 Weeks, Ungraded

Military Science I

Academic Year

MS 101 Military Heritage and Map Reading

Instruction is designed to develop an appreciation of the history and traditions of the profession of arms and to instill a pride in that profession; to provide the cadet with a working knowledge of basic map reading in preparation for subsequent military training.

1 Credit Hour

MS 102 Small Unit Tactics I

Instruction introduces the principles of war and the fundamentals of offensive and defensive combat operations; organization of the type infantry rifle company; military aspects of terrain and terrain analysis; troop leading procedures, to include the estimates of the situation, combat orders and graphic representation, infantry rifle platoon offensive and defensive tactics, and patrolling.

1 Credit Hour

THIRD CLASS MILITARY INSTRUCTION

Third Class Cadet Field Training Program

Summer

Training is designed to develop self-confidence through performance under conditions of mental and physical stress. Emphasis is placed on meeting high standards of physical fitness, discipline, and esprit. Training also provides leadership experience through troop leading in a simulated combat environment.

8 Weeks, Ungraded

Military Science II

MS 202 Small Unit Tactics II

Academic Year

Instruction is designed to teach the fundamentals and principles of combat operations employing the mechanized infantry company as the vehicle for instruction.

1.5 Credit Hours

SECOND CLASS MILITARY INSTRUCTION

Second Class Cadet Leader Training Program

Summer

Consists of Military specialty training in one of five programs: Ranger, Airborne, Aviation, Northern or Jungle Warfare. Cadet Troop Leader Training gives an opportunity for cadets to serve as platoon leaders in Regular Army units in the United States and abroad.

7 Weeks, Ungraded

Military Science III

MS 301 Combined Arms Operations

Academic Year

Instruction involves study of the ground combat operations of the mechanized infantry battalion in offensive, defensive, and counterattack operations. Also includes the study of combat support and combat service

support elements required to sustain the unit in ground combat.

1 Credit Hour

FIRST CLASS MILITARY INSTRUCTION

First Class Cadet Leader Training Program

Summer

First Classmen serve as instructors, counselors, and commanders during New Cadet Training for the incoming class, in the field training of the Third Class, and as cadre and command for selected Second Class training programs.

8 Weeks, Ungraded

Military Science IV

Academic Year

MS 401 Small Unit Training

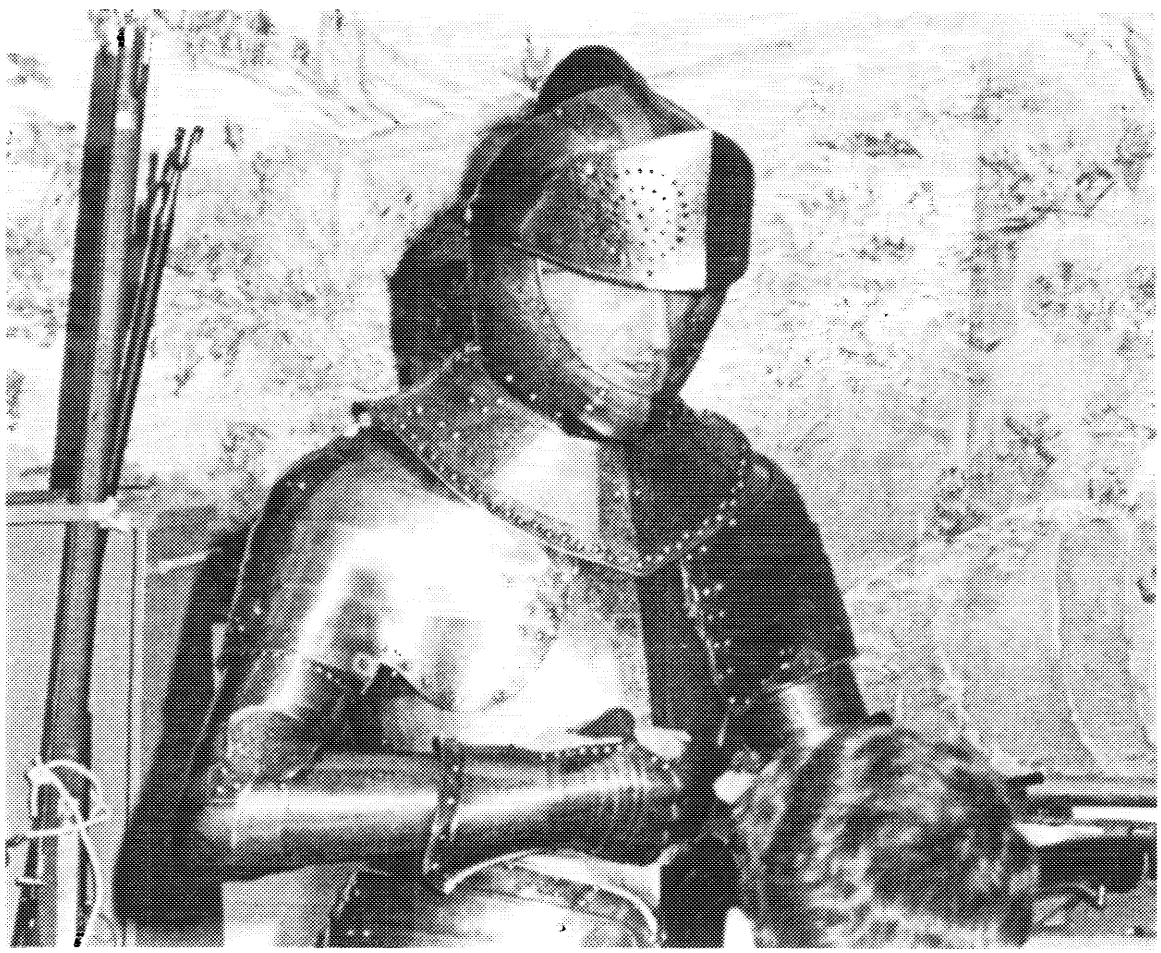
Stresses the phases of Army Training ranging from Basic Combat Training of the individual soldier to Mission Readiness Training of a Battalion Task Force.

1.5 Credit Hours

MI 400 Service Orientation

Instruction involves a series of service orientation conferences designed to assist cadets in selecting their branch of service and initial assignments; also provides information on matters such as finance, travel, personal and professional affairs.

Ungraded



OFFICE OF MILITARY LEADERSHIP

Director

Harry A. Buckley, COL; B.S., USMA; M.S., Purdue; Ph.D., Purdue.

The Office of Military Leadership teaches courses in the Behavioral Sciences as well as Personnel Management. Instruction is designed to assist the cadet in developing an understanding of human behavior which is essential to the military leader. A foundation course in individual human behavior (psychology) is given to all third classmen. All First Classmen are enrolled in the Military Leadship Course.

STANDARD AND ADVANCED COURSES

PL 202 General Psychology
Both Terms—Prerequisite: None
Provides a basic understanding of human development and individual differences through the study of perception, learning, thinking, motivation, personality, and social relations.

2.5 Credit Hours

PL 252 Advanced General Psychology
Both Terms—Prerequisite: Pre-tests
Amplifies the basic content of PL 202, General Psychology, by presenting to selected cadets additional course material and scientific methodology used in the behavioral sciences.

2.5 Credit Hours

PL 401 Military Leadership
Both Terms—Prerequisite: PL 202, 252, or validation
Contributes to the leadership development of cadets through interdisciplinary study of theories, models, and behavioral science information related to leadership and the effective application of this information in a military environment.

2.5 Credit Hours

ELECTIVE COURSES

PL 472 Topics in Sociology
Terms as Listed—Prerequisite: PL 202, 252, or validation.

PL 472A Introduction to Sociology
First Term, Academic Year 1975-76
Designed to develop a sociological perspective for objective analysis of human behavior in complex social situations. After learning the basic concepts of sociology, the cadet learns to apply them in the study of major social institutions in the United States.

2.5 Credit Hours

PL 472B Minorities in the United States, A sociological Perspective
Second Term, Academic Year 1975-76
Designed to develop an understanding for the family structure, culture, migration, religion, and assimilation of selected minorities in American society including an appreciation for cultural pluralism and one's own role in relation to others in his society.

2.5 Credit Hours

PL 481 Managerial Psychology
Both Terms—Prerequisite: PL 202, PL 252, or validation
Provides a conceptual grasp of the application of psychology to the management of personnel as well as programs in management. An understanding of common human behavior across organizations is developed.

2.5 Credit Hours

PL 483 Social Psychology
Both Terms—Prerequisite: PL 202, PL 252, or validation
Provides understanding of how individual behavior is shaped and modified through interaction with others,

to include interpersonal perception, social motivation, and attitude formation and change.

2.5 Credit Hours

PL 487 Psychology II

Both Terms—Prerequisite: PL 202, 252, or validation

Provides an operational framework essential to an understanding of individual behavior and fosters an appreciation of how individual adjustment can be facilitated through the study of selected adjustment techniques.

2.5 Credit Hours

PL 489 Advanced Individual Study in the Behavioral Sciences

Both Terms—Prerequisite: Approval of the Director

Selected individuals conduct study or research in the behavioral sciences. Each cadet is assigned an individual instructor who has an advanced degree in the area the study or research involves.

2.5 Credit Hours

OFFICE OF PHYSICAL EDUCATION

Professor and Head of Department

James L. Anderson, COL; B.S., USMA; M.S., Ph.D., Indiana.

The Office of Physical Education provides an extensive and progressive program of physical education instruction which prepares each cadet for a career of military leadership.

STANDARD COURSES

PE 100 Foundations in Physical Education

Emphasizes the development of basic physical ability through instruction in boxing, gymnastics, swimming and wrestling. Active participation in the athletic program is mandatory.

3 Credit Hours

PE 200 Development of Sports Skills

Provides basic instruction in a selection of sports and personal conditioning. Lectures on various aspects of personal fitness programs are presented. Active participation in the athletic program is mandatory.

1.5 Credit Hours

PE 300 Development of Sports Skills

Provides basic instruction in a sport activity not previously taken. Completion of various physical fitness tests are required. Active participation in the athletic program is mandatory.

1 Credit Hour

PE 400 Physical Training Leadership

Provides leadership experiences by assignment as cadet-in-charge, coach, or official in the mandatory athletic program. Instruction in sports not previously taken also is offered.

1.5 Credit Hours

DEPARTMENT OF PHYSICS

Professor and Head of Department

Edward A. Saunders, COL; B.S., USMA; M.S.E.E., Purdue; Ph.D., R.P.I.

PH 201 Physics I
First Term—Prerequisite: None
A comprehensive calculus-based study of mechanics including conservation principles and translational, rotational, and oscillatory motion. An integrated laboratory program illustrates basic scientific techniques.
3.5 Credit Hours

PH 202 Physics II
Second Term—Prerequisite: PH 201
A calculus-based study of electricity, magnetism, and optics with a comprehensive laboratory program. Emphasis is placed on problem solving in support of science and engineering students.
3.5 Credit Hours

PH 204 Physics II
Second Term—Prerequisite: PH 201
A calculus-based course in the fundamentals of electricity, magnetism, and optics with emphasis on the nature and significance of physics principles. Studies in the history and philosophy of science are included.
3.5 Credit Hours

PH 303 Physics III
Either Term—Prerequisites: PH 201 and PH 202 or PH 204
A modern physics course including quantum, atomic, and nuclear physics. A laboratory program stressing quantum interactions and spectroscopic measurements demonstrates the physical principles. Designed for students concentrating in science and engineering.
3.5 Credit Hours

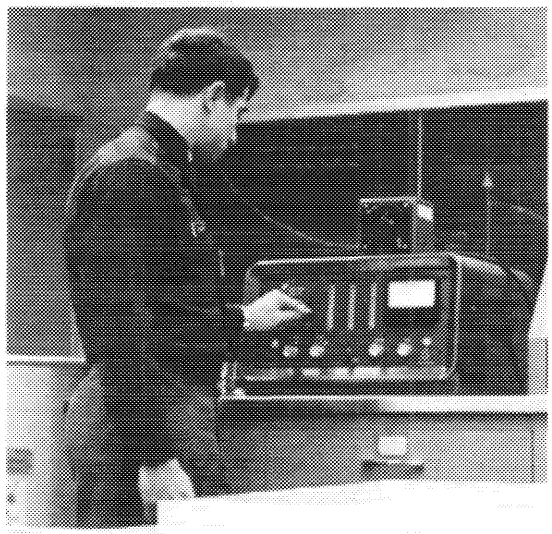
PH 305 Physics III
Either Term—Prerequisites: PH 201 and PH 204 [PH 202 with Department permission]
A continuation of the PH 201-204 sequence designed to provide the student interested in fields other than science and engineering with the fundamentals of quantum, atomic and nuclear physcis.
3.5 Credit Hours

PH 383 Introduction to Theoretical Physics I
First Term—Prerequisite: PH 201
An intermediate development of theoretical physics. Special techniques, including the Lagrangian formulation of mechanics, are used to solve problems in dynamics, central force motion, rigid body motion and vibrational modes.
2.5 Credit Hours

PH 384 Introduction to Theoretical Physics II
Second Term—Prerequisite: PH 202
An intermediate development of the physics of electromagnetism. Topics covered include Maxwell's equations and the propagation and interaction of electromagnetic waves. The effects of special relativity are also considered.
2.5 Credit Hours

PH 385 Topics in Physics
Either Term—Prerequisite: PH 303 or PH 305, may be taken concurrently
Offers a variety of physics topics for in-depth study. Topics differ each semester and are selected to emphasize the application of basic physics principles to contemporary areas of concern.
2.5 Credit Hours

PH 385A Physics of the Energy Crisis
First Term, Academic Year 1975-76
An analysis of world-wide energy resources and requirements. Basic physical principles will be applied



in analyzing the feasibility of further technological development of fossil, nuclear, geothermal, and solar sources of energy.

2.5 Credit Hours

PH 385B Laser Physics
Second Term, Academic Year 1975-76
A combined theoretical and experimental investigation of laser devices. The basic principles of electromagnetism, optics, and atomic structure will be utilized in analyzing both solid state and gas lasers.

2.5 Credit Hours

PH 483 Solid State Physics
Second Term—Prerequisite: PH 303
A course in the fundamentals of solid state physics including the important mechanical, electrical, magnetic and thermal properties of crystals. Metals, semiconductors and statistics pertinent to solid state theory are discussed.

2.5 Credit Hours

PH 484 Quantum Mechanics
First Term—Prerequisite: PH 303
A course stressing the physical meaning and the mathematical methods of quantum mechanics. Solutions of barrier problems, the harmonic oscillator, and the hydrogen atom are investigated. Perturbation theory is introduced.

2.5 Credit Hours

PH 486 Experimental Physics
Either Term—Prerequisites: PH 303 and one elective in physics
Individual laboratory experiments, selected by the student and designed to develop experimental ability, are performed. Equipment is available for a number of standard experiments in both classical and modern physics.

2.5 Credit Hours

PH 487 Nuclear Reactor Theory
Either Term—Prerequisite: PH 303
An introductory course in the theory and operation of thermal fission reactors. Includes both theoretical and laboratory coverage of radiation detection, neutron activation, cross-section determination, thermal diffusion and flux distribution.

2.5 Credit Hours

PH 488 Nuclear Physics
Second Term—Prerequisite: PH 303
A study of selected topics in nuclear physics covering primarily the structure of the nucleus and nuclear reactions. Radioactivity is covered in detail. Scattering and fundamental particle classifications are introduced.

2.5 Credit Hours

Ph 489 Advanced Individual Study in Physics
Either Term—Prerequisites: PH 303, two electives in physics, and permission of Head of Department.
Individually supervised research and study in a selected problem area.

2.5 Credit Hours

DEPARTMENT OF SOCIAL SCIENCES

Professor and Head of Department

Lee D. Olvey, COL; B.S., USMA; B.A., M.A., Oxford; Ph.D., Harvard.

STANDARD COURSES

SS 301 Economic Principles and Problems
First Term—Prerequisite: None
A survey of basic economic principles and their application to public policy. Macroeconomic, microeconomic, and international economic principles and problems are studied.

2.5 Credit Hours

SS 302 United States Government and Economics of National Security
Second Term—Prerequisite: None
Examines American politics emphasizing governmental decision making processes. Subcourse in Economics of National Security is integrated into American politics examining defense decision making within the national political and economic environment.

2.5 Credit Hours

SS 401 Comparative Political Systems: Europe and Asia
First Term—Prerequisite: None
A foundation of fundamental concepts of political science and comparative politics, including an analysis of four contemporary political systems (Great Britain, USSR, China and Japan.)

3.5 Credit Hours

SS 407 International Relations
Second Term—Prerequisite: None
An interdisciplinary study of the relations between nations, building upon previous Social Science courses, with particular emphasis on the role of the United States in the international system.

3.5 Credit Hours

ADVANCED COURSES

SS 351 Economic Principles and Problems
First Term—Prerequisite: Permission of Instructor
A survey of basic economic principles and their application to public policy. Macroeconomic, microeconomic, and international economic principles and problems are studied.

2.5 Credit Hours

SS 352 United States Government and the Political Economy of National Security
Second Term—Prerequisite: Permission of Instructor
Examination of the complex political and economic interplay between private and government institutions in development of public policy. Course uses case materials and governmental speakers on public policy issues.

2.5 Credit Hours

SS 451 Advanced Comparative Political Systems
First Term—Prerequisite: Permission of Instructor
A developmental approach to the comparative study of selected political systems. Political development in Great Britain, USSR, and a third student-selected political system serve as application of theoretical materials.

3.5 Credit Hours

SS 457 Advanced International Relations
Second Term—Prerequisite: Permission of Instructor
A capstone course covering the concepts, theories, and methodologies pertaining to the study of international relations with emphasis on analyzing post-World War II issues.

3.5 Credit Hours

ELECTIVE COURSES

SS 372 Policy and Administration
Either Term—Prerequisite: SS 302 or equivalent. May be taken concurrently.
Analysis of modern methods of policy development and control including organizational and political perspectives; exposure to the central position of public administrators and problems of policy control in large bureaucracies.

2.5 Credit Hours

SS 373 Quantitative Analysis in the Social Sciences
First Term—Prerequisite: MA 205 or MA 207. May be taken concurrently with SS 301 or equivalent.
Application of quantitative analytical tools to problems in political science, international relations, and economics. Emphasis is on application of quantitative techniques and evaluation of results therefrom.

2.5 Credit Hours

SS 383 Middle Eastern Studies
Second Term—Prerequisite: None
An introduction to the contemporary problems and progress of the countries of the Middle East in light of political history and cultural traditions.

2.5 Credit Hours

SS 384 Government and Politics of Latin America
First Term—Prerequisite: None
A basic course in the government and politics of Latin America focusing on politically active groups through the use of case studies.

2.5 Credit Hours

SS 385 Comparative Economic Systems
First Term—Prerequisite: None
Course analyzes capitalism, market socialism, and command socialism as economic systems and divergent methods of problem solving associated with resource allocation, income distribution, economic growth, and stability.

2.5 Credit Hours

SS 386 Political Philosophy
Either Term—Prerequisite: None
A history of political theory from Plato through Marcuse examining certain ethical, moral and epistemological concepts, the evolution of Western democracy, and its alternatives.

2.5 Credit Hours

SS 387 Seminar in Public Policy
Either Term—Prerequisites: SS 301 and SS 302 or their equivalent. May be taken concurrently with SS 302.
An interdisciplinary course which analyzes a specific issue of current interest. It studies the interrelationships of political and economic considerations, emphasizing the trade-offs and implications of associated public policies.

2.5 Credit Hours

SS 388 Macroeconomics: Theory and Policy
Second Term—Prerequisite: SS 301 or equivalent
A blend of aggregate economy theory, empirical analysis and political considerations dealing with macroeconomic theory and national economic policy designed to achieve full employment, price stability and economic growth.

2.5 Credit Hours

SS 389 Managerial Economics
Either Term—Prerequisites: SS 301 or equivalent
Managerial decision making, using cost and financial accounting and realistic case studies to provide practice in directing and controlling an organization. Emphasis toward problem solving.

2.5 Credit Hours

SS 471 Major Political Systems of East Asia
Second Term—Prerequisite: None
This course examines the contemporary political problems of the Peoples Republic of China with special emphasis on traditional background, problems of development and Marxist political principles.

2.5 Credit Hours

SS 473 Issues in American Foreign Policy
First Term—Prerequisite: None
This seminar-type course will provide a thorough grounding in U.S. foreign policy: substance and process. The field of focus will be the Middle East and attendant current problems for U.S. policy makers.
2.5 Credit Hours

SS 475 Government and Politics of the Soviet Union
Second Term—Prerequisite: None
An examination of the Soviet political system in historical perspective and in contemporary structure.
2.5 Credit Hours

SS 476 International Affairs: Theory and Application
Second Term—Prerequisite: Permission of Instructor
An introduction to the traditionalist view of international politics that will study and compare Morganthau's concept of power politics with concepts of international organization.
2.5 Credit Hours

SS 482 Microeconomics: Theory and Application
Second Term—Prerequisite: SS 301 or equivalent
An intermediate level course in microeconomics applying marginal analysis to decision making in the public and private sectors.
2.5 Credit Hours

SS 483 National Security Seminary
Either Term—Prerequisite: Permission of the Course Director
Course focuses on issues affecting U.S. security. Examination of the changing context in which U.S. foreign and defense policies operate, and the issues to be resolved to maintain international order.
2.5 Credit Hours

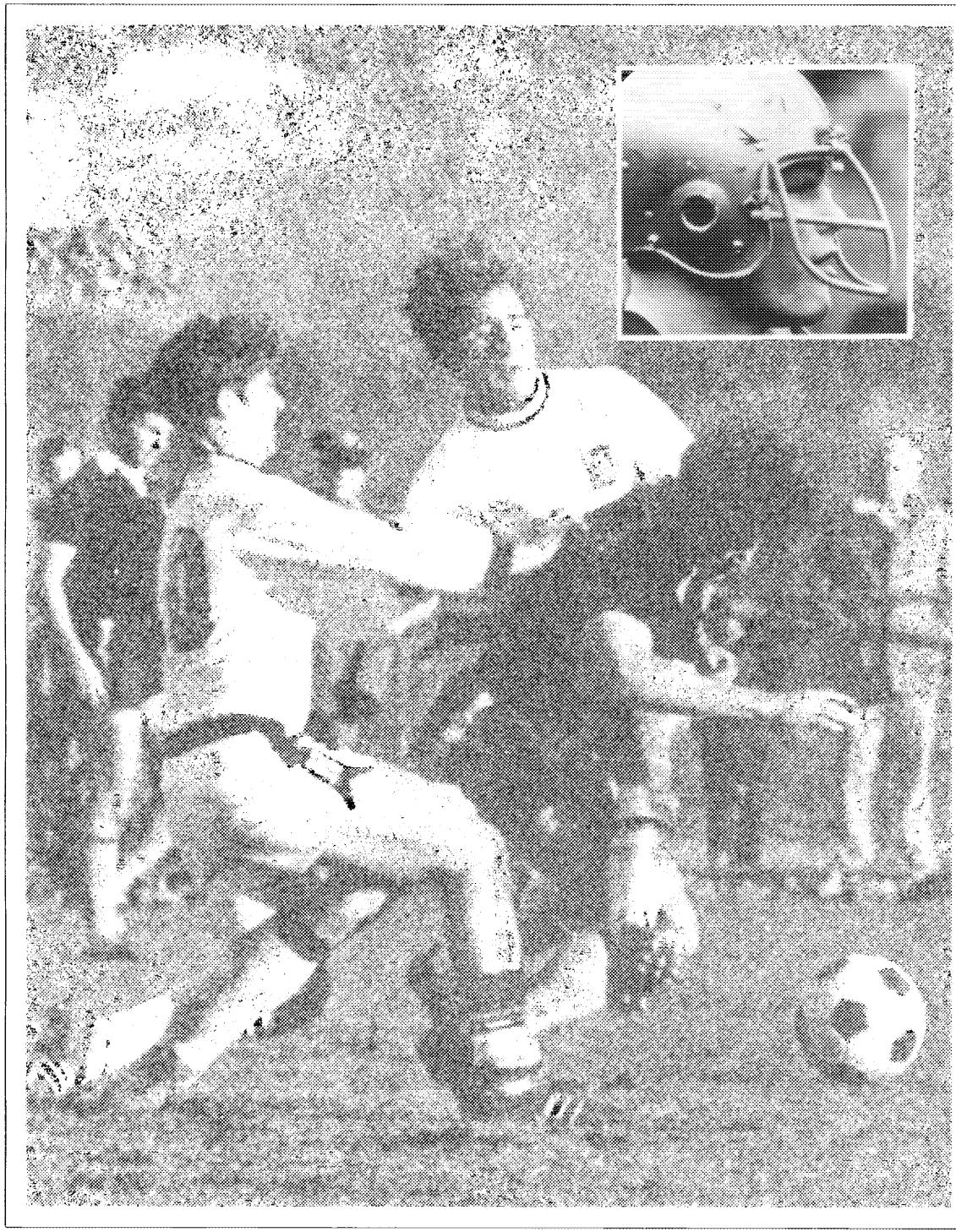
SS 484 International Economics and Economic Development
Second Term—Prequisite: SS 301 or equivalent
Covers trade issues and theory, transfer payments, exchange rates, balance of payments, international monetary issues, world inflation/depression, transnational corporations, international investment, developmental aid, and international economic institutions.
2.5 Credit Hours

SS 485 Problems of the Developing Nations
Either Term—Prerequisite: None
The course develops an understanding of the political, economic, social and cultural problems of the developing nations of Asia and Sub-Saharan Africa as they continue the process of modernization.
2.5 Credit Hours

SS 486 Political and Cultural Anthropology
Either Term—Prerequisite: None
An introductory course in anthropology focusing on the political mechanisms inherent in the various levels of society. The Case Study approach demonstrates the adaptive role of culture.
2.5 Credit Hours

SS 487 Public Policy Decision Making and Debate
First Term—Prerequisite: Permission of the Course Director
Instruction in techniques of rational decision making and persuasive argumentation to develop research skills in governmental policy making and provide substantive knowledge concerning policy issues of the national debate topic.
2.5 Credit Hours

SS 489 Advanced Individual Study in Social Sciences
Either Term—Prerequisite: Approval of the Head of the Department
Course permits study in an environment conducive to independent effort to accomplish original research or specialized study of special student interest in economics, political science, international affairs or anthropology.
2.5 Credit Hours



VII. Athletic Program

EVERY CADET AN ATHLETE

Every cadet at West Point competes in intercollegiate or intramural sports. Every man also participates in a demanding physical education program. The value of athletic experience to the potential Army officer has long been recognized. General Douglas MacArthur, Superintendent shortly after World War I, was largely responsible for the first-rate athletic program the Military Academy now has. MacArthur's view was that "The training of the athletic field, which produces in a superlative degree the attributes of fortitude, self-control, resolution, courage, mental agility and, of course, physical development, is one completely fundamental to an efficient soldiery."

The men who have worn the Army "A" bear out the accuracy of this view. Among them are former President Dwight D. Eisenhower and Generals Omar N. Bradley and James A. Van Fleet. Secretary of the Army Howard ("Bo") Callaway won five varsity letters in squash and tennis. Pete Dawkins was an Army football captain, Heisman trophy winner, All-American halfback, Rhodes Scholar, and the youngest man ever named to the college football Hall of Fame. The late Ed White, first astronaut to walk in space, was a track star; fellow astronaut, Frank Borman, also won a varsity letter.

INTERCOLLEGIATE ATHLETICS

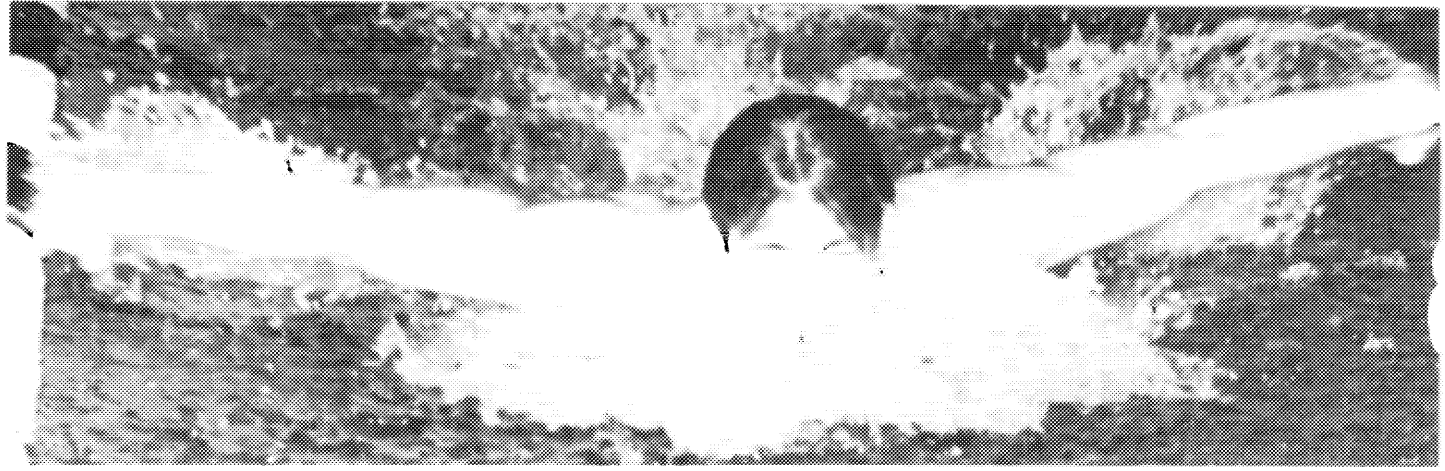
Army teams are nationally known for their intense will to win. Nearly one-third of the Corps of Cadets engage in twenty competitive varsity sports: football, lightweight football, soccer, and cross-country in the fall; basketball, fencing, gymnastics, hockey, pistol, rifle, skiing, squash, swimming, indoor track, and wrestling in the winter; and baseball, golf, lacrosse, outdoor track, and tennis in the spring. Each fall the Army Football Team plays many of the nation's top-ranked teams before capacity crowds. Traditionally, the rugged football schedule is capped by the nationally televised Army-Navy classic in Philadelphia.

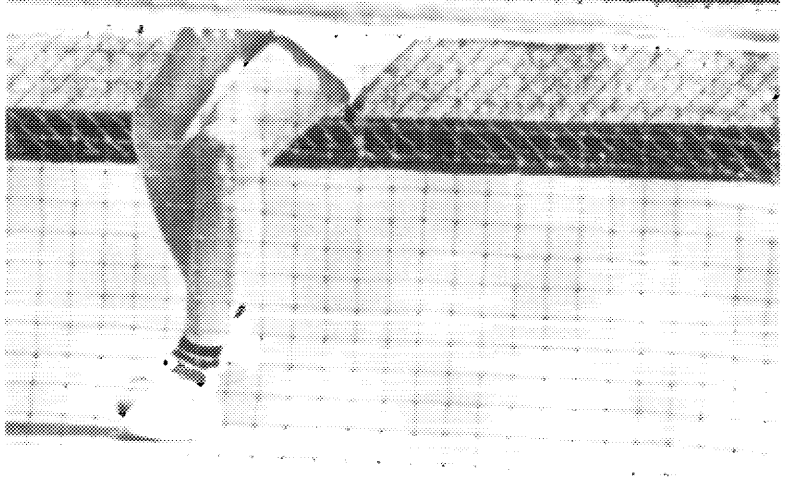
1975 FOOTBALL SCHEDULE

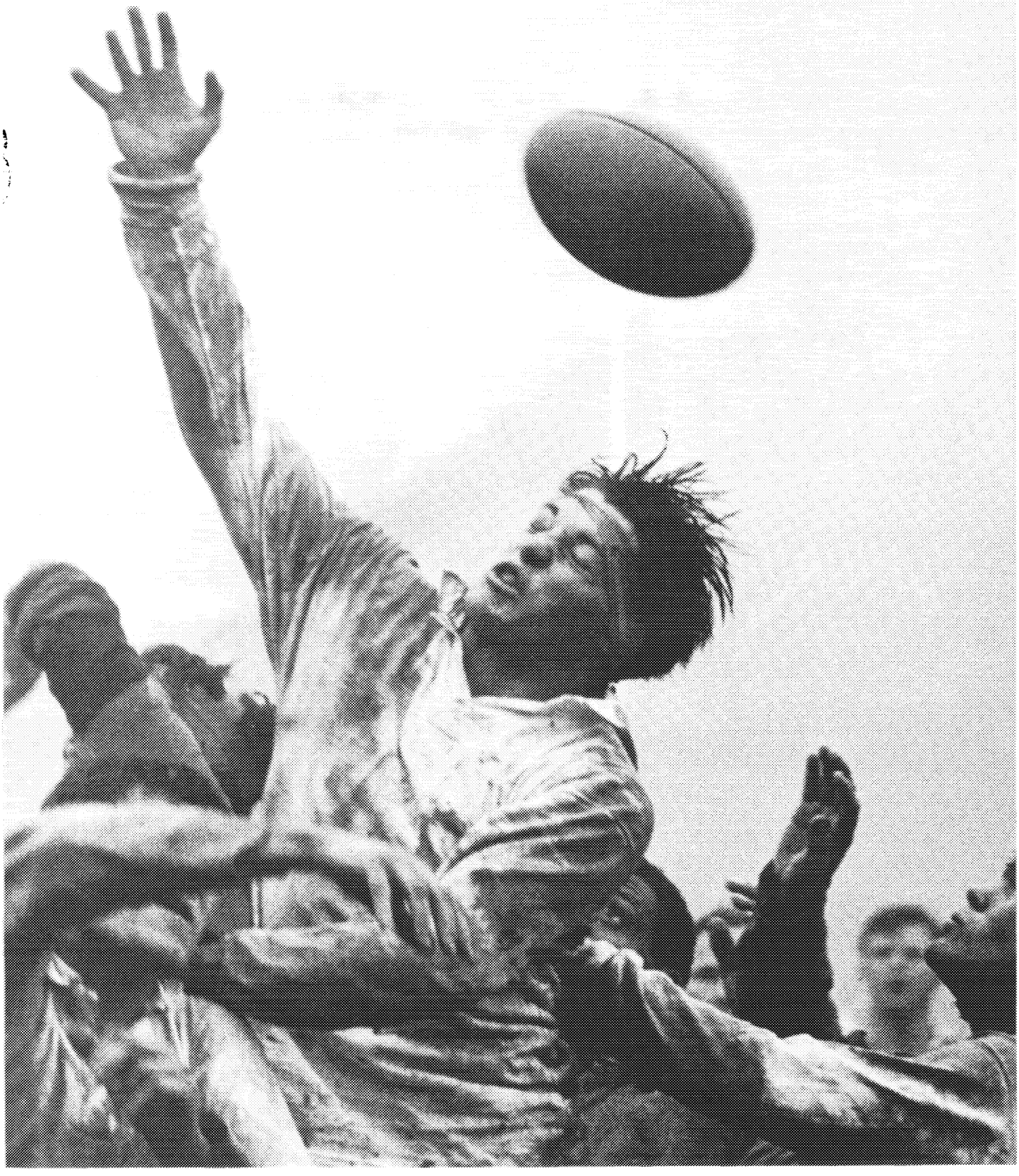
September
13 HOLY CROSS at West Point
20 LEHIGH at West Point
27 VILLANOVA at West Point
October
4 STANFORD at Stanford
11 DUKE at West Point
18 PITTSBURGH at West Point (Homecoming)
25 PENN STATE at University Park
November
1 AIR FORCE at USAFA
8 BOSTON COLLEGE at West Point
15 VANDERBILT at Nashville
29 NAVY at Philadelphia

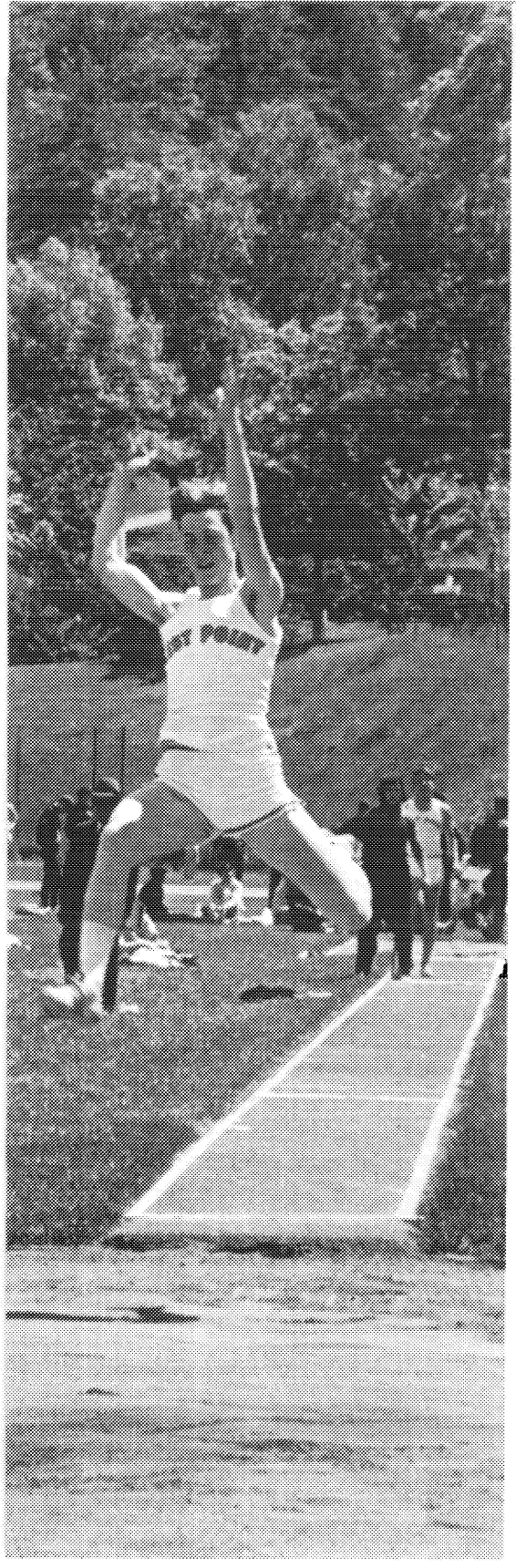
Several Army teams and individuals have done well in NCAA National championships. The soccer team has been invited to play in the NCAA tournament 10 times in the past 12 years. Lacrosse has been a frequent entrant in that sport's national competition. Army 150-pound football teams have won or shared the Eastern Intercollegiate Championship five straight years, for a total of 12 titles in 18 years of competition. Pistol and rifle teams have captured a number of national championships, while the Army basketball team was selected to play in the prestigious National Invitational Tournament (NIT) in New York City six of eight seasons between 1963 and 1970.

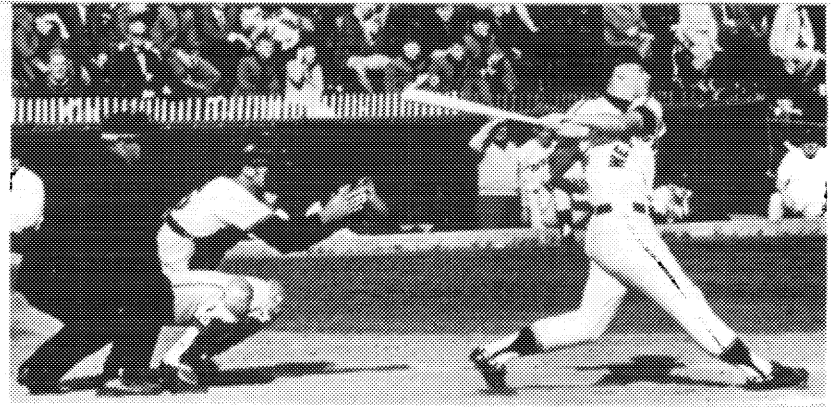
The intercollegiate athletic program is financed by the Army Athletic Association, a self-supporting, non-profit organization with approximately 14,000 Academy graduates as members.

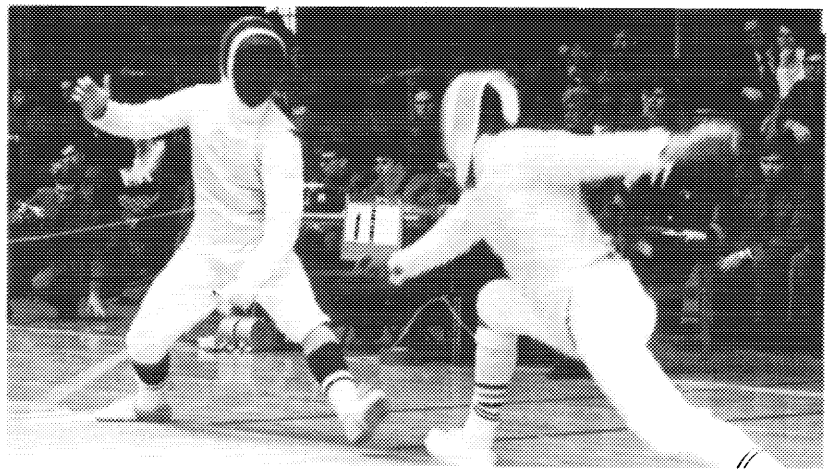










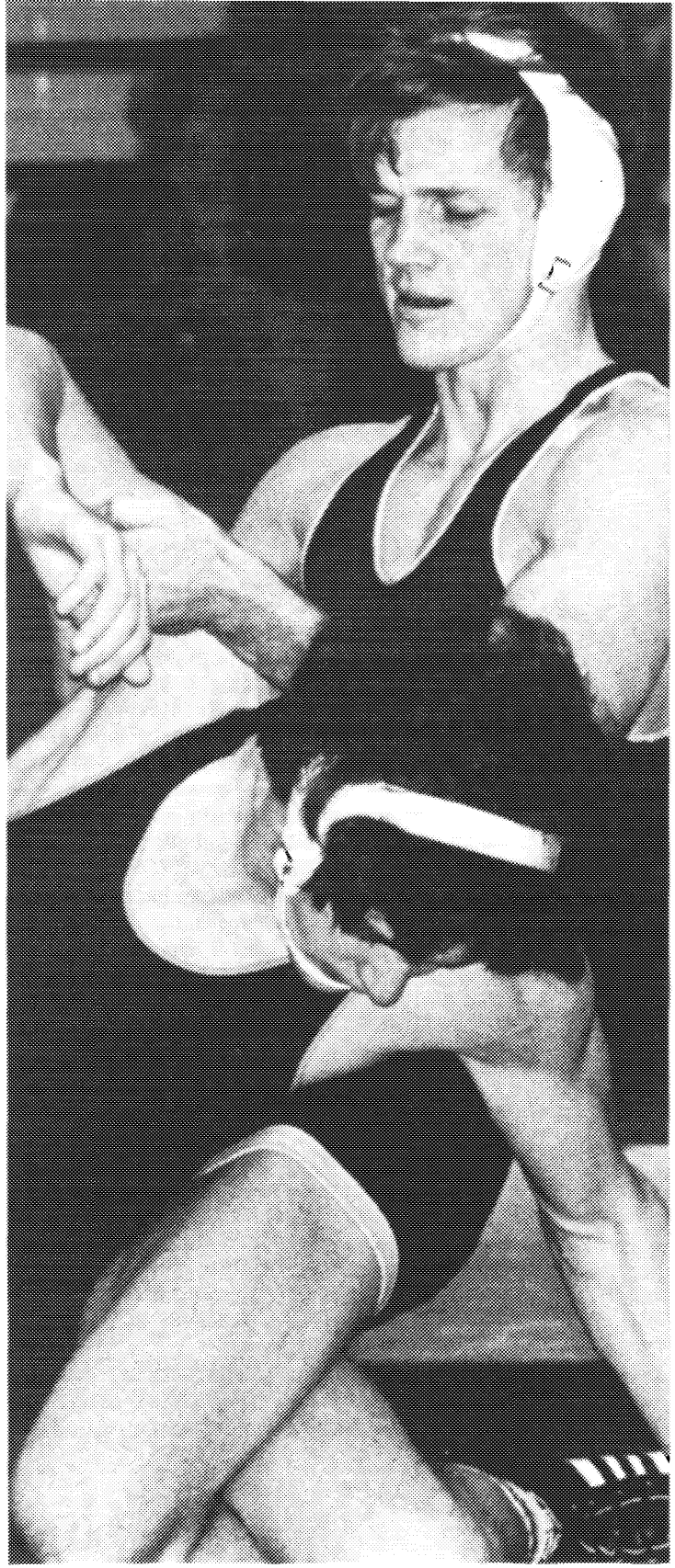


CLUB TEAMS

Club teams offer competition and fun in everything from sailing to rugby football. Many of these clubs are among the best in the nation. In 1974 the cadet Sport Parachute Club won the NCAA National Championship for the second year in a row. The Triathlon Club defeated the Canadian Pentathlon Team and went on to place second in the United States competition. After winning the Western Championships, the Judo Club placed sixth in the Nationals with two cadets named All-Americans. The year-old Cycling Club won the Eastern Intercollegiate Division of the Amateur Bicycle League of America. The Riding Club ended the year as Reserve Champions in the Intercollegiate Horse Show Association. Volleyball, Pistol, Skeet and Trap, and Marathon teams also placed in Eastern and national competition.

INTRAMURAL ATHLETICS

At 3:40 P. M. every Monday through Friday, the "fields of friendly strife" are flooded with intramural athletes—including (during fall and



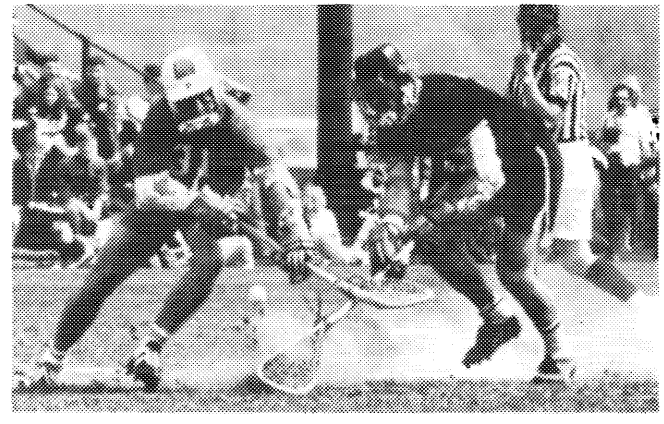
winter) every man not on a varsity or club team. Normally, each cadet competes in intramurals twice weekly. Participation during the spring is voluntary. Intramurals give every cadet a chance to build strength, coordination, and endurance as well as an opportunity to blow off steam and have a little fun. Fall brings competition in flickerball, football (with full gear), soccer, tennis, and track. With winter the action moves indoors for basketball, boxing, handball, squash, swimming, volleyball, and wrestling. Spring intramurals feature team handball, lacrosse, touch football, water polo, and a number of others determined by cadet interest.

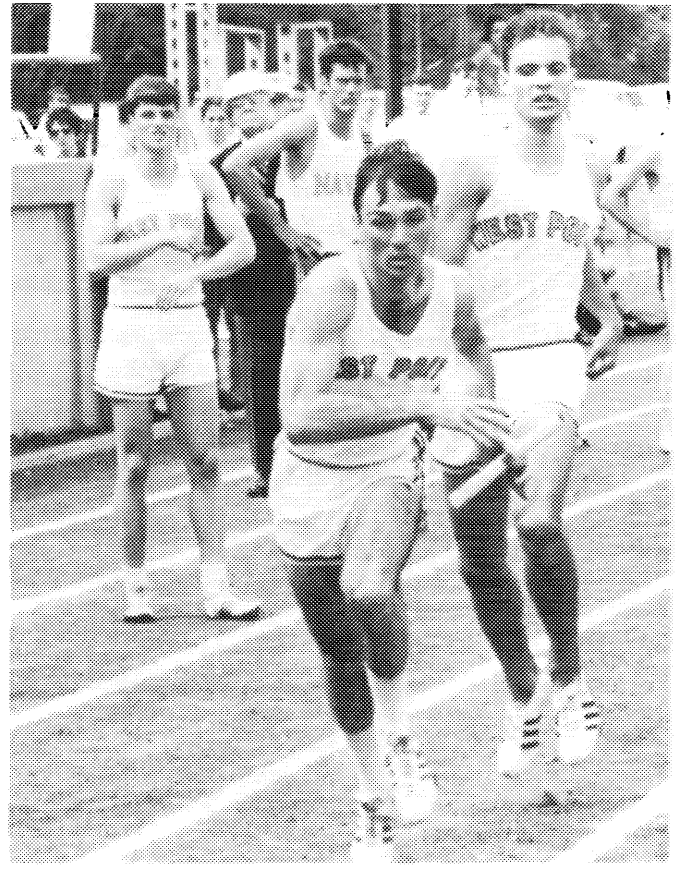
PHYSICAL EDUCATION

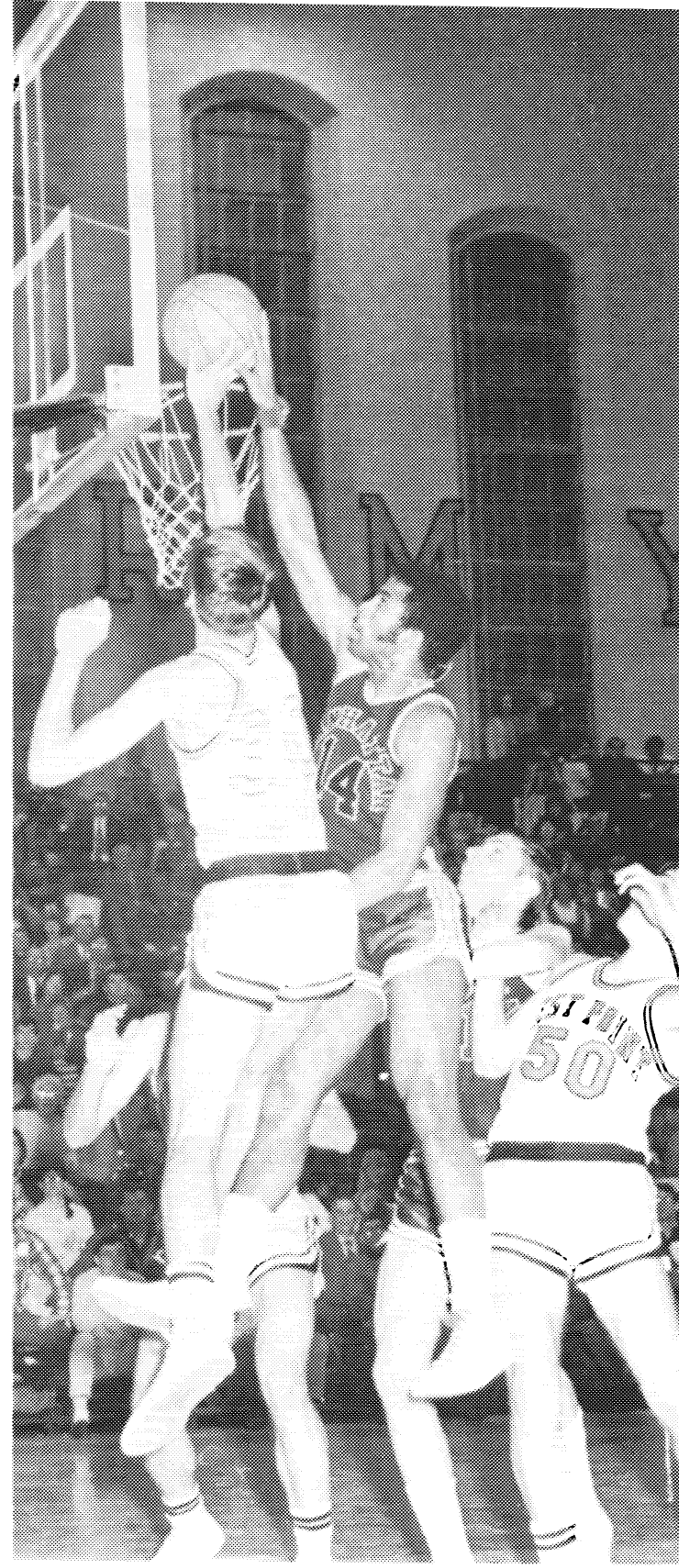
Every cadet takes seven credit hours in the comprehensive, four-year physical education program. The progression begins Plebe year with fundamentals of conditioning, boxing, swimming, wrestling, gymnastics, and carryover sports, including golf and tennis. Carryover sports, activities a cadet may engage in the rest of his life, receive progressively greater emphasis during upperclass years. Among such sports are badminton, handball, paddleball, personal conditioning, senior life saving, SCUBA, skiing, squash, volleyball, water safety instruction, and aerobics. As an upperclassman, a cadet also learns techniques of instruction and coaching, which provide him additional leadership experience and help build confidence. Summer training programs also include physical education activity and leadership.

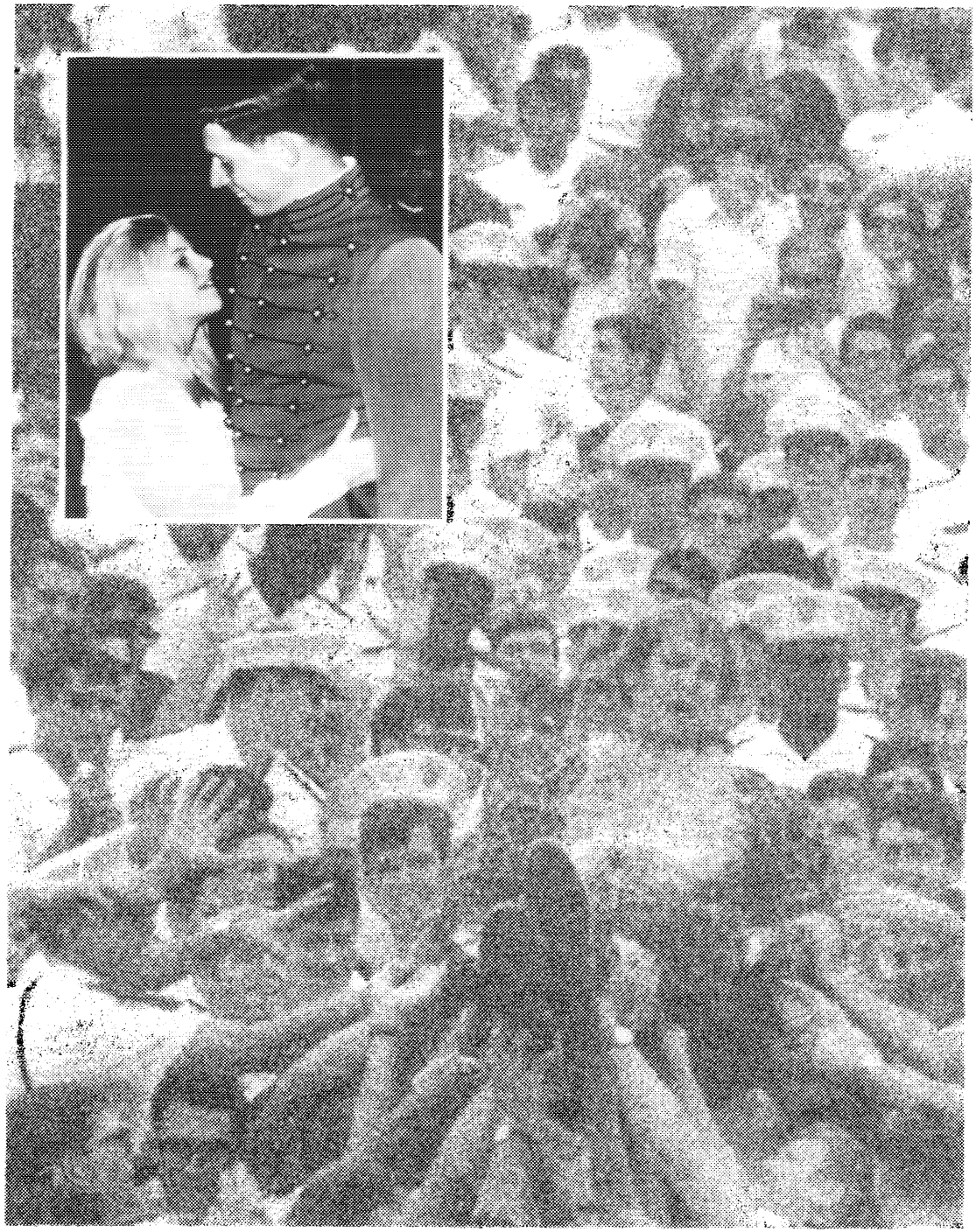
The program is administered by the Office of Physical Education (OPE), part of the Department of Tactics. An OPE instructor is assigned to each cadet company as Guidance Counselor. The Counselor maintains an overall physical progress record on each cadet; concerns himself with corrective assistance for injury, posture deficiency, or weight control; and, where necessary, provides special programs for cadets having difficulty meeting minimum standards in swimming or other sports.

Individual attention, team activity, and fine coaching rank the total physical education program at West Point among the country's best.









VIII. Extracurricular Activities

You know what all work and no play does to Jack. So do we. Woods, lakes, ski slopes, sports fields, athletic buildings, lounges, golf courses, tennis courts—you name it—make for a lot of playing around. Varied interests and know-how are important for a well-rounded Army officer. So, time-out from studies and military training permits such relaxing activities as sailing, ice skating, fishing, canoeing, or the more active pastimes of skiing, sky-diving, cycling, mountain climbing, hunting, and SCUBA diving. Scholastic groups delve into languages, engineering, math, geology, and the arts. A wide variety of religious activities are also pursued.

SOCIAL LIFE

Cadets, like college students everywhere, find time for social acitivies. Frequent dances bring young women from such neighboring campuses as Vassar, Ladycliff, and Briarcliff. Cadets hold functions in the First Class Club, the Ski Lodge, the Golf Club, a remodeled railroad depot, two lake cabins, and even a West Point excursion boat. The Academy's Hotel Thayer provides a place for cadets to dine with friends and families; First Classmen (seniors) also have access to the officers' club. Both facilities have panoramic views of the Hudson River. Movies, plays, concerts, other live entertainment, and formal dances in the brand-new Cadet Activities Building give the cadet considerable choice in the use of his free time.

THE ARTS

The Cadet Fine Arts Forum is the largest extracurricular group at West Point. Interests in archaeology, ballet, theater, photography, sculpture, painting, film, and music are pursued through the Forum's cadet-organized activities. In 1974-75 the Forum brought to West Point such performers as Bob Hope, Van Cliburn, Bill Cosby, and the Harlem Dance Troupe. The traditional "100th Night Show," sponsored by the Dialectic Society 100 nights before graduation, is written, produced, directed, and performed by cadets. The Society's Cadet Acting Troupe also recently staged two musicals, *1776* and *The Roar of the Greasepaint, the Smell of the Crowd.*

Musical talents conspire and inspire through the Cadet Band, dance combos, and the nationally famous Cadet Glee Club. WKDT, the Cadet FM-stereo radio station, broadcasts music, news, and sports commentary during the academic year.

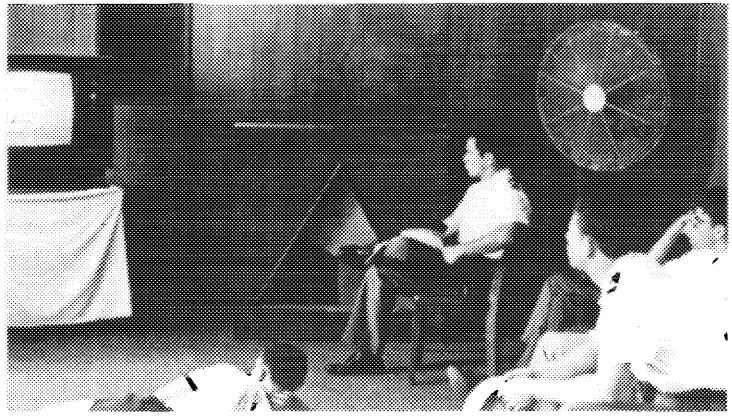
Cadet writers and editors strive to prove that the word can be (almost) as mighty as the sword. The *Howitzer* yearbook, the *Pointer* magazine, the *Bugle Notes* handbook for Plebes (freshmen), and the *Slum and Gravy* sports newsletter are some of their publications.

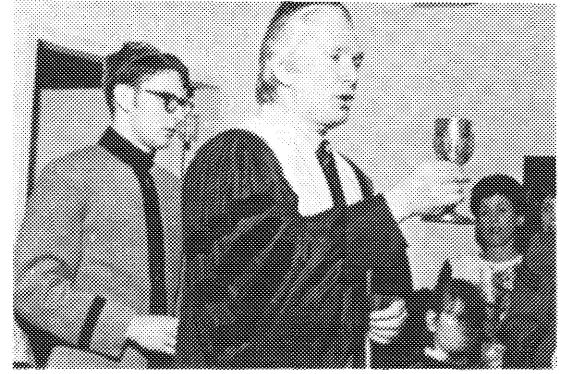
The dynamic West Point Debate Council and Forum is another popular activity at the Academy. Cadets speak out on current issues against their college peers at debate tournaments throughout the United States.

Cadets assimilate the literature and customs of foreign countries through many language clubs: French, Chinese, German, Portuguese, Russian, and Spanish.

SCIENTIFIC CLUBS

Guest lecturers, innovative projects, discussion groups, and field trips are sponsored by cadet scientific clubs. The Aeronautics and Astronautics Club has launched homemade miniature rockets and visited such full-sized rocket sites as Cape Kennedy and the Marshall Space Center. The ancient science of star-gazing has an attentive following in the Cadet Astronomy Club. The Computer Club maintains a full program with West Point's computer. Other clubs include the Engineering Forum, the Electronics Club, the Geology Club, and the Mathematics Forum.





COMMUNITY AFFAIRS GROUPS

Many cadets step out of the West Point Community to help in Veterans' Hospitals, juvenile correctional institutions, and young people's organizations. The Cadet Scoutmasters Council annually hosts a camporee which draws over 3,000 Scouts from all over the Eastern seaboard.

The Cadet Public Relations Council sponsors cadet appearances at junior and senior high schools, military and civic organizations, and on radio and TV throughout the nation. Cadets talk about their experiences at West Point and present audio-visual portrayals of cadet life.

RELIGIOUS ACTIVITIES

A large and enthusiastic group of cadets hesitates to draw a line between fun and religious activity. Saturday nights find them with their dates, gathered for "rap sessions," singing, and guitar-strumming good times at the Coffee House in the Cadet Chapel. Retreats, worship services, conferences, choirs, discussion groups, and Sunday School teaching in a variety of denominations revolve around the three West Point chapels. All cadets are encouraged, though not required, to become involved in religious groups.

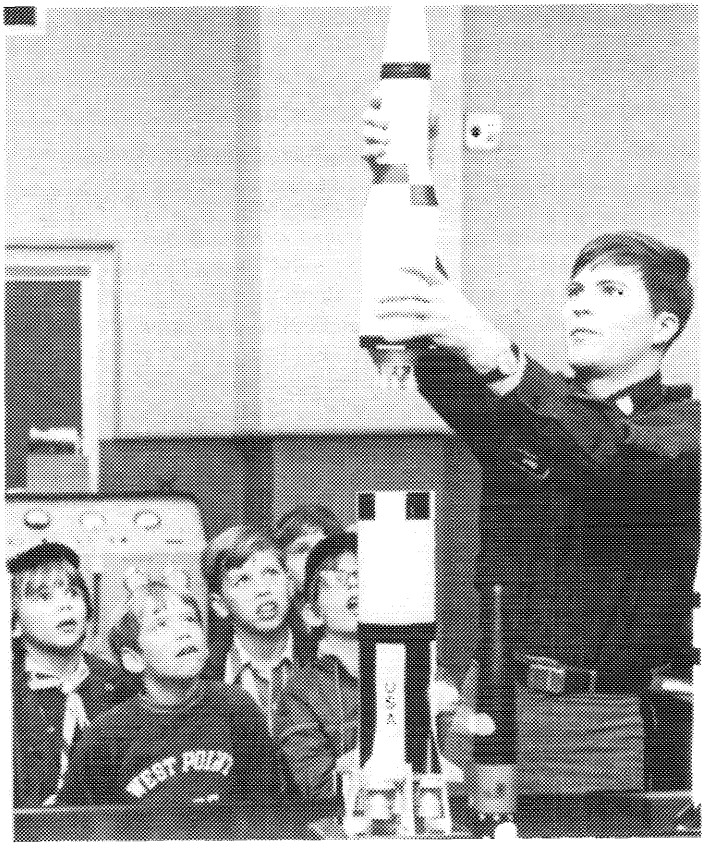
Protestant cadets serve as acolytes, choir members, and ushers in the interdenominational services at the Cadet Chapel and at the outdoor amphitheater. Three hundred children of the West Point community attend Sunday School classes taught by cadets. Discussion groups, Bible studies, retreats, and morning devotions are offered weekdays. Regular activities of the Fellowship of Christian Athletes include prayer breakfasts in the cadet dining room. Cadets may participate in certain authorized retreats on weekends. The Officers' Christian Fellowship Retreat during the weekend of Washington's birthday features workshops, speakers, and abundant good fellowship at a Conference and Retreat Center in upstate New York. Specific denominational groups such as the Church of the Latter Day Saints, Baptists, and Lutherans also get together on a scheduled basis.

Additional activities for Catholic cadets include Masses and other liturgical ceremonies, held in the Holy Trinity Chapel. A cadet Cardinal Newman Forum meets each week, offering instruction and discussions in religion, morals, and philosophy.

Jewish cadets also attend denominational worship services each Friday. Cadets participate in all services, leading many. High Holy Day services are observed in nearby communities where cadets stay in homes of congregants. A community Seder is held each year, and four weekends a year a Jewish Cadet Choir sings for congregations in neighboring communities.

In addition to conducting formal worship services and coordinating other religious activities, Chaplains of various denominations are quick to lend a sympathetic ear to the cadet who seeks individual spiritual guidance or advice about personal and family problems, or who simply wants to talk. A Chaplain's office right in Washington Hall, hub of the cadet living area, makes this kind of personal counseling readily available.

West Point religious activities are as varied and as interesting as the young men who participate in—even initiate—many of them. Sharing and fellowship make the Academy a close-knit, brotherly place.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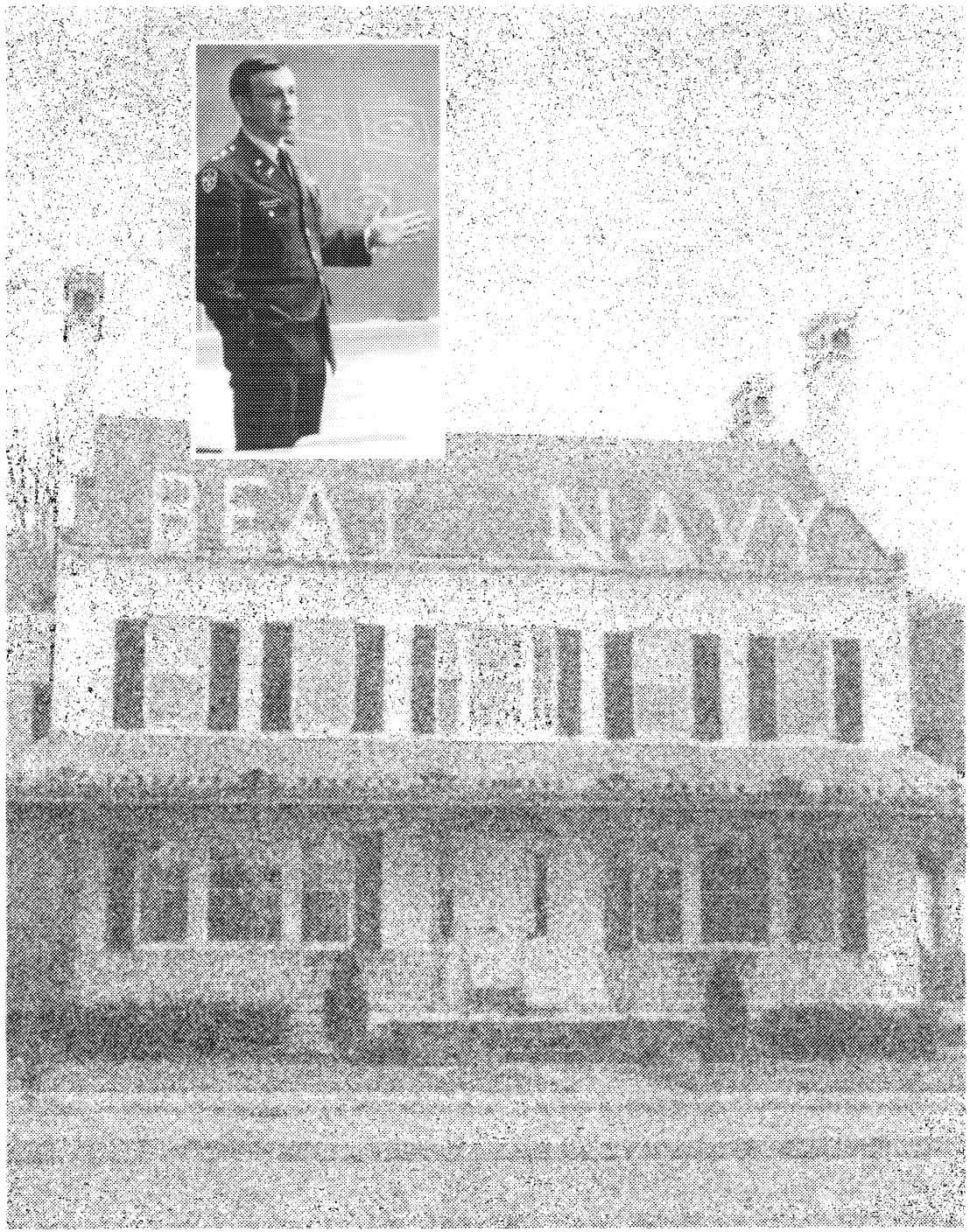

PEARL HARBOR

IX. Administration, Staff, and Faculty

Administrative titles at the Military Academy may differ from those at most colleges, but the responsibilities that go along with the titles are similar. The Superintendent is like a college president, except that in addition to heading the Academy he commands the military post at West Point. The Dean of the Academic Board, like a college dean of faculty, coordinates the activities of the academic departments and advises the Superintendent on academic matters. The Commandant of Cadets, head of the Department of Tactics, is the military equivalent of a dean of students. He oversees student government, works with student activities, and supervises the military training of the Corps of Cadets. The Superintendent, Dean, and Commandant join 13 heads of academic departments to form the Academic Board, which establishes standards for admission, academic performance, and a wide range of other educational and administrative policies. The faculty, composed almost exclusively of Army officers, combines the wisdom and continuity of tenured professors and associate professors with the fresh new ideas of young assistant professors and instructors assigned to West Point for three or four years.

Since 1815 a Board of Visitors, similar in function to a board of trustees, has annually reviewed the Academy's curriculum, policies, and equipment and submitted recommendations to the President of the United States.

USMA Staff and Faculty

[*Listing as of the spring semester, 1975*]

Superintendent

Sidney B. Berry, LTG; B.S., USMA; M.A., Columbia.

Superintendent's Staff

Secretary to the General Staff

Alexander H. Evans, MAJ; B.S., USMA; M.B.A., George Washington.

Richard E. Supinski, MAJ; B.S., M.Ed., Penn. State.

Aide-de Camp

Geoffrey G. Prosch, CPT; B.S., USMA.

USMA Staff

Chief of Staff

James H. Tormey COL; B.S., USMA; M.S.C.E., Princeton.

Deputy Chief of Staff, Comptroller

Roger N. Edgington, COL; DCSCompt; B.S., Maryland; M.B.A.; Indiana.

John J. Smith; Asst. DCSCompt.

George B. Adams, LTC; Finance & Acct. Officer; B.S., Kentucky; M.C., Richmond.

Thomas Archibald, MAJ; B.S., Missouri; M.A., Georgia.

Vernon L. Eppley, MAJ; B.A., Claremont; M.A., Alabama.

Ray H. Smallen, MAJ; B.S., Tennessee; M.B.A., Indiana.

Deputy Chief of Staff, Logistics

Graham M. Sibbles, COL; DCSLog; B.S., USMA; B.S., M.S., Miss. State.

Edward L. Aschliman, LTC; Asst. DCSLog; B.S., Purdue; M.S., Long Island.

James C. Cooper, III, LTC; Ch., Maint. Div.; B.S., USMA; M.S., Stevens Tech.

Thomas E. Cullins, LTC; Ch., Sup. & Serv. Div.; B.S., Illinois; M.B.A., Oklahoma.

Bertram W. Ferrie, MAJ; B.A., Providence; MSA, George Washington.

Henry T. Glisson, CPT; B.S., N. Georgia; M.S., Pepperdine.
Jack R. Harper, MAJ; B.S., N.E. La. State; M.B.A., Alabama.
Edward I. Hickey, Jr., LTC; Ch., Trans. Div.; B.S., USMA; M.B.A., Pennsylvania.
Kenneth J. Offan, LTC; Ch., Comm.-Elec. Div.; B.S.S., Loyola.
Eleazar Parmly, IV, COL; Treasurer, USMA; B.S., USMA; M.A., Johns Hopkins.
Darman C. Place, MAJ; Ch., Purch. & Con. Div.; B.S., E. Tenn. State.
Ronald W. Tasket, MAJ; B.S., Penn. Military; M.S., Long Island.
Ralph R. Wolfe, MAJ; A.B., Ohio; M.B.A., Syracuse; M.S., Long Island.

Deputy Chief of Staff for Operations and Security

Joseph T. Griffin, Jr., COL; DCSOpS; B.S., USMA; M.P.A., Shippensburg.
Donald H. Cline, LTC; Asst. DCSOpS; B.S., USMA; M.P.A., Missouri.
John H. Bradley, LTC; Bicentennial Activities Dir.; B.S., USMA; M.A., Rice.
Robert N. Johns, LTC; Alumni Affairs Off.; B.S., USMA; M.B.A., Long Island.
Billy L. Dillard, LTC; USAF Liaison Officer; B.S., Memphis State.
Leigh C. Fairbank, III, MAJ; B.S., USMA; M.B.A., Georgia State.
John T. Schofield, Jr., CPT; B.S., Maryland; M.B.A., Long Island.

Deputy Chief of Staff for Personnel and Administration

William C. Hammill, COL; DCSP&A; B.S., Jacksonville State; M.A., Stanford.
Frederick R. Pole, LTC; Adj. Gen.; B.S., Omaha; M.S., Shippensburg.

Dudley L. Tademy, LTC; Ch., Pers. Serv. Div.; B.S., Southern; M.A., Missouri.
Robert T. Donovan, LTC; Provost Marshal; B.S., USMA; M.S., Mich. State.
Lawrence K. Montgomery, LTC; Rec. Serv. Off.; B.A., Morgan State.
J. Earl Andrews, CH (LTC); Post Chaplain; A.B., Asbury; M.Div., Emory; M.A., Boston U.
M. Edgar Hollowell, Jr., CH (CPT); Dep. Post Chaplain; B.A., VMI; M. Div., Virginia Theo. Sem.; S.T.M., U. of the South; M.S., Long Island; D.Min., Union Theo. Sem.

Public Affairs Office

Thomas P. Garigan, LTC; PAO; B.S., USMA; M.A., Pennsylvania.
Frank C. McGourty, MAJ; B.S., Holy Cross.
F. William Smullen, MAJ; B.A., Maine; M.A., Syracuse.
William J. Diehl, Jr., CPT; B.A., Minnesota.
Robert J. Kinney; B.A., Rutgers.
Al V. Konecny; B.S., State U. of N.Y.
Joseph E. Dineen; B.A., Fordham.
Patricia Y. Carter; B.A., M.A., Washington State.

Inspector General

Colbert L. Dilday, LTC; B.S., N.C. State; B.S., Georgia Tech.

Facilities Engineer

Carrol W. Guth, COL; USMA Engr.; B.S., Drexel; M.S., Texas A&M.

Clifford T. Flanigan, LTC; B.S., USMA; M.S., Illinois.

Donald H. Harwig, LTC; B.S., Illinois; M.S., Long Long Island.

Dale R. Anderson, CPT; B.S., USMA; B.A., M.S., M.S., Mich. Tech.

John G. Flora, MAJ; B.S., Wisc.; B.S., Mo.; M.A., Pepperdine; M.S., Okla. State.

First Battalion, First Infantry

Donald M. Buchwald, LTC; Commander; B.S., USMA; M.A., Fairleigh Dickinson.

Charles W. Stewart, III, MAJ; Exec. Off.; B.S., USMA; M.S., Long Island.

USMA Band

Verne D. Campbell, MAJ; Commander; B.S., Wash. State

William E. Clark, MAJ; Exec. Off.; B.A., M.A., Marshall.

Erling H. Erlandson, CWO; Band Master; B.A., St. Olaf.

Chaplains, United States Corps of Cadets

James D. Ford, Rev.; USMA Chaplain; B.A., Gustavus Adolphus; B.D., Augustana Sem.

Richard P. Camp, Jr., Rev.; Asst. USMA Chaplain; B.A., Wheaton (Ill); M.Div., Gordon-Conwell Theo. Sem.

Office of Institutional Research

Gerald W. Medsger, COL; Director; B.S., USMA; M.S., Cal. Tech.; M.S., NYU.

George D. Waters, LTC; Ch., Research Br.; B.S., USMA; M.E., Texas A & M.

Claude F. Bridges; B.S., M.A., Florida.

Richard P. Butler, Dr.; B.A., King's; M.A., Xavier; Ph.D., Tennessee.

John W. Houston; B.S., St. Lawrence.

Robert F. Priest, Dr.; A.B., Ph.D., Chicago.

Paul T. Hirth; B.S., Norwich; M.S., MIT.

Betsy L. Smith; B.S., Mary Washington.

Gregory J. Warzala

USMA Museum

Richard E. Keuhne; Director; B.A., Amherst.

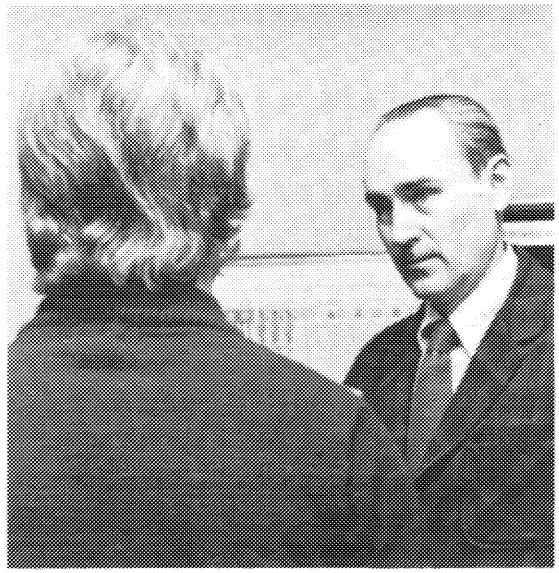
Ray W. Moniz; Curator of Design; B.F.A., Syracuse.

Robert W. Fisch; Curator.

Michael J. McAfee; Curator; B.A., M.A., Ohio.

Walter J. Nock; Museum Spec.; B.A., Fairleigh Dickinson.

Admissions



Manley E. Rogers, COL; Director; B.S., USMA; M.S., Cal. Tech.

Office of the Director of Admissions and Registrar

Mr. John I. Woodruff, Deputy Director.

Harold G. Beal, Jr., COL; Reserve Affairs Advisor; B.A., Fordham; M.A., Columbia; M.S., Long Island.

ADP/Records Branch

Donald L. Dukes, MAJ; Assoc. Dir.; B.S., M.A., Florida.

Robert B. Cato, CPT; Asst. Dir.; B.S., USMA; M.S., M.A., Stanford.

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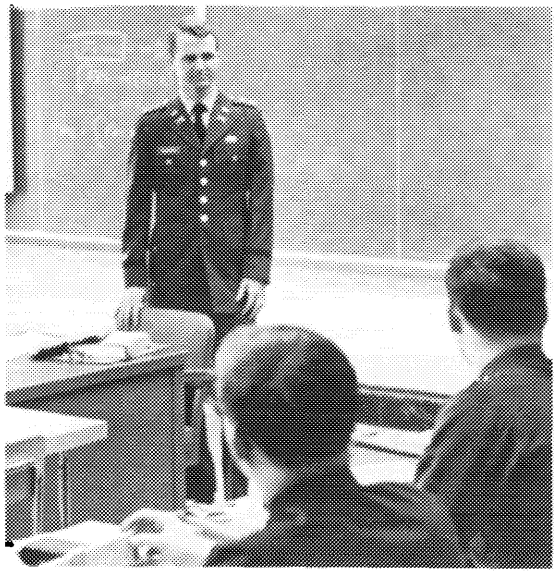

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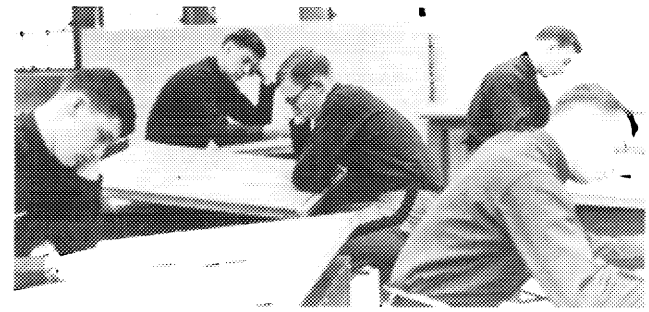

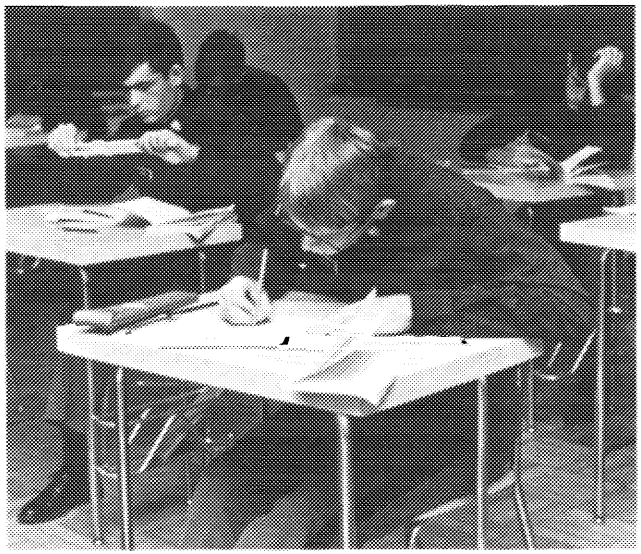

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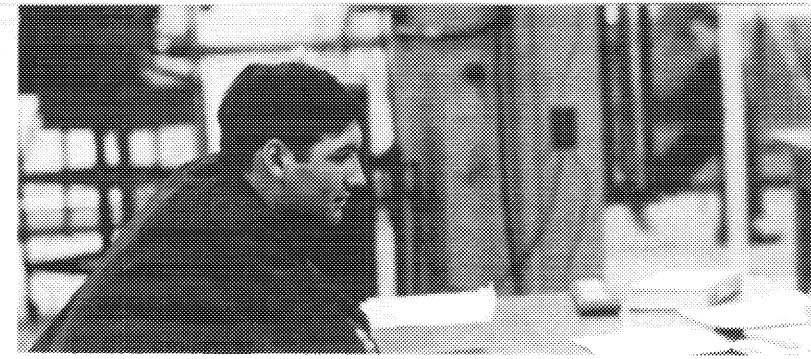

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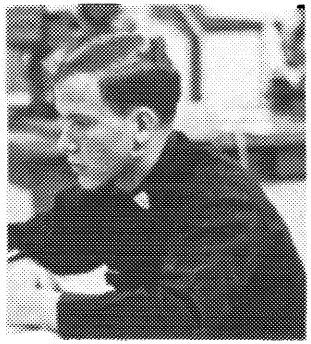
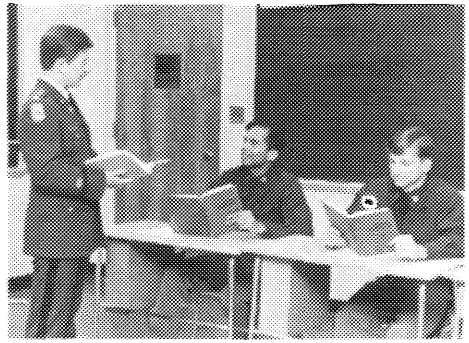


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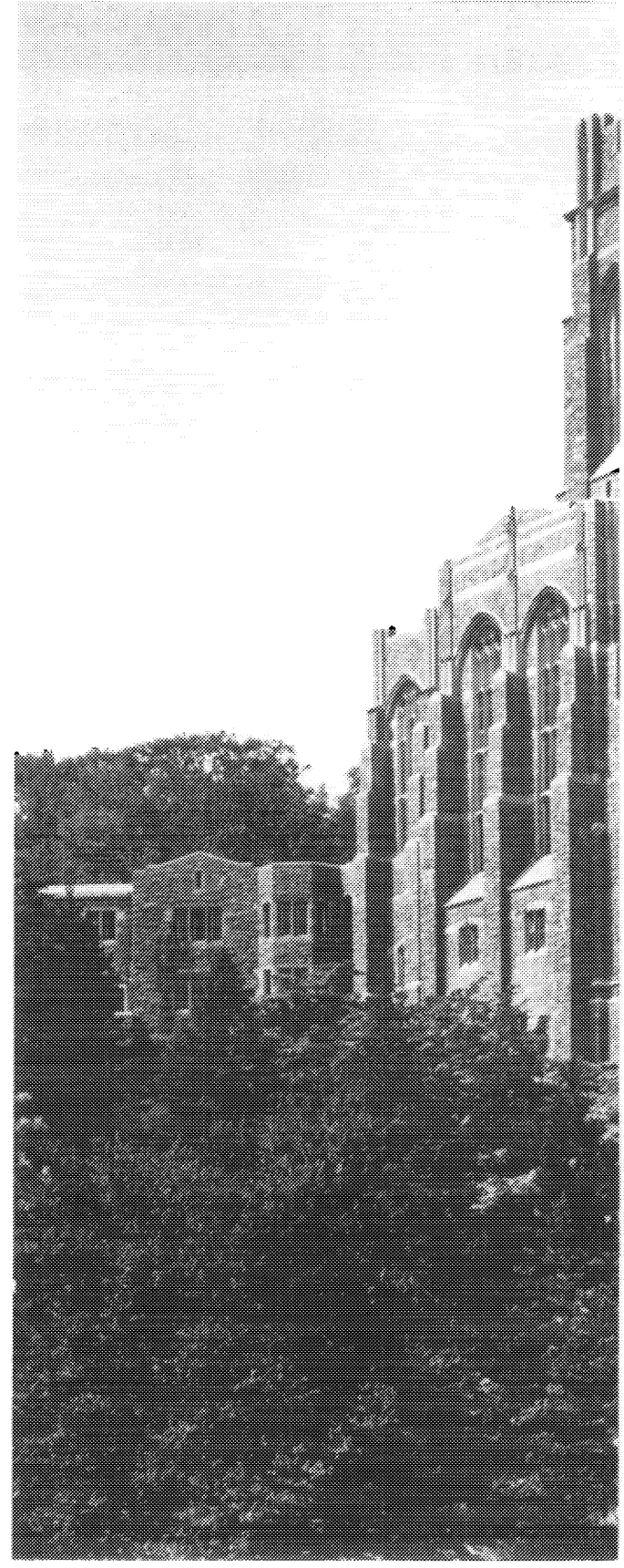

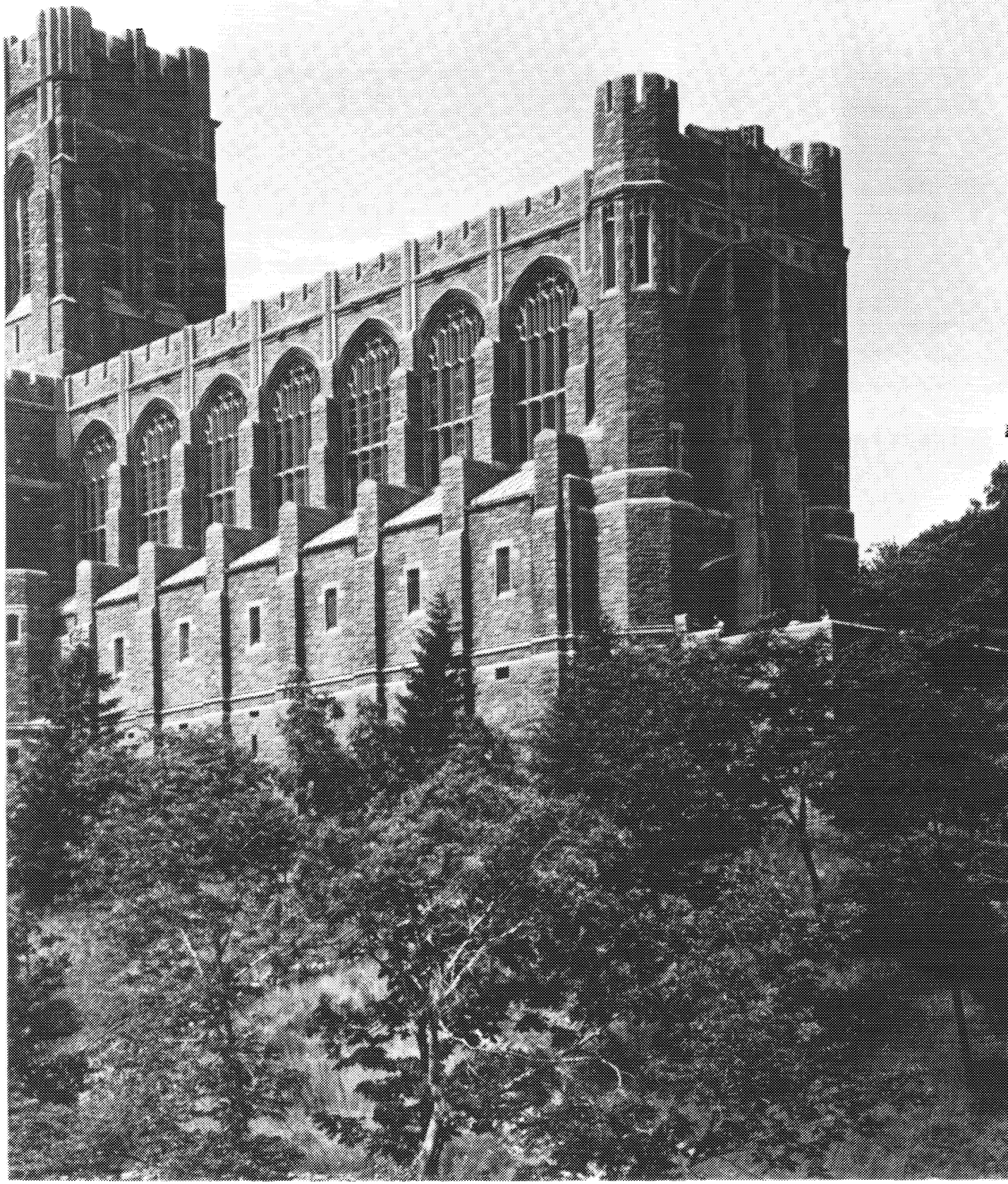

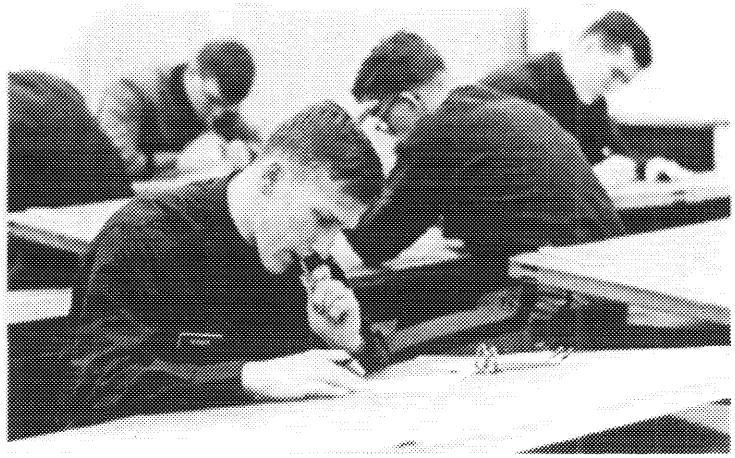

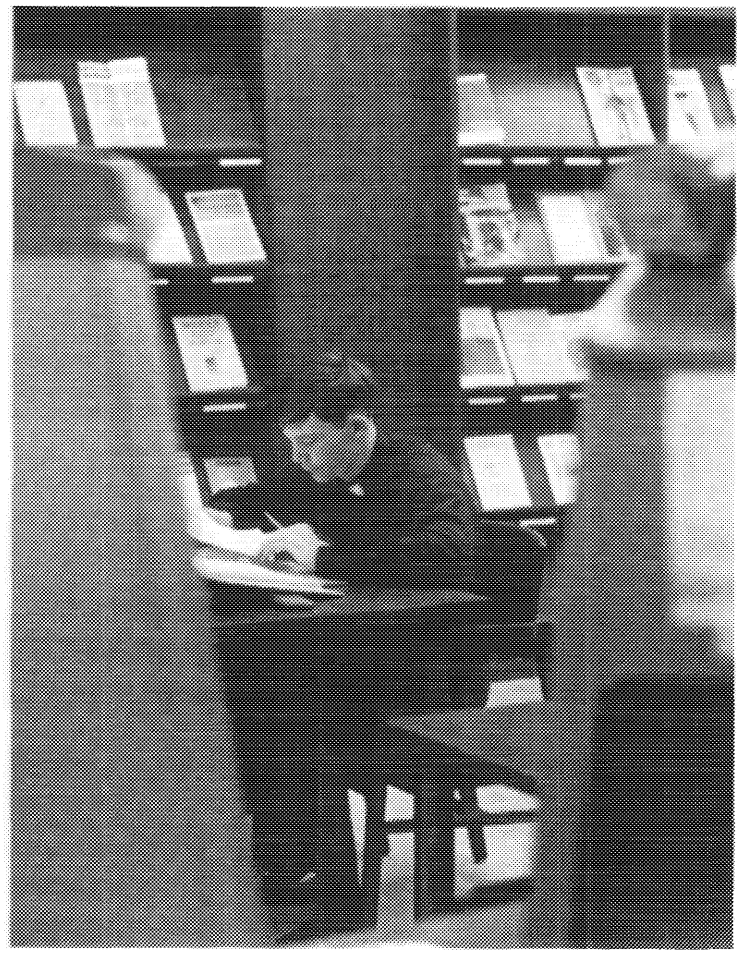

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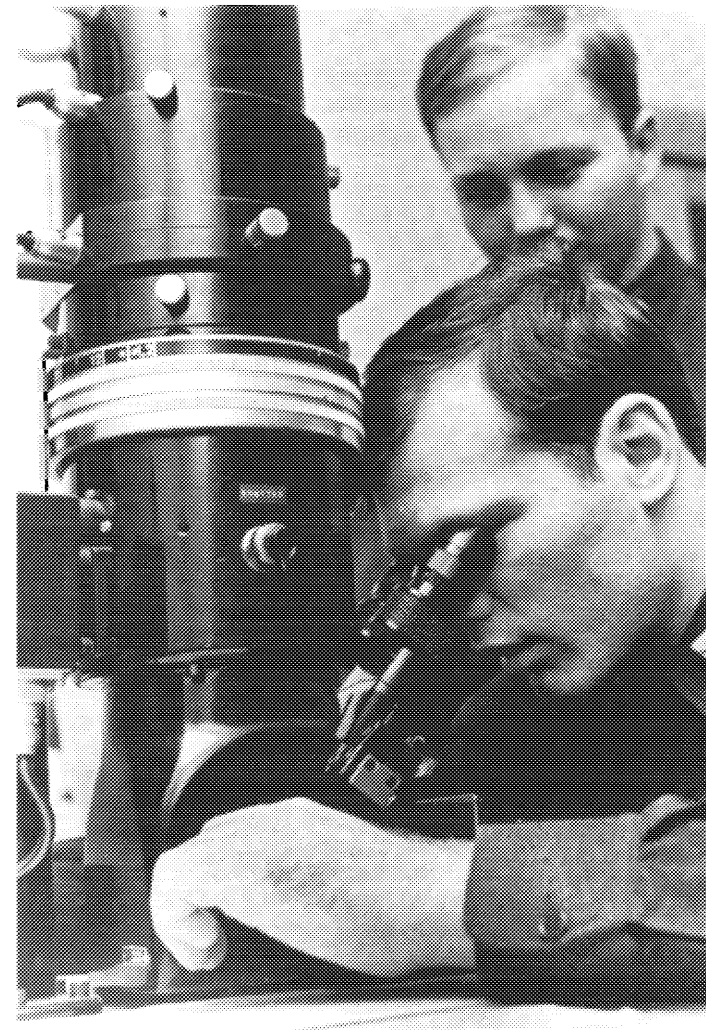

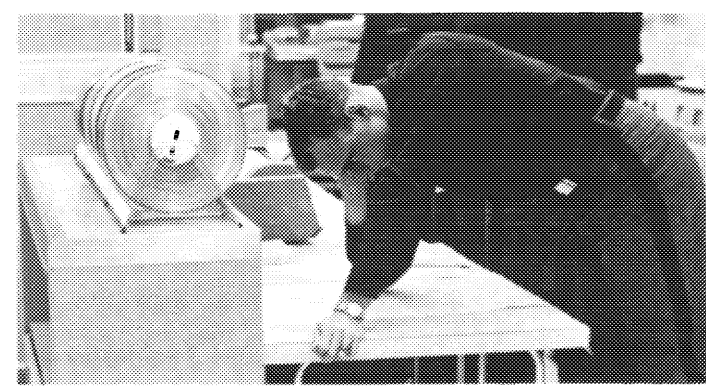

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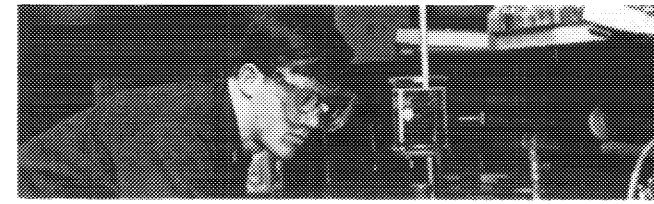

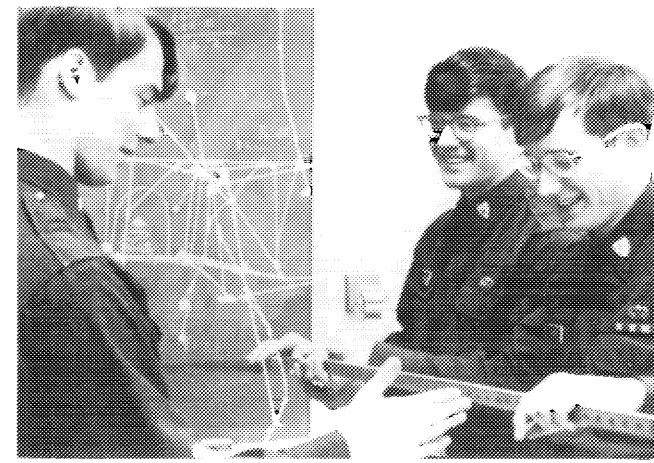

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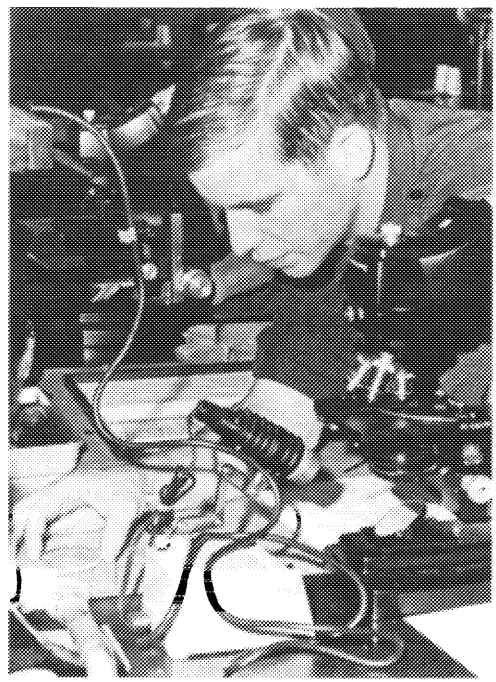

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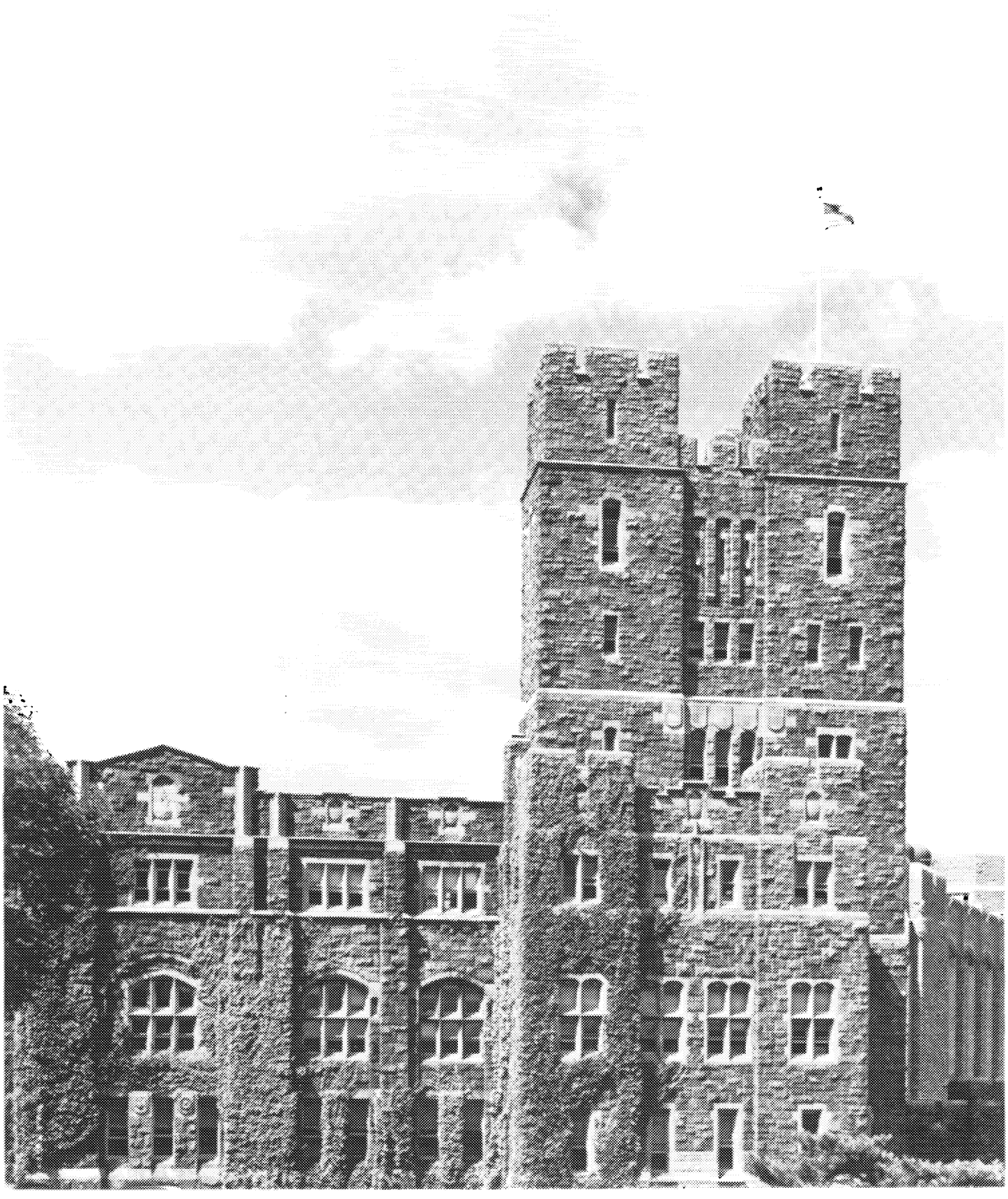

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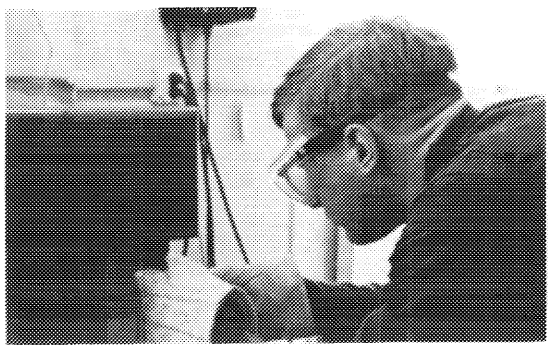

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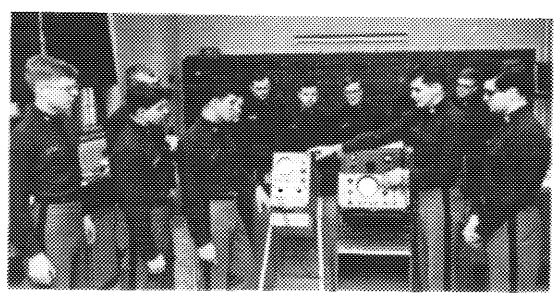

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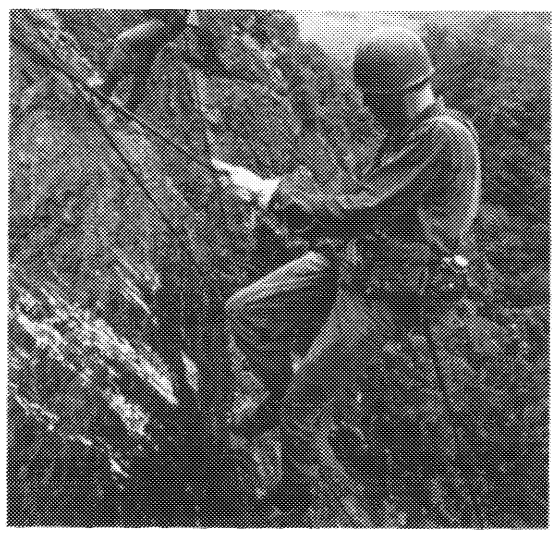

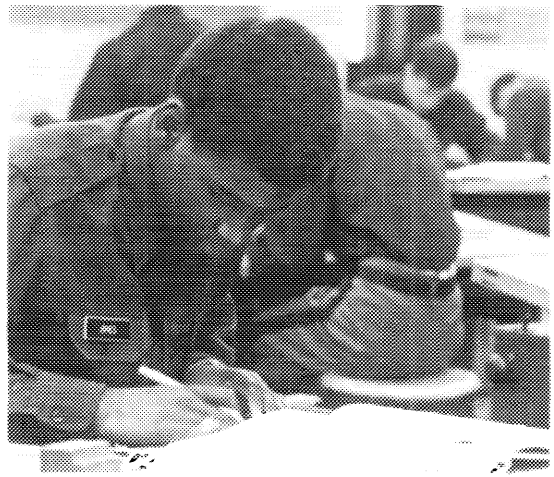

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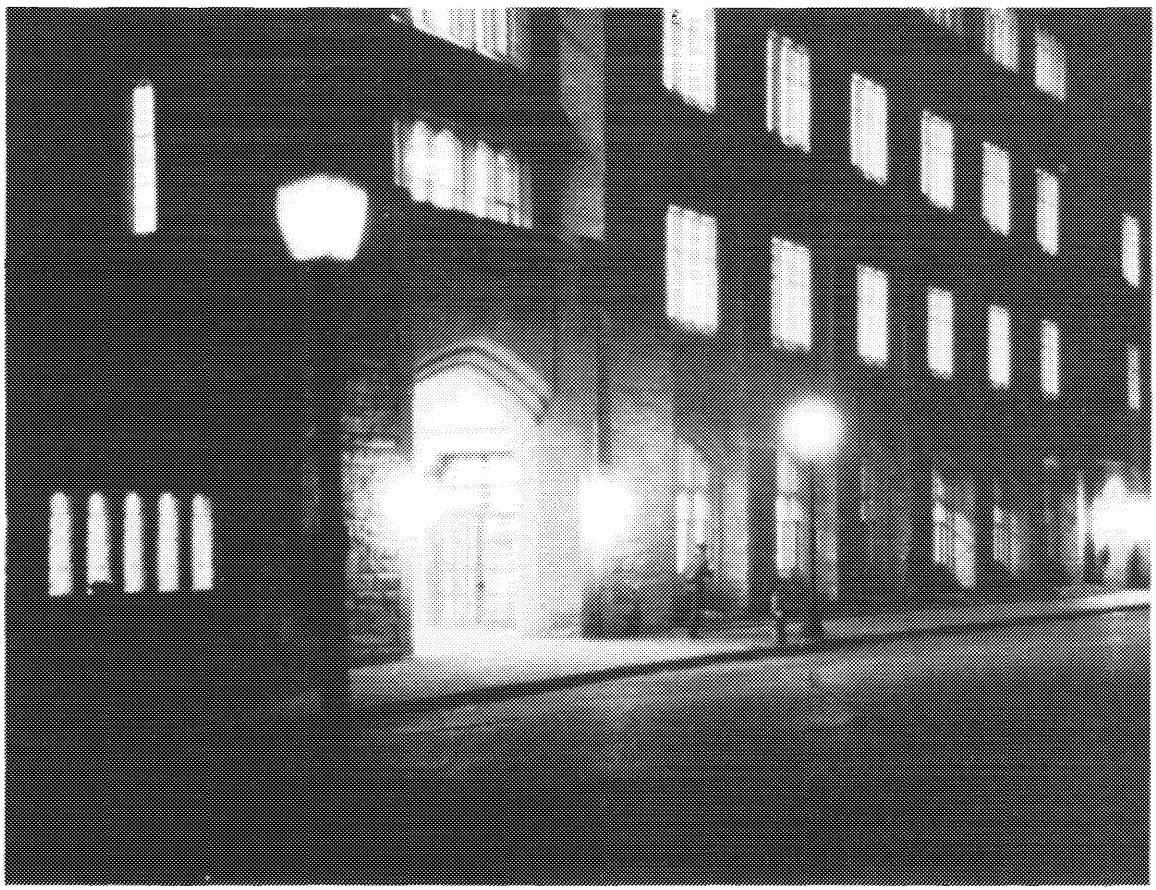
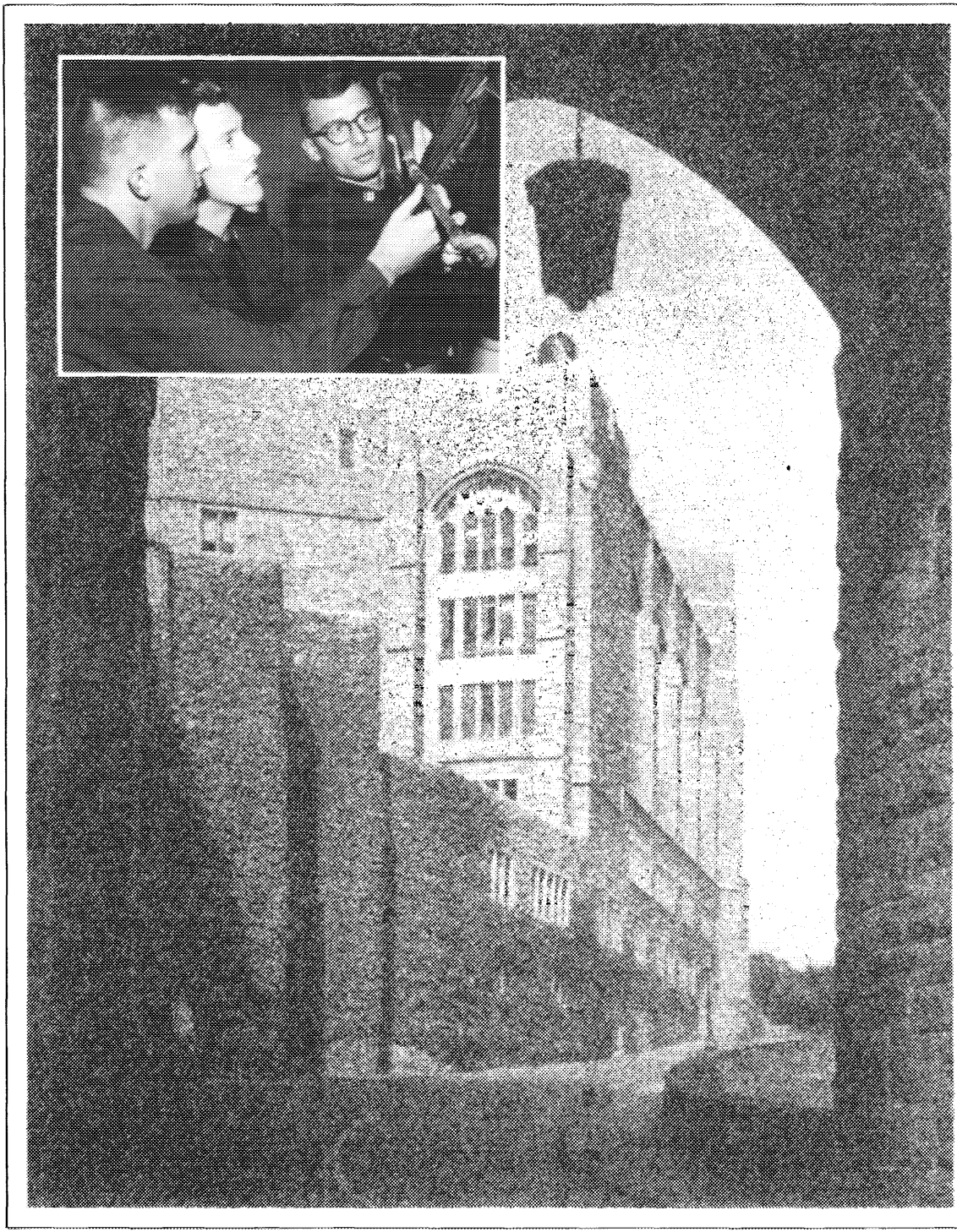




X. Supporting Activities

A number of supporting activities add significantly to the quality of Academy life. Among them are the Museum, the Office of Institutional Research, and alumni organizations.

THE MUSEUM

The West Point Museum allows cadets to visualize our nation's colorful military heritage. Its collection of military relics is thought to be the largest in the Western Hemisphere. Lectures and demonstrations, loans to instructors and cadets, and rotating exhibits in cadet areas make the museum a kind of huge reference book for the entire community and for the country. Located in Thayer Hall, the museum welcomes hundreds of visitors daily, free of charge.

Among the museum's historic memorabilia are Custer's footlocker; uniforms of Grant, Patton, and Eisenhower; the French artillery piece that fired the first artillery round of the American Expeditionary Forces in World War I; German Field Marshal Hermann Goering's handgun; and a pressurized suit worn by astronaut Frank Borman. War trophies and other items of national interest have been collected and maintained at West Point since 1777, when British weaponry captured in the Battle of Saratoga was sent here. Links of the famous Great Chain which stretched across the Hudson at West Point to bar British navigation now rest on Trophy Point, a grassy promontory overlooking the river. Cannon given the Continental Congress by Lafayette and others captured by Winfield Scott in the Mexican War can also be viewed.

Unlike most military museums, the West Point Museum tells an international story. Dioramas show major battles from Cynoscephalae (197 B.C.) to Gettysburg (1863). One gallery takes military instruction and the art of war from the Romans to the present; others concentrate on ordnance, logistics, decorations, tactical developments, great leaders, and the everyday life of the soldier. Visitors may see full-scale replicas ranging from part of an early 19th century frontier stockade to a World War I staff car in a typical French rural scene.

The museum also monitors Academy-wide holdings of portraits, paintings, and battle flags, such as those in the Library, the Cadet Chapel, and in Grant Hall. The Department of Earth, Space, and Graphic Sciences, once the Department of Drawing, takes pride in early work of Cadet James A. McNeil Whistler, as well as that of less likely artists Sheridan, Grant, and Jefferson Davis.

OFFICE OF INSTITUTIONAL RESEARCH

The Office of Institutional Research helps the Academy see and better understand itself. It conducts research for the Superintendent and supports studies by other individuals and departments of the Academy. Cadets themselves, acting in concert with an academic department, get project assistance. The primary research program focuses on cadet recruitment, selection, values, motivation, and performance here and after graduation. The office also maintains a central library of institutional research at West Point, as well as information regarding candidates, cadets, and graduates.

ALUMNI ORGANIZATIONS

Association of Graduates

Alumni keep in touch with each other and with their alma mater through the Association of Graduates. The Association is open to all graduates of the Military Academy and former cadets who spent at least one academic term here. Over 97 percent of the 23,561 living graduates are members.

Since its foundation in 1869 under the personal leadership of Sylvanus Thayer, "Father of the Military Academy," and Robert Anderson, hero

of Fort Sumter, the Association has preserved and circulated historical information, encouraged the study of military science, and supported West Point through a variety of programs.

A major program of the Association since 1961 has been the West Point Fund. Tax-deductible donations and bequests to the Fund add to programs, equipment and facilities, and other improvements at the Academy for which no budgetary support is available. The use of such gifts is determined by the Superintendent and an Advisory Committee. Gifts directly to the Association of Graduates, Inc.—a tax-exempt organization—support the West Point Fund, operating expenses of the Association, or are earmarked for the Endowment Fund, where they work for the Academy and the Association in perpetuity. Conditional gifts are accepted only if their provisions are acceptable to the Academy; unrestricted gifts are preferred.

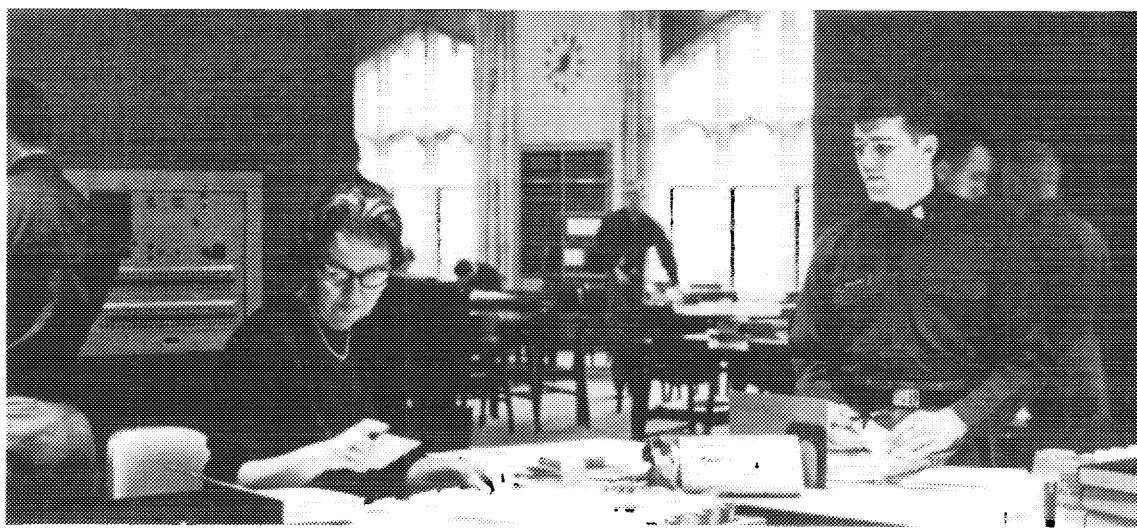
Four annual events supported by the Association have grown into important traditions at the Academy. The Long Gray Line gathers each June Week for the Alumni Parade. Since 1958 alumni have reassembled at one of the home football games for Homecoming festivities. Founders Day, March 16, is celebrated at West Point and more than 100 other locations around the world. Also since 1958 the Association has annually presented the gold Sylvanus Thayer medal to the United States citizen whose life's work best exemplifies devotion to "Duty, Honor, Country." Recipients of the award have included such figures as Henry Cabot Lodge, Dwight D. Eisenhower, Douglas MacArthur, Francis Cardinal Spellman, Neil Armstrong, and Omar Bradley.

The Association presents awards to cadets, maintains up-to-date addresses of and information about graduates, assists in the formation of West Point Societies, and publishes an annual *Register of Graduates and Former Cadets* and the quarterly, *Assembly*. The Association's Academy offices are in Cullum Hall. Additional information may be obtained from the Executive Vice President, Association of Graduates, West Point, NY 10996.

Cooperating with the Association are 77 autonomous West Point Societies in 40 states and foreign countries.

The West Point Alumni Foundation

The West Point Alumni Foundation, Inc., is a nonprofit, tax-exempt educational institution-support organization that contributes to the welfare of the United States Military Academy and the Corps of Cadets. The Foundation, chartered in Maryland in 1945, maintains an office at West Point. A Board of Managers composed of distinguished alumni directs its activities.



Appendixes

APPENDIX A

OATH OF ALLEGIANCE AND PROVISIONS OF SERVICE

Candidates accepted for admission to West Point join the Corps of Cadets in July. At that time they are required to sign the Oath of Allegiance:

I. *Oath of Allegiance*

I, _____, do solemnly swear that I will support the constitution of the United States, and bear true allegiance to the National Government; that I will maintain and defend the sovereignty of the United States, paramount to any and all allegiance, sovereignty, or fealty I may owe to any State or country whatsoever; and that I will at all times obey the legal orders of my superior officers, and the Uniform Code of Military Justice.

II. *Engagement of Service*

I, having been appointed a cadet of the United States Military Academy, do hereby engage, with consent of my parents or guardian if I am a minor, unless sooner separated from the Academy.

a. To complete the course of instruction at the United States Military Academy.

b. If tendered an appointment as a commissioned officer in a Regular component of one of the armed services upon graduation from the United States Military Academy, to accept such appointment and to serve under such appointment for not less than five consecutive years immediately following the date of graduation.

c. If an appointment as provided in IIb above is not tendered, or if permitted to resign my commission in a Regular component of one of the Armed Services prior to the sixth anniversary of my graduation, to accept an appointment as a commissioned officer in a Reserve component of one of the Armed Services and remain therein until such sixth anniversary.

III. *Marital Status*

I am unmarried. Furthermore, I understand that a Cadet who marries prior to graduation will be separated from the Academy.

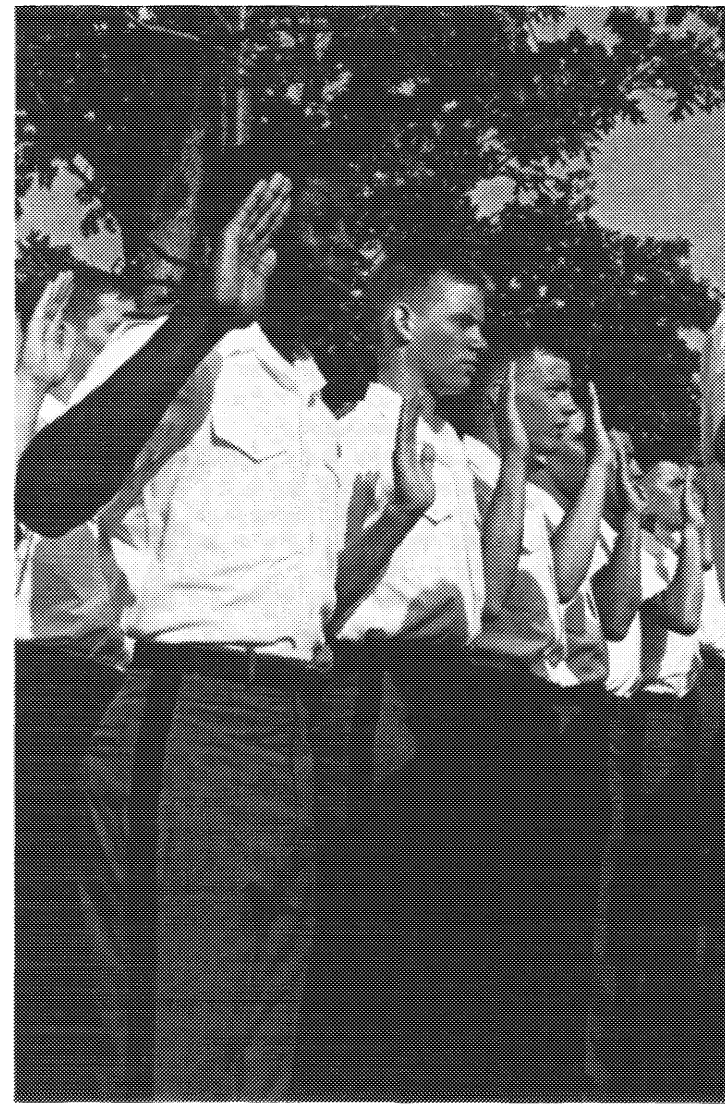
IV. *Separations and Resignations*

I have read and understand the following policy applicable to cadets who are separated prior to graduation:

a. A cadet who enters the United States Military Academy directly from a civilian status assumes a military service obligation of six years (10 USC 651).

b. A cadet who is separated from the Academy because of demonstrated unsuitability, unfitness, or physical disqualifications for military service will be discharged.

c. A cadet who enters the Academy directly from a civilian status and resigns or is separated from the Academy prior to the commencement of the Second Class Academic Year will be discharged. A resignation tendered by a Fourth or



Third Classman will be accepted when found to be in the best interest of the service. A cadet who tenders a resignation will be required to state a specific reason for his action.

d. A cadet who enters the Military Academy from the Regular or Reserve Component of any military service or resigns or is separated from the Military Academy prior to the commencement of the Second Class Academic Year will revert to his former status for completion of any prior service obligation. All service as a cadet is counted in computing the unexpired portion of the enlistment or period of obligated service (10 USC 516 (b)).

e. With the commencement of the Second Class Academic Year, a First or Second Classman who resigns or is separated prior to completing the course of instruction, except for physical disqualification, unfitness, or unsuitability, normally will be transferred to the Reserve Component in an enlisted status and ordered to active duty for not less than two years (10 USC 4348 (b)).

(1) Completion or partial completion of service obligation acquired by prior enlistment in no way exempts a separated cadet from being transferred to a Reserve Component and ordered to active duty under the provisions of 10 USC 4348 (b).

(2) When separation occurs as a result of deficiencies which are not considered willful, the active duty provision may be waived by the Department of the Army, upon recommendation of the Superintendent.

f. In a case where it is necessary to determine whether a cadet resigned or was separated prior to or following the commencement of the Second Class Academic Year, the critical date is the date that action is initiated, either by the cadet or by authorities at West Point.

g. Any First Classman who completes the course of instruction and declines to accept an appointment as a commissioned officer will be transferred to the Reserve Component in an enlisted status and ordered to active duty for four (4) years (10 USC 4348 (b)).

h. In each case where a cadet is separated from the Military Academy, the Selective Service System will be notified of the individual's change in status.

APPENDIX B

Medical Requirements

MEDICAL EXAMINATION

Every candidate must take the Qualifying Medical Examination given at authorized examining centers throughout the United States and at certain overseas bases (See Chapter III, section #6, for detailed explanation of Qualifying Medical Exam). Examination by private physicians and dentists cannot be considered qualifying examinations. Only examinations given at authorized military medical facilities are acceptable as qualifying examinations.

MEDICAL STANDARDS AND DISQUALIFICATIONS

Your private physician and dentist should examine you for disqualifying medical conditions listed below. In addition, your full medical history, including all illnesses, injuries, and operations, should be compiled. Medical care which significantly affected your medical status must be documented with supporting statements from the attending physician or hospital records.

HEIGHT AND WEIGHT STANDARDS

Each candidate should be from 66" to 80" tall (measured to the nearest half-inch). Anyone below the minimum height of 66" will automatically be considered for a waiver if he has outstanding academic, military, athletic, or leadership abilities.

Desirable weight ranges for each height are listed below. Underweight disqualification will not be waived. Exception to overweight disqualification may be made if the applicant has a large bone structure and well-distributed, proportioned muscle masses with little evidence of thick layers of subcutaneous fat. Gross obesity is a disqualifying factor unless excess weight is lost before admission. Each case will be judged on its own merits.

Height (inches)	Weight (lbs)
64	105 to 183
65	106 to 187
66	107 to 191
67	111 to 196
68	115 to 202
69	119 to 208
70	123 to 214

71	127 to 219
72	131 to 225
73	135 to 231
74	139 to 237
75	143 to 243
76	147 to 248
77	151 to 254
78	153 to 260
79	159 to 266
80	166 to 273

EYES AND VISION DISQUALIFICATIONS

Vision: Distant visual acuity not correctable to at least 20/20 in each eye with *spectacle lenses.*

Muscle Balance:

Esophoria over 15 prism diopters.

Exophoria over 10 prism diopters.

Hyperphoria over 2 prism diopters.

Strabismus (Tropia) of any degree.

Color Vision: Must be able to distinguish vivid red and vivid green.

Refractive Error: Myopia over 5.50 diopters in any meridian.

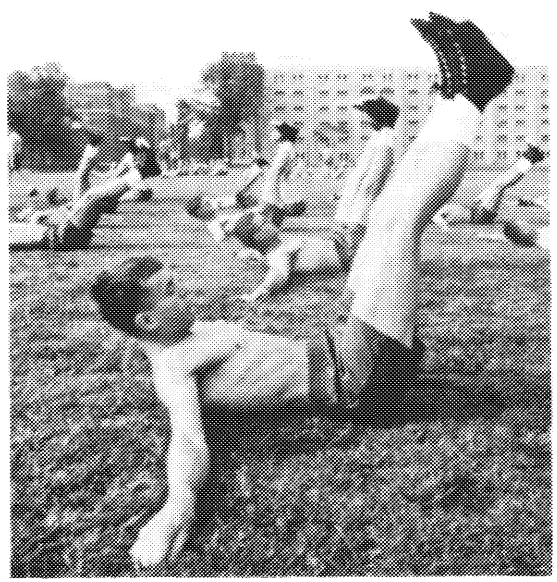
Hyperopia over 5.50 diopters in any meridian.

Astigmatism all type over 3 diopters.

Anisometropia over 3.50 diopters.

Hard Contact Lenses: Must be removed 21 days prior to examination.

Soft Contact Lenses: If worn a notation should be made on medical history form.



EARS AND HEARING DISQUALIFICATIONS

The auditory acuity of all candidates is determined by an audiometer. Maximum allowable decibel loss at certain frequencies are listed below:

Hearing Loss

(International Standards Organization Calibration)

	ISO						
Frequency	**500**	**1000**	**2000**	**3000**	**4000**	**6000**	**8000**
Maximum Loss in Decibels							
Right Ear	**30**	**25**	**25**	*	**45**	*	*
Left Ear	**30**	**25**	**25**	*	**45**	*	**8**

***Not standardized or no requirement.**

To convert the International Standards Organization (ISO) Calibration above to the American Standard (ASA) Calibration, subract the decibel loss for the frequencies listed below:

Frequency	Subtract for ASA
500	15 decibels
1000	10 decibels
2000	10 decibels
3000	10 decibels
4000	5 decibels
6000	10 decibels
8000	10 decibels

Both ears must be free from any disfiguring or incapacitating abnormalities. Other disqualifying features are: existing perforations of the tympanic membrane regardless of etiology; exostosis or other forms of canal blockage obstructing the examiner's view of the tympanic membrane.

NASAL DISQUALIFICATIONS

Any congenital or acquired lesion which interferes with the functions of the nasopharynx or eustacian tubes. Septal deviation, hypertrophic rhinitis, nasal polyps, or other conditions which result in 50% or more obstruction to either sinus drainage or airways. Allergic rhinitis not controllable by antihistamines or by desensitization or both. Histories of acute or chronic sinusitis will be reviewed.

LUNG AND CHEST DISQUALIFICATIONS

Tuberculosis active in any form or location during the past two years. A positive skin test

without other evidence of active disease is not disqualifying. Individuals taking prophylactic chemotherapy because of recent skin test conversion are not disqualified. A candidate is disqualified if he has had pneumothorax due to simple trauma or surgery within one year of date of Medical Qualifying Examination, or pneumothorax of spontaneous origin within three years of Qualifying Examination. Surgical correction is acceptable if no significant residual deforming disease remains and pulmonary function tests are within normal limits.

ALLERGIC DISQUALIFICATIONS

Asthma or a history of asthma. (Exception: childhood asthma with no symptoms since 12th birthday.) A history of allergic rhinitis past the 12th year, including those cases in which desensitization therapy has been initiated, will be reviewed. Consultation with an allergic specialist will be required in many cases of allergic rhinitis. (See Nasal Disqualifications)

SKIN DISQUALIFICATIONS

Psoriasis, even if moderate in degree. Moderately severe acne or resultant scarring, disfiguring face or interfering with wearing of military equipment. Unsightly congenital markings or chronic skin disease such as eczema. Pilonidal cyst with mass or discharging sinus. Deep or adherent scars which interfere with movement or wearing of military equipment.

HEART AND VASCULAR SYSTEM DISQUALIFICATIONS

An electrocardiogram is required of all applicants. Electrocardiographic abnormalities will be evaluated for evidence of an organic basis. A history of rheumatic fever requires a careful general medical examination as well as a detailed health history, fluoroscopic examination of the heart, and an X-ray film. All murmurs will be evaluated thoroughly to determine if functional or organic in origin. Any evidence of organic heart disease is unequivocally disqualifying. Any valvular disease of the heart is disqualifying even if improved by surgery. Hypertension evidenced by preponderant systolic pressure readings of 140-mm or more, or preponderant diastolic pressure of over 90-mm. Heart rate greater than 100 on repeated examinations will be reviewed. Severe or symptomatic varicosities of any extremities unless correctable by treatment.

GENITOURINARY SYSTEM DISQUALIFICATIONS

Persistent albuminuria of any type including so-called orthostatic albuminuria or persistence of casts in urine—even if the etiology cannot be determined. Phimosis, epispadias, or hypospadias severe enough to interfere with micturition. Amputation of the penis; infantile genitalia; atrophy, absence, deformity, or maldevelopment of *both* testicles; or undescended testicle of any degree unless surgically corrected. Chronic orchitis or epididymitis. Chronic kidney diseases. Repeated attacks of renal calculi. Absence of one kidney, regardless of cause.

SEROLOGIC TEST

A serologic test for syphilis is required for all applicants.

ABDOMEN DISQUALIFICATIONS

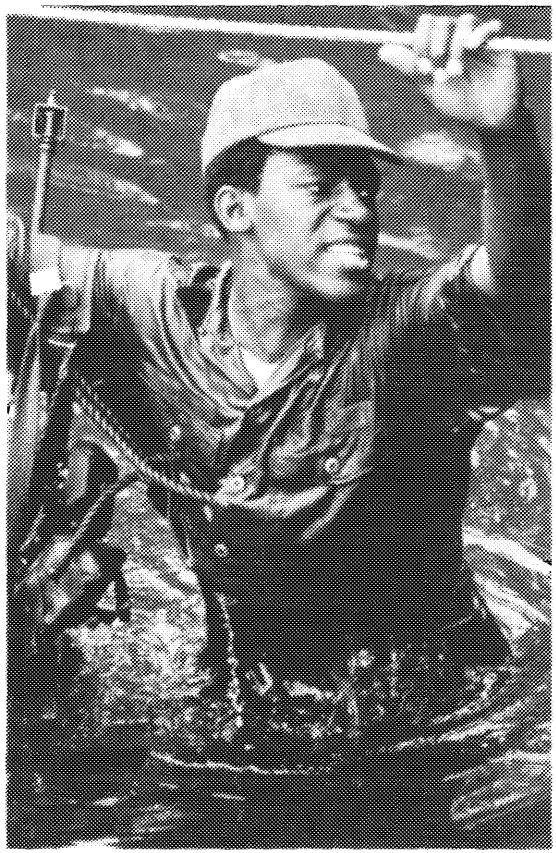
Weakness of abdominal wall sufficient to interfere with function. Hernias of any type unless surgically corrected. History of operation for hernia within past 60 days is temporarily disqualifying. Chronic diseases of abdominal viscera. History of gastric or duodenal ulcer. Acute or chronic gallbladder disease. History of splenectomy for any reason other than trauma.

ORTHOPEDIC DISQUALIFICATIONS

Ununited fractures, old joint fractures with evidence of arthritis. Pes planus more than mild, symptomatic, or with marked bulging of the inner border due to rotation or eversion of the astragalus and any callosities. Pes cavus with clawing of the toes and calluses beneath the metatarsal heads can be cause for rejection. Hammertoes of such degree as to interfere with function or wearing of suitable footwear. Other conditions of the feet which would interfere with successful compliance with military routine. History of derangement of knee joint not corrected by surgery if symptomatic within one year preceding examination. Six months must elapse after knee surgery before final evaluation. Postoperative instability, stiffness, traumatic arthritis, muscle atrophy or weakness will be thoroughly evaluated, and may be disqualifying.

SPINE AND MUSCULOSKELETAL DISQUALIFICATIONS

Defects and diseases of the spine, scapulae, ribs, or sacroiliac joints which interfere with daily participation in rigorous physical training



or athletic programs, with the wearing of military equipment, or which detract from military bearing or appearance. Spondylolysis or spondylolisthesis that is symptomatic or likely to interfere with performance. Gout. Deficient muscular development. Tuberculosis of the spine, active or healed. History of herniated nucleus pulposus, even if surgically corrected, is cause for disqualification.

EXTREMITIES DISQUALIFICATIONS

Total loss of either thumb. Loss of other digits sufficient to interfere with function. Absence of one phalanx of any finger together with the absence of the little finger of the same hand. Loss of either great toe.

NEUROLOGICAL DISQUALIFICATIONS

History of head injury resulting in unconsciousness will be thoroughly evaluated. Lengthy periods of unconsciousness will require a complete neurological consultation to include electroencephalogram. Degenerative disorders, convulsive disorders, even though controlled by medication. Residuals of infection (polio, meningitis, etc.). Miscellaneous disorders such as tics, spasms, and spina bifida associated with neurological manifestations. All periods of amnesia will be evaluated thoroughly and completely regardless of length. History of unexplained unconsciousness. Multiple episodes of syncope (fainting). Documented history of migraine headaches or chronic headaches which interfere with daily functions or require medical treatment. A history of multiple episodes of air sickness (air, sea, swing, train, or carnival ride) will be thoroughly evaluated and may be cause for rejection.

PSYCHIATRIC DISQUALIFICATIONS

History of emotional instability, psychosis, anxiety reaction or dissociative reaction. Pathologic personality types; other obsessive compulsive reactions or neurotic depressive reaction. Indication of addiction to or abuse of alcohol or drugs. Antisocial behavior. Sexual deviation. Immaturity reaction if marked; situational maladjustment. Enuresis (bedwetting) which is habitual or persistent, not due to an organic condition occurring beyond early adolescence. Stammering or stuttering of such a degree that the individual is normally unable to express himself clearly or to repeat commands. History of attempted suicide. Other disorders of emotion, behavior, thought, intelligence, or mood, difficult to define, will be thoroughly evaluated and may be cause for disqualification.

ENDOCRINE AND METABOLIC DISQUALIFICATIONS

Diabetes mellitus. Persistent glycosuria including renal glycosuria. Exophthalmic or adenomatous goiter, from any cause associated with toxic symptoms. History of thyroidectomy. History of partial thyroidectomy will be cause for thorough evaluation and may be disqualifying. Other endocrine or metabolic disorders which preclude satisfactory performance of duty or which would require long term treatment.

DENTAL DISQUALIFICATIONS

(1) Diseases and abnormalities of the mouth:

(a) Diseases such as cysts, tumors, osteomyelitis, and other acute or chronic conditons which are not easily remedied and which will

incapacitate the individual.

(b) Loss of oral tissues sufficient to prevent replacement of missing teeth with a satisfactory prosthetic appliance.

(c) Perforation(s) of the hard palate.

(d) Harelip, unless satisfactorily repaired by surgery, and unsightly mutilations at the lip.

(e) Fractures:

((1)) Malunion of a fracture that interferes significantly with function.

((2)) Ununited fractures.

((3)) Any fracture in which an insert such as a plate, pin, or screw was left in place for fixation and may be subject to easy trauma.

(f) Deformities or conditions of the mouth, to include insufficient functionally opposed natural or artificial teeth or malocclusion, which interferes with speech, breathing, or mastication and swallowing of ordinary food.

(g) A skeletal relationship between the mandible and maxilla which will preclude future satisfactory prosthetic replacement, if necessary.

(2) Teeth:

(a) Numerous carious teeth which are unfilled or improperly filled or restored may be cause for disqualification.

(b) Grossly disfiguring spacing of anterior teeth.

APPENDIX C

THE PHYSICAL APTITUDE EXAMINATION (PAE)

Overall performance on the following physical tests constitutes the Physical Aptitude Examination of the Military Academy:

Pullups: From the arm hang position on a horizontal bar, palms away from the face, elevate the body until the chin is above the bar.

Standing Broad Jump: Jump for distance.

Basketball Throw: Throw a basketball overhand from a kneeling position for distance.

Shuttle Run: Run back and forth between two lines, 25 yards apart, to cover a distance of 300 yards.

The final PhysicalAptitude Examination score is a total accumulated score for all items in a given examination series adjusted to a 200-800 scale. A low or high score on any one test item does not determine success or failure on the entire examination.

WEST POINT PHYSICAL APTITUDE EXAMINATION
Total Candidate Population for a Recent Class

	PULLUPS	STANDING BROAD JUMP	BASKETBALL THROW	300 YARD SHUTTLE	PERCENTILE
	19	8'8"	90'	55 sec	100%
	15				
TOP QUINTILE	13		80'		
	12	8'0"	75'	56 sec	80%
	11		70'	57 sec	
	9	7'8"			
		7'6"	67'	58 sec	60%
	8		65'	59 sec	
	7	7'4"	61'		
MIDDLE QUINTILE	6	7'2"		61 sec	40%
			60'	62 sec	
	5	7'0"			
	4		55'	64 sec	20%
	3	6'8"			
		6'4"	50'	65 sec	
BOTTOM QUINTILE	1	5'8"	40'	68 sec	

APPENDIX D

For further information about the Military Academy, fill out one of these inquiry slips and mail to: SUPERINTENDENT, UNITED STATES MILITARY ACADEMY, ATTENTION: MAAR, WEST POINT, NEW YORK 10996.

Please send information concerning Admission to West Point to:

(Please print or type)

NAME .....
(Last, First, MI)

ADDRESS .....

.....

ZIP CODE

YEAR OF HIGH SCHOOL GRADUATION

SSN — —

HOME TELEPHONE:

( ) –

HIGH SCHOOL:

.....

.....

K

Please send information concerning Admission to West Point to:

(Please print or type)

NAME .....
(Last, First, MI)

ADDRESS .....

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ZIP CODE

YEAR OF HIGH SCHOOL GRADUATION

SSN — —

HOME TELEPHONE:

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HIGH SCHOOL:

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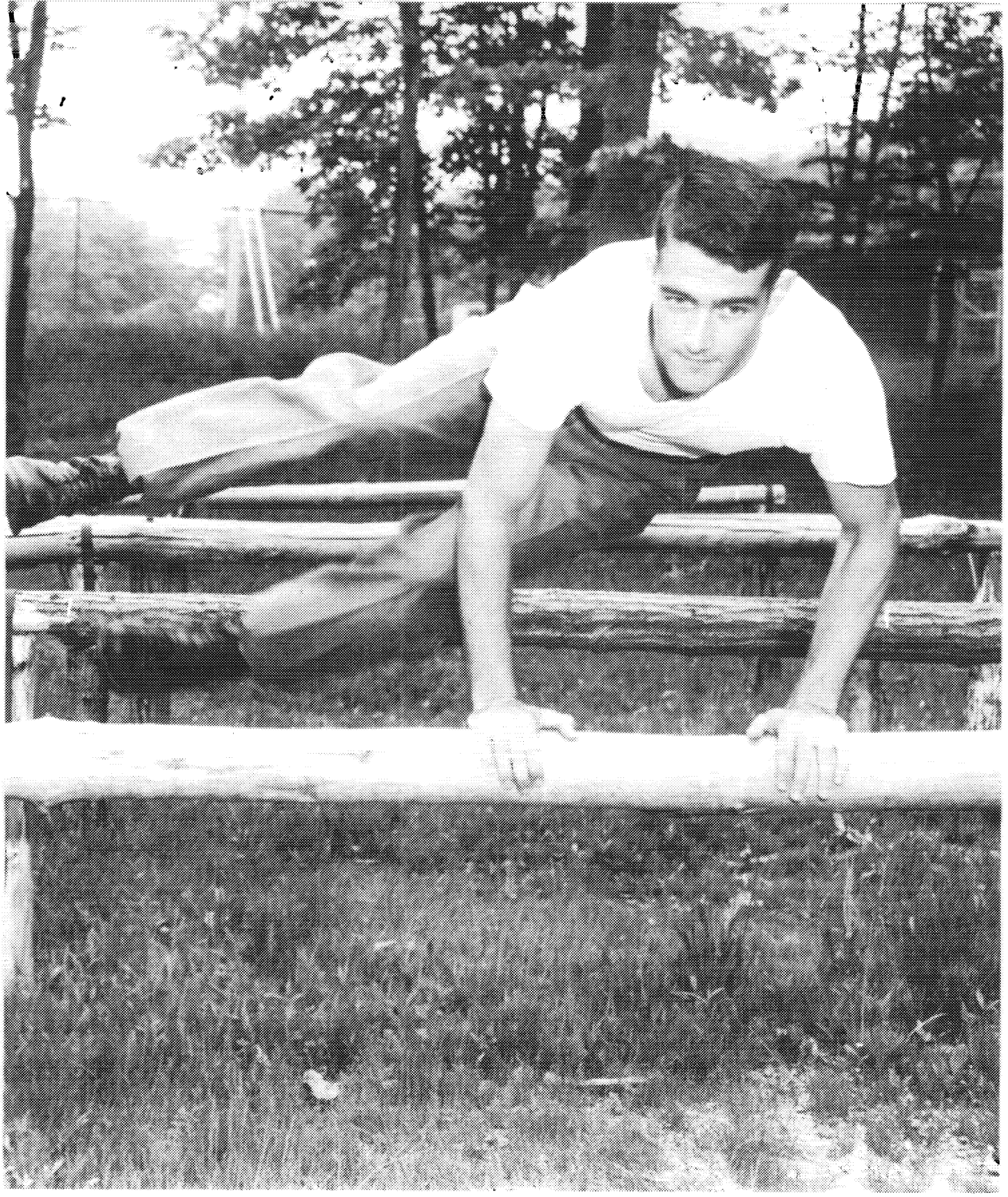

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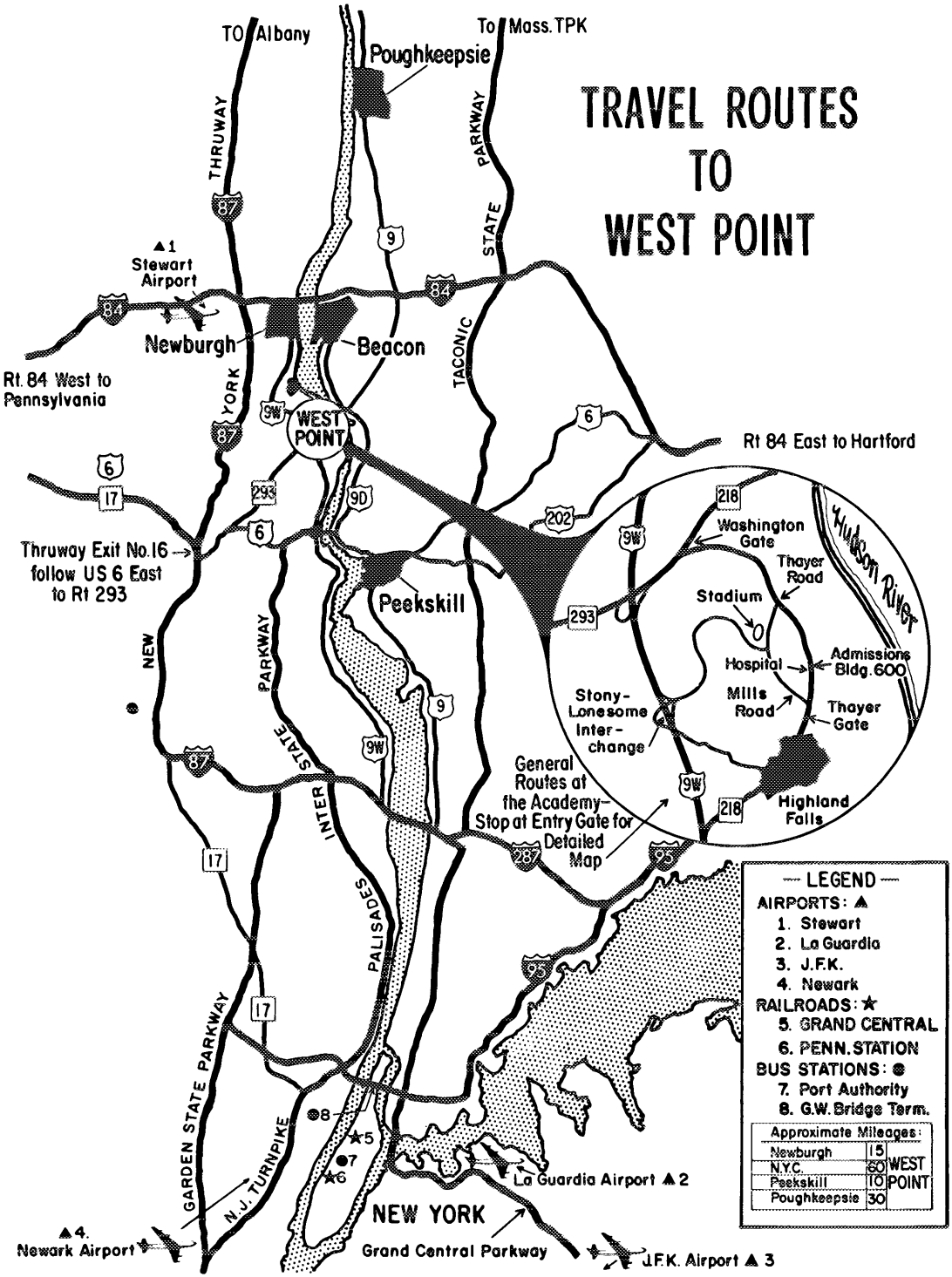
TRAVEL ROUTES TO WEST POINT
TO Albany
To Mass. TPK
Poughkeepsie
THRUWAY
STATE PARKWAY
▲1 Stewart Airport
Newburgh
Beacon
Rt. 84 West to Pennsylvania
YORK
TACONIC
WEST POINT
Rt 84 East to Hartford
Thruway Exit No. 16 → follow US 6 East to Rt 293
Peekskill
NEW STATE PARKWAY
INTER
PALISADES
GARDEN STATE PARKWAY
N.J. TURNPIKE
▲4. Newark Airport
NEW YORK
Grand Central Parkway
La Guardia Airport ▲2
J.F.K. Airport ▲3
General Routes at the Academy– Stop at Entry Gate for Detailed Map
Washington Gate
Thayer Road
Stadium
Hudson River
Hospital
Admissions Bldg. 600
Stony-Lonesome Inter-change
Mills Road
Thayer Gate
Highland Falls
— LEGEND —
AIRPORTS: ▲
1. Stewart
2. La Guardia
3. J.F.K.
4. Newark
RAILROADS: ★
5. GRAND CENTRAL
6. PENN. STATION
BUS STATIONS: ●
7. Port Authority
8. G.W. Bridge Term.
Approximate Mileages:
Newburgh 15
N.Y.C. 60
Peekskill 10
Poughkeepsie 30
WEST POINT

West Point Calendar

1975

August 24, Sunday - **Reorganization Week Begins**
August 30, Saturday - **Reorganization Week Ends**
September 1, Monday - **Labor Day** (holiday)
September 2, Tuesday - **First Term Begins**
October 18, Saturday - **Homecoming** (Classes Suspended)
October 27, Monday - **Veterans Day** (holiday)
November 27-28, Thursday-Friday - **Thanksgiving** (holiday)
November 29, Saturday - **Army-Navy Football Game** (Classes Suspended)
December 20, Saturday - **Christmas Leave Begins** (12:00 Noon)

1976

January 4, Sunday - **Christmas Leave Ends** (5:30 P.M.)
January 9, Friday - **Term End Examinations Begin**
January 17, Saturday - **First Term Ends**
January 19, Monday - **Second Term Begins**
February 16, Monday - **Washington's Birthday** (holiday)
March 27, Saturday - **Spring Leave Begins** (12:00 Noon)
April 5, Monday - **Spring Leave Ends** (5:30 P.M.)
May 17, Monday - **Term End Examinations Begin**
May 22, Saturday - **Second Term Ends for 1st Class**
May 26, Wednesday - **June Week Begins**
May 27, Thursday - **Second Term Ends**
May 31, Monday - **Memorial Day** (holiday)
June 2, Wednesday - **Graduation Day, Class of 1976**

DEPARTMENT OF THE ARMY
HQ. UNITED STATES MILITARY ACADEMY
OFFICE OF THE DIRECTOR
OF ADMISSIONS AND REGISTRAR
WEST POINT, N.Y. 10996

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THIRD CLASS