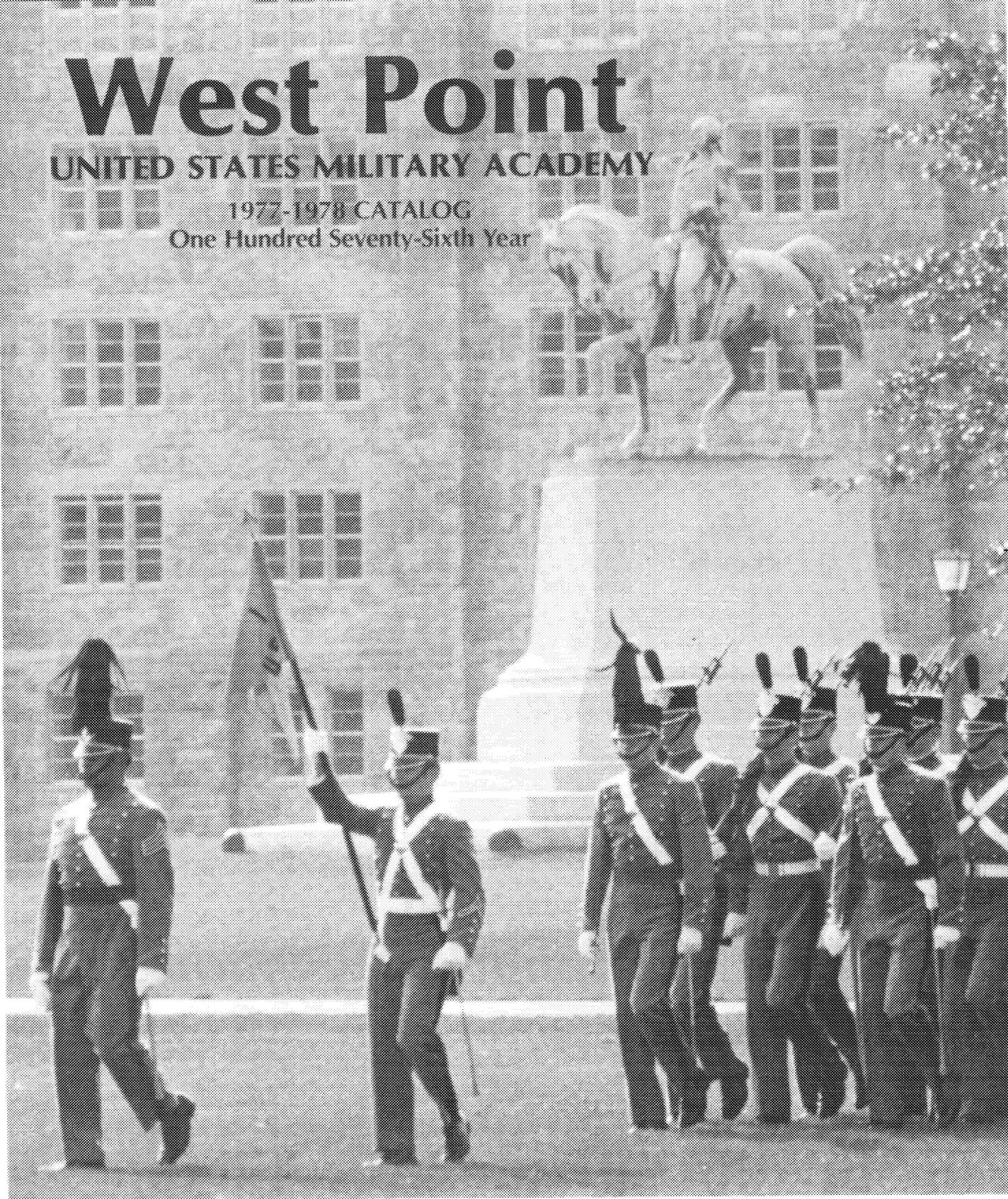


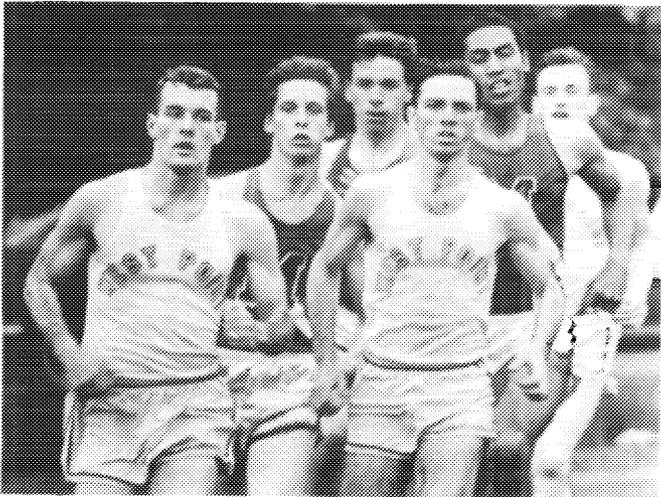
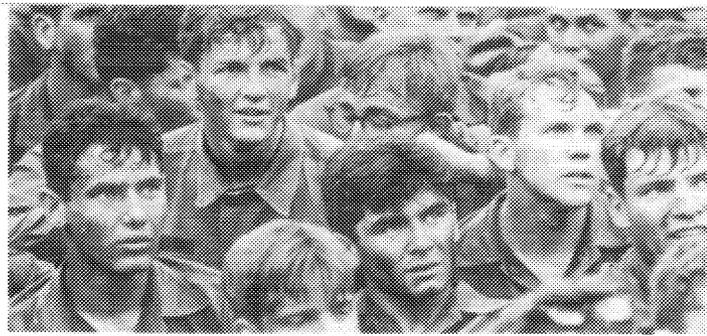
# WEST POINT

# West Point

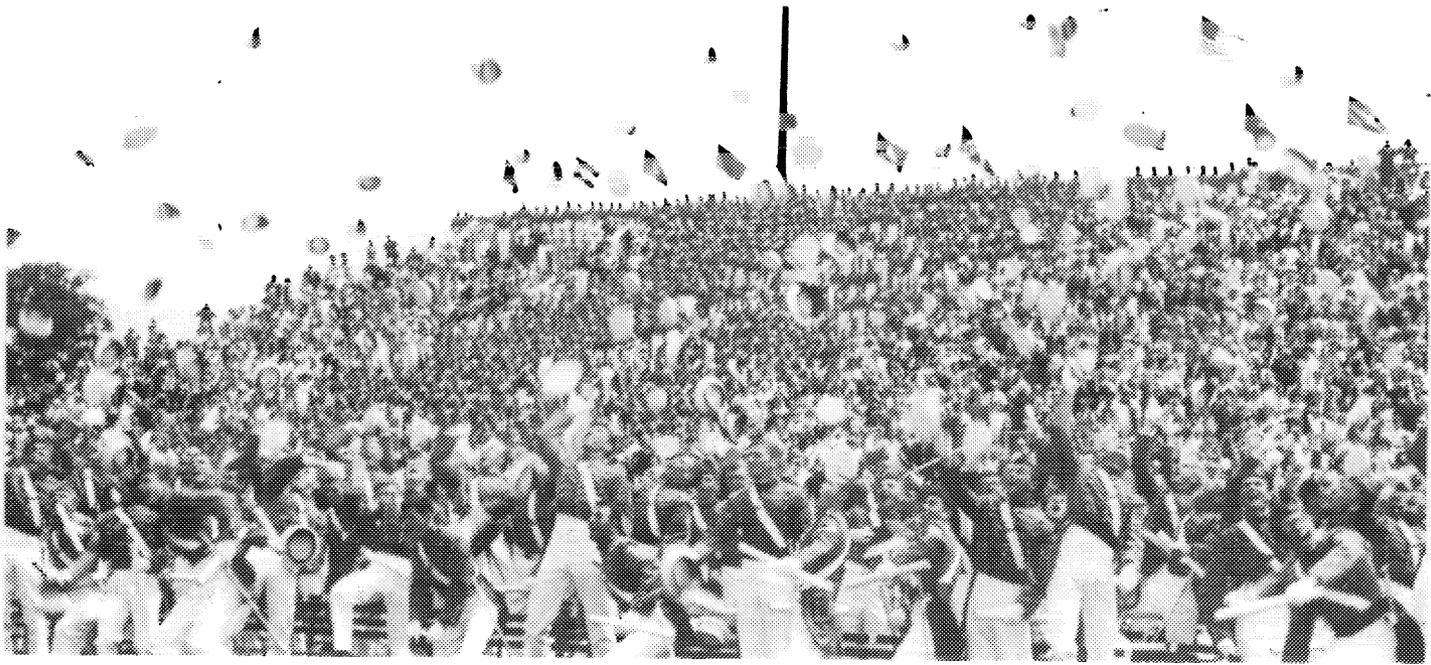
UNITED STATES MILITARY ACADEMY

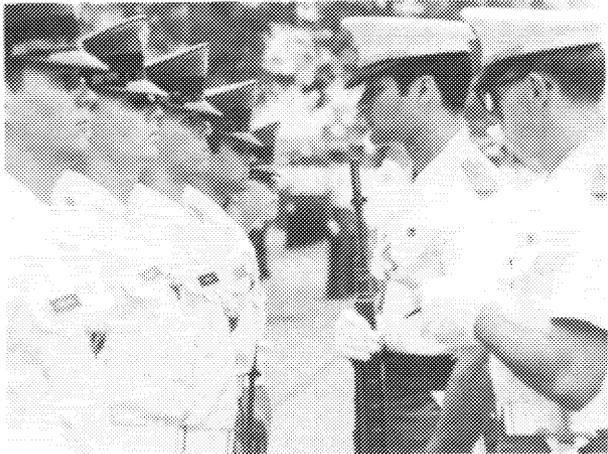
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One Hundred Seventy-Sixth Year

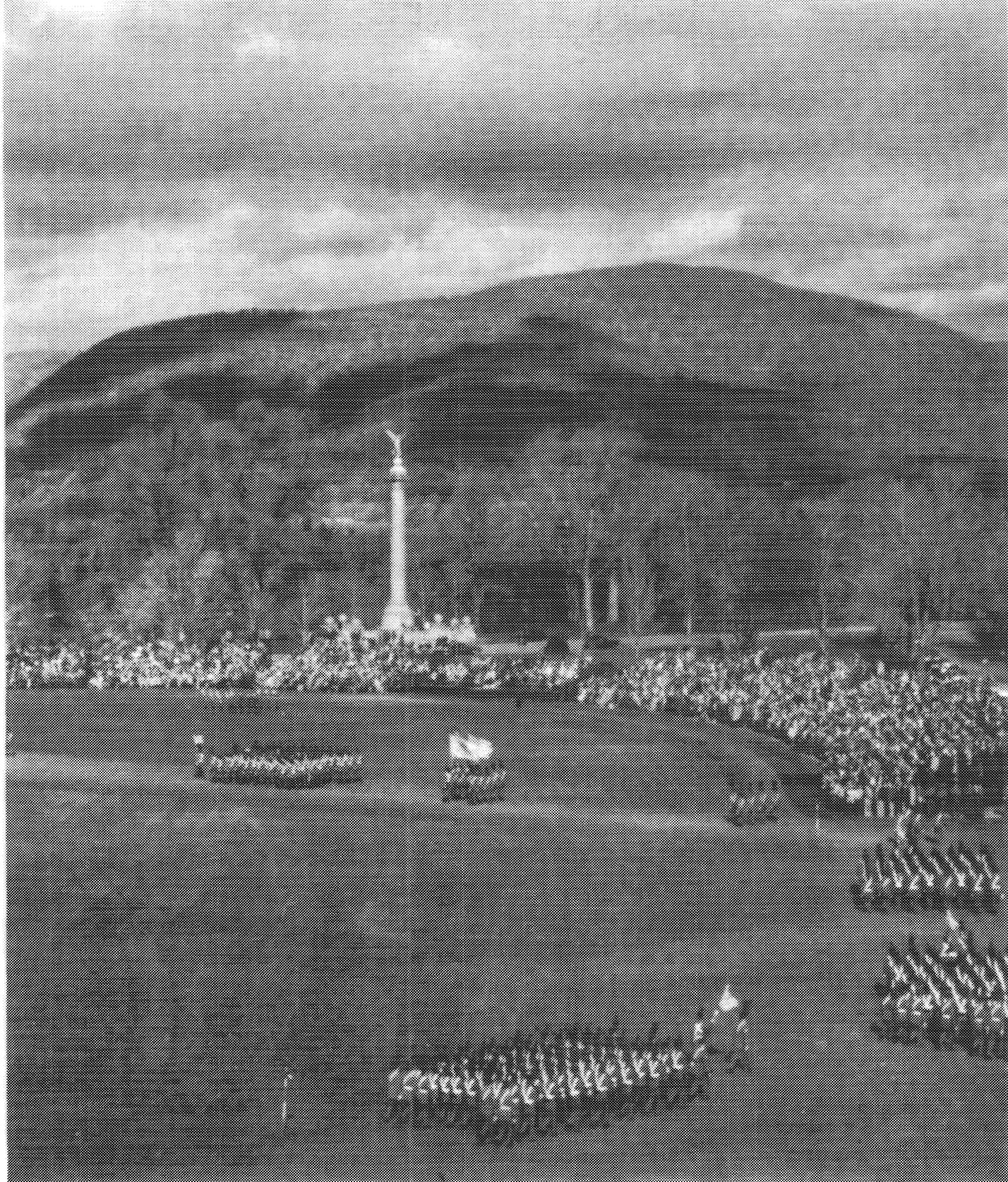




LTG Andrew J. Goodpaster, Superintendent

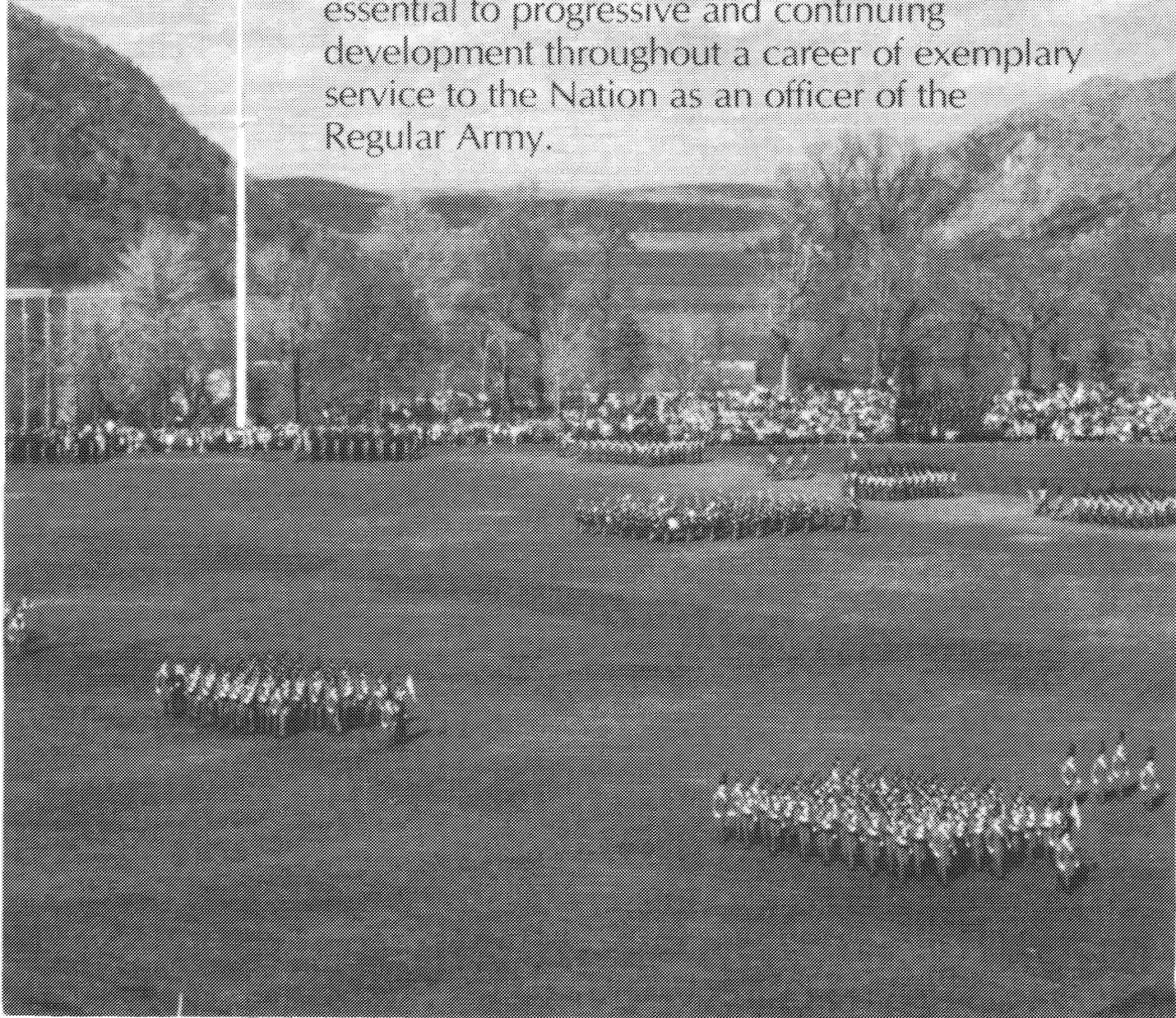






## MISSION OF THE MILITARY ACADEMY

The mission of the United States Military Academy is to educate, train, and motivate the Corps of Cadets so that each graduate shall have the character, leadership, and other attributes essential to progressive and continuing development throughout a career of exemplary service to the Nation as an officer of the Regular Army.





# **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 Military Academy continues as a vital part of our national defense and a major source of our nation's leadership.

West Point offers qualified young applicants a special opportunity — a top-quality college education leading to varied, significant service. The Military Academy encourages individuals to realize and develop their abilities in many areas. Cadets pursue a variety of studies and activities from biology to baseball, 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 is unique. The rewards after graduation are also unique. Officers in today's Army have unlimited opportunities for satisfying and diversified careers. You will find yourself sharing with other dedicated men and women the strong sense of purpose, pride, and personal satisfaction that comes from meaningful service to others and to your country.

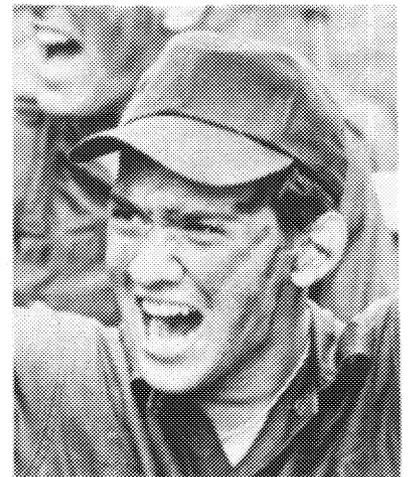
West Point is indeed a special place. It may be for you.

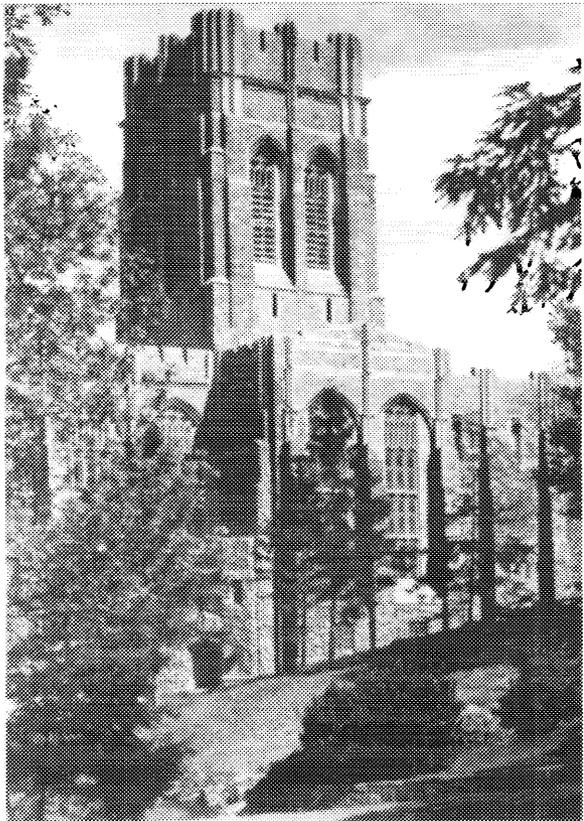


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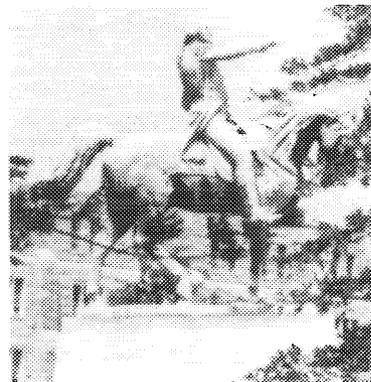
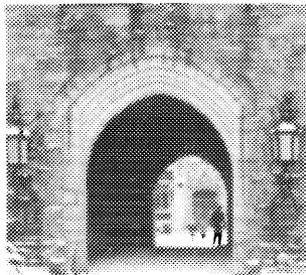
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*"In no other profession are the penalties for employing untrained personnel so appalling or so irrevocable as in the military."*

GENERAL DOUGLAS MACARTHUR



# I. YOUR MILITARY ACADEMY

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You are a young man or woman interested in the possibility of a quality, fully-funded education leading to service to your country as a Regular Army officer. You probably suspect that the popular, late-movie view of West Point cadets in splendid uniforms, pivoting their way gracefully through dances by night and parades by day, 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

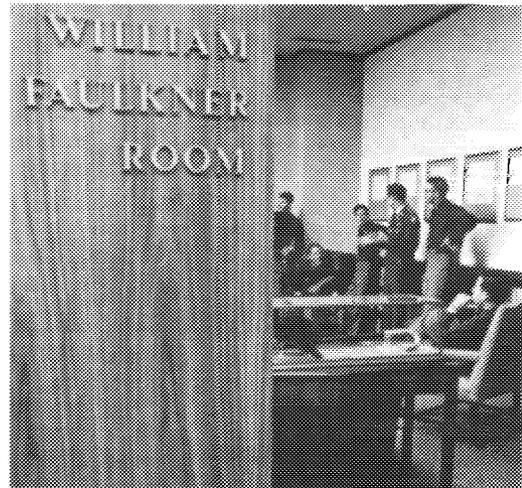
We will be frank. The nation has charged the Military Academy with educating and training professional officers for the Regular Army. This is exactly what we do. The Military Academy provides graduates with a sound basis for the intellectual growth essential to high-level responsibility.

## SERVICE TO COUNTRY

What does this mean for you? It means you should be interested in the opportunity to serve your country as an Army officer. While we do not expect you to come here completely committed to spending twenty or more years as an officer, the idea of service should be high among your priorities. Your experience here will not be a picnic in uniform. It will be tough. It has to be if Army officers are to be able to react to stress and are to earn the respect of the men and women they command and the country they serve. The personal sacrifices are many, 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 Military Academy will help you develop academically, physically, and as an officer-leader.

## Education

The United States Military Academy advocates the "whole person" concept. Our objective is not to educate experts in the color vision of the tree frog. Instead, the Military Academy provides the broad college preparation demanded by the military profession.



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 sound basis for future intellectual growth. A wide variety of physical and athletic programs will build your strength, endurance, and confidence. Extensive military training and leadership experience within the Corps of Cadets will prepare you for the responsibilities of an Army officer. Finally, the high sense of discipline, integrity, and loyalty within the Corps of Cadets will encourage devotion to "Duty, Honor, Country." The personal traits and abilities you will have developed by the end of four years will open the door to a rich array of opportunities for service and the satisfaction that comes with it.

## Army Opportunities

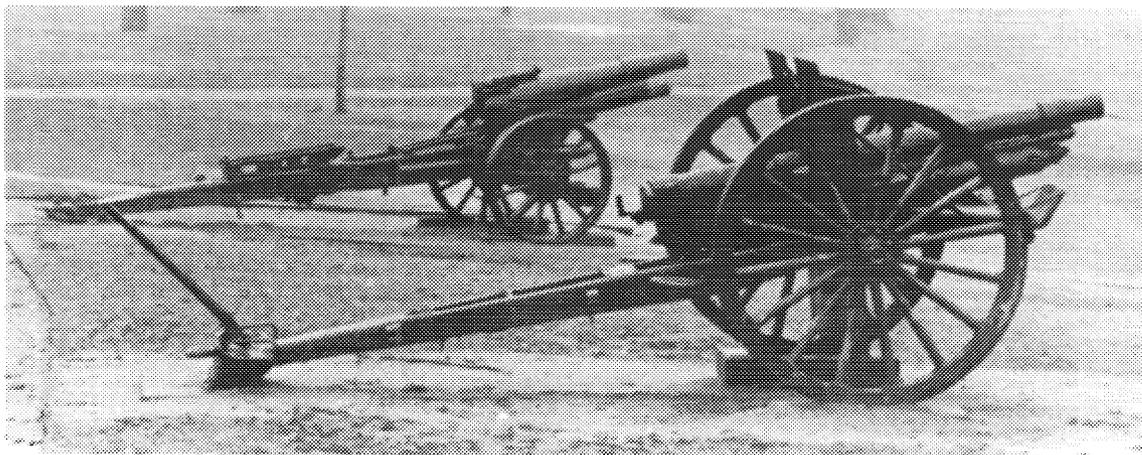
When you enter West Point you are also beginning a profession. Upon graduation you will be commissioned a second lieutenant in the Regular Army and will serve in the United States Army for at least five years. As many before you have discovered, two features which distinguish Army life from that of most professions are early responsibility and diversity. In your first duty assignment, you may find yourself responsible for more people, money, and sophisticated equipment than most other professional people 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. Succeeding assignments will both draw upon and add to the knowledge of your basic Army specialty. Later 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 overseas assignments, allowing cross-cultural experiences. Service life demands versatility; variety of experience is the result. The Army is a place for a person of merit to make a significant contribution to fellow Americans.

## 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, West Point graduates have repeatedly been sought for high-level civilian leadership. Their numbers include 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 leading the way for the settlers who followed. 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 was Edwin (Buzz) Aldrin, the second human to walk on the moon.

The Military Academy was established in response to a need for qualified engineers which we sorely lacked during the Revolution. 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 decades. As one cadet explained to a Military 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 facilities. Construction remains an important Army function. Today, Army engineers can take credit for 20,000 miles of waterways, the Panama Canal, the Alaskan Highway, some fifty hydroelectric plants, and hundreds of important 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 and affirmative action programs for minorities and women.

## **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 officer-leaders since its founding in 1802. Yet the Military 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 Hudson River. To control the Hudson was to control an artery linking New England with the other colonies. The patriots gained that control in



1778 by occupying the high ground dominating the narrow "S" turn in the river at a place called West Point. George Washington had a hand in fortifying West Point in 1778, transferring his headquarters there in 1779. Continental soldiers built forts, batteries, redoubts, and extended a 150-ton iron chain across the river 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.

Seeking independence from wartime reliance on foreign engineers, artilleryists, and drillmasters, 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 United States Military Academy at West Point, New York. The Military Academy 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 each course or make up his failure.

After gaining experience during the Mexican and Indian Wars, West Point graduates dominated the high commands of both sides during the Civil War. Among these leaders were Grant, Sherman, Sheridan, Meade, Lee, Jackson, Johnston, Bragg, Longstreet, and Jefferson Davis. Of the war's 60 major battles, 55 saw West Pointers commanding both sides. In the other five, a graduate commanded one of the sides.

The development of other technical schools allowed West Point to drop its strict civil engineering emphasis in the post Civil War period. With the creation of Army post-graduate command and staff schools, the Military Academy came to be viewed as the first step in a continuing Army education. After the Military Academy's Centennial in 1902 a gradual liberalization of the West Point curriculum began. Courses in English, foreign languages, history, and the social sciences were strengthened or added.

In World War I, Military 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 reinstated 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. Additionally, 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 again saw sweeping revisions to the West Point curriculum brought about by the explosive developments in science and technology, the increasing need to understand other cultures, and the rising level of general education in the Army. The Military Academy

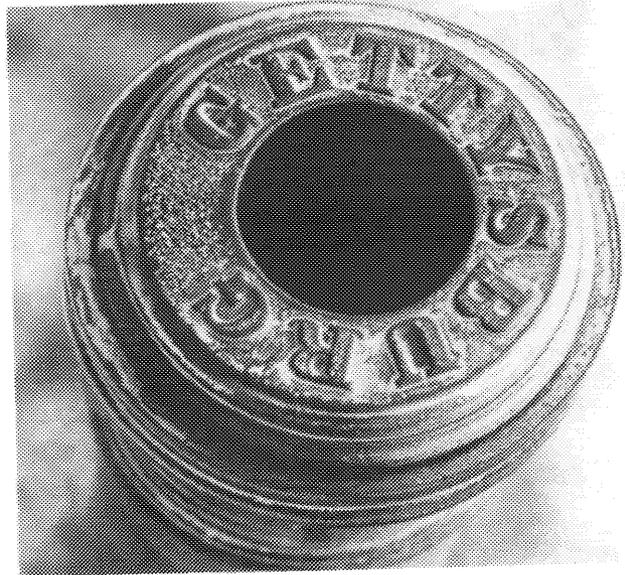
began to supplement the basic course with elective study programs, allowing cadets time to follow more specialized interests.

In 1964, President Johnson signed a bill increasing the 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.

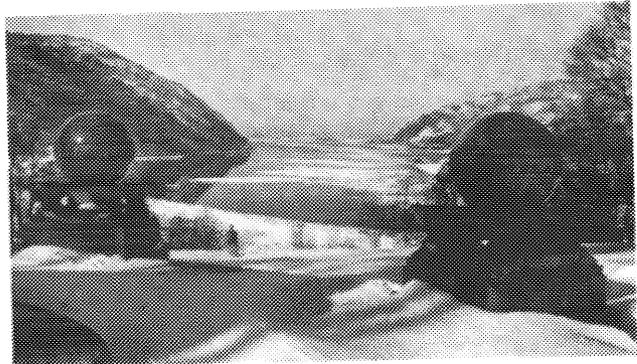
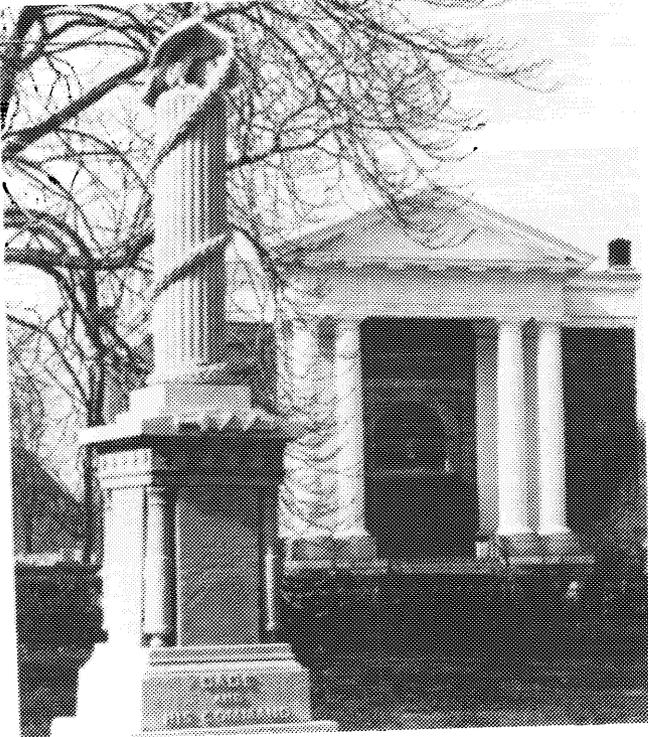
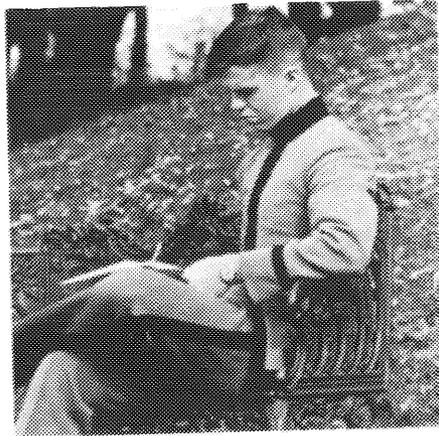
July 1976 marked perhaps the most dramatic, certainly one of the most controversial changes in West Point's history: the entrance of women into the Corps of Cadets. On October 7, 1975, President Ford signed into law a bill authorizing women to compete for admission to the service academies beginning with the Class of 1980 which entered in July 1976.

Academic and military life at West Point has 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.





*"Fairness, diligence, sound preparation,  
professional skill and loyalty are the marks  
of American military leadership."*  
GENERAL OMAR N. BRADLEY



## CADET LIFE

Daily life at West Point is guided by the following objectives which the Military Academy strives to develop in each cadet: a broad collegiate education in the arts and sciences upon which a Regular Army officer can base that continued intellectual development essential to a military career; physical attributes essential to a career as an officer of the Regular Army; a broad military education, rather than individual technical proficiency; and a high sense of duty and the attributes of character with emphasis on integrity, discipline, and motivation essential to the profession of arms.

## Academic

Requiring a minimum of six courses per semester, West Point's broad academic program is tough but certainly 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—41 of them—and may develop an area of concentration by choosing from the more than 170 electives offered.

## Physical

Upon entering West Point you will suddenly find yourself an athlete—perhaps not an intercollegiate athlete, but certainly one to be reckoned with in some of the 33 intramural and club sports. The Military 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

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. From selection based on demonstrated potential, through the four years as a cadet, leadership development is a total process preparing young people for their career roles as officer-leaders. There is probably more student leadership here than at any other college. The 4,000-strong 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 cadet not only leads but receives counseling and guidance in the techniques of leading. In addition, each cadet is rated on leadership development through an evaluation system. Cadets find themselves organizing everything from a Plebe (freshman) hop to a platoon of enlisted soldiers in the active Army.

## The Honor Code

“A cadet will not lie, cheat, or steal nor tolerate those who do.”

## The Honor System

High ethical standards are the very soul of the Army Officer Corps and must be understood and adhered to by each officer as part of his way of life. At the United States Military Academy, acceptance by cadets of the spirit of the Honor Code as an unyielding part of their daily life is the principal method for developing personal integrity. All West Point graduates must have the strength of character to maintain these high standards of professional conduct.

The Code is not a regulation promulgated by the Military Academy authorities. Rather, it has

its origin among the cadets themselves who initially adopted it to enhance the quality of cadet life. Now the Corps administers the system which supports the Code and continues to keep its spirit alive through the Cadet Honor Committee. The Code pertains to all aspects of a cadet's life—to small things as well as more important ones. Since strength of character is a valued tradition at West Point, anyone who compromises the Code is not acting in the manner expected by the Corps of Cadets. Therefore, the Corps does not tolerate violations of the Honor Code; in fact, any cadet who tolerates a violation is as guilty as the one who committed the violation.

Why is there an Honor Code at West Point? Today, the Honor Code is the principal method for developing habitual honesty and integrity not only in each cadet but more importantly in each Army officer graduate so he will be honorable and trustworthy under all circumstances. The high ideals of the Cadet Honor Code are associated with each cadet and graduate of the Military Academy. It is a good feeling to know you can trust another because you know he does not lie, cheat, or steal. It is an even better feeling to know you are trusted by others because it is known that you do not lie, cheat, or steal. All cadets revere and defend the secure, comfortable, productive existence that naturally follows from the atmosphere of mutual trust that exists among honorable persons.



## Typical Daily Schedule

### Morning:

6:25 Breakfast formation  
6:30- 7:00 Breakfast  
7:45-11:45 Class or study

### Afternoon:

12:15- 1:00 Lunch  
1:05- 3:15 Class or study

3:15- 6:00 Free Time (Intramural/  
intercollegiate athletics,  
study time, parades, or  
extracurricular activities)

### Evening:

6:15- 7:00 Dinner  
8:00-11:00 Study time  
11:00 Taps

This schedule typifies a cadet's life during the academic year, September through May. Free time gives a cadet a big choice: participation in some of the 79 extracurricular activities or 22 intercollegiate sports, study, or just plain relaxa-

tion (depending, of course, on the cadet's year and privileges). Worship services and other religious activities are also available to the cadet. During the summer months, cadets take vacations 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 seniority as well as military performance. A First Class cadet (senior) gets about twice as many weekend leaves per semester as a Second Class cadet (junior). If an upperclassman ranks high militarily, more free time may be earned. On the other hand, a Plebe (freshman) leaves the Military Academy only during the Christmas holidays, and on authorized athletic, extracurricular activity, or cultural trips. All cadets take Christmas and summer leaves; upperclass cadets also have a spring leave.

Progressively greater amounts of free time allow cadets to be part of the collegiate subculture at the Military 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, a cadet receives over \$3,900 per year—one-half the basic pay of a second lieutenant. The cadet must pay for uniforms and textbooks from this amount. As part of the Regular Army, a cadet is entitled to a salary and Army benefits.

## Counseling and Health Care

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

Army lawyers are also available to provide professional legal advice and assistance.

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 such facilities as the renowned Walter Reed Army Hospital in Washington, D.C.

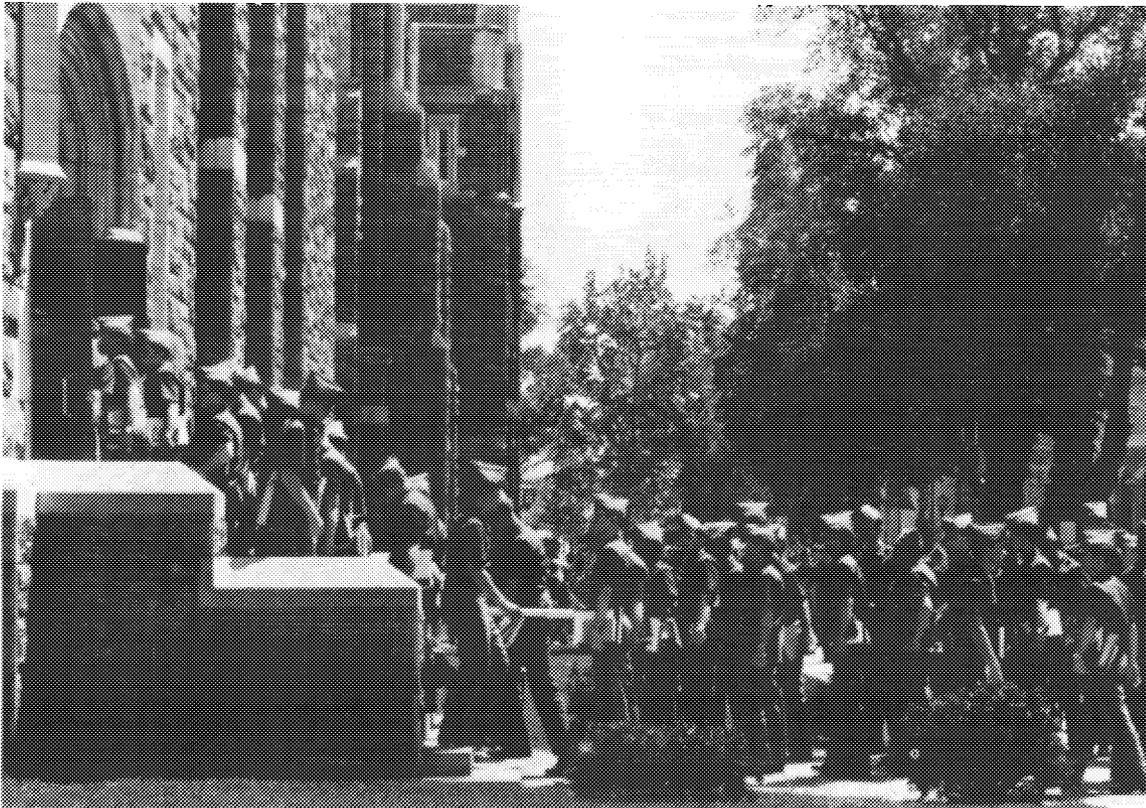
## Facilities

The Military 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, the dining hall and headquarters of the Corps of Cadets. In the immediate area surrounding Washington Hall are cadet barracks. Over half of the two-cadet, dormitory-style rooms are only eight years old. Older rooms have been completely refurbished.

Some academic departments, classrooms, and laboratories are right in Washington Hall. Others are located in Thayer, Bartlett, and Mahan Halls near the cadet barracks. A riding hall in early days, Thayer Hall today houses a computer center, television studio, two large auditoriums, and the Military Academy Museum. Nine-story Mahan Hall was completed in 1972. Located 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 huge gymnasium building contains six gyms, three swimming pools including a new Olympic-sized



pool, and numerous other special purpose rooms for squash, handball, weight training and combatives. Varsity and intramural athletes display their skills in a football stadium, hockey rink, field house, or on a baseball diamond, rubberized track, or indoor rifle and pistol ranges. Also located within the immediate military reservation are a number of other athletic fields as well as a ski slope, golf course, many tennis courts, and outdoor swimming pools.

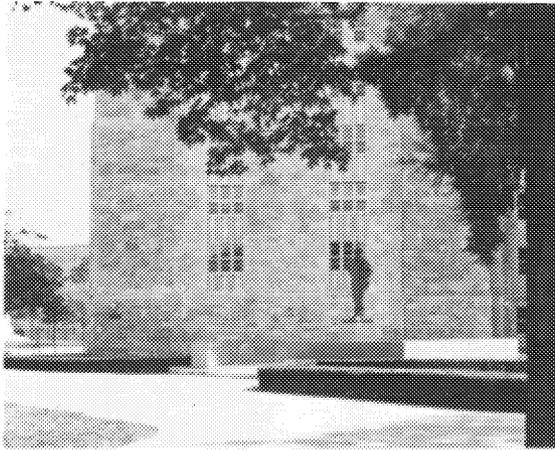
Southwest of the campus the reservation's lake-dotted forest provides an extensive military training and recreational area. In the summer, Camp Buckner and Lake Frederick are focal points for field exercises of all descriptions. Members of the West Point community hunt, fish, swim, and hike on the reservation. In addition, Army reserve components perform field exercises, Scouts and other civilian groups camp and hike, and local townspeople enjoy the recreational use of Long Pond.

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 Cadet Activities Center, Eisenhower Hall, contains a 4,500-seat auditorium, a 1,000-seat restaurant, a large ballroom overlooking the Hudson River, a games area, an art gallery, and a spacious reception foyer for cadets and guests. Grant Hall, Cullum Hall, and the First Class Club provide additional cadet snack and lounge facilities.

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







## II. THE ARMY AS A PROFESSION

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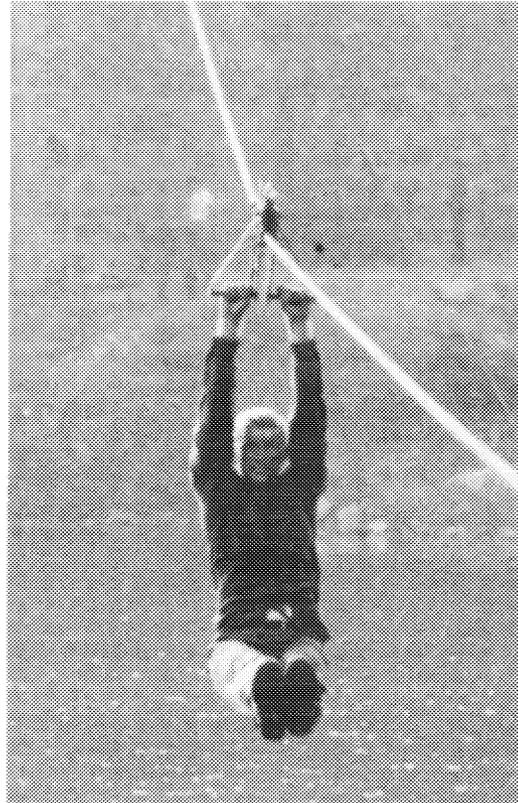
Entering the Military Academy is but the first step in a demanding—and rewarding—profession as an officer in the United States Army.

The Army officer leads, teaches, guides, builds, counsels, learns—at home and overseas. An officer works with people and ideas. Responsibilities and satisfying experiences increase with each assignment. An officer must meet and understand the subtle challenge of motivating soldiers to do their best, the complexity of sophisticated weapons systems, and, with advances to higher levels of leadership, the international implications of some decisions. As an officer you will make use of abilities you didn't know you had.

The satisfactions of service are real. In America, the Army was one of the first professions to judge a person on abilities rather than by social class. A person with imagination and talent can still find success in the Army. Continuing military and civilian education alternate with on-the-job experience, insuring both educational and professional 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 normally will be commissioned a second lieutenant in the Regular Army and serve for at least five years as an Army officer. Your first duty assignment will test your leadership and managerial skills in smaller troop units. As a male officer, you may work as an artillery forward observer (spotting targets and guiding artillery fire); as a tank platoon leader (responsible for five tanks and the men who work with them); as an infantry platoon leader (responsible for the training, health, welfare,



safety, morale, and equipment of about forty soldiers); or as an engineer platoon leader (supervising small construction projects and the soldiers who accomplish them)—to mention only a very few of the specialty areas. As a female officer, you might be a platoon leader in a military police company (responsible for the training, health, welfare, safety, morale, and equipment of a military police platoon); a platoon leader in a transportation company (working with anything from boats to trucks to helicopters); or a signal officer (dealing with electronic communications systems)—again, these are only a few of the specialty areas available to you.

Your preferences, past performance, and the needs of the Army are carefully considered when determining the nature and locale of your assignments. For the requisite skills, tactics, and technological know-how, you first attend a branch officer basic course for an introduction to your specialty. Throughout your first eight years, troop command, management positions, and instructorships may be interspersed with additional education and training, both civilian and military. All officers attend a branch advanced course to prepare for higher levels of responsibility, leadership, and specialization.

## Advanced Professional Development

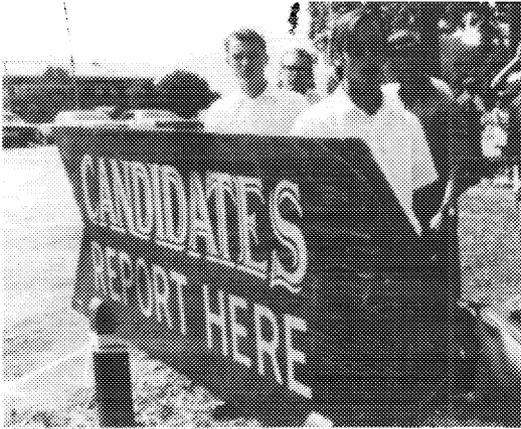
During the ninth to fifteenth years, your assignments will usually alternate between primary and secondary specialties, like communications-electronics, engineering, atomic energy, or education. Professional patterns in the modern Army have increasingly come to demand academic specialization. Many Military Academy graduates who remain in the Army earn graduate degrees in their

specialties from leading civilian universities. In addition, selected officers continue on to a Military Staff College where such subjects as high level management practices and international affairs are studied. Education and experience at this level prepare you for the highly rewarding later years which might find you working in the Pentagon, commanding a large troop unit, serving as military attaché 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 soldiers 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 mankind.







*"Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity."*

GENERAL GEORGE S. PATTON, JR.



# III. ADMISSIONS

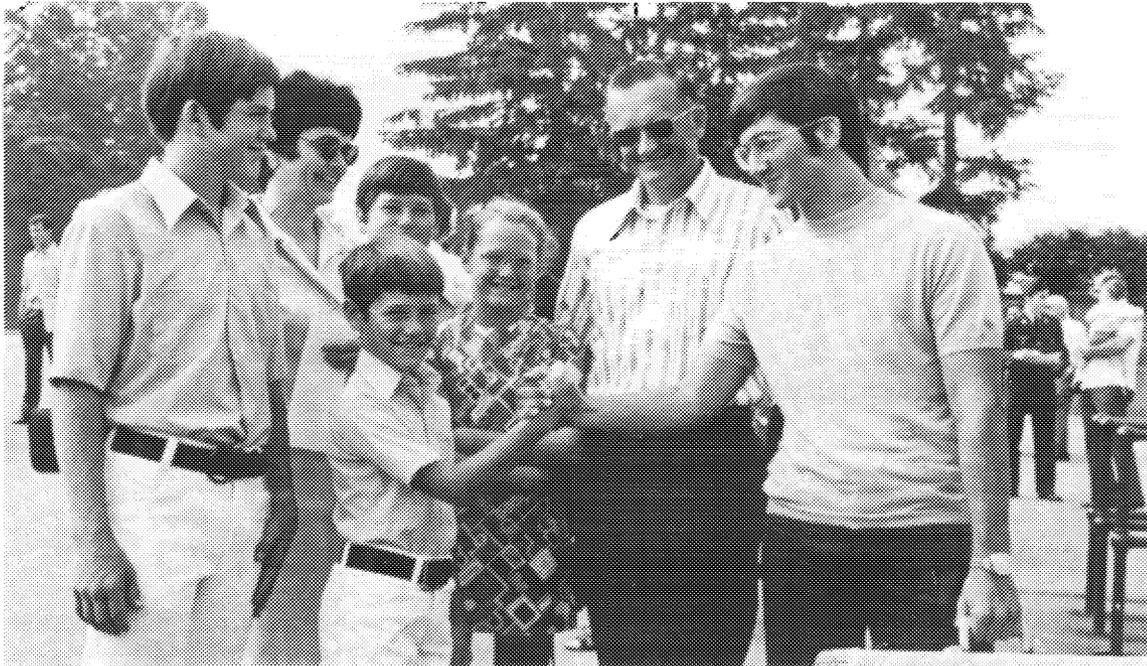
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Each year the United States Military Academy admits approximately 1,400 young men and women. These new members of the cadet corps come from all corners of the United States and represent nearly every race, religion, and culture in the country. Encouraged by West Point, this diversity of background helps each cadet gain a cultural as well as a rich educational experience.

For a first-hand view of cadet life, try to arrange a visit to the Military Academy. During the academic year, tours and talks with cadets will be arranged if you contact the Admissions Office, USMA, at least two weeks before arriving (phone 914-938-4041). Daily tours of West Point, for those interested in admission who are at least high school juniors, start from the Admissions Office (third floor, Administration Building) at 10 a.m. Monday through Friday.

Saturday tours begin at 11 a.m. If a visit to the Military Academy is not possible, contact USMA Admissions. An Admissions Officer can then tell you how to contact the admissions assistant in your area. In addition, USMA Admissions sponsors cadet visits during Christmas and spring vacations to many areas throughout the country. Your area admissions assistant can tell you if a cadet visit is scheduled for your area. For additional information on the cadet visit program, write to the Cadet Public Relations Council, Admissions, USMA, West Point, NY 10996.

To become a cadet you must meet the requirements specified by public law and must be qualified academically, physically, and medically. Additionally, 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

Applicants should accomplish all the steps outlined below. Each step listed is explained in the remainder of this chapter.

### Procedure Guide:

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

### 1. Determine whether you meet the legal requirements and qualifications

#### Legal Requirements

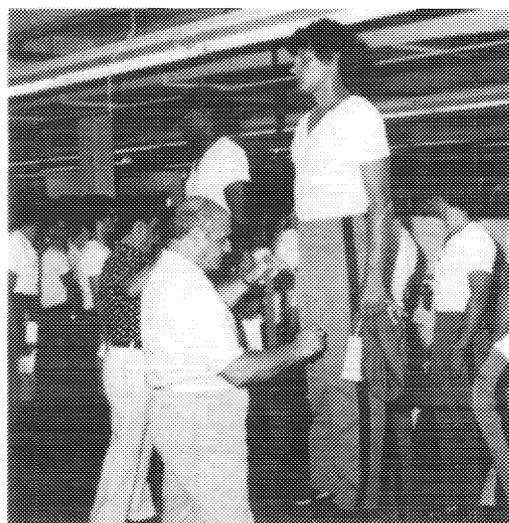
*Each candidate must:*

- be 17 but not yet 22 years of age by July 1 of year admitted.
- be a U.S. citizen at time of enrollment (exception: foreign students nominated by agreement between U.S. and another country).
- be trustworthy, emotionally stable, and motivated.
- be unmarried.
- not be pregnant or have a legal obligation to support a child or children.

#### 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 as a prerequisite for admission, 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 biology; a standard American history course; additionally, you will find courses in geography, government, economics, and European history to be very helpful. College courses taken prior to entrance to West Point may be substituted for similar courses in the Military Academy curriculum (see “Validation” in Chapter IV).

#### Medical Qualifications

*Candidates must:*

- be in good physical and mental health.
- pass a Medical Exam (see Appendix B).

#### Physical Qualifications

*Each candidate should have:*

- above-average strength, endurance, and agility.
- adequate performance on USMA Physical Aptitude Exam (see Appendix C).

*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**

The Honorable .....  
United States Senate  
Washington, D.C. 20510

OR

Date .....  
The Honorable .....  
House of Representatives  
Washington, D.C. 20515

Dear Senator .....

Dear Mr./Mrs./Miss/Ms. ....

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 1978.

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 precandidate file be initiated for me at the West Point Admissions Office.

Sincerely,

**2. Start a file at West Point**

West Point will start a candidate file for you upon receipt of your completed Precandidate Questionnaire. You may receive this questionnaire as a result of your inquiry into various USMA programs or by sending one of the forms at Appendix D to Admissions, USMA, West Point, NY 10996. 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.)

**3. Apply for a nomination**

At the same time you request a precandidate package from West Point, you can also apply for a nomination from one or more of the sources listed below. You must obtain a nomination in order to be admitted to the United States Military Academy. 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. Nominating officials may select up to ten young men and/or women to compete for each cadetship vacancy they may have. Apply for a nomination from each source for which you are eligible.

**Congressional and Gubernatorial Cadetships**  
(At any one time)

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

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 and daughters of citizens 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. Governors of Guam, the Virgin Islands, and American Samoa nominate sons and daughters of U.S. citizens or nationals living on their respective islands.

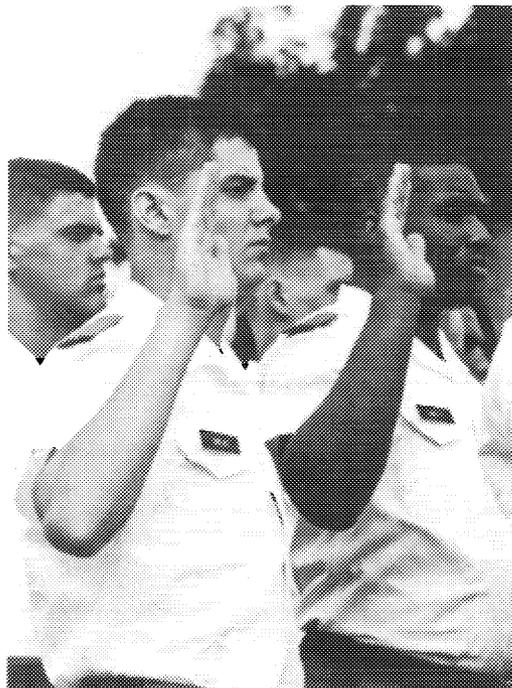
The nomination process can be lengthy—applicants are usually interviewed and tested before being selected as nominees. Consequently, a candidate should apply for consideration as a nominee at least one year before expecting to be enrolled at the Military Academy.

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 Military 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 as above 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.



New Cadets taking Oath of Allegiance

*This format is intended as a guide.*

**FORMAT**

**REQUEST FOR SERVICE-CONNECTED NOMINATION  
(MUST BE SUBMITTED BEFORE DECEMBER 15, 1977)**

Date \_\_\_\_\_

Superintendent  
United States Military Academy  
ATTN: MAAR-R  
West Point, New York 10996

Dear Sir:

I request a nomination under the \_\_\_\_\_ category for the class entering the United States Military Academy in July 1978, and I submit the following data:

Name of Applicant: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Social Security Number: \_\_\_\_\_

Names of Parents: \_\_\_\_\_

Military Rank and Serial Number of Parent: \_\_\_\_\_

Social Security Number of Parent: \_\_\_\_\_

Component and Branch of Service of Parent: \_\_\_\_\_

If parent is on active duty, you must furnish a statement of service signed by the unit adjutant.

If parent is retired or deceased, you must furnish date and copy of retirement order 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.)

### Department of the Army Cadetships

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

<b>Presidential</b>	<b>100</b>
<b>Enlisted Members of the Regular Army</b>	<b>85</b>
<b>Enlisted Members of the Army Reserve/ National Guard</b>	<b>85</b>
<b>Sons and Daughters of Deceased and Disabled Veterans (approximately)</b>	<b>10</b>
<b>Honor Military, Naval Schools and ROTC</b>	<b>20</b>
<b>Sons and Daughters of Persons Awarded the Medal of Honor</b>	<b>Unlimited</b>

Appointments to vacancies are awarded to the best qualified candidates competing in each Army category. Following is a detailed description of the nomination categories and procedures.

*Presidential:* Sons and daughters 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. Adopted sons or daughters are eligible if adopted prior to their fifteenth birthday. A certified copy of the court order decreeing adoption must accompany the application. Sons and daughters of Reservists retired while *not* on active duty are ineligible. Application for a nomination in this category should be made by writing to the Superintendent, United States Military Academy, 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. Regular Army nominees are usually required to attend the USMA Preparatory School (USMAPS) at Fort Monmouth, New Jersey, the year prior to entering the Military Academy. Active Army enlisted personnel should apply to the Commandant, USMAPS, Fort Monmouth, NJ 07703, in accordance with Army Regulation 351-12.

*Reserve Components:* This category is for enlisted members of the Army Reserve and Army National Guard. Members not on active duty should apply in accordance with AR 351-12 by writing to the Commandant, USMAPS, Fort Monmouth, NJ 07703.

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

*Army ROTC:* Applicants enrolled in a junior or senior Army Reserve Officer Training Corps program are eligible for nomination in this category. 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 Army Instructor at your school prior to December 15.

*Sons and Daughters of Persons Awarded the Medal of Honor:* All sons and daughters of persons awarded the Medal of Honor who seek admission and are fully qualified will be admitted. Apply to the Superintendent, United States Military Academy, using the format shown by December 15.

*Allied Countries:* Young people 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 United States citizens. 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.

#### **4. Fill out USMA forms**

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

#### **5. 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).

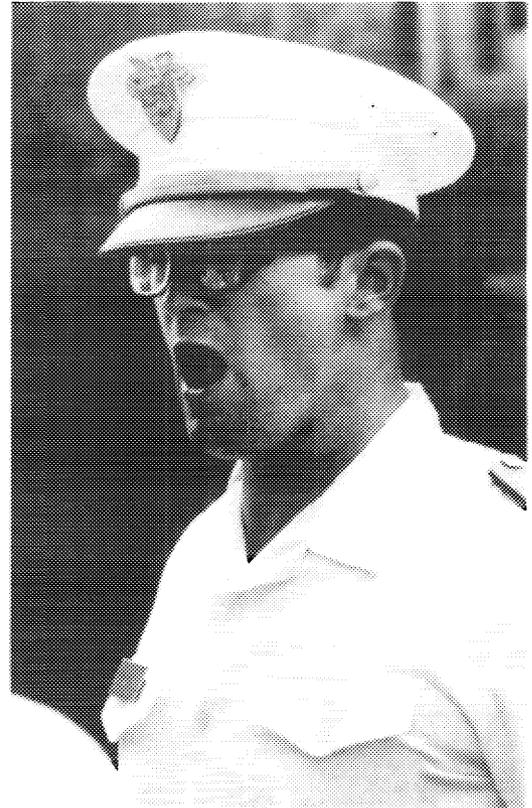
##### **ACT**

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 (2976) 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 member of Congress). Each time you use the 7000 code number, you will receive a sealed copy of your ACT score report to be forwarded (or delivered) by you directly to the appropriate member of Congress. It is your responsibility to see that West Point and your Congressional representative receive your test results.

##### **SAT**

Candidates taking the College Board exam for admission are required to take the Scholastic Aptitude Test. To take the examination apply to College Board Admission Testing Program (CBATP), 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 Congressional representatives, follow one of the procedures below: (1) Contact each member of Congress from whom you are seeking a nomination to obtain his or her CBATP code number. Record each member's number on the registration form. (2) If any of your Congressional representatives do not have a specific CBATP code number, record code number 1000 on the registration form (once for each member of Congress). CBATP will then forward your results to you in a sealed envelope. When you receive the results, you must then forward them, unopened, to your Congressional representative. You are responsible for insuring that the test results are forwarded to West Point and your Congressional representative.



**CHART FOR ACT AND SAT TESTING DATES**

**ACT ASSESSMENT PROGRAM DATES 1977-1978**

<b>Test Date</b>	<b>Registration Opens</b>	<b>Registration Closes</b>
October 8, 1977	August 8, 1977	September 12, 1977
November 19, 1977	September 26, 1977	October 21, 1977
February 11, 1978	November 14, 1977	January 13, 1978

**The FINAL DATE for taking the ACT exam for West Point is February 11, 1978**

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**COLLEGE BOARD SCHOLASTIC APTITUDE TEST (SAT) DATES 1977-1978**

<b>Test Date</b>	<b>Registration Closes</b>	<b>Late Registration Closes (Penalty)</b>
October 15, 1977 (CA&TX only)	September 23, 1977	September 23, 1977
November 5, 1977	September 30, 1977	October 14, 1977
December 3, 1977	October 28, 1977	November 11, 1977
January 28, 1978	December 23, 1977	January 6, 1978

**The FINAL DATE for taking the SAT exam for West Point is January 28, 1978**

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If circumstances prevent completion of the SAT or the ACT exams by the indicated dates, the scheduled March 11, 1978, SAT may be accepted as a make-up exam. The candidate should register for the March 11 SAT (registration closes February 3; late registration closes February 17) 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 1978 from the data then present.

**6. Take Qualifying Medical Exam**

All candidates planning to enroll in July 1978 must take a Qualifying Medical Examination between June 1, 1977 and July 1, 1978. One Qualifying Medical Examination meets the application requirements of all service academies and all ROTC Scholarship nominations a candidate may receive. The Department of Defense Medical Examination Review Board will schedule your exam and evaluate the results after you have started an admissions file. You will receive instructions for taking the Qualifying Medical Examination directly from the Medical Examination 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 Examination Review Board, U.S. Academy, CO 80840.

Detailed USMA medical requirements are covered in Appendix B.

**7. Take Physical Aptitude Exam**

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

Candidates are advised to prepare for this examination by engaging in vigorous activities such as running, general conditioning exercises, and competitive games as well as by practicing specific test items. The exam you take will be good for any year you apply to West Point.

While the Air Force Academy Physical Ap-

titude Examination is an acceptable substitute for West Point's exam, the Naval Academy's is not. If you take the Air Force Academy exam, have the results sent to the Director of Admissions at West Point.

#### **8. Await evaluation and status of application**

Notification of acceptance is possible as early as November for fully qualified, outstanding candidates who have completed all admissions requirements *and* received a nomination.

Final admissions decisions will be made in April 1978 from the available data on each candidate. 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.

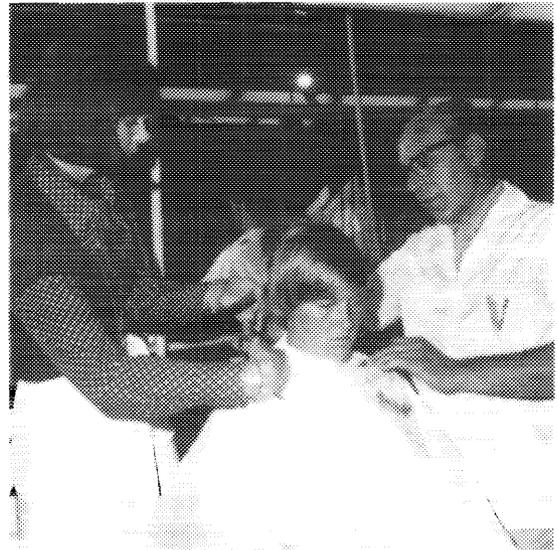
#### **9. Apply to USMA Preparatory School**

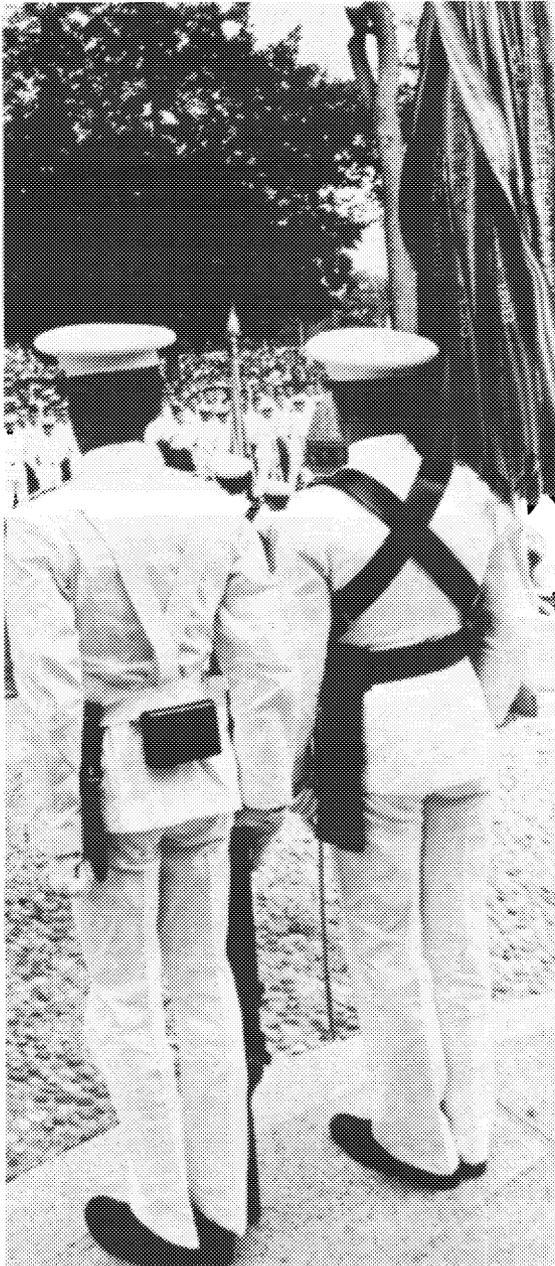
If you have any doubt about your chances for admission to West Point, request admission to the United States Military Academy Preparatory School (USMAPS) at Ft. Monmouth, NJ. The ten-month school prepares selected young men and women for entrance to the Military Academy. You should bear in mind, however,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

USMAPS is open to enlisted members of the Army on active duty and to civilians who are authorized by the Army's Military Personnel Center to enlist in the Army for the purpose of attending the school.

Application procedures depend on a candidate's status—military or civilian—prior to entry. Active Army applicants must follow the steps outlined in Army Regulation 351-12. Army Reserve and National Guard personnel not on active duty should write to the Commandant, USMAPS, Ft. Monmouth, NJ. Civilian applicants should begin a file at West Point indicating they would like to attend USMAPS if not selected for admission to West Point. The best qualified applicants of those not selected for admission to West Point will be chosen for enrollment at the preparatory school.

USMAPS candidates must meet the general requirements for admission to West Point and





be 17 but not yet 22 years of age on July 1 of the year entering West Point.

Prep school students undergo intensive academic, physical, and military training. The academic program, which includes English and mathematics, is divided into two terms. The first term is a comprehensive review of high school English and mathematics, with emphasis on literature, grammar, algebra, geometry, and trigonometry. The second term is an introduction to college level composition, literature, solid and spherical geometry, and calculus. Electives are available to those who qualify.

Rigorous physical training helps condition prep students for the athletic program at West Point. USMAPS currently competes in 12 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 military, academic, and leadership performance, prepare prep school students for life at West Point.

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.

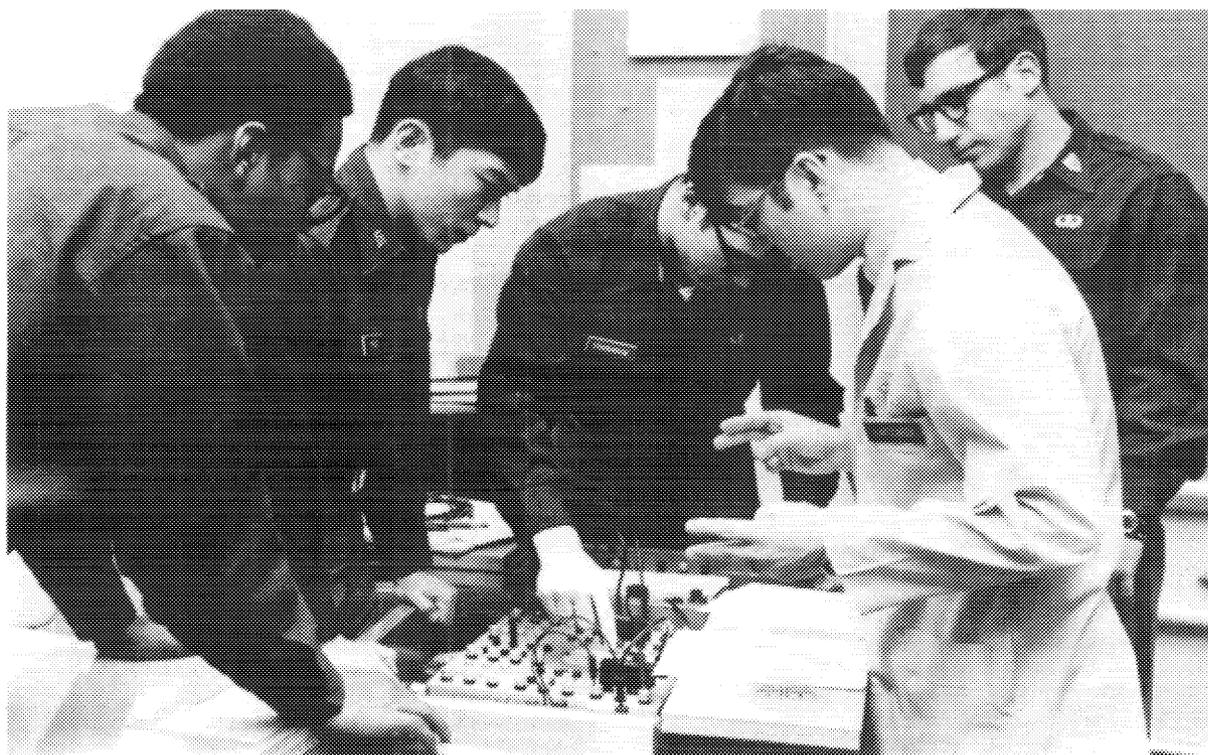
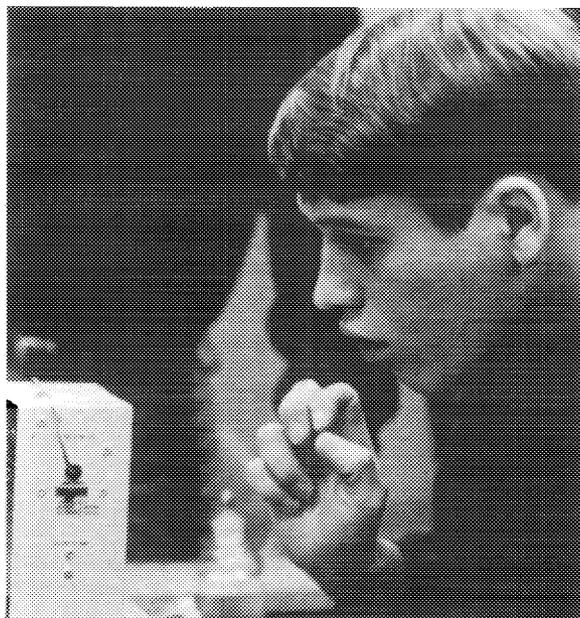
#### **10. Prepare for entrance to USMA**

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 Military Academy. Vigorous conditioning exercises, cross-country running, and swimming are recommended. It is especially important that a candidate train through a variety of strenuous activities and 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, Scouts, civic programs, and athletic teams build leadership experience for themselves.

*“Professional attainment, based upon prolonged study, and collective study at colleges rank by rank, and age by age—these are the title deeds of the commanders of future armies, and the secret of future victories.”*

WINSTON CHURCHILL



# IV. ACADEMIC PROGRAM

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Young persons entering the United States Military Academy can expect to expand their store of knowledge, to develop more fully the intellectual skills needed to assume responsibility as a junior officer, and to build a strong foundation for assuming senior officer responsibilities. They can also expect to acquire a sound basis for post-graduate 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 and women 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 or she 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 full potential, to concentrate in an area of interest, and to make forays into subjects out of curiosity.

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 Military 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 ACADEMIC CURRICULUM

The curriculum reflects 175 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 Military 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 Bruce Laingen, Deputy Assistant Secretary of State for European Affairs; Rosalind Rosenberg, Columbia University; Dr. Sidney Hook, Philosopher and Educator; Elsa Dixler, Vassar College; Professor Bernard Vonnegut, Atmosphere Sciences Research Center; Dr. Ralph B. Peck, Professor Emeritus, University of Illinois; William E. Colby, Former Director, CIA; Dr. Wilcomb Washburn, Director, Office of American Studies, Smithsonian Institute; and General Sir Frank King, CIC, British Army.

## THE CORE ACADEMIC PROGRAM

The 41 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 usually indicates the term in which the course is usually 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

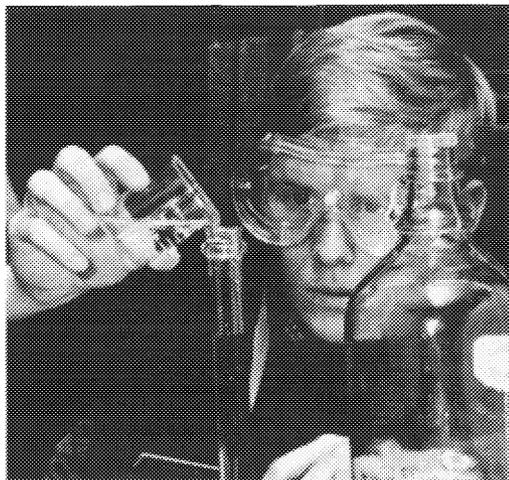
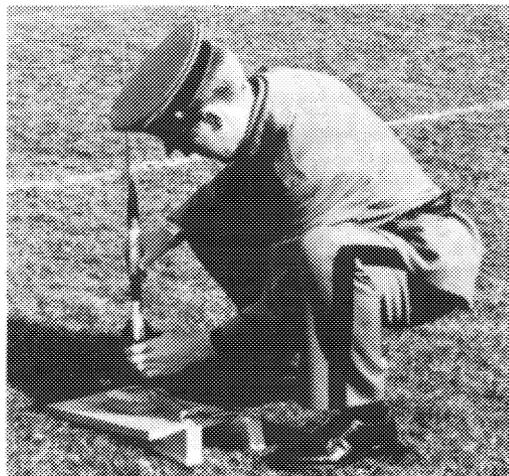
You may be excused from (validate) certain core courses if you have sufficient knowledge of a subject to meet the appropriate department's standards. Credit earned in other colleges, scores on Advanced Placement Examinations, and tests administered at the Military Academy are considered in validation 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 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 Military 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 scientific orientation. For course descriptions of electives, refer to Chapter VI, "Courses of Instruction."

# CORE CURRICULUM<sup>x</sup>

## Fourth Class (Freshman) Year

<sup>y</sup>\*Mathematics  
 \*English  
 †\*Foreign Language  
 \*Environment  
 \*Engineering Fundamentals

## First Term

MA 101  
 EN 101  
 L—101  
 EV 103  
 EF 101

## Second Term

MA 102  
 EN 102  
 L—102  
 EV 102  
 EF 102

## Third Class (Sophomore) Year

\*Mathematics  
 Physics (one sequence to be selected)

\*Chemistry

†\*Foreign Language  
 English

\*Psychology  
 History (One sequence to be selected)

MA 201  
 PH 201  
 or  
 PH 201  
 CH 201  
 L—201  
 EN 201

HI 201  
 or  
 HI 203  
 or  
 HI 205

MA 207  
 PH 202  
 PH 204  
 CH 202  
 L—202  
 —  
 PL 202  
 HI 202  
 or  
 HI 204  
 or  
 HI 206

## Second Class (Junior) Year

Electrical Engineering  
 \*Mechanics  
 \*Mechanics  
 Physics

Law  
 \*Social Sciences

EE 301  
 ME 301  
 ME 303  
 —  
 or  
 —  
 LW 301  
 SS 301  
 Elective

EE 304  
 \*\*ME 302  
 —  
 PH 303  
 PH 305  
 LW 302  
 SS 302  
 Elective

## First Class (Senior) Year

Engineering (One sequence to be selected)

Leadership  
 English  
 \*Social Sciences  
 \*History

\*CE 401  
 or  
 CE 453  
 or  
 \*OE 401  
 or  
 EE 403  
 or  
 ER 401

PL 401  
 —  
 SS 401  
 HI 401  
 Elective  
 Elective

\*CE 402  
 CE 454  
 \*OE 402  
 EE 404  
 ER 402  
 —  
 EN 402  
 SS 407  
 HI 402  
 Elective  
 Elective

<sup>x</sup>See Chapter VI, "Courses of Instruction," for course descriptions, including required courses in military science and physical education.

<sup>y</sup>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 Arabic, Chinese, French, German, Portuguese, Russian, and Spanish.

## The General Elective Program

Cadets following this program can choose electives from the entire list of electives, satisfying their 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 26 fields under four areas of concentration and an interdisciplinary field, Management.

### Applied Science and Engineering:

- Aerospace Engineering
- Civil Engineering
- Electrical Engineering
- Engineering Mechanics
- Nuclear Engineering
- Weapon Systems (Mechanical) Engineering

### Basic Science:

- Chemistry
- Computer Science
- Mathematics
- Physics

### Humanities:

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

### National Security and Public Affairs:

- Economics
- Geography
- History
- International Affairs
- Military Studies
- Political Science
- Sociology/Psychology

### Interdisciplinary Field:

- Management



# TABLES FOR AREAS OF CONCENTRATION FIELDS OF STUDY

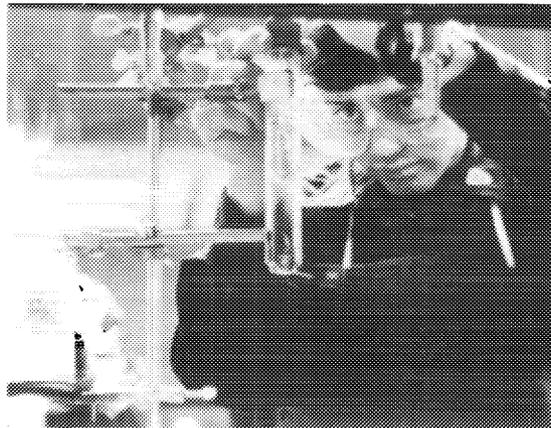
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## APPLIED SCIENCES & ENGINEERING AREA (A)

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### Requirement:

- a. Complete a core program engineering sequence other than General Engineering.
- b. Complete six elective courses selected as follows:
  1. Five selected from the Applied Sciences and Engineering Area elective course list or five selected according to the guidance contained in one of the fields in the Applied Sciences and Engineering Area, and
  2. One selected from among the entire elective course offerings.



### ELECTIVES:

- |   |   |
|---|---|
| <p>CE 381 Soil Mechanics</p> <p>CE 382 Environmental Systems Engineering</p> <p>CE 481 Design of Concrete Structures</p> <p>CE 482 Advanced Structural Analysis</p> <p>EE 381 Signals and Systems</p> <p>EE 382 Electromechanical Energy Conversion</p> <p>EE 383 Electromagnetic Fields</p> <p>EE 385 Digital Computer Systems</p> <p>EE 471 Automatic Control Systems</p> <p>EE 477 Communication Systems</p> <p>EE 482 Power System Analysis</p> <p>EE 485 Computer Engineering</p> <p>EE 486 Solid State Electronics</p> <p>EE 489 Advanced Individual Study in Electrical Engineering</p> <p>EF 384 Principles of Surveying</p> <p>ER 381 Foundations of Management (Formerly known as Scientific Management)</p> <p>ER 383 Quantitative Methods for Decision Making (Formerly known as Systems Engineering &amp; Decision Making)</p> <p>ER 385 Quantitative Methods for Operations Management (Formerly known as Management Engineering)</p> | <p>ER 487 Operations Research</p> <p>ER 489 Advanced Individual Study in Engineering</p> <p>ME 384 Mechanics of Materials</p> <p>ME 387 Introduction to Applied Aerodynamics</p> <p>ME 388 Aerodynamics of V/STOL Flight</p> <p>ME 472 Direct Energy Conversion</p> <p>ME 474 Propulsion</p> <p>ME 475 Gas Dynamics</p> <p>ME 476 Experimental Stress Analysis</p> <p>ME 477 Experimental Fluid Mechanics &amp; Thermodynamics</p> <p>ME 478 Analysis of Modern Lightweight Structures</p> <p>ME 482 Heat Transfer</p> <p>ME 483 Space Mechanics</p> <p>ME 485 Continuum Mechanics</p> <p>ME 486 Mechanical Vibrations</p> <p>ME 488 Flight Mechanics</p> <p>ME 489 Advanced Individual Study in Mechanics</p> <p>OE 383 Engineering Materials</p> <p>OE 481 Automotive Engineering</p> <p>OE 483 Helicopter Engineering</p> <p>PH 487 Nuclear Reactor Theory</p> |
|---|---|

## AEROSPACE ENGINEERING FIELD (AA)

### Requirement:

a. Complete a minimum of five elective courses according to one of the programs defined below or a variation of one of those programs approved by the Head of the Department of Mechanics or the Head of the Department of Engineering.

b. Complete OE 401-402 (or OE 451-452) as the core engineering sequence. (Cadets choosing the Aerospace Structures option under Field Options, below, may take CE 401-402 (451-452) as the core engineering sequence.)

### Course Selection Guidelines:

Enroll in Mechanics core courses, and in ME 384 and ME 387 (where these electives are included in the field option chosen) as early as possible.

#### a. Aerodynamics

(1) Choose one of the following sequences:

- (a) ME 387 and ME 488 (Fixed Wing)
- (b) ME 388 and OE 483 (V/STOL)

(2) Choose two additional courses from the combined list of para (1) above and the following: ME 474, ME 475, ME 482, ME 483, ME 486, ME 477.

(3) Choose one additional course from the combined lists of para (1) and (2) above and the following: EE 471, EF 382, ER 381, ER 383, ER 385, ER 487, ER 489, MA 483, MA 484, MA 485, MA 486, ME 489.

#### b. Aerospace Structures

(1) Take ME 384, ME 478, and CE 482.

(2) Choose one of the following: ME 387, ME 388, OE 483.

(3) Choose one additional course from the combined list of para (2) above and the following: EF 382, ER 381, ER 383, ER 385, ER 487, MA 483, MA 484, MA 486, ME 476, ME 485, ME 486, OE 383.

### ELECTIVE COURSES

- CE 482 Advanced Structural Analysis
- EE 471 Automatic Control Systems
- EF 382 Computer Application with FORTRAN
- ER 381 Foundations of Management (Formerly known as Scientific Management)
- ER 383 Quantitative Methods for Decision Making (Formerly known as Systems Engineering & Decision Making)
- ER 385 Quantitative Methods for Operations Management (Formerly known as Management Engineering)
- ER 487 Operations Research
- ER 489 Advanced Individual Study in Engineering
- MA 483 Mathematics for Engineers & Scientists
- MA 484 Intermediate Differential Equations
- MA 485 Complex Analysis
- MA 486 Numerical Analysis with Digital Computation
- ME 384 Mechanics of Materials
- ME 387 Introduction to Applied Aerodynamics
- ME 388 Aerodynamics of V/STOL Flight
- ME 474 Propulsion
- ME 475 Gas Dynamics
- ME 476 Experimental Stress Analysis
- ME 477 Experimental Fluid Mechanics & Thermodynamics
- ME 478 Analysis of Modern Lightweight Structures
- ME 482 Heat Transfer
- ME 483 Space Mechanics
- ME 485 Continuum Mechanics
- ME 486 Mechanical Vibrations
- ME 488 Flight Mechanics
- ME 489 Advanced Individual Study in Mechanics
- OE 383 Engineering Materials
- OE 483 Helicopter Engineering

## CIVIL ENGINEERING FIELD (AC)

### Requirement:

1. Four principal electives to include ME 384, and
2. At least one additional course from the combined lists of principal and associated electives.
3. Cadets concentrating their electives in civil engineering must take CE 401-402 or CE 451-452 as their required core engineering course sequence.

### Course Selection Guidelines:

ME 384 should be taken no later than 2d Term, Second Class Year.

### Suggested Course Sequences:

1. CE (Structures)—CE 381, ME 384, CE 481, CE 482, then add OE 383 and/or ME 485 and/or ME 486 and/or ER 489.
2. CE (Systems)—ER 385, ME 384, ER 383, CE 382, then add ER 381 or EF 382 and/or CE 381 or CE 481.
3. CE (General)—ER 385, ME 384, CE 381, CE 382, then add CE 481 and/or ER 383 and/or EF 384.
4. Note: Any of the principal or associated electives can be considered compatible with each of the above suggested sequences, depending upon the individual interests and desires of the cadet.



### PRINCIPAL ELECTIVES

- CE 381 Soil Mechanics
- CE 382 Environmental Systems Engineering
- CE 481 Design of Concrete Structures
- CE 482 Advanced Structural Analysis
- EF 384 Principles of Surveying
- ER 383 Quantitative Methods for Decision Making (Formerly known as Systems Engineering and Decision Making)
- ER 385 Quantitative Methods for Operations Management (Formerly known as Management Engineering)
- ER 489 Advanced Individual Study in Engineering
- ME 384 Mechanics of Materials

### ASSOCIATED ELECTIVES

- EE 382 Electromechanical Energy Conversion
- EE 482 Power System Analysis
- EF 382 Computer Applications with FORTRAN
- ER 381 Foundations of Management (Formerly known as Scientific Management)
- EV 385 Issues Confronting Man & His Environment
- EV 388 Physical Geology
- MA 471 Linear Algebra
- MA 473 Intermediate Probability & Statistical Applications
- MA 481 Linear Programming
- MA 484 Intermediate Differential Equations
- MA 486 Numerical Analysis with Digital Computation
- ME 476 Experimental Stress Analysis
- ME 477 Experimental Fluid Mechanics & Thermodynamics
- ME 478 Analysis of Modern Lightweight Structures
- ME 485 Continuum Mechanics
- ME 486 Mechanical Vibrations
- OE 383 Engineering Materials

## ELECTRICAL ENGINEERING FIELD (AE)

### Requirement:

- a. Three principal electives, and
- b. At least two additional electives from the combined lists of principal and associated electives.
- c. EE 403-404 must be taken as the engineering sequence.

### Course Selection Guidelines:

- a. EE 383 and EE 381 or EE 382 should be taken in 2nd Class year.
- b. Other MSE courses, with department approval, may be accepted as associated electives.

### Suggested Course Sequences:

- a. Communications: EE 383, EE 381, EE 477, and two of the following: MA 473, EE 471, PH 385B, MA 485, or EE 489.
- b. Electronics: EE 383, EE 381, EE 477, EE 486; choice of PH 483, MA 473, or EE 489.
- c. Power: EE 383, EE 382, EE 482, EE 471; choice of MA 484, ER 385, or EE 489.
- d. Computers: EE 385, EE 381, EF 382, EE 485; choice of EE 383, EF 383, or EE 489.
- e. A sequence different from those listed above may be devised with the approval of the Department of Electrical Engineering.

### PRINCIPAL ELECTIVES

- EE 381 Signals and Systems
- EE 382 Electromechanical Energy Conversion
- EE 383 Electromagnetic Fields
- EE 385 Digital Computer Systems
- EE 477 Communication Systems
- EE 482 Power System Analysis



### ASSOCIATED ELECTIVES

- EE 471 Automatic Control Systems
- EE 485 Computer Engineering
- EE 489 Advanced Individual Study in Electrical Engineering
- EF 382 Computer Applications with FORTRAN
- EF 383 Data Processing with COBOL
- EF 489 Advanced Individual Study in Computer Science
- ER 385 Quantitative Methods for Operations Management (Formerly known as Management Engineering)
- MA 473 Intermediate Probability & Statistical Applications
- MA 484 Intermediate Differential Equations
- MA 485 Complex Analysis
- ME 472 Direct Energy Conversion
- PH 385B Laser Physics
- PH 483 Solid State Physics

## NUCLEAR ENGINEERING FIELD (AN)

### Requirement:

1. Three principal electives to include PH 487, and
2. At least two courses selected from the combined lists of principal and associated electives.
3. Cadets concentrating their electives in Nuclear Engineering must take CE 453-454 as their required core engineering sequence.

### Course Selection Guidelines:

PH 487 must be taken prior to or concurrently with CE 453, unless an exception is granted by the Department of Engineering.

### Suggested Course Sequence:

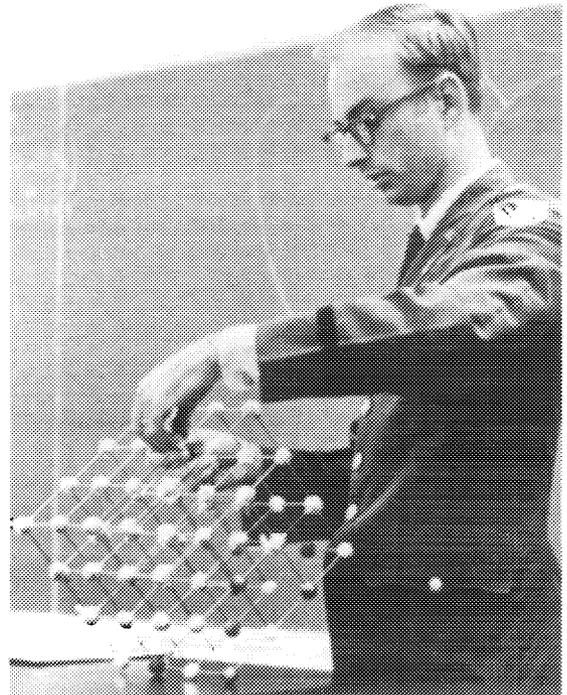
- a. The broadest interdisciplinary background is recommended for cadets interested in graduate work in nuclear engineering.
- b. MA 484, ME 384, ME 482, OE 383, PH 484, PH 487, and PH 488 are particularly applicable and useful in this field.
- c. Other courses may be equally pertinent depending on the cadet's background, interests and plans.
- d. Cadets desiring further assistance should report to the Course Director for Nuclear Engineering, Department of Engineering.

### PRINCIPAL ELECTIVES

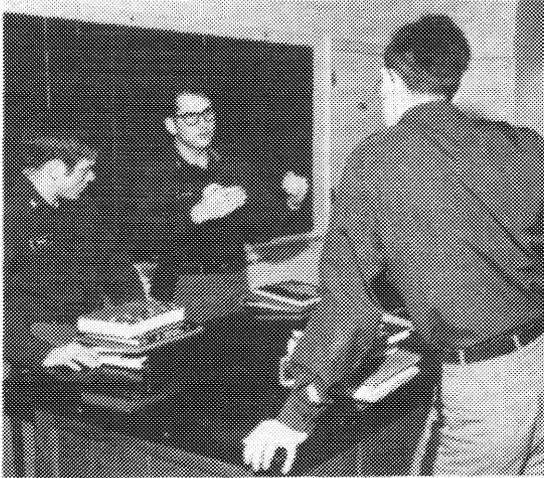
- EF 382 Computer Applications with FORTRAN**  
**ER 383 Quantitative Methods for Decision Making (Formerly known as Systems Engineering & Decision Making)**  
**MA 484 Intermediate Differential Equations**  
**ME 384 Mechanics of Materials**  
**ME 482 Heat Transfer**  
**OE 383 Engineering Materials**  
**PH 484 Quantum Mechanics**  
**PH 487 Nuclear Reactor Theory**  
**PH 488 Nuclear Physics**

### ASSOCIATED ELECTIVES

- CE 382 Environmental Systems Engineering**  
**EE 471 Automatic Control Systems**  
**EF 488 Advanced Computer Programming**  
**ER 489 Advanced Individual Study in Engineering**  
**MA 473 Intermediate Probability & Statistical Applications**  
**MA 485 Complex Analysis**  
**MA 486 Numerical Analysis with Digital Computation**  
**PH 381 Intermediate Classical Mechanics**  
**PH 382 Intermediate Electricity & Magnetism**  
**PH 483 Solid State Physics**  
**PH 486 Experimental Physics**  
**PH 489 Advanced Individual Study in Physics**



**WEAPON SYSTEMS (MECHANICAL)  
ENGINEERING FIELD (AW)**



**Requirement:**

1. Three principal electives, and
2. At least two courses selected from the combined lists of principal and associated electives.
3. Cadets enrolled in this field must take OE 401-402 or OE 451-452 as their core engineering sequence.

**Course Selection Guidelines:**

Attention must be given to the prerequisites listed for each course in determining the sequence of study.

**Suggested Course Groupings:**

1. Automotive: OE 383, ER 385, OE 481, ME 482, ME 486, ER 489.
2. Aero-Missile: OE 383, ER 385, ME 387, ME 388, ME 474, OE 483.
3. General: OE 383, ER 385, ME 474, ME 482, ME 486, ER 489.

**PRINCIPAL ELECTIVES**

- ER 383 Quantitative Methods for Decision Making (Formerly known as Systems Engineering and Decision Making)
- ER 385 Quantitative Methods for Operations Management (Formerly known as Management Engineering)
- ER 489 Advanced Individual Study in Engineering
- MA 484 Intermediate Differential Equations
- ME 384 Mechanics of Materials
- ME 387 Introduction to Applied Aerodynamics
- ME 388 Aerodynamics of V/STOL Flight
- ME 474 Propulsion
- ME 482 Heat Transfer
- ME 486 Mechanical Vibrations
- OE 383 Engineering Materials
- OE 481 Automotive Engineering
- OE 483 Helicopter Engineering

**ASSOCIATED ELECTIVES**

- EF 382 Computer Applications with FORTRAN
- ER 381 Foundations of Management (Formerly known as Scientific Management)
- ER 487 Operations Research
- MA 473 Intermediate Probability and Statistical Applications
- MA 486 Numerical Analysis with Digital Computation
- ME 475 Gas Dynamics
- ME 476 Experimental Stress Analysis
- ME 477 Experimental Fluid Mechanics & Thermodynamics
- ME 478 Analysis of Modern Lightweight Structures
- ME 483 Space Mechanics
- ME 488 Flight Mechanics

## ENGINEERING MECHANICS FIELD (AX)

### Requirement:

a. Complete a minimum of five elective courses according to the distribution requirements described below or a variation approved by the Head of the Department of Mechanics.

b. Complete one of the following as the core engineering sequence: CE 401-402 (451-452), CE 453-454, or OE 401-402 (451-452).

### Course Selection Guidelines:

a. Enroll in ME 303 (353) as soon as possible, and enroll in ME 384, no later than the second term of 2nd Class year.

b. For those cadets who have earned extra elective spaces, or who desire to take overload courses, the following courses are recommended as being closely related to the Engineering Mechanics Field: ER 383, ER 489, MA 482, MA 483, MA 484, MA 485, MA 486, ME 387, ME 474, ME 489, OE 383, PH 483.

c. Take ME 384 and at least four other elective courses from those listed below. Choose courses from at least two of these groups.

(1) Solid Mechanics: CE 481, CE 482, ME 476, ME 478, ME 485.

(2) Dynamics: ME 483, ME 486, PH 381.

(3) Thermosciences: ME 472, ME 475, ME 477, ME 482.

### ELECTIVE COURSES

**CE 481 Design of Concrete Structures**

**CE 482 Advanced Structural Analysis**

**ME 384 Mechanics of Materials**

**ME 472 Direct Energy Conversion**

**ME 475 Gas Dynamics**

**ME 476 Experimental Stress Analysis**

**ME 477 Experimental Fluid Mechanics & Thermodynamics**

**ME 478 Analysis of Modern Lightweight Structures**

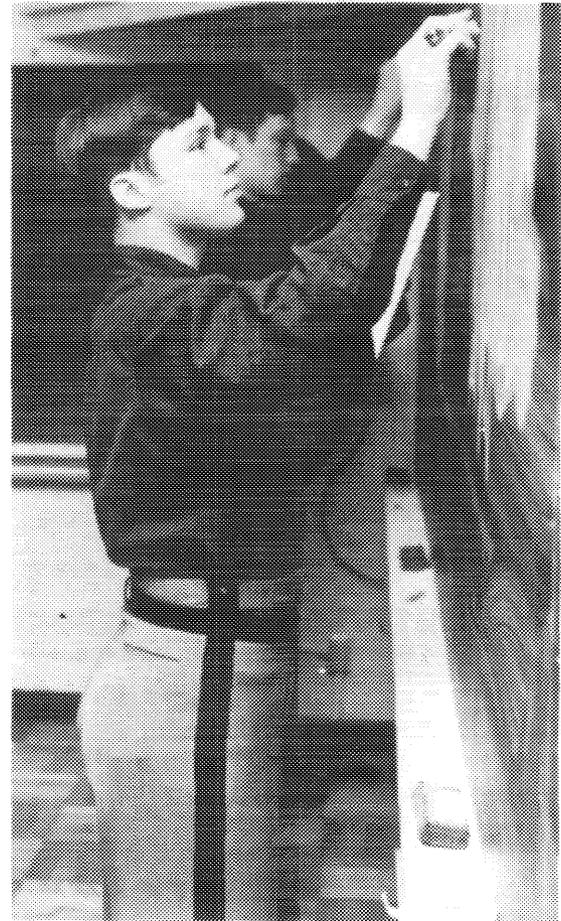
**ME 482 Heat Transfer**

**ME 483 Space Mechanics**

**ME 485 Continuum Mechanics**

**ME 486 Mechanical Vibrations**

**PH 381 Intermediate Classical Mechanics**



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## BASIC SCIENCE AREA (B)

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### Requirement:

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

b. Complete six elective courses as follows:

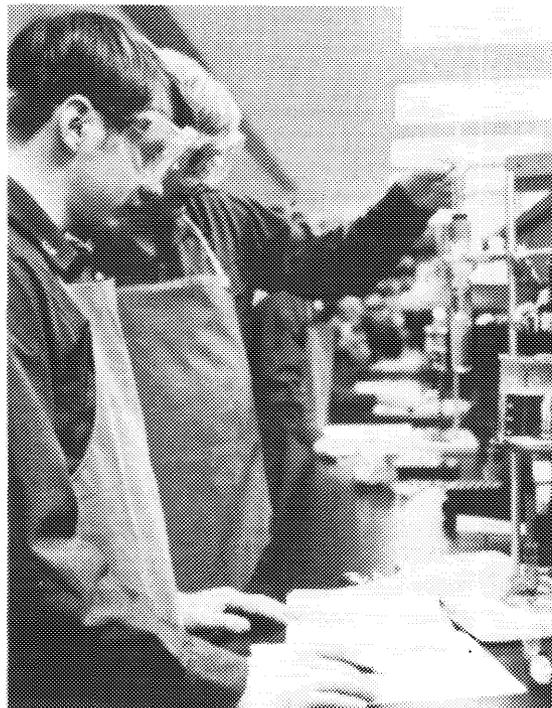
(1) Five from the Basic Sciences Area list or five selected in accordance with the requirements of the Chemistry, Computer Science, Physics, or Mathematics field, and

(2) One from the entire elective course offerings.

### Basic Science Area Elective Course List:

CH 383 Organic Chemistry I

CH 384 Organic Chemistry II



- CH 481 Physical Chemistry I  
CH 482 Physical Chemistry II  
CH 485 Human Biology I  
CH 486 Human Biology II  
CH 489 Advanced Individual Study in Chemistry  
EF 382 Computer Applications with FORTRAN  
EF 383 Data Processing with COBOL  
EF 488 Advanced Computer Programming  
EF 489A Advanced Individual Study in Computer Science  
EF 489B Advanced Individual Study in Geodetic Science  
EV 383 Astronomy  
EV 388 Physical Geology  
EV 489 Advanced Individual Study in Environment  
MA 471 Linear Algebra  
MA 473 Intermediate Probability and Statistical Applications  
MA 481 Linear Programming  
MA 482 Abstract Algebra  
MA 483 Mathematics for Engineers & Scientists  
MA 484 Intermediate Differential Equations  
MA 485 Complex Analysis  
MA 486 Numerical Analysis with Digital Computation  
MA 487 Real Variable Theory  
MA 488 Visiting Professor's Course  
MA 489 Advanced Individual Study in Mathematics  
PH 381 Intermediate Classical Mechanics  
PH 382 Intermediate Electricity & Magnetism  
PH 385 Topics in Physics  
PH 483 Solid State Physics  
PH 484 Quantum Mechanics  
PH 486 Experimental Physics  
PH 488 Nuclear Physics  
PH 489 Advanced Individual Study in Physics

## CHEMISTRY FIELD (BC)

### Requirement:

1. Four principal electives, and
2. One course chosen from the combined lists of principal and associated electives.

### Course Selection Guidelines:

The principal electives are listed in the order which is recommended for a cadet in this field to follow. CH 489 requires the approval of the Department Head and may be taken by cadets who have completed CH 384 and are enrolled in or have completed CH 481-482 or CH 485-486. Experience has shown that two semesters are generally needed for a meaningful CH 489 project. Cadets choosing the chemistry field should consider EE 403-404 for the required engineering sequence.

### Suggested Course Sequences:

- a. CH 383-384, CH 481-482, CH 489 or associated elective.
- b. The associated electives are listed in the order in which it is suggested that they be considered.
- c. Cadets who desire to emphasize Life Science should concentrate in the Basic Science Area and use the sequence of CH 383-384, CH 485-486, CH 489.

### PRINCIPAL ELECTIVES

- CH 383 Organic Chemistry I
- CH 384 Organic Chemistry II
- CH 481 Physical Chemistry I
- CH 482 Physical Chemistry II
- CH 489 Advanced Individual Study in Chemistry

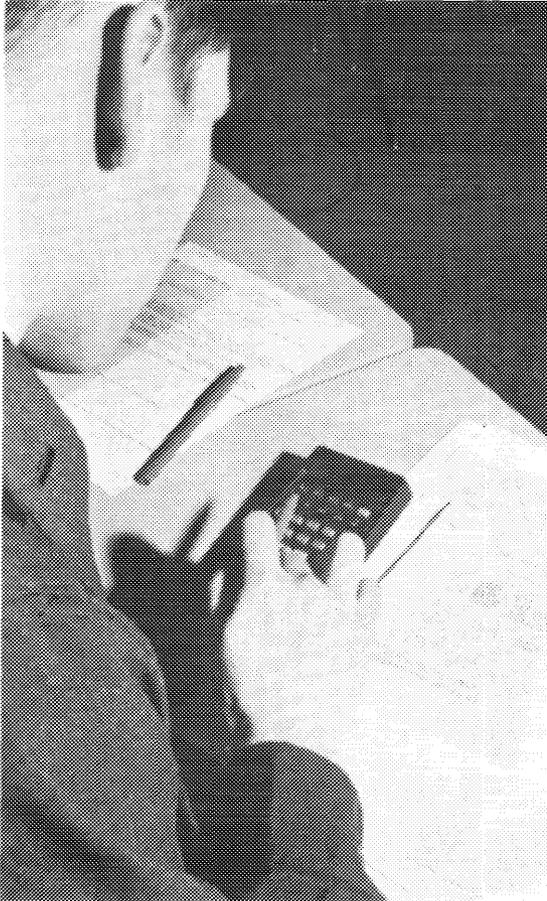
### ASSOCIATED ELECTIVES

- CH 485 Human Biology I
- CH 486 Human Biology II
- EF 382 Computer Applications with FORTRAN



- MA 473 Intermediate Probability & Statistical Applications
- MA 484 Intermediate Differential Equations
- MA 486 Numerical Analysis with Digital Computation
- PH 483 Solid State Physics
- PH 484 Quantum Mechanics
- PH 488 Nuclear Physics

## MATHEMATICS FIELD (BM)



### Requirement:

1. Four principal electives, and
2. One course chosen from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets interested in mathematical analysis of either a pure or applied nature should begin their field with MA 484 followed by MA 485.

### Suggested Course Sequences:

- a. For cadets interested in mathematics from an abstract viewpoint: MA 484, MA 485, MA 482, MA 487 and one additional elective.
- b. For cadets interested in applied mathematics: MA 484, MA 485, MA 483, MA 471 and one additional elective.
- c. For cadets interested in mathematical application to digital computation: MA 481, MA 486, EF 382, MA 473 and one elective.

### PRINCIPAL ELECTIVES

- MA 471 Linear Algebra
- MA 473 Intermediate Probability & Statistical Applications
- MA 481 Linear Programming
- MA 482 Abstract Algebra
- MA 483 Mathematics for Engineers & Scientists
- MA 484 Intermediate Differential Equations
- MA 485 Complex Analysis
- MA 486 Numerical Analysis with Digital Computation
- MA 487 Real Variable Theory
- MA 488 Visiting Professor's Course
- MA 489 Advanced Individual Study in Mathematics

### ASSOCIATED ELECTIVES

- EE 381 Signals and Systems
- EE 477 Communication Systems
- EF 382 Computer Applications with FORTRAN
- ME 478 Analysis of Modern Lightweight Structures
- ME 483 Space Mechanics
- ME 485 Continuum Mechanics
- ME 486 Mechanical Vibrations
- ER 487 Operations Research
- PH 381 Intermediate Classical Mechanics
- PH 484 Quantum Mechanics

## COMPUTER SCIENCE FIELD (BX)

### Requirement:

1. EF 382, EE 385 or EE 485, and one additional principal elective, and
2. Two additional courses chosen from the combined lists of principal and associated electives.

### Course Selection Guidance:

The list of associated electives is not exhaustive, and cadets may arrange courses to fit specific interests after consulting with designated advisors.

### Suggested Course Sequence:

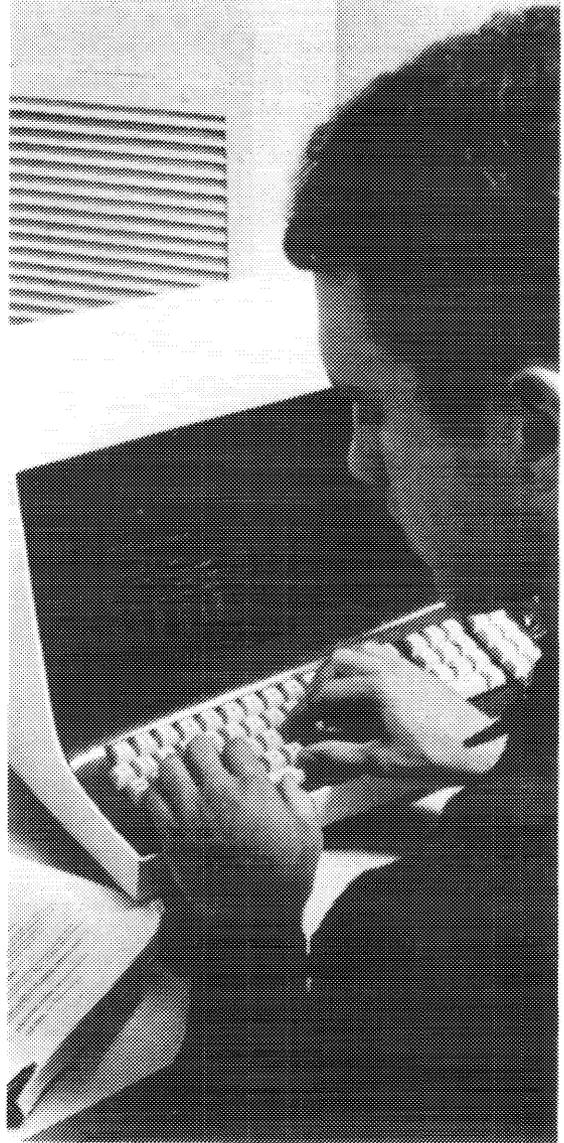
Enroll in EF 382 as early as possible but not later than the first term, 2nd Class year.

### PRINCIPAL ELECTIVES

- EE 385 Digital Computer Systems
- EE 485 Computer Engineering
- EF 382 Computer Applications with FORTRAN
- EF 383 Computer Applications with COBOL
- EF 488 Advanced Computer Programming
- EF 489 Advanced Individual Study in Computer Science
- MA 486 Numerical Analysis with Digital Computation

### ASSOCIATED ELECTIVES

- ER 381 Foundations of Management (Formerly known as Scientific Management)
- ER 383 Quantitative Methods for Decision Making (Formerly known as Systems Engineering & Decision Making)
- MA 481 Linear Programming
- ER 485 Quantitative Methods for Operations Management (Formerly known as Management Engineering)
- ER 487 Operations Research
- SS 389 Managerial Economics



## PHYSICS FIELD (BP)

### Requirement:

- a. Complete four principal electives.
- b. Complete at least one additional elective from the combined lists of principal and associated electives.

### Course Selection Guidelines:

a. PH 381, 382, 483, 484, 487 and 488 cover basic material which underlies most areas of science and engineering. In particular, PH 381 provides an excellent foundation for mechanics and space sciences, PH 382, 483, and 484 for electrical engineering and PH 484, 487 and 488 for nuclear engineering.

b. PH 381 and PH 382 are fundamental physics courses which are normally taken Second Class year, but may also be taken First Class year.

### Suggested Course Sequences:

a. General Physics: PH 381, PH 382, PH 483, PH 486, PH 489.

b. Applied Physics: PH 385A, B, and F (any two 385 courses), PH 484, PH 487, EE 486, ME 473, OE 383.

c. Nuclear Physics: PH 381, PH 382, PH 385A, PH 484, PH 486, PH 488.

d. Reactor Physics: PH 385A, PH 484, PH 487, PH 488. Cadets taking this sequence should consider CE 453-454 for their engineering sequence.

### Suggested Physics Sequences for Generalists:

Although not adequate sequences for satisfying the needs of the title "Physics Field," the elective programs outlined below have a strong physics flavor and will serve as excellent backgrounds for those generalists interested in science and engineering.

- a. Energy Crisis: PH 385A, PH 385B, PH 487, CE 453-454, EE 382, EE 482, EV 385, EV 388, ME 472, ME 482, SS 387.

b. Materials Science: PH 483, EE 486, ME 384, ME 478, OE 383.

c. Applied Mathematics: PH 381, PH 382, PH 385F, PH 483, PH 484, PH 487, ME 483, ME 485. (May meet criteria for Physics Field.)

d. Environmental Science: PH 385A, PH 487, CE 453-454, CE 382, EV 385, EV 388, SS 387.

## PRINCIPAL ELECTIVES

- PH 381 Intermediate Classical Mechanics
- PH 382 Intermediate Electricity & Magnetism
- PH 385A Physics of the Energy Crisis
- PH 385B Laser Physics
- PH 385C The Origins of Physics
- PH 385F Atmospheric Physics
- PH 483 Solid State Physics
- PH 484 Quantum Mechanics
- PH 486 Experimental Physics
- PH 487 Nuclear Reactor Theory
- PH 488 Nuclear Physics
- PH 489 Advanced Individual Study in Physics

## ASSOCIATED ELECTIVES

- EE 486 Solid State Electronics
- EV 383 Astronomy
- MA 473 Intermediate Probability & Statistical Applications
- MA 483 Mathematics for Engineers & Scientists
- MA 484 Intermediate Differential Equations
- MA 485 Complex Analysis
- ME 472 Direct Energy Conversion
- ME 483 Space Mechanics
- OE 383 Engineering Materials

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## HUMANITIES AREA (H)

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### Requirement:

a. Completion of a two-term engineering sequence.

b. Completion of six electives from the Humanities Area list or fulfillment of the requirements of the American Studies, Literature, or Language Fields; completion of one additional elective from among the entire elective course offerings.

### ELECTIVES

- |  |  |
|--|--|
| EN 371 British Literature to 1660                      | LC 488 Directed Studies in Chinese               |
| EN 372 British Literature, 1660-1900                   | LF 371 French Language Through Literature I      |
| EN 373 19th Century American Literature                | LF 372 French Language Through Literature II     |
| EN 374 British & American Literature, 1900-1950        | LF 382 Military Readings in French               |
| EN 375 Contemporary Literature, 1950-Present           | LF 483 History of French Civilization I          |
| EN 376 The Novel                                       | LF 484 History of French Civilization II         |
| EN 377 Shakespeare Survey                              | LF 485 Survey of French Literature I             |
| EN 385 Background to American Studies                  | LF 486 Survey of French Literature II            |
| EN 387 19th Century American Thinkers                  | LF 487 Directed Studies in French                |
| EN 388 Social Criticism in 20th Century American Prose | LF 488 Directed Studies in French                |
| EN 391 Introduction to Fine Arts (overload only)       | LG 371 German Language Through Literature I      |
| EN 392 Introduction to Music (overload only)           | LG 372 German Language Through Literature II     |
| EN 471 Period Studies in Literature                    | LG 382 Military & Scientific Readings in German  |
| EN 472 Studies in Literary Forms                       | LG 483 History of German Civilization            |
| EN 475 Seminar in Major British Authors                | LG 484 Contemporary Germany                      |
| EN 476 Seminar in Major American Authors               | LG 485 Survey of German Literature I             |
| EN 478 Special Topics in Languages & Literature        | LG 486 Survey of German Literature II            |
| EN 483 Seminar in American Studies                     | LG 487 Directed Studies in German                |
| EN 489 Advanced Individual Study in English            | LG 488 Directed Studies in German                |
| HI 371 European National Histories                     | LP 371 Portuguese Language Through Literature I  |
| HI 376 American Social History                         | LP 372 Portuguese Language Through Literature II |
| HI 377 History of Religions                            | LP 383 Military Readings in Portuguese           |
| HI 378 History of Western Ethics                       | LP 475 Survey of Brazilian Literature            |
| HI 379 History of Latin America                        | LP 476 Modern Brazilian Literature               |
| HI 398 Colloquium in History                           | LP 487 Directed Studies in Portuguese            |
| LC 383 Chinese Literature and Culture I                | LP 488 Directed Studies in Portuguese            |
| LC 384 Chinese Literature and Culture II               | LR 381 Advanced Russian Language                 |
| LC 485 Advanced Contemporary Chinese                   | LR 382 Russian Language Through Literature       |
| LC 486 Selected Chinese Military Readings              | LR 473 Russian & Soviet Civilization             |
| LC 487 Directed Studies in Chinese                     | LR 474 Soviet Russian Literature                 |
|  | LR 475 Military & Scientific Readings in Russian |
|  | LR 476 Soviet Expository Writings                |
|  | LR 487 Directed Studies in Russian               |
|  | LR 488 Directed Studies in Russian               |
|  | LS 371 Spanish Language Through Literature I     |
|  | LS 372 Spanish Language Through Literature II    |
|  | LS 382 Military Readings in Spanish              |
|  | LS 471 Survey of Spanish Literature              |
|  | LS 472 Survey of Spanish-American Literature     |
|  | LS 487 Directed Studies in Spanish               |
|  | LS 488 Directed Studies in Spanish               |

## AMERICAN STUDIES FIELD (HA)

### Requirement:

Five principal electives are required, plus a sixth elective taken from either the principal or the associated electives lists. The five principal electives must include EN 385, EN 387 (482A), EN 388 (482B), EN 483 (any topic), and an American History elective. For purposes of this requirement, the two-semester sequence of EN 151 and EN 152 may be counted as a principal elective.

### Course Selection Guidelines:

a. American Studies investigates the nation's past and present by integrating the methods and knowledge of more than one academic discipline. Each cadet's program is tailored to his individual interests but must have a particular focus.

b. Elective topics offered under the same course number but with different letter designations are discrete courses covering different subject matter. Cadets may not repeat topics, and may enroll in courses offering multiple topics no more than twice without permission of the Head of the Department and the approval of the Dean.

c. In the case of over-subscribed electives, priority of enrollment will go to First Classmen concentrating in the American Studies or Literature fields.

### PRINCIPAL ELECTIVES

- EN 151 **Advanced Composition: Interdisciplinary Study of American Issues**
- EN 152 **Advanced Composition: American Literature**
- EN 373 **19th Century American Literature**
- EN 385 **Background to American Studies**
- EN 387 **19th Century American Thinkers**
- EN 388 **Social Criticism in 20th Century American Prose**
- EN 483 **Seminar in American Studies**
- EN 489 **Advanced Individual Study in English**
- HI 373 **Topics in United States History**
- HI 376 **American Social History**



- HI 384C **Topics in Military History**
- HI 389 **Colloquium in History**
- HI 481 **Seminar in History**
- HI 482 **The American Military Experience**

### ASSOCIATED ELECTIVES

- EN 374 **British & American Literature, 1900-1950**
- EN 391 **Introduction to Fine Arts (overload only)**
- EN 392 **Introduction to Music (overload only)**
- EN 476 **Seminar in Major American Authors**
- EV 384 **Regional Geography of the United States**
- HI 372 **History of United States Foreign Relations**
- HI 378 **History of Western Ethics**
- HI 383 **War in the Twentieth Century**
- LW 481 **International Law**
- LW 482 **Seminar in Military Aspects of International Law**
- PL 472B **Topics in Sociology**
- SS 386 **Political Philosophy**
- SS 387 **Seminar in Public Policy**
- SS 473 **Issues in American Foreign Policy**
- SS 483 **National Security Seminar**

## LITERATURE FIELD (HL)



### Requirement:

Five principal electives are required, plus a sixth elective taken from either the principal or the associated electives lists. The five principal electives must include three of the following: EN 371 (381A), EN 372 (381B), EN 373 (383B), EN 374 (383F), and EN 377 (485Q).

### Course Selection Guidelines:

a. It is preferable to take literature courses in the chronological order of course content. For example, EN 371 (British Literature to 1660) should precede EN 372 (British Literature, 1660-1900).

b. Generally, survey courses (EN 300 series) should be undertaken before more specialized seminar studies (EN 400 series).

c. Elective topics offered under the same course number but with different letter designations are discrete courses covering different subject matter. Cadets may not repeat topics and may enroll in courses offering multiple topics no more than

twice without the permission of the Head of the Department and the approval of the Dean.

d. In the case of over-subscribed electives, priority of enrollment will go to First Classmen concentrating in the Literature or American Studies fields.

### PRINCIPAL ELECTIVES

- EN 371 **British Literature to 1660**
- EN 372 **British Literature 1660-1900**
- EN 373 **19th Century American Literature**
- EN 374 **British & American Literature 1900-1950**
- EN 375 **Contemporary Literature, 1950-Present**
- EN 376 **The Novel**
- EN 377 **Shakespeare Survey**
- EN 471C **Period Studies in Literature: Literature of the Renaissance**
- EN 475 **Seminar on Major British Authors**
- EN 476 **Seminar on Major American Authors**
- EN 478 **Special Topics in Language & Literature**
- EN 489 **Advanced Individual Study in English**

### ASSOCIATED ELECTIVES

- EN 385 **Background to American Studies**
- EN 391 **Introduction to Fine Arts (overload)**
- EN 392 **Introduction to Music (overload)**
- EN 387 **19th Century American Thinkers**
- EN 388 **Social Criticism in 20th Century American Prose**
- EN 483 **Seminar in American Studies**
- HI 373 **Topics in United States History**
- HI 374 **Topics in European Political & Cultural History**
- PL 472 **Topics in Sociology**
- PL 483 **Social Psychology**
- PL 487 **Psychology II (Personality & Adjustment)**
- SS 386 **Political Philosophy**

**Any language courses in the 300 or 400 series.**

## ARABIC LANGUAGE FIELD (HX)

### Requirement:

Four LA electives and two courses from the combined lists of principal and associated electives.

### Suggested Course Sequence:

To be published.

### PRINCIPAL ELECTIVES:

As the class of 1980 progresses through its third and fourth years at USMA, it is anticipated that a new elective course in Arabic will be offered each semester, thus making available four such courses on the Arabic language and cultural aspects of the Arab world.

### ASSOCIATED ELECTIVES:

To be published, and to include EV 386C and SS 383.



## CHINESE LANGUAGE FIELD (HC)

### Requirement:

Four LC electives and two courses from the combined lists of principal and associated electives.

### Suggested Course Sequence:

LC 383, LC 384, LC 485, LC 486 (may be taken concurrently with LC 384), LC 487, LC 488.

### PRINCIPAL ELECTIVES

- EV 386B Geography of the People's Republic of China
- LC 383 Chinese Literature & Culture I
- LC 384 Chinese Literature & Culture II
- LC 485 Advanced Contemporary Chinese
- LC 486 Selected Chinese Military Readings
- LC 487 Directed Studies in Chinese
- LC 488 Directed Studies in Chinese
- SS 471 Government & Politics of China
- HI 375 History of the Far East

### ASSOCIATED ELECTIVES

- HI 381 History of Revolutionary Warfare
- LW 481 International Law
- LW 482 Seminar in Military Aspects of International Law
- PL 472 Topics in Sociology
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 472 Comparative Civil-Military Relations
- SS 476 International Affairs: Theory and Applications
- SS 484 International Economics & Economic Development
- SS 485 Problems of Developing Nations
- SS 486 Political & Cultural Anthropology

Any English Course in the 300 or 400 series except EN 391 and EN 392.

## FRENCH LANGUAGE FIELD (HF)

### Requirement:

Four LF electives and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets finishing the standard course in French (LF 201-202), the accelerated course (LF 241) or the advanced course (LF 151-152) will normally require LF 371-372 before taking a 400 level course. Any cadet completing the standard, accelerated or advanced course may enroll in LF 382.

### Suggested Course Sequence:

LF 371, LF 372, LF 483 and/or LF 486 (may be taken concurrently), LF 487, LF 488. Other electives to be arranged between each cadet and his advisor.

### PRINCIPAL ELECTIVES

- HI 371A **The French Military & Society, 1848-1940**
- LF 371 **French Language Through Literature I**
- LF 372 **French Language Through Literature II**
- LF 382 **Military Readings in French**
- LF 483 **History of French Civilization I**
- LF 484 **History of French Civilization II**
- LF 485 **Survey of French Literature I**
- LF 486 **Survey of French Literature II**
- LF 487 **Directed Studies in French**
- LF 488 **Directed Studies in French**

### ASSOCIATED ELECTIVES

- HI 374 **Topics in European Political & Cultural History**
- HI 381 **History of Revolutionary Warfare**
- HI 481 **Seminar in History**
- HI 489 **Advanced Individual Study in History**
- LW 481 **International Law**
- LW 482 **Seminar in Military Aspects of International Law**
- PL 472 **Topics in Sociology**

- SS 385 **Comparative Modern Economic Systems**
- SS 386 **Political Philosophy**
- SS 472 **Comparative Civil-Military Relation**
- SS 476 **International Affairs: Theory & Application**
- SS 484 **International Economics & Economic Development**
- SS 485 **Problems of the Developing Nations**
- SS 486 **Political & Cultural Anthropology**

Any English elective in the 300 or 400 series except EN 391 and EN 392.



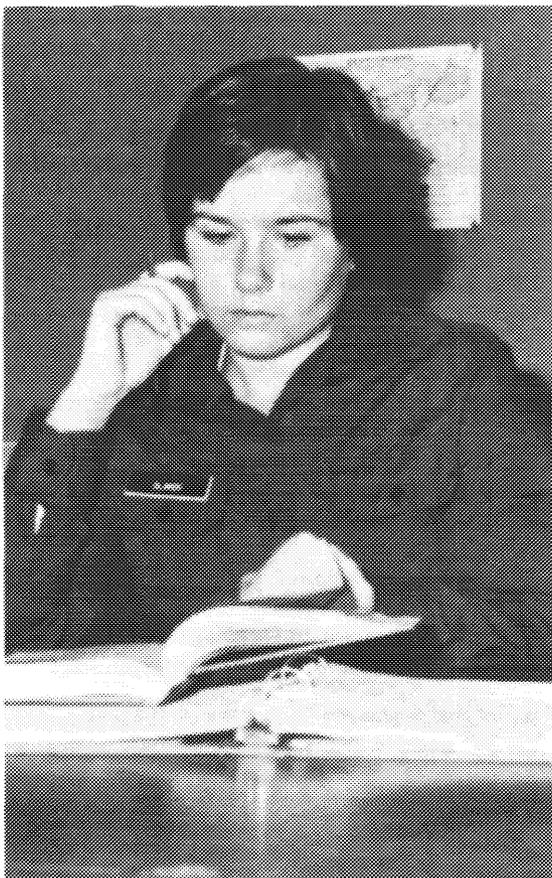
## GERMAN LANGUAGE FIELD (HG)

### Requirement:

Four LG electives and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets finishing the standard (LG 201-202), accelerated (LG 241), and advanced (LG 151-152) courses will normally require LG 371 and LG 372 before taking a more advanced elective course. Any cadet completing the standard, accelerated or advanced course may enroll in LG 382.



### Suggested Course Sequence:

LG 371, LG 372, LG 483 and/or LG 485 (may be taken concurrently), LG 484 and/or LG 486 (may be taken concurrently), LG 487, LG 488. LG 382 and other electives to be arranged between each cadet and his advisor.

### PRINCIPAL ELECTIVES

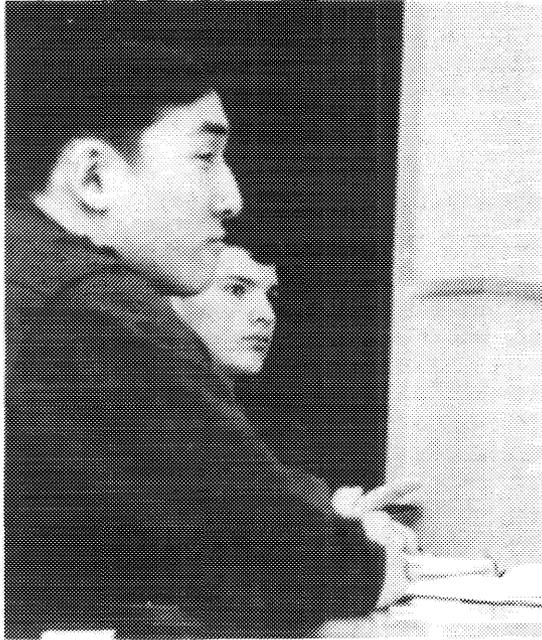
- HI 371D *Wilhelmine, Weimar & Nazi Germany*
- LG 371 *German Language Through Literature I*
- LG 372 *German Language Through Literature II*
- LG 382 *Military and Scientific Readings in German*
- LG 483 *History of German Civilization*
- LG 484 *Contemporary Germany*
- LG 485 *Survey of German Literature I*
- LG 486 *Survey of German Literature II*
- LG 487 *Directed Studies in German*
- LG 488 *Directed Studies in German*

### ASSOCIATED ELECTIVES

- HI 374 *Topics in European Political & Cultural History*
- HI 481 *Seminar in History*
- HI 489 *Advanced Individual Study in History*
- LW 481 *International Law*
- LW 482 *Seminar in Military Aspects of International Law*
- PL 472 *Topics in Sociology*
- SS 385 *Comparative Modern Economic Systems*
- SS 386 *Political Philosophy*
- SS 472 *Comparative Civil-Military Relations*
- SS 476 *International Affairs: Theory & Applications*
- SS 484 *International Economics & Economic Development*
- SS 485 *Problems of Developing Nations*
- SS 486 *Political & Cultural Anthropology*

Any English elective in the 300 or 400 series except EN 391 and EN 392.

## PORTUGUESE LANGUAGE FIELD (HP)



### Requirement:

Four LP electives and two courses selected from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets who are concentrating their electives in this field may enroll in HI 374 twice if the Head of the Department of History approves.

### Suggested Course Sequence:

LP 371, LP 372, LP 383 (may be taken concurrently with LP 372), LP 475, LP 476, LP 487, LP 488. Other electives to be arranged as agreed between each cadet and his advisor.

### PRINCIPAL ELECTIVES

- LP 371 Portuguese Language Through Literature I
- LP 372 Portuguese Language Through Literature II
- LP 383 Military Readings in Portuguese
- LP 475 Survey of Brazilian Literature
- LP 476 Modern Brazilian Literature
- LP 487 Directed Studies in Portuguese
- LP 488 Directed Studies in Portuguese
- EV 386D Geography of Latin America
- HI 379 History of Latin America
- SS 384 Government & Politics of Latin America

### ASSOCIATED ELECTIVES

- HI 374 Topics in European Political & Cultural History
- HI 481 Seminar in History
- HI 489 Advanced Individual Study in History
- LW 481 International Law
- LW 482 Seminar in Military Aspects of International Law
- PL 472 Topics in Sociology
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 472 Comparative Civil-Military Relations
- SS 476 International Affairs: Theory & Application
- SS 484 International Economics & Economic Development
- SS 485 Problems of Developing Nations
- SS 486 Political & Cultural Anthropology

Any English elective in the 300 or 400 series except EN 391 and EN 392.

## RUSSIAN LANGUAGE FIELD (HR)

### Requirement:

Four LR electives and two electives from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets finishing the standard course in Russian (LR 201-202) and advanced course (LR 151-152) will require LR 381 and LR 382 before taking a more advanced course.

### Suggested Course Sequence:

LR 381, LR 382, LR 473 and/or LR 475 (may be taken concurrently), LR 474 and/or LR 476 (may be taken concurrently), LR 487, LR 488.

### PRINCIPAL ELECTIVES

- EV 386A Geography of USSR
- HI 371B The Origins of Soviet Russia
- LR 381 Advanced Russian Language
- LR 382 Russian Language Through Literature
- LR 473 Russian & Soviet Civilization
- LR 474 Soviet Russian Literature
- LR 475 Military & Scientific Readings in Russian
- LR 476 Soviet Expository Writings
- LR 487 Directed Studies in Russian
- LR 488 Directed Studies in Russian
- SS 475 Government & Politics of the USSR

### ASSOCIATED ELECTIVES

- HI 374 Topics in European Political & Cultural History
- HI 381 History of Revolutionary Warfare
- HI 481 Seminar in History
- HI 489 Advanced Individual Study in History
- LW 481 International Law
- LW 482 Seminar in Military Aspects of International Law



- PL 472 Topics in Sociology
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 472 Comparative Civil-Military Relations
- SS 476 International Affairs: Theory & Application
- SS 484 International Economics & Economic Development
- SS 485 Problems of Developing Nations
- SS 486 Political & Cultural Anthropology

Any English course in the 300 or 400 series except EN 391 and EN 392.

## SPANISH LANGUAGE FIELD (HS)

### Requirement:

Four LS electives and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets finishing the standard (LS 201-202), accelerated (LS 241) and advanced courses (LS 151-152) will normally require LS 371-372 before taking any 400 level course. LS 382 may be taken at any time but may not be used in lieu of either LS 371 or LS 372 for the purpose of enrolling in a 400 level course.

### Suggested Course Sequence:

- a. LS 371, LS 372, LS 471, LS 472, LS 487, LS 488.
- b. The 300 level courses may be reversed in order. The 400 level courses LS 471 and LS 472 may be taken in any order. However, both must be completed before the LS 487-488 series. Enrollment in LS 487-488 requires Department Head approval.



### PRINCIPAL ELECTIVES

- LS 371 Spanish Language Through Literature I
- LS 372 Spanish Language Through Literature II
- LS 382 Military Readings in Spanish
- LS 471 Survey of Spanish Literature
- LS 472 Survey of Spanish-American Literature
- LS 487 Directed Studies in Spanish
- LS 488 Directed Studies in Spanish
- HI 379 History of Latin America
- SS 384 Government & Politics of Latin America
- EV 386D Geography of Latin America

### ASSOCIATED ELECTIVES

- HI 374 Topics in European Political & Cultural History
- HI 381 History of Revolutionary Warfare
- HI 481 Seminar in History
- HI 489 Advanced Individual Study in History
- LW 481 International Law
- LW 482 Seminar in Military Aspects of International Law
- PL 472 Topics in Sociology
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 472 Comparative Civil-Military Relations
- SS 476 International Affairs: Theory & Application
- SS 484 International Economics & Economic Development
- SS 485 Problems of the Developing Nations
- SS 486 Political & Cultural Anthropology

Any English elective in the 300 or 400 series except EN 391 and EN 392.

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## NATIONAL SECURITY AND PUBLIC AFFAIRS AREA (N)

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### Requirement:

- a. Complete a two-term engineering sequence.
- b. Complete seven elective courses selected as follows:
  1. Six from the National Security and Public Affairs Area list or fulfillment of the Economics, Geography, History, International Affairs, Military Studies, Political Science, or Sociology/Psychology fields, and
  2. One from among the entire elective course offerings.

### Course Selection Guidelines:

- a. Course prerequisites, identified in the course descriptions, influence the sequencing of courses in some cases.
- b. Consult course descriptions for EV 386, EV 389, HI 371, HI 373, HI 374, HI 376, HI 384, and PL 472 for specific subject matter offered each term.

### ELECTIVES:

- |   |   |
|---|---|
| <p>EV 383 Astronomy</p> <p>EV 384 Regional Geography of the U.S.</p> <p>EV 385 Issues Confronting Man and His Environment</p> <p>EV 386 Regional Studies in Geography</p> <p>EV 388 Physical Geology</p> <p>EV 389 Topics in Geography</p> <p>EV 489 Advanced Individual Study in Environment (if Geography)</p> <p>HI 371 European National Histories</p> <p>HI 372 History of United States Foreign Relations in the Twentieth Century</p> <p>HI 373 Topics in United States History</p> <p>HI 374 Topics in European Political and Cultural History</p> <p>HI 375 History of the Far East</p> <p>HI 376 American Social History</p> <p>HI 377 History of Religions</p> <p>HI 378 History of Western Ethics</p> <p>HI 379 History of Latin America</p> <p>HI 381 History of Revolutionary Warfare</p> <p>HI 383 War in the Twentieth Century</p> <p>HI 384 Topics in Military History</p> | <p>HI 385 War and Its Philosophers</p> <p>HI 398 Colloquium in History</p> <p>HI 481 Seminar in History</p> <p>HI 482 Visiting Professor's Course: The American Military Experience</p> <p>HI 489 Advanced Individual Study in History</p> <p>LW 481 International Law</p> <p>LW 482 Seminar in Military Aspects of International Law</p> <p>LW 488 Business and Procurement Law</p> <p>PL 472 Topics in Sociology</p> <p>PL 481 Managerial Psychology</p> <p>PL 483 Social Psychology</p> <p>PL 487 Psychology II (Personality and Adjustment)</p> <p>PL 489 Advanced Individual Study in the Behavioral Sciences</p> <p>SS 372 Public Policy and Administration</p> <p>SS 373 Quantitative Analysis in the Social Sciences</p> <p>SS 383 Middle Eastern Studies</p> <p>SS 384 Governments and Policies of Latin America</p> <p>SS 385 Comparative Modern Economic Systems</p> <p>SS 386 Political Philosophy</p> <p>SS 387 Seminar in Public Policy</p> <p>SS 388 Macroeconomics: Theory and Practice</p> <p>SS 389 Managerial Economics</p> <p>SS 471 Politics and Government of China</p> <p>SS 472 Comparative Civil-Military Relations</p> <p>SS 473 Issues in American Foreign Policy</p> <p>SS 475 Government and Politics of the Soviet Union</p> <p>SS 476 International Affairs: Theory and Application</p> <p>SS 482 Microeconomics: Theory and Application</p> <p>SS 483 National Security Seminar</p> <p>SS 484 International Economics and Economic Development</p> <p>SS 485 Problems of Developing Nations</p> <p>SS 486 Political and Cultural Anthropology</p> <p>SS 487 Public Policy Decision-Making &amp; Debate</p> <p>SS 489 Advanced Individual Study in the Social Sciences</p> |
|---|---|

## ECONOMICS FIELD (NE)

### Requirement:

Four principal electives to include SS 482 and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets in the Economic Field are encouraged to select Social Sciences Sequence 2.

### PRINCIPAL ELECTIVES

- SS 373 Quantitative Analysis in the Social Sciences
- SS 385 Comparative Modern Economic Systems
- SS 388 Macroeconomics: Theory & Practice
- SS 389 Managerial Economics
- SS 482 Microeconomics: Theory & Application
- SS 484 International Economics & Economic Development
- SS 489 Advanced Individual Study in the Social Sciences

### ASSOCIATED ELECTIVES

- EF 382 Computer Applications with FORTRAN
- EN 483 Seminar American Studies
- EV 385 Issues Confronting Man & His Environment
- ER 381 Foundations of Management
- ER 383 Quantitative Methods for Design Making
- HI 3731 The U.S. in The Twentieth Century
- HI 374K European Revolution, 1789-1945
- LW 488 Business & Procurement Law
- MA 471 Linear Algebra
- MA 473 Intermediate Probability & Statistical Applications
- MA 481 Linear Programming

- ER 385 Quantitative Methods for Operations Management
- ER 487 Operations Research
- PL 472 Topics in Sociology
- PL 481 Managerial Psychology
- PL 483 Social Psychology
- PL 487 Psychology II (Personality and Adjustment)
- SS 372 Public Policy & Administration
- SS 387 Seminar in Public Policy
- SS 483 National Security Seminar
- SS 485 Problems of Developing Nations
- SS 486 Political & Cultural Anthropology
- SS 487 Public Decision Making & Debate



## GEOGRAPHY FIELD (NG)

### Requirement:

Four principal electives to include at least one topic from EV 386 or EV 384, and two courses from the combined lists of principal and associated electives.

### Suggested Course Sequences:

Course prerequisites provide information on sequencing of courses. Cadets desiring further assistance should report to the Office of the Dean or to the department(s) concerned.



### PRINCIPAL ELECTIVES

- EV 384 Regional Geography of the United States
- EV 385 Issues Confronting Man and His Environment
- EV 386 Regional Studies in Geography
- EV 387 Cartography
- EV 388 Physical Geology
- EV 389 Topics in Geography
- EV 489 Advanced Individual Study in Environment
- PL 472A Introduction to Sociology
- SS 486 Political and Cultural Anthropology

### ASSOCIATED ELECTIVES

- CE 381 Soil Mechanics
- CE 382 Environmental Systems Engineering
- EV 383 Astronomy
- HI 371B History of Russia
- HI 373I The United States in the Twentieth Century
- HI 374J Imperialism
- HI 375 History of the Far East
- HI 376A A Nation of Sections: The West in United States History
- HI 379 History of Latin America
- PH 385A Physics of the Energy Crisis
- PH 385F Atmospheric Physics
- LC ----- Elective Language Course
- LP ----- Elective Language Course
- LS ----- Elective Language Course
- LR ----- Elective Language Course
- SS 383 Middle Eastern Studies
- SS 384 Government & Politics of Latin America
- SS 385 Comparative Economic Systems
- SS 387 Seminar in Public Policy
- SS 471 Major Political Systems of East Asia
- SS 475 Government & Politics of the Soviet Union
- SS 485 Problems of Developing Nations

## HISTORY FIELD (NH)

### Requirement:

- a. Four principal electives to include HI 398, and
- b. At least two courses selected from the combined lists of principal and associated electives.

### Course Selection Guidelines:

a. The Department of History encourages those cadets who wish to concentrate in military history to enroll in HI 401-402 in the Second Class year by deferring two of that year's electives to the First Class year.

b. Cadets should consult the course descriptions for HI 371—, HI 373—, HI 374—, HI 376—, and HI 384— for the specific subjects covered each year.

c. The Department of History encourages cadets to select history courses that will provide depth of historical knowledge beyond that required in the core courses. Cadets may achieve this depth by selecting courses in American, European, Military, or World History. Alternatively, they may strive for understanding in depth of a specific historical period, such as the 19th or 20th century.

### PRINCIPAL ELECTIVES

- HI 371 European National Histories
- HI 372 History of U.S. Foreign Relations in the Twentieth Century
- HI 373 Topics in United States History
- HI 374 Topics in European Political & Cultural History
- HI 375 History of the Far East
- HI 376 American Social History
- HI 377 History of Religions
- HI 378 History of Western Ethics
- HI 379 History of Latin America
- HI 381 History of Revolutionary Warfare
- HI 383 War in the Twentieth Century
- HI 384 Topics in Military History

- HI 385 War & Its Philosophers
- HI 398 Colloquium in History
- HI 481 Seminar in History
- HI 482 Visiting Professor's Course: The American Military Experience
- HI 489 Advanced Individual Study in History

### ASSOCIATED ELECTIVES

- EN 372 British Literature, 1660-1900
- EN 373 19th Century American Literature
- EN 385 Background to American Studies
- EN 478L Makers of the Modern Mind: Freud, Marx, and Einstein
- EN 483C Seminar in American Studies: Impact of Science and Technology on American Culture
- EV 384 Regional Geography of the United States
- EV 386 Regional Studies in Geography
- L— ——— Any Foreign Language elective course using historical materials
- LW 481 International Law
- LW 482 Seminar in Military Aspects of International Law
- PL 472A Introduction to Sociology
- PL 483 Social Psychology
- SS 372 Public Policy and Administration
- SS 383 Middle Eastern Studies
- SS 384 Government and Politics of Latin America
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 471 Politics and Government of China
- SS 472 Comparative Civil-Military Relations
- SS 473 Issues in American Foreign Policy
- SS 476 International Affairs: Theory and Application
- SS 483 National Security Seminar
- SS 486 Political and Cultural Anthropology

## INTERNATIONAL AFFAIRS FIELD (NI)

### Requirement:

Four principal electives to include SS 473 and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

a. Cadets in the International Affairs Field are encouraged to select Social Sciences sequence 1B.

b. Selection is limited to two of the area studies: SS 383, SS 384, SS 471, SS 475.

### PRINCIPAL ELECTIVES

- HI 372 History of U.S. Foreign Relations in the Twentieth Century
- LW 481 International Law
- SS 373 Quantitative Analysis in the Social Sciences
- SS 383 Middle Eastern Studies
- SS 384 Governments and Politics of Latin America
- SS 471 Politics and Government of China
- SS 473 Issues in American Foreign Policy
- SS 475 Government and Politics of the USSR
- SS 476 International Affairs: Theory and Application
- SS 483 National Security Seminar
- SS 484 International Economics and Economic Development
- SS 485 Problems of Developing Nations
- SS 489 Advanced Individual Study in the Social Sciences

### ASSOCIATED ELECTIVES

- EV 386 Regional Studies in Geography
- HI 371B The Origins of Soviet Russia
- HI 371C Military and Diplomatic Origins of The European State
- HI 373I The U.S. in The Twentieth Century

- HI 373K History of the Cold War
- HI 374J Imperialism
- HI 375 History of the Far East
- HI 379 History of Latin America
- HI 381 History of Revolutionary Warfare
- HI 383 War in the Twentieth Century
- HI 384C The Development of Air Power
- HI 384G Strategy, Soldiers, and Statesmen
- HI 385 War and Its Philosophers
- HI 481 Seminar in History
- HI 489 Advanced Individual Study in History
- LW 482 Seminar in Military Aspects of International Law
- PL 483 Social Psychology
- SS 372 Public Policy and Administration
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 472 Comparative Civil-Military Relations
- SS 486 Political and Cultural Anthropology
- SS 487 Public Policy Decision Making and Debate
- L ——— Elective Language Course in 300 or 400 series



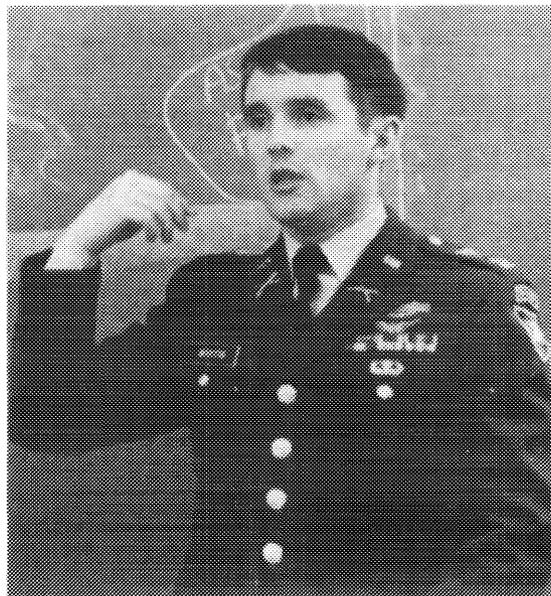
## MILITARY STUDIES FIELD (NM)

### Requirement:

- a. Four principal electives to include either HI 383 or HI 385, and
- b. At least two courses selected from the combined lists of principal and associated electives.

### Course Selection Guidelines:

- a. Cadets in the Military Studies Field are encouraged to enroll in HI 401-402 during their Second Class year.
- b. Cadets are encouraged to take HI 383 before taking HI 402 unless they are enrolled in HI 402 during their Second Class year.
- c. Cadets should consult the course description for HI 371—, HI 373—, HI 374—, HI 384—, and HI 398 for specific subjects offered each year.
- d. HI 381 and SS 485 are complementary courses. Cadets who elect one should consider taking both.



### PRINCIPAL ELECTIVES

- EV 389D Military Geography
- HI 381 History of Revolutionary Warfare
- HI 383 War in the Twentieth Century
- HI 384 Topics in Military History
- HI 385 War and Its Philosophers
- HI 398 Colloquium in History
- HI 481 Seminar in History
- HI 482 Visiting Professor's Course: The American Military Experience
- HI 489 Advanced Individual Study in History
- PL 472C Sociology of Military Institutions
- SS 483 National Security Seminar

### ASSOCIATED ELECTIVES

- EV 386 Regional Studies in Geography
- HI 371 European National Histories
- HI 372 History of U.S. Foreign Relations
- HI 373 Topics in United States History (on militarily related topic)

- HI 374 Topics in European Political and Cultural History (on militarily related topic)
- HI 378 History of Western Ethics
- L— ——— Any Foreign Language elective course in military readings
- LW 481 International Law
- LW 482 Seminar in Military Aspects of International Law
- PL 481 Managerial Psychology
- PL 483 Social Psychology
- PL 487 Psychology II (Personality and Adjustment)
- SS 372 Public Policy and Administration
- SS 472 Comparative Civil-Military Relations
- SS 473 Issues in American Foreign Policy
- SS 482 Microeconomics: Theory and Application
- SS 485 Problems of Developing Nations

## POLITICAL SCIENCE FIELD (NP)



### Requirement:

Four principal electives to include SS 386 and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

- a. Cadets in the Political Science Field are encouraged to select Social Sciences Sequence 1B.
- b. SS 372 should be taken prior to SS 387.
- c. Selection is limited to two of the area studies: SS 383, SS 384, SS 471, SS 475.

### PRINCIPAL ELECTIVES

- PL 472 Topics in Sociology
- SS 372 Public Policy & Administration
- SS 373 Quantitative Analysis in the Social Sciences
- SS 383 Middle Eastern Studies
- SS 384 Governments & Politics of Latin America
- SS 385 Comparative Modern Economic Systems
- SS 386 Political Philosophy
- SS 387 Seminar in Public Policy
- SS 471 Politics & Government of China
- SS 472 Comparative Civil-Military Relations

- SS 473 Issues in American Foreign Policy
- SS 475 Government & Politics of the USSR
- SS 483 National Security Seminar
- SS 485 Problems of Developing Nations
- SS 486 Political & Cultural Anthropology
- SS 489 Advanced Individual Study in the Social Sciences

### ASSOCIATED ELECTIVES

- EN 483 Seminar in American Studies
- EV 385 Issues Confronting Man & His Environment
- HI 371B The Origins of Soviet Russia
- HI 372 History of U.S. Foreign Relations
- HI 373I,J Topics in United States History
- HI 374I The Cultural Roots of Socialism, Nationalism, and Fascism
- HI 375 History of the Far East
- HI 376 American Social History
- HI 378 History of Western Ethics
- HI 381 History of Revolutionary Warfare
- HI 383 War in the Twentieth Century
- HI 384G Strategy, Soldiers, & Statesmen
- HI 385 War & Its Philosophers
- HI 481 Seminar in History: Small Wars
- HI 489 Advanced Individual Study in History
- LW 481 International Law
- PL 483 Social Psychology
- PL 487 Psychology II (Personality & Adjustment)
- SS 388 Macroeconomics: Theory & Practice
- SS 476 International Affairs: Theory & Applications
- SS 482 Microeconomics: Theory & Applications
- SS 484 International Economics & Economic Development
- SS 487 Public Policy Decision Making & Debate

## SOCIOLOGY/PSYCHOLOGY FIELD (NS)

### Requirement:

Four principal electives to include either PL 472A or PL 483 and two courses from the combined lists of principal and associated electives.

### Course Selection Guidelines:

Cadets may consult suggested course sequences for desired track or select an appropriate distribution of courses from among listed principal and associated electives. Cadets desiring to take a research oriented PL 489 are encouraged to take MA 473 or EF 382 or SS 373 prior to enrollment.

### Suggested Course Sequences:

a. Sociology: PL 472A, PL 472B or PL 472C, PL 483, SS 486, EV 385 and either PL 489 or one course dealing with human social processes (EN 483C, EN 483G, HI 376B, HI 376C, LW 481, SS 372, SS 472).

b. Psychology: PL 483, PL 487, PL 481, PL 472B and either CH 485/CH 486 or PL 489 or two courses dealing with human thought process (EN 376, EN 478K, EN 478L, EN 481G, EN 483K, HI 378, SS 386).

### PRINCIPAL ELECTIVES

- PL 472 Topics in Sociology
- PL 481 Managerial Psychology
- PL 483 Social Psychology
- PL 487 Psychology II (Personality and Adjustment)
- PL 489 Advanced Study in the Behavioral Sciences
- SS 486 Political & Cultural Anthropology

### ASSOCIATED ELECTIVES

- CH 485 Human Biology
- CH 486 Human Biology
- EN 376 The Novel
- EN 478K Philosophy in America
- EN 478L Makers of the Modern Mind—Freud, Marx, Einstein
- EN 481G Existentialism in Literature
- EN 483C Seminar on American Studies: Impact of Science & Technology on American Culture
- EN 483G War & Morality
- EN 483K An Inalienable Right: The Pursuit of Happiness
- EV 385 Issues Confronting Man & His Environment
- HI 376B The Black in American History
- HI 376C Woman in America
- HI 378 History of Western Ethics
- LW 481 International Law
- SS 372 Public Policy and Administration
- SS 386 Political Philosophy
- SS 472 Civil-Military Relations in Comparative Perspective



## MANAGEMENT FIELD (GM)

### Requirement:

Five elective courses from the combined lists of principal and associated electives and one from the entire elective course offerings.

### Course Selection Guidelines:

A cadet who wishes to obtain the maximum benefit from the courses offered in this field should select six electives as follows:

- a. ER 381: Foundations of Management
- b. PL 481: Managerial Psychology
- c. ER 385: Quantitative Methods for Operations Management or  
ER 487: Operations Research
- d. SS 482: Microeconomics: Theory and Applications or  
SS 389: Managerial Economics
- e. Free choice from among the combined lists of principal and associated electives.
- f. Free choice from among all electives.

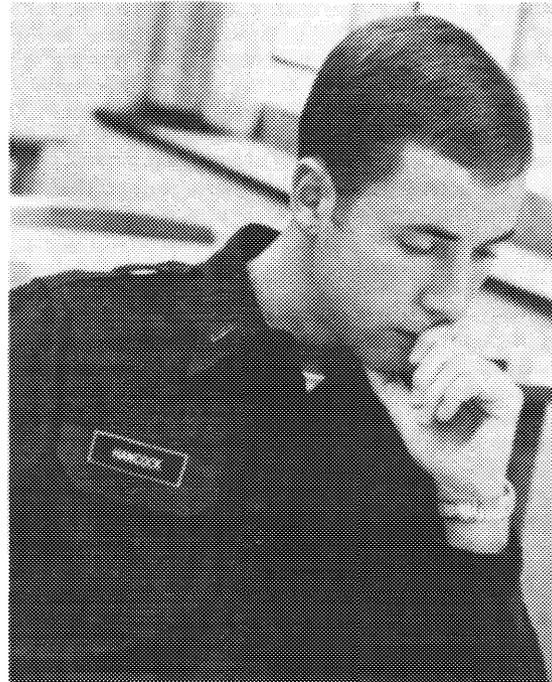
### PRINCIPAL ELECTIVES

- EF 382 Computer Applications with FORTRAN
- EF 383 Data Processing with COBOL
- ER 381 Foundations of Management (Formerly known as Scientific Management)
- ER 383 Quantitative Methods for Decision Making
- ER 385 Quantitative Methods for Operations Management
- ER 487 Operations Research
- MA 473 Intermediate Probability & Statistical Applications
- MA 481 Linear Programming
- PL 481 Managerial Psychology
- PL 483 Social Psychology
- SS 372 Public Policy & Administration

- SS 388 Macroeconomics: Theory & Practice
- SS 389 Managerial Economics
- SS 482 Microeconomics: Theory & Application

### ASSOCIATED ELECTIVES

- LW 488 Business & Procurement Law
- MA 471 Linear Algebra
- MA 486 Numerical Analysis with Digital Computation
- PL 472 Topics in Sociology
- PL 487 Psychology II (Personality & Adjustment)
- SS 373 Quantitative Analysis in Social Sciences
- SS 387 Seminar in Public Policy



## **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 55 newspapers, domestic and foreign, currently received. A library orientation starts the Plebe on the way as an independent researcher; expert librarians and written instructions sharpen the 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 Military 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 8,600 records, TV cassettes, 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, 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**

In the early 1800's, cadets at the U.S. Military Academy were the first American students to have their lessons illustrated by the blackboard, and the first students to make extensive use of "philosophical instruments" and other laboratory equipment. Today, the Instruction Support and Information Systems Division helps West Point retain its traditional position at the front of instructional technology. Chalk dust still flies but, today, the chalkboard is supplemented by slide and overhead projectors, learning resource carrels, and other products of modern technology which complement straight talk between individuals in the Military Academy's traditional small-class sections. In the past dozen or so years, cadets at West Point became some of the first students in the country to have access to interactive computing via timeshare; to computer graphics; to short, high-impact, color television programs made at their own institution for their own needs; and to high-impact, multi-image instruction.

All cadets learn the basics of computer use and have free access to the computer. One hundred and fifty remote, time-sharing terminals in cadet barracks, laboratories, classrooms, and academic department offices assist both cadet and faculty member. Graphics terminals allow pictorial output as well. By integrating the computer with television facilities, an instructor may present computer output on his classroom TV set, controlling it through a terminal in the

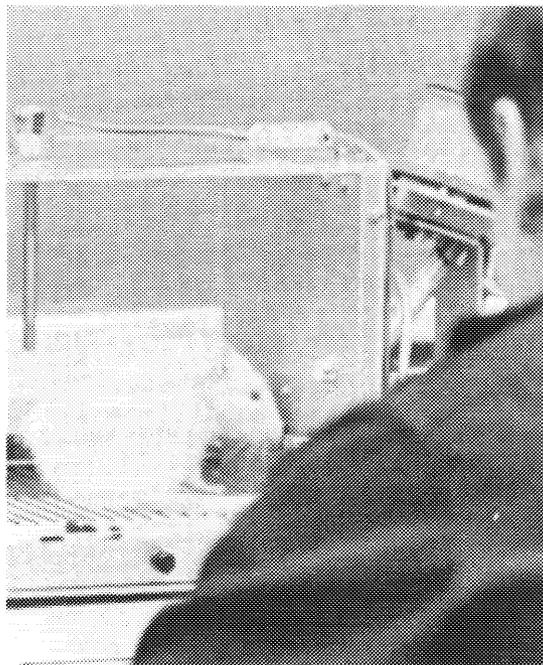
classroom. The Academic Computer Center also helps manage data for the academic program. Among other things, this allows cadets to retrieve information regarding their current academic standing at any time.

The Instructional Technology Center provides instructors virtually any teaching aid they desire to vary or liven classroom instruction. Television, multi-media, 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 two 12-channel closed-circuit TV systems, 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 Division also gives academic faculty technical assistance in applying computers, television, and other educational media to the academic program.

## Science Research Laboratory

Second and First Class cadets and Military Academy faculty conduct original research in the Science Research Laboratory. Ongoing research includes the molecular orbital calculation of defects in solids, electron spin resonance and optical absorption measurements of defects in solids, computer studies of the molecular structure of liquids, and analyses of the pollutants in rainwater and the streams and lakes on the USMA reservation. These projects are supported by grants from the Environmental Protection Agency, the U.S. Army Research Office, and the U.S. Air Force Geophysics Laboratory.



## **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 Military 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**

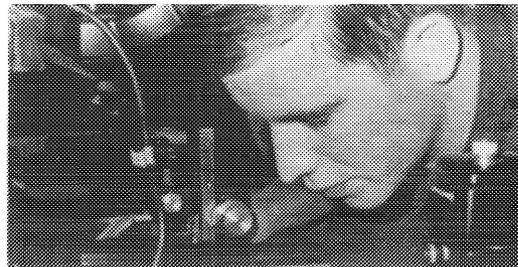
Fifty-five Military Academy graduates since 1923 have been awarded Rhodes Scholarships to attend Oxford while on active duty, making West Point the nation's fourth-ranking source of Rhodes Scholars.

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 scholars would "esteem the performance of public duties as their highest aim."

### **Olmsted Scholarships**

The George Olmsted Foundation annually awards two scholarships to Military Academy graduates for two years 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 Military Academy and in the Army figure into the Foundation's scholarship decisions.

### **National Science Foundation Fellowships**

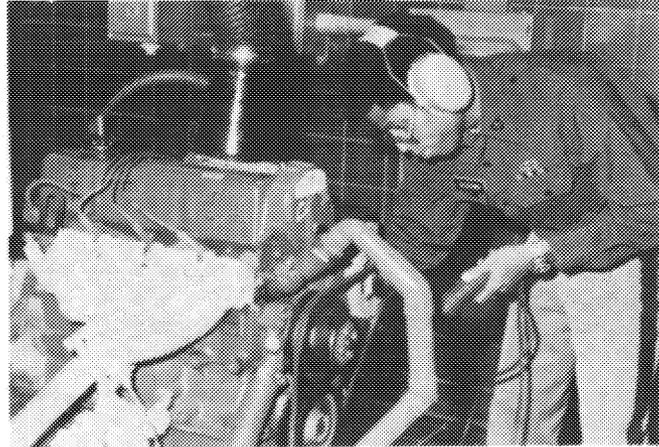
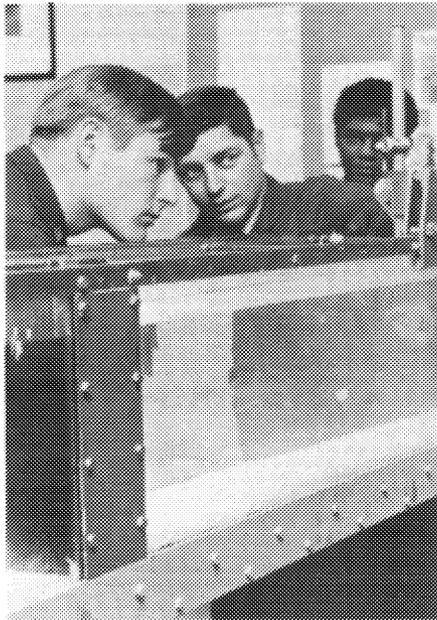
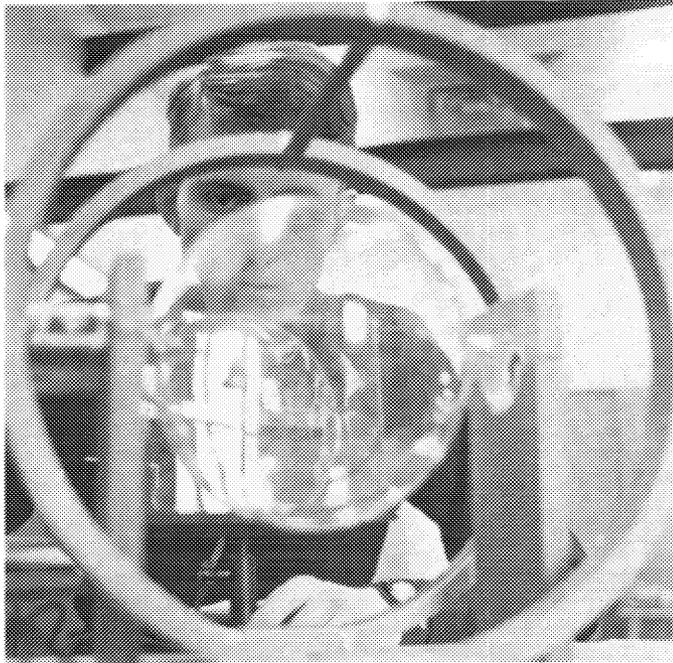
Twenty-seven cadets have been awarded National Science Foundation Graduate Fellowships since 1961; another 103 have received honorable mention. Outstanding cadets compete annually for the one- or two-year fellowships, which enable them to pursue graduate study at the university of their choice. Academic records and examinations administered by the Foundation form the basis for selection.

### **Hertz Foundation Fellowships**

Since 1973, eight 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 provides \$2500 for advanced study in a field related to aerospace engineering. Since the start of this program, Military Academy graduates have received two scholarships.





# V. MILITARY PROGRAM

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

The United States Military Academy's mission is to educate and train these select young men and women for service as commissioned officers in the United States Army. The first step in this training is discipline. The daily regimen of cadet life is designed to develop an appreciation for discipline and the need to maintain professional standards of the highest order. Self-discipline, sensitivity to the needs and feelings of others, and unselfish, thoughtful service to the nation are among the characteristics most highly prized within the cadet corps.

Cadets discover that at West Point they must draw upon something extra within themselves, budget their time wisely, and establish a clear sense of priorities. In the tradition of West Point, cadets become aware of and learn to fulfill their responsibilities to the soldiers they will eventually lead. The military training program is dedicated to strengthening the cadets' respect for the human dignity and rights of their fellow men.

## PROFESSIONAL EDUCATION AND TRAINING

Potential officer-leaders must master basic military concepts and skills, and know the role and employment of elements of the Army. They must understand and commit themselves to the demanding code of ethics of the American professional soldier.

Each cadet receives instruction in the fundamentals of small unit tactics and leadership through the study of military science and military leadership. Physical education and an extensive intramural program (discussed in Chapter VII) 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 prac-



**Commandant of Cadets**

John C. Bard, BG; B.S., USMA; B.A., Oxford; M.S.E., Michigan.

tical application of principles learned, while sustaining the high level of fitness demanded of the Army officer.

Classroom instruction and practical experience in the field are combined to develop in each cadet the basic leadership expertise critical to the profession of arms. A strong sense of duty and responsibility is especially valued. In addition to self-discipline, each cadet learns to exercise good judgment even when thinking and reacting under mental and physical stress and the demands of time. The cadet's high standards, manners, bearing, and appearance are but the visible signs of a deep pride in the profession. Like the Long Gray Line of graduates before them, West Point cadets share a sense of dedication to "Duty, Honor, Country."

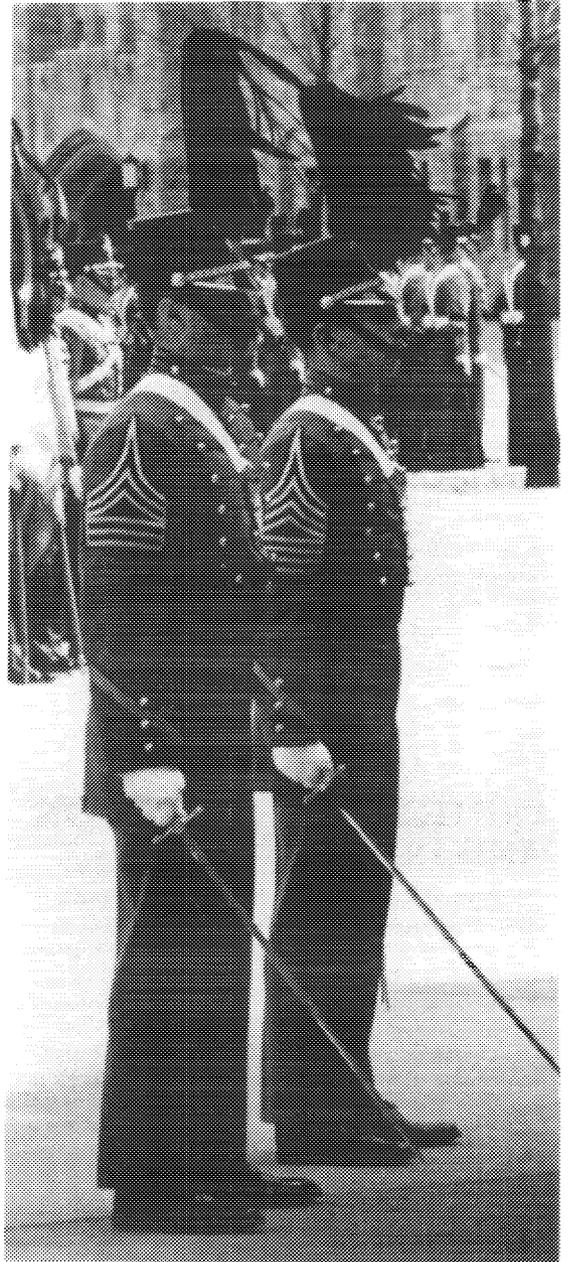
## FOURTH CLASS YEAR

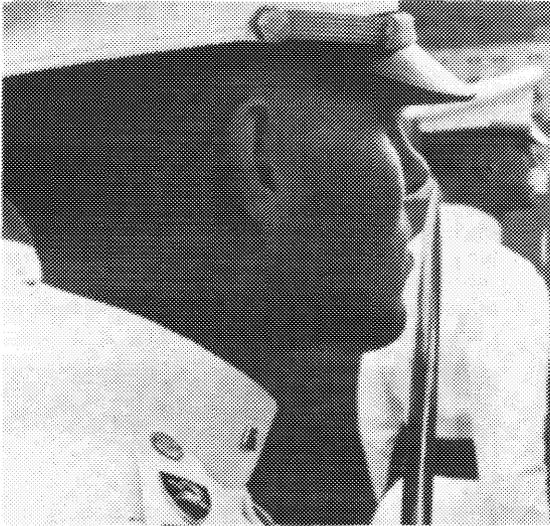
During their first day at West Point, the men and women of the incoming class make a rapid transition from civilians to cadets. They discover that they are expected to produce phenomenal results in a single afternoon, and they discover that they can do it. Beginning with this par-

ticularly challenging first day, new cadets start the intensely rigorous eight-week Cadet Basic Training program designed to teach them to be both soldiers and cadets. They learn to answer to "Mister" or "Miss" and to make every response with the traditional military courtesies. They learn to wear the cadet uniforms, to prepare their rooms for exacting inspections, and to participate in parades. Many hours of tough physical exercise prepare them for the long foot marches, land navigation exercises, rifle marksmanship, and tactical maneuvers that are part of their field training in the basic skills of the soldier. Like all new soldiers everywhere, they learn to respond quickly and accurately to their commanders under conditions of mental and physical stress. The primary purpose of the new cadets' experiences during these eight weeks was expressed very well by a cadet who stated that the training was ". . . the most significant event in my life. It has provided for me exactly what I came here for: discipline, personal pride and confidence, and a high sense of duty." Another reason for this type of training is that officers can perform with greater perspective and understanding if they themselves have at one time experienced the life of the Army 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.

At the end of this initial training period, in late August, new cadets are formally accepted into the Corps. These new members of the United States Corps of Cadets have a well-deserved sense of confidence and pride which comes with the knowledge that they have successfully completed a long physically and emotionally demanding period of their lives. During the full dress parade acceptance ceremony, each new member of the Fourth Class—traditionally called a "Plebe"—is assigned to one of the 36 companies which make up the Corps.

Military training during the rest of the Fourth Class year focuses on military heritage, map reading, small unit tactics, and physical education. June signals the end of Plebe year and recognition as upperclass cadets.





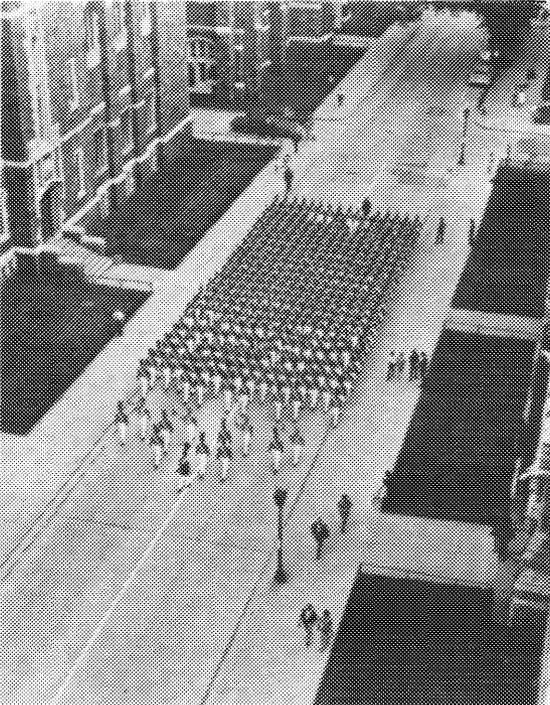
## THIRD CLASS YEAR

After June vacation, Third Class cadets report to West Point's Camp Buckner for eight weeks of military field training. Infantry patrolling, artillery firing, rifle marksmanship, rappelling, hand-to-hand combat, mine warfare, demolitions, field communications, and wilderness survival make up most of this training experience. One week is spent at Fort Knox, Kentucky, for familiarization with tank, cavalry, and air defense operations. Emphasis is on small unit ground combat operations which allows Third Class cadets to apply principles already learned in military instruction.

The training during these eight weeks is designed to be physically and mentally demanding and to simulate as nearly as possible actual combat conditions. The cadets are challenged to give everything they have and then challenged to give more.

Members of the Third Class emerge from the summer more self-confident, having experienced some of the environment, the skills, and the challenges of the small combat units around which the Army is built. 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 Third Class 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 Class 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; handling a helicopter in pilot training; or practicing survival techniques at the Air Force Academy in Colorado. Duty with an actual platoon of United States Army soldiers comes next in what is called Cadet Troop Leader Training. Members of the Second Class may find themselves in Ger-

many, Alaska, Panama, Hawaii, or the continental United States serving with a regular Army unit to gain practical experience as officers in the Regular Army. Many cadets find that this is their most valuable military experience.

The summer ends with many cadets feeling they are ready to take their places in the Regular Army. However, still more training is required before they are in fact prepared to assume the responsibilities of commissioned officers in the United States Army. Military training during the rest of the Second Class year includes courses in physical education, 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 latitude, and much greater responsibility. During the summer before starting this final academic year, members of the First Class lead much of the training of the Third Class cadets at Camp Buckner and the new cadets during Cadet Basic Training. With the start of academics, First Class cadets are selected to fill leadership positions from commander of the 4,000-member Corps to leaders of forty-member platoons, and staff positions that involve management of all the activities of the Corps of Cadets. The opportunities for planning, organizing, and leading are almost limitless.

Final preparation for the First Class 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.

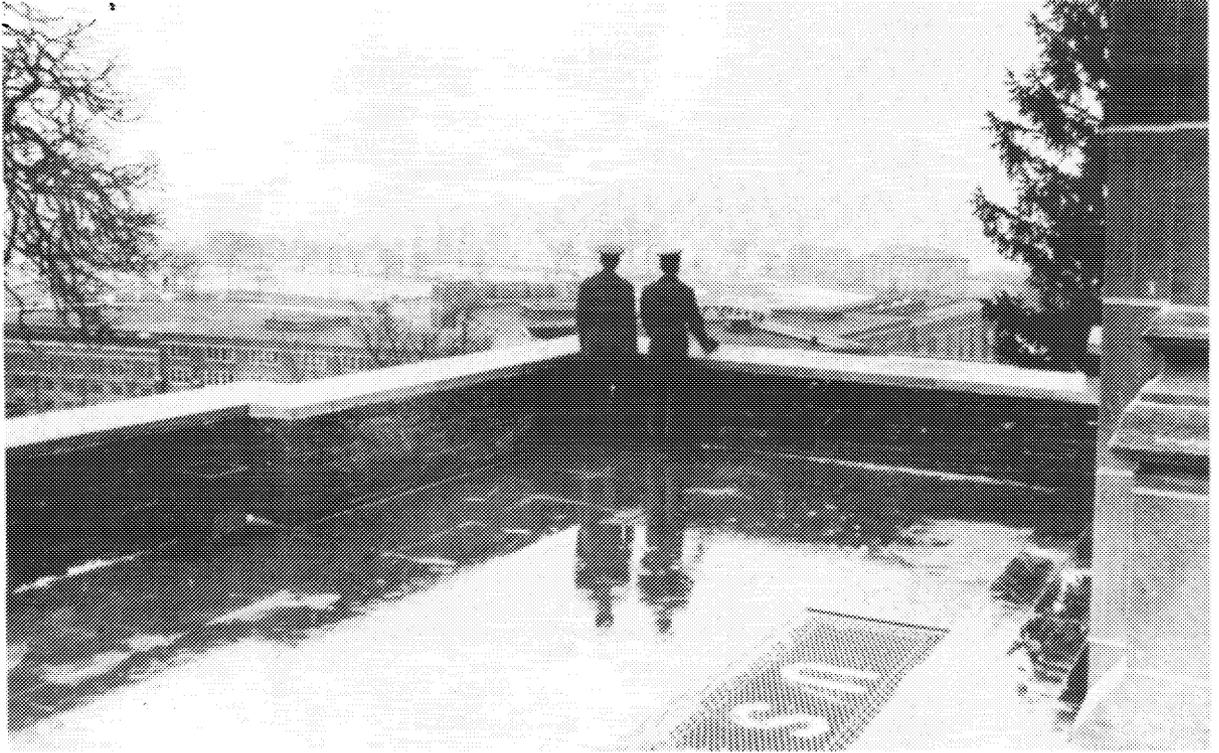
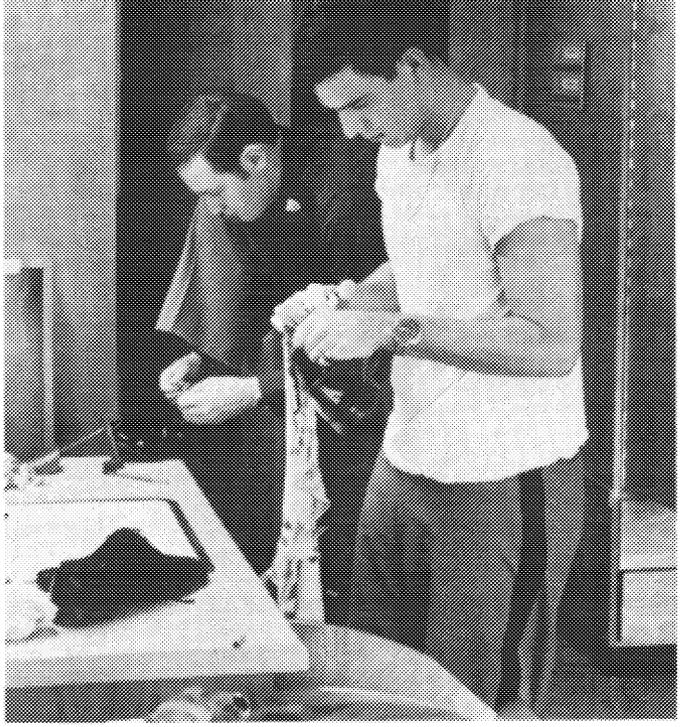
## ORGANIZATION

The Department of Tactics, under the direct supervision of 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 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 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 each company. 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.







Guard duty at Eisenhower Hall

# VI. COURSES OF INSTRUCTION\*

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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 and Physical Education are guided by the Commandant of Cadets.

## DEPARTMENT OF BEHAVIORAL SCIENCE AND LEADERSHIP



*Director*

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

The Department of Behavioral Science and Leadership provides a program of instruction in the Behavioral Sciences and Personnel Management emphasizing the study of organizational leadership. 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 Leadership course.

\*NOTE: Course syllabi are subject to change as a result of curricular change or other unforeseen events.

## 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, motivation, personality and adjustment, 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 by applying the theories and models of the behavioral sciences and personnel management to leadership as it functions in a military environment.

*2.5 Credit Hours*

### PL 451 Advanced Seminar in Military Leadership

*Both Terms — Prerequisite: Selection by instructor*

Provides an opportunity for selected students to undertake in-depth analyses of the concepts of leadership in a military environment and their application to current military problems. Classes are conducted in seminar fashion with emphasis on experiential learning and student participation.

*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*

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*

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 472C Sociology of Military Institutions**

*Second Term*

Provides an understanding of the military as an institution, analyzing selected groups within the military from a sociological perspective. Contemporary social problems related to the military and civil-military relations are examined.

*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*

Promotes understanding of how individual behavior is influenced by interaction with other people. Topics include social perception, social motivation, power, and small group functioning.

*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*

**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 COURSES**

**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.

*3.5 Credit Hours/Semester*

**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.

*3.5 Credit Hours/Semester*

**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.

*3.5 Credit Hours/Semester*

### **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 include an independent project.

*3.5 Credit Hours/Semester*

### **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 elements of cell morphology and functions, human anatomy, and physiology. A small number of laboratory exercises are included.

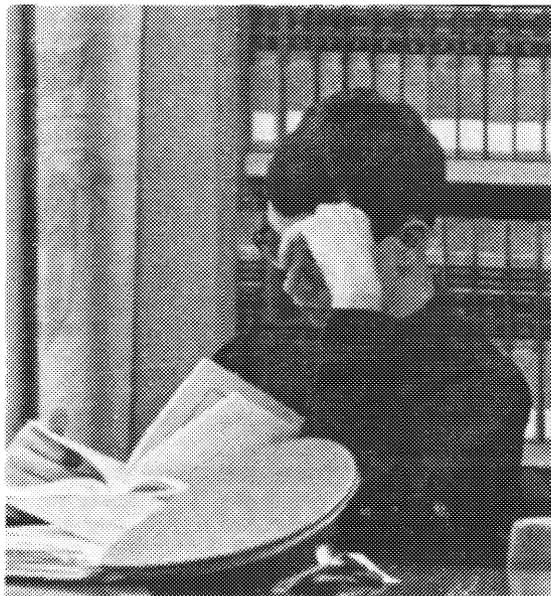
*2.5 Credit Hours/Semester*

### **CH 489 Advanced Individual Study in Chemistry**

*Offered Both Terms — Prerequisite: Approval of the Head of the Department*

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/Semester*



## **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 and techniques to communicate ideas and specifications is emphasized. Orthographic and pictorial drawing and sketching, dimensions, sections and conventional practices are studied.

*2.0 Credit Hours*

#### **EF 102 Engineering Fundamentals**

*First and Second Terms — Prerequisite: None*

The course includes the study of computer programming in the FORTRAN IV language and an introduction to basic digital computer operations. Use of the time-share system is stressed.

*2.0 Credit Hours*

#### **EV 103 Earth Science**

*First Term — Prerequisite: None*

An introductory study of the solar system and its planetary bodies, the Earth, its natural systems and those

physical processes acting upon it, and modifications of the Earth's biosphere by nature and by man. Laboratory periods are included.

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.*

The course includes a study of descriptive geometry, architectural drawing and the design process. The use of graphics in analysis, communication and design is emphasized.

2.0 Credit Hours

### **EF 154 Advanced Engineering Fundamentals**

*Second Term — Prerequisite: Demonstrated ability on placement examination.*

The application of FORTRAN IV at a more advanced level than in the standard course is offered, and an introduction to computer graphics is included. Use of the time-share system is stressed.

2.0 Credit Hours

### **EV 153 Advanced Earth Science**

*First Term — Prerequisite: Placement by examination and interview. Offered in lieu of EV 103.*

The course enlarges upon the subject matter of EV 103 in that coverage is accelerated and in greater depth with additional studies in astronomy, geotectonics and environmental problems. Laboratory periods are included.

2.5 Credit Hours

### **EV 152 Advanced Environment**

*Second Term — Prerequisite: Placement by examination and performance in EV 103 or 153. Offered in lieu of EV 102.*

An expanded treatment of geographic concepts, realities and methods of analysis, the course examines the origins, diffusion, and complex spatial organization and interactions of major world culture regions.

2.5 Credit Hours

### **EF 382 Computer Applications with FORTRAN**

*First and Second Terms — Prerequisites: EF 102, EF 154 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 154*

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: None*

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 486 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 383 Astronomy**

*Second Term — Prerequisite: EV 101 or EV 151*

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 or EV 152*

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 103 or EV 153; EV 102 or EV 152*

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 386 Regional Studies in Geography**

*Either Term — Prerequisite: EV 102 or EV 152*

In-depth study of selected world culture regions from a geographic perspective. Regions customarily offered in sequential semesters are: (A) — USSR; (B) — People's Republic of China; (C) — Africa and the Middle East; (D) — Latin America.

2.5 Credit Hours

**EV 387 Cartography**

*Second Term — Prerequisite: EF 101 or EF 153; EF 102 or EF 154; 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 — Prerequisite: EV 103 or EV 153*

A systematic treatment of principles and methods of physical geology with emphasis on plate dynamics, earth materials, 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

**EV 389 Topics in Geography**

*Either Term — Prerequisite: EV 103 or EV 153; EV 102 or EV 152*

In-depth study of selected geographic topics focusing on natural processes and spatial aspects of man's physical and cultural environment. Topics offered in sequential semesters are: (A) — Remote Sensing of the Environment; (B) — Applied Climatology; (C) — Geomorphology; (D) — Military Geography.

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 207*

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 403-4 Electronic Engineering

*Prerequisite: EE 304*

Two course sequence on semiconductor theory, transistor fundamentals, integrated circuits, digital and

analog electronics, and introduction of communication system applications. Sequence is laboratory oriented emphasizing design, construction, and testing of practical circuits.

*7 Credit Hours*

### ELECTIVE COURSES

#### EE 381 Signals and Systems

*Prerequisite: EE 301*

In-depth study of linear systems theory of continuous and discrete signals to include state space representation; convolution; Laplace, Fourier, and Z transform techniques.

*2.5 Credit Hours*

#### 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: PH 202 and MA 207*

In-depth study of static and time-varying electromagnetic fields. Applications include transmission lines, waveguides, antennas, and wave propagation in various media. Principles are emphasized through laboratory exercises using microwave equipment.

*3.5 Credit Hours*

#### EE 385 Digital Computer Systems

*Prerequisite: EE 304 or Department Permission*

Includes block diagram discussion of computers, microprocessors, gates, flipflops, memory, control, arithmetic, and input/output units. Current and future trends are discussed. Laboratories using micro processor and computer center are emphasized.

*2.5 Credit Hours*

#### EE 471 Automatic Control Systems

*Prerequisite: EE 304*

Analysis and design of linear feedback systems using root locus, Bode Diagram, and Nyquist plots. Stability and system performance are investigated in the laboratory using analog computers and electromechanical servo-trainers.

*2.5 Credit Hours*

**EE 477 Communication Systems**

*Prerequisites: EE 304 and MA 207 or equivalent*

Analysis of analog and discrete communication system techniques to include random signal analysis, transmission of information, modulation, multiplexing, and noise. Emphasis on general systems approach in specifying communication problems.

2.5 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 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 circuit 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 for solids, semiconductor models, and p-n junctions. Theory is applied to analyze diodes, transistors, and other electronic devices. Laboratories study basic semiconductor properties.

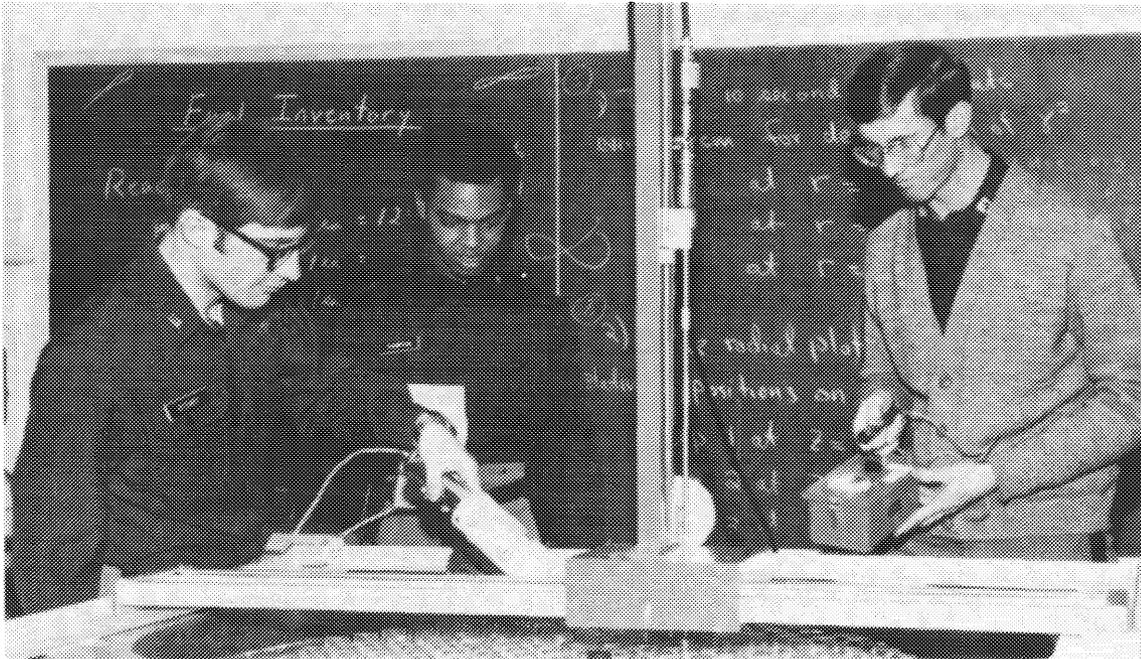
2.5 Credit Hours

**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

#### **ER 401 General Engineering (Mechanical Systems)**

*Either Term*

Principles of engineering design. Interior, exterior, and terminal ballistics; propulsion, recoil, and control mechanisms of weapon systems, modeling and analog techniques.

3.5 Credit Hours

#### **ER 402 General Engineering (Structural Systems)**

*Second Term — Prerequisite: CE 401*

Determination of structural form and proportions emphasizing systems engineering concepts including modeling and optimization; design of steel tension members, columns, and beams; a comprehensive design problem requiring applications of the principles of analysis, synthesis, and design.

3.5 Credit Hours

#### **ER 403 General Engineering (Engineering Decision Methods)**

*Either Term — Prerequisite: MA 207 or equivalent*

Decision analysis, optimization techniques, probabilistic models, reliability, and other decision making techniques; emphasis on placing students in realistic situations which require quantitative analytical methods of solution.

3.5 Credit Hours

#### **GE 401 General Engineering**

*Either Term*

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**

*Either Term*

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 of material included in CE 401. 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; PH 303 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 Weapon 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

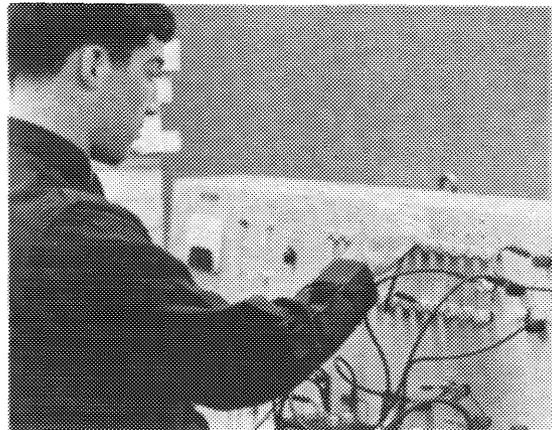
## **ELECTIVE COURSES**

### **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.

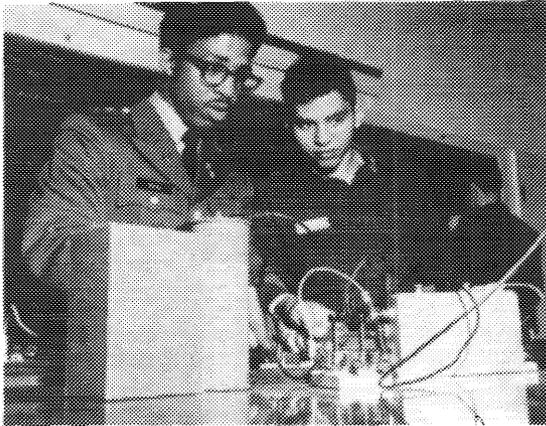
2.5 Credit Hours

### **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. Introduces advanced techniques such as finite differences, displacement and direct element matrix methods, and plastic analysis as applied to indeterminate structures. Independent analysis and design problems emphasize practical applications of the concepts studied.

2.5 Credit Hours



**ER 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

**ER 381 Foundations of 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

**ER 383 Quantitative Methods for 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 and modelling 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

**ER 385 Quantitative Methods for Operations Management**

*Either Term — Prerequisite: None*

Quantitative methods of management that aid decision making and improve managerial abilities; deterministic and statistical techniques, to include 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).*

Analysis and design of the helicopter as an integrated system of components to include air frame, rotors, power production and transmission elements, flight controls, avionics, and crew support subsystems. Operating characteristics associated with these components are determined such that overall system performance is optimized.

2.5 Credit Hours

**ER 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; Dynamic Programming, Probability Theory, Inventory Theory, Waiting-Line Analysis, Models of Combat, and Markovian Models.

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, and evaluation of ideas. Readings provide basis for practical analysis, discussion, and theme-writing. Emphasizes writing effective expository 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 introduces major literary forms.

*2.5 Credit Hours*

#### **EN 201 Comparative Literature**

*Prerequisite: None*

Introduces major literary figures of Western civilization to provide awareness of enduring imaginative literature. Writing skills and effective speaking emphasized. Among authors considered are Homer, Dante, Chaucer, Shakespeare, Cervantes, Ibsen, Tolstoy.

*2.5 Credit Hours*

#### **EN 402 Philosophic Issues**

*Prerequisite: None*

Seeks to understand differing viewpoints on significant philosophic issues through reading of imaginative literature, expository essays, and philosophic works. Emphasizes competence in oral and written treatment of abstract subjects.

*2.5 Credit Hours*

### ADVANCED COURSES

#### **EN 151 Advanced Composition; Interdisciplinary Study of American Studies**

*First Term — Prerequisite: Selection by Department*

Through interdisciplinary study, concentrates upon a significant American issue as a means to develop and refine skills in reading, research, oral expression, and writing.

*2.5 Credit Hours*

#### **EN 152 Advanced Composition; American Literature and Thought**

*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 371 British Literature to 1660**

*First Term — Prerequisite: Credit for EN 201*

Surveys genesis and development of prose, poetry, and drama in English to 1660.

*2.5 Credit Hours*

#### **EN 372 British Literature, 1660-1900**

*Second Term — Prerequisite: Credit for 201*

A companion course to EN 371. Examines British prose, poetry, and drama from 1660-1900.

*2.5 Credit Hours*

#### **EN 373 19th-Century American Literature**

*Prerequisite: Credit for EN 201*

Treats major phases of 19th-Century American Literature.

*2.5 Credit Hours*

#### **EN 374 British and American Literature, 1900-1950**

*Second Term — Prerequisite: Credit for EN 201*

Devoted to the major writers of British and American Literature of the first half of the 20th Century.

*2.5 Credit Hours*

**EN 375 Contemporary Literature, 1950-Present**

*First Term — Prerequisite: Credit for EN 201*

Examines fiction, poetry, and drama of major British, American, and Continental writers of the last 25 years.

2.5 Credit Hours

**EN 376 The Novel**

*First Term — Prerequisite: Credit for EN 201*

In AY 1977-78, the course will address the philosophical novel.

2.5 Credit Hours

**EN 377 Shakespeare Survey**

*Second Term — Prerequisite: Credit for EN 201*

Provides opportunity for concentrated study of Shakespeare's works. Emphasis on appreciation and critical understanding.

2.5 Credit Hours

**EN 385 Background to American Studies**

*First Term — Prerequisite: None*

Examines genesis and development of American religious, political, social, and literary thought as appended in the cultural milieu of Benjamin Franklin and Cotton Mather.

2.5 Credit Hours

**EN 391 Introduction to Fine Arts**

*First Term — 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.

2 Credit Hours

**EN 392 Introduction to Music**

*Second Term — 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.

2 Credit Hours

**EN 476A Seminar in Mark Twain and His Contemporaries**

*Second Term — Prerequisite: One 300-level English elective, preferably EN 373*

Provides opportunity for concentrated study of Twain and selected major American contemporaries. Emphasis on appreciation and critical understanding.

2.5 Credit Hours

**EN 476C Seminar in Frost**

*First Term — Prerequisite: One 300-level English Elective, preferably EN 373*

A concentrated critical study of the poetry and prose of Robert Frost.

2.5 Credit Hours

**EN 478H Special Topics in Language and Literature: Science Fiction from Swift to Heinlein**

*Second Term — Prerequisite: Credit for EN 201*

A detailed look at the development of the genre, to include topics, problems, and the place of science fiction in the literary tradition.

2.5 Credit Hours

**EN 478K Special Topics in Language and Literature: Philosophy in America**

*First Term — Prerequisite: Credit for EN 201*

This course will trace the various strains of American philosophical thought that culminated in the distinctively American position, pragmatism.

2.5 Credit Hours

**EN 478L Special Topics in Language and Literature: Makers of the Modern Mind — Freud, Marx, and Einstein**

*Second Term — Prerequisite: Credit for EN 201*

This course will explain and assess the intellectual impact of three of the most influential figures of the 20th century — Freud, Marx, and Einstein.

2.5 Credit Hours

**EN 483C Seminar in American Studies: Impact of Science and Technology on American Culture**

*First Term — Prerequisite: Approval of the Course Director*

Considers the ways that various Americans — imaginative artists, philosophers, scholars of all sorts — have responded to scientific thought and technical innovation.

2.5 Credit Hours

**EN 483G Seminar in American Studies: War and Morality**

*Second Term — Prerequisite: Credit for EN 201*

This course will be devoted to a critical discussion of the moral issues which surround the waging of wars.

2.5 Credit hours

**EN 489 Individual Studies in English**

*Both Terms — Prerequisite: Selection by Department*

Permits student of superior ability and extensive background to develop original project through independent study. Student develops prospectus, conducts extensive research, and presents findings in monograph form.

2.5 Credit Hours

## DEPARTMENT OF FOREIGN LANGUAGES



*Professor and Head of Department*  
Walter J. Renfro, 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

**LA 101-102-Arabic;**  
**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)*

**LA 201-202-Arabic;**  
**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 and oral fluency 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.

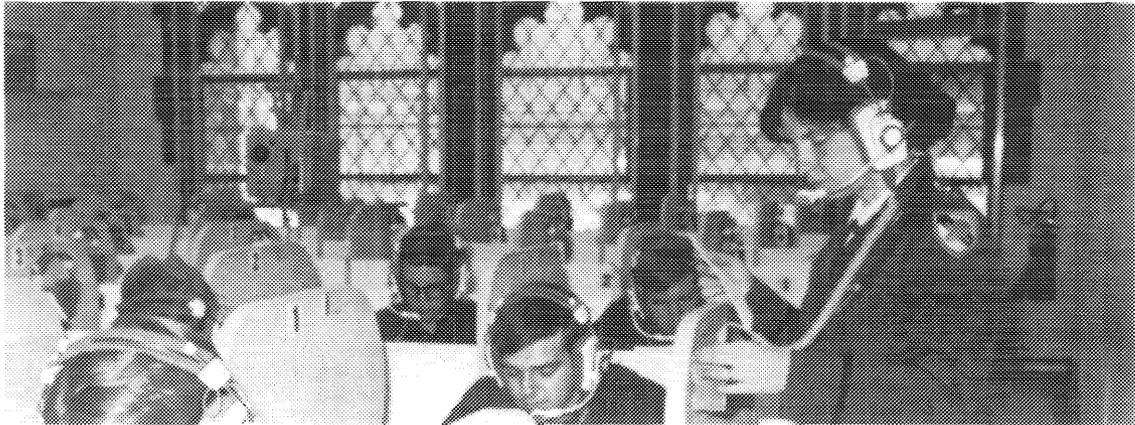
*6 Credit Hours (3 each term)*

### ADVANCED COURSES

**LC 485 Advanced Contemporary Chinese**

*First Term — Prerequisite: LC 384*

This course is a continuation of LC 383-384, emphasizing



correct Chinese expressions and patterns and stressing individual ability in speaking and writing.

2.5 Credit Hours

**LF 141-142-French; LG 141-142-German;  
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; 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**

**LF 371-372 French Language Through Literature**

**LG371-372 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 or equivalent validation*

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)

**LR 381 Advanced Russian Language**

*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 Readings in French**

**LG 382 Military and Scientific Readings in German**

*Second Term — Prerequisites: The 202 or 241 or 152 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 I**

*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**

*Second Term — Prerequisite: LP 202*

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 371-372 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 483 or LF 371-372 or validation*

Continuation of LF 483.

*2.5 Credit Hours*

**LG 483 History of German Civilization**

*First Term — Prerequisite: LG 372 or validation*

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 372 or validation*

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 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 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 472 Survey of Spanish-American Literature**

*Second Term — Prerequisites: LS 371-372, validation or LS 471.*

A study of some of the outstanding 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*

**LP 475 Survey of Brazilian Literature**

**LF 485 Survey of French Literature**

**LG485 Survey of German Literature**

**LS 471 Survey of Spanish Literature**

*First Term — Prerequisites: The appropriate 371-372 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**

**LG486 Modern German Literature**

*Second Term — Prerequisites: The appropriate 371-372 courses, or validation*

Advanced studies in the contemporary literature of France, Germany, and Brazil, with class discussions, themes, etc., in the appropriate foreign language.

*2.5 Credit Hours*

**LC 487 Directed Studies in Chinese**

**LP 487 Directed Studies in Portuguese**

**LF 487 Directed Studies in French**

**LG487 Directed Studies in German**

**LR 487 Directed Studies in Russian**

**LS 487 Directed Studies in Spanish**

*First Term — Prerequisites: LC 485 or LP 475-476 or LF 485-486 or LG 485-486 or LS 471-472 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*

**LC 488 Directed Studies in Chinese**

**LF 488 Directed Studies in French**

**LG488 Directed Studies in German**

**LP 488 Directed Studies in Portuguese**

**LR 488 Directed Studies in Russian**

**LS 488 Directed Studies in Spanish**

*Second Term — Prerequisites: LC 485 or LP 475-476 or LF 485-486 or LG 485-486 or LS 471-472 or LR 473-474 or LR 475-476*

Same academic level as LC 487, LP 487, LF 487, LG 487, LS 487, LR 487 — Directed Studies in Chinese, French, German, Portuguese, Russian, or Spanish.

*2.5 Credit Hours*

**LR 474 Soviet Russian Literature**

*Second Term — Prerequisite: LR 382*

A course on the literature of Russia. Class discussions, talks, outside reading in Russian.

*2.5 Credit Hours*

**LR 476 Soviet Expository Writing**

*Second Term — Prerequisite: LR 382*

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 201-202 History of Modern Europe**

*First Term — Prerequisite: None*

*Second Term — Prerequisite: HI 201 or equivalent*

This course is 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.

*5 Credit Hours*

#### **HI 203-204 History of the United States**

*First Term — Prerequisite: None*

*Second Term — Prerequisite: HI 203 or equivalent*

A topical survey of American history. The central themes for study are the diversity of the American experience, the U.S. rise to world power, industrialization, and urbanization.

*5 Credit Hours*

#### **HI 205-206 History of Europe and the World**

*First Term — Prerequisite: None*

*Second Term — Prerequisite: HI 205 or equivalent*

This course is a topical survey, beginning with the great civilizations of the ancient world, progressing through the Middle Ages, and leading to the development of a distinct European culture. Central themes are the rise and

decline of western dominance and the growing interrelationship between Europe and the world after 1600.

*5 Credit Hours*

#### **HI 401-402 History of the Military Art**

*Prerequisites: HI 201-202, 203-204, or 205-206*

This course examines the evolution of the art of war from ancient times to the present. Cadets study military operations, the evolution of military theory and institutions, and the relationship between an army and the state which it serves.

*7 Credit Hours*

### ADVANCED COURSES

#### **HI 254 Advanced History of the United States Since 1877**

*Second Term — Prerequisite: HI 203 and approval of Associate Professor in American History*

The course encompasses the same chronological period and thematic coverage as HI 204, but it does so with monographic literature and greater emphasis on classroom discussion. The course also stresses historical analysis and criticism. Consequently, the student acquires a broader understanding of American history and the historian's methods.

*2.5 Credit Hours*

#### **HI 451-452 Advanced History of the Military Art**

*Prerequisites: HI 201-202, 203-204, or 205-206, and approval of the Head of the Department*

This course encompasses the same periods and themes as HI 401-402, but does so in greater depth and breadth. The advanced course emphasizes historical analysis and critique, requiring more reading and student participation than HI 401-402.

*7 Credit Hours*

### ELECTIVE COURSES

#### **HI 371 European National Histories**

*Either Term — Prerequisites: HI 201-202, 203-204, or 205-206*

*2.5 Credit Hours*

#### **HI 371A The French Military and Society, 1848-1940**

*First Term*

The course examines the relationship of the French military establishment to French society from before the Franco-Prussian War until the collapse of the French Third Republic in World War II.

*2.5 Credit Hours*

**HI 371B The Origins of Soviet Russia***Second Term*

The course examines the evolution of the Russian state from the ancient Kievan Empire to the modern Soviet federation, emphasizing the leaders who have influenced the development of the Russian people into a modern state.

*2.5 Credit Hours***HI 372 History of the United States Foreign Relations in the Twentieth Century***Either Term — Prerequisites: HI 201-202, 203-204, or 205-206*

The course examines 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 study.

*2.5 Credit Hours***HI 373 Topics in United States History***Either Term — Prerequisites: HI 201-202, 203-204, or 205-206**2.5 Credit Hours***HI 373I The United States in the Twentieth Century***First Term*

The course examines the transformation of the United States from a rural-agricultural to an urban-industrial nation and the impact of that change on the numerous groups that make up its society.

*2.5 Credit Hours***HI 373J America in Crisis: The Spanish-American War and American Imperialism***Second Term*

The course develops two themes: the troubled relationship between a democratic society and its military forces during a popular conventional war with Spain and an unpopular guerrilla war in the Philippines and the origin and impact of American imperialism.

*2.5 Credit Hours***HI 374 Topics in European Political and Cultural History***Either Term — Prerequisites: HI 201-202, 203-204, or 205-206**2.5 Credit Hours***HI 374J Imperialism***First Term*

After a brief introduction to Spanish hegemony in the New World, the course focuses on European economic growth and overseas expansion beginning in the nineteenth century and the effect of imperialism on international diplomacy.

*2.5 Credit Hours***HI 374I The Cultural Roots of Socialism, Nationalism, and Fascism***Second Term*

The course studies three phenomena which have shaped the modern world, developing the cultural setting in which the forces originated, their theoretical framework, and their political impact.

*2.5 Credit Hours***HI 375 History of the Far East***First Term — Prerequisites: HI 201-202, 203-204, or 205-206*

The course traces the development of East Asian civilization from its origins in China to its decline under the impact of westernization around 1800.

*2.5 Credit Hours***HI 376 American Social History***Either Term — Prerequisites: HI 201-202, 203-204, or 205-206**2.5 Credit Hours***HI 376A A Nation of Sections: The West in United States History***First Term*

The course examines the real and imagined impact of trans-Mississippi America upon the nation's social, intellectual, economic, and political development. The

frontier movements, the cultural interactions, and the Americanization of the West serve as the major themes.

2.5 Credit Hours

### **HI 376B The Black in American History**

*Second Term*

The course examines the evolution of blacks in the United States from a position of chattel to one of full—though perhaps not yet equal—citizenship. Special topics include: slavery, segregation, integration, black nationalism and black artistic expression.

2.5 Credit Hours

### **HI 377 History of Religions**

*Second Term — Prerequisites: HI 201-202, 203-204, or 205-206*

The course examines the history of Asian religious thought and experience. It focuses on the development of Hinduism in India, the Buddhist challenge to Hinduism and its spread throughout Asia, the advent of Buddhism in China, the development of Confucianism and Taoism, and the development of Shinto in Japan.

2.5 Credit Hours

### **HI 378 History of Western Ethics**

*First Term — Prerequisites: HI 201-202, 203-204, or 205-206*

The course examines the development of major ethical viewpoints in the western past. Discussion focuses on the tension which exists between the “good” and the “ought.”

2.5 Credit Hours

### **HI 379 History of Latin America**

*First Term — Prerequisites: HI 201-202, 203-204, or 205-206*

The course treats the colonial, independence and modern periods of Latin American history, with particular attention given to constitutional, political, social, and economic developments; the relation of Latin America to the Western world; and common traditions and patterns of development.

2.5 Credit Hours

### **HI 381 History of Revolutionary Warfare**

*Either Term — Prerequisites: HI 201-202, 203-204, or 205-206*

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, 203-204, or 205-206*

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, 203-204, or 205-206*

2.5 Credit Hours

### **HI 384C The Development of Air Power**

*First Term*

The course traces the development of the theory, doctrine, and employment of air power from World War I to the present. Although emphasis is on the United States, the role of air power in other major military powers is also investigated.

2.5 Credit Hours

### **HI 384G Strategy, Soldiers and Statesmen**

*Second Term*

Using a case study approach, this course analyzes historical events of the nineteenth and twentieth centuries wherein policies and decisions have involved military and political leaders to a marked degree.

2.5 Credit Hours

### **HI 385 War and Its Philosophers**

*First Term — Prerequisites: HI 201-202, 203-204, or 205-206*

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 398 Colloquium in History**

*Second Term — Prerequisites: HI 201-202, 203-204, or 205-206*

The colloquium uses small-group discussions of important books, monographs, and articles to gain a deeper understanding of selected topics in American, European, world, or military history.

2.5 Credit Hours



**HI 481 Seminar in History; Small Wars**

*First Term — Prerequisites: HI 201-202, 203-204, or 205-206*

Cadets develop individual research projects on small wars waged by the United States since the Spanish-American War with emphasis on the evolution of a limited war strategy and military operations in the nuclear age.

*2.5 Credit Hours*

**HI 482 Visiting Professor's Course: The American Military Experience**

*Second Term — Prerequisite: HI 201-202, 203-204, or 205-206*

Taught by Professor Edward Coffman of the University of Wisconsin, the course traces the development of the American military system as it accommodated to changes in national policy and power from the nation's beginnings to the present.

*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 cadets having considerable background in history the opportunity to write a major research paper on a topic of their choice. A faculty advisor provides guidance and evaluation.

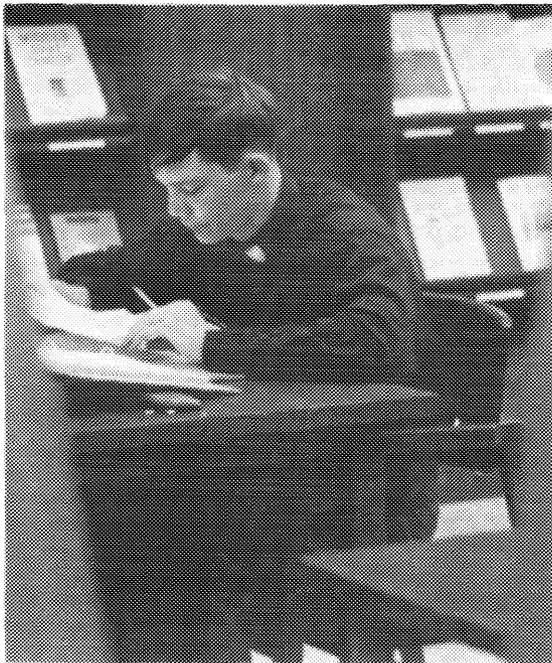
*2.5 Credit Hours*



## 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 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)

### 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, an introduction to matrix algebra covering algebraic operations and systems of equations, and the theory of infinite series.

*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 and vector differentiation.

*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 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 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 101-102 and MA 201, plus surface integrals. 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 153-154 and MA 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 extension of the probability and statistics studied in the core curriculum to include hypothesis testing, regression analysis, analysis of variance, and design of experiments. In addition, quality control, reliability, and an introduction to decision theory are included.

2.5 Credit Hours

### MA 481 Linear Programming

*Either Term — Prerequisite: Completion of the Mathematics Core Curriculum*

A study of the theory and applications of linear programming techniques which includes the simplex method and post optimal analysis. Special topics such as the transportation problem, game theory, network models, 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.

1.5 Credit Hours

### MA 483 Mathematics for Engineers and Scientists

*Second Term — Prerequisite: Completion of the Mathematics Core Curriculum*

An extension of the study of ordinary linear differential equations studied in the core curriculum followed by vector analysis. Study of line and surface integrals prior to the study of Fourier Series and Integrals. Coverage of partial differential equations including the one and two dimensional wave equations, heat flow, and Laplace's equation.

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 488 Visiting Professor's Course

*Second Term — Prerequisite to be announced*

The Visiting Professor of Mathematics will conduct a course on a topic to be announced.

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.S.,  
Shippensburg State; Ph.D., Lehigh.

### **ME 301 Thermodynamics**

*Either Term — Prerequisite: CH 201 or CH 251, PH 201,  
MA 201 or MA 154 or MA 156*

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: Ph 201 or PH 251 or validation  
thereof*

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**

*Either Term — Prerequisites: Credit for PH 201 and MA  
201 or MA 154 or MA 156*

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: CH 201 or CH 251, PH 201, MA 201 or MA 154 or MA 156*

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 — Prerequisites: PH 201 or PH 251 or validation thereof. 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 — Prerequisites: PH 201 and MA 201 or MA 154 or MA 156. 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 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

**ME 388 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**

*Second Term — Prerequisites: EE 301 and ME 301 or ME 351*

This course examines various alternatives to fossil fuel combustion as energy sources. Such schemes as thermoelectric, photovoltaic, magnetohydrodynamics converters, fuel cells, geothermal, wind power, and solar heating and cooling are studied.

2.5 Credit Hours

**ME 474 Propulsion**

*Either Term — Prerequisites: ME 301 or ME 351, and ME 302 or ME 352*

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 — Prerequisites: ME 302 or ME 352, and ME 301 or ME 351*

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, and photoelasticity. Instruction on equipment and statistical analysis of data are integrated with laboratory work.

2.5 Credit Hours

**ME 477 Experimental Fluid Mechanics and Thermodynamics**

*Either Term — Prerequisites: ME 301 or ME 351 and 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, two of his own choosing.

2.5 Credit Hours

**ME 478 Analysis of Modern Lightweight Structures**

*Either Term — Prerequisite: ME 384 or permission of Head of Department*

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, ME 301 or ME 351, and MA 207 or MA 154 or MA 156*

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 — Prerequisite: PH 201 or PH 251 and MA 154 or MA 156*

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

2.5 Credit Hours

**ME 485 Continuum Mechanics**

*Second Term — Prerequisite: ME 384*

Boundary value problems for elastic materials are solved using Cartesian tensor calculus. Stress-strain relations, equilibrium, and compatibility conditions are examined. Indicical 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 analyses of multi-degree of freedom systems are studied. Theory illustrated by frequent classroom demonstrations.

2.5 Credit Hours

**ME 488 Flight Mechanics**

*Second Term — Prerequisite: ME 387. May be taken concurrently.*

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

2.5 Credit Hours

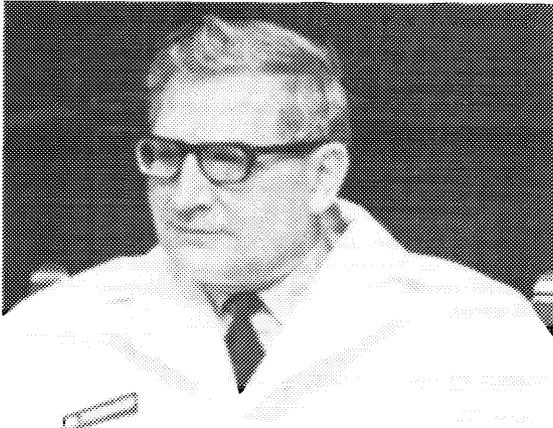
**ME 489 Advanced Individual Study in Mechanics**

*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

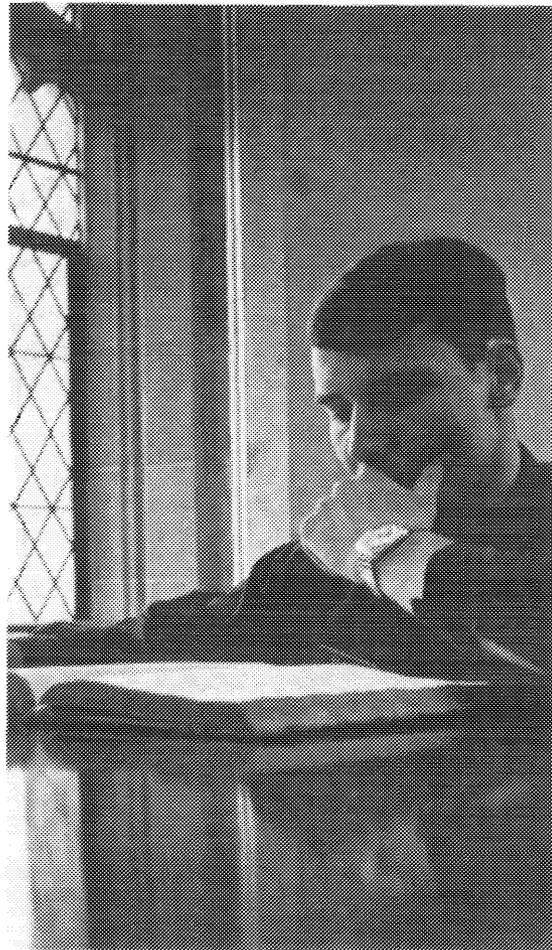


*Professor and Head of Department*  
Martin A. Pfothauer, COL.; B.S., Northwestern; M.D., Illinois.



All cadets receive instruction from the Department of Military Hygiene.

Instruction given is primarily in the area of emergency medical care, to include cardio-pulmonary resuscitation; control of bleeding and shock; bandaging, splinting, and the immediate treatment of fractures; treatment of snake bites and poisonous plants; heat injury treatment. Instruction is also given in hearing conservation; dental hygiene; eye protection; common skin disorders; field sanitation; and the effects of stress.



## OFFICE OF MILITARY INSTRUCTION



### Director

Thomas F. Cole, COL.; B.S., USMA; M.S., Stanford.

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

### Cadet Basic 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 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

Instruction is designed to develop an appreciation of the historical evolution of the U.S. Army and professionalism therein.

*.5 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 infantry rifle platoon; military aspects of terrain and terrain analysis; troop leading procedures, combat orders and graphic representation; and infantry rifle platoon offensive and defensive tactics.

*.5 Credit Hour*

#### PB 101 Standards of Professional Behavior

##### Both Terms

Designed to raise awareness of the need for professional standards of behavior, to identify those standards in general terms, and to enhance commitment to those standards.

*1.0 Credit Hour*

## THIRD CLASS MILITARY INSTRUCTION

### Third Class Cadet Field Training

#### 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 and discipline, and instilling high esprit in each cadet. Training also provides leadership experience through troop leading in a simulated combat environment.

*8 Weeks, 1 Credit Hour*

### Military Science II

#### MS 202 Small Unit Tactics II

Instruction teaches the fundamentals of mounted combat operations. Cadets learn how to employ mechanized infantry and tank platoons in offensive and defensive operations.

*1.5 Credit Hours*





British Army Major Michael Reynolds, one of three allied officers on the Military Academy Faculty.

## SECOND CLASS MILITARY INSTRUCTION

### Cadet Military Specialty Training

#### Cadet Troop Leader Training

*Summer*

Cadet Military Specialty Training consists of six programs: Airborne, Ranger, Flight, Northern Warfare, Jungle Warfare and Survival, Evasion, Resistance and Escape. Cadet Troop Leader Training gives cadets an opportunity 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 combined arms team in the offense and defense. The mechanized infantry battalion with its combat support and combat service support elements is also included along with a discussion as to how they interface with the division base in order to be sustained during combat.

*1.5 Credit Hours*

## FIRST CLASS MILITARY INSTRUCTION

### Cadet Leader Training

*Summer*

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

*8 Weeks, Ungraded*

### Military Science IV

*Academic Year*

The course 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 Credit Hour*

### 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, and interface with sister services.

*Ungraded*

## OFFICE OF PHYSICAL EDUCATION



*Professor and Head of Department*

James L. Anderson, COL; B.S., USMA; M.S., 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 (men)**

#### **PE 100 Foundations in Physical Education (women)**

Emphasizes the development of basic physical ability through instruction in combatives (boxing and wrestling for men and self defense I and II for women), gymnastics, and swimming. Lectures are presented on various aspects of personal conditioning. 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**

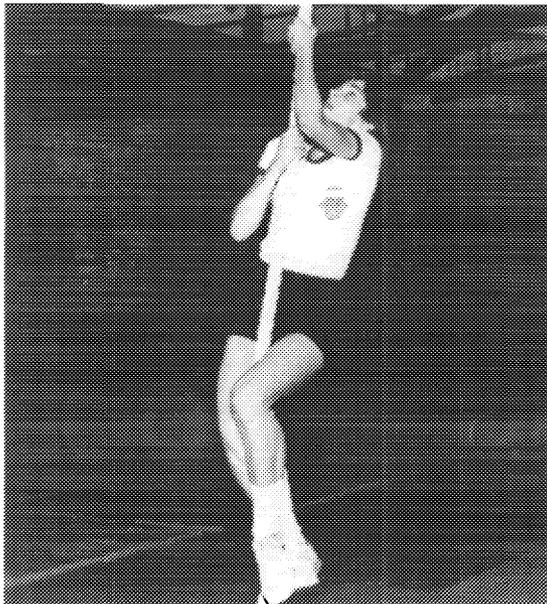
Provides basic instruction in a sport activity not previously taken. Active participation in the athletic program is mandatory.

*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: MA 101-102 or equivalent*

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 202 and MA 207*

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 engineering or applied science.

*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 physics.

3.5 Credit Hours

**PH 381 Intermediate Classical Mechanics**

*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.

3 Credit Hours

**PH 382 Intermediate Electricity and Magnetism**

*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.

3 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.

3 Credit Hours

**PH 385A Physics of the Energy Crisis**

*First Term*

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.

3 Credit Hours

**PH 385B Laser Physics**

*Second Term*

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.

3 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.

3 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.

3 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.

3 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.

3 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.

3 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.

3 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**

*Either 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**

*Either 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 303 Economic Principles and National Security Applications I**

*First Term — Prerequisite: None*

Focuses on basic microeconomic principles and their application to public policy. Subcourse in Economics of National Security develops systematic analysis of defense procurement decisions.

*2.5 Credit Hours*

#### **SS 304 Economic Principles and National Security Applications II**

*Second Term — Prerequisite: SS 303*

A study of basic macroeconomic principles and their application to domestic and international economic problems. Subcourse in Economics of National Security focuses on the budget process and associated defense problems.

*2.5 Credit Hours*

#### **SS 401 Comparative Political Systems: Europe and Asia**

*Either Term — Prerequisite: SS 301 and SS 302*

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.)

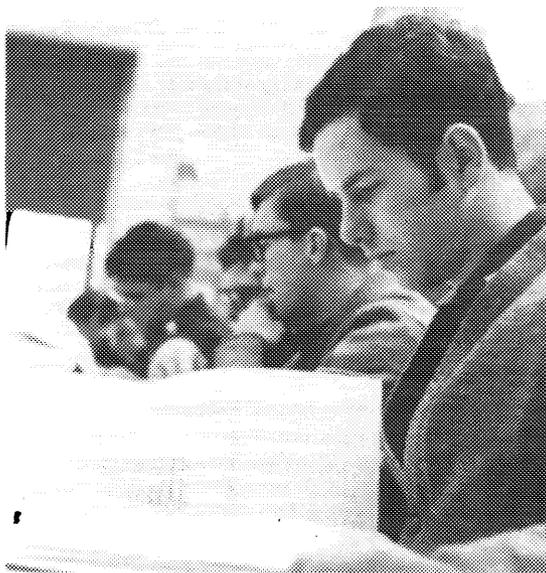
*3.5 Credit Hours*

#### **SS 403 An Introduction to Political Science: A Comparative Approach**

*First Term — Prerequisite: SS 304*

An introduction to political science organizing concepts which uses a comparative approach to analyze the political systems of three polities: the United States, Soviet Union and a contrasting system to be selected.

*3.5 Credit Hours*



**SS 404 International Relations**

*Either Term — Prerequisite: SS 403*

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

**SS 407 International Relations**

*Second Term — Prerequisite: SS 401*

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**

*Either 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**

*Either 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 and theories of international relations with special emphasis on foreign policy formulation and policy interaction in the post-World War II period.

3.5 Credit Hours

**ELECTIVE COURSES****SS 372 Public Policy and Administration**

*Either Term — Prerequisite: None*

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: None*

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 and economic history and cultural traditions.

2.5 Credit Hours

**SS 384 Government and Politics of Latin America**

*Second Term — Prerequisite: None*

A basic course in government and politics of Latin America focused on political power contenders and employing case studies of those nations considered to have diverse political cultures.

2.5 Credit Hours

**SS 385 Comparative Modern 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 — Prerequisite: None*

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 Practice**

*Second Term — Prerequisites: SS 301, 304, or 351*

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 — Prerequisite: None*

Examines financial/economic decision-making in the private business sector, utilizing financial accounting, operational planning, asset acquisition and performance analysis skills in case studies. Emphasis is on application of skills.

*2.5 Credit Hours*

**SS 471 Government and Politics of China**

*Second Term — Prerequisite: None*

This course examines the contemporary political problems of the Peoples Republic of China with special emphasis on traditional political behavior, Marxist political principles, and contemporary issues.

*2.5 Credit Hours*

**SS 472 Comparative Civil-Military Relations**

*Second Term — Prerequisite: None*

Analysis of the socio-economic and political roles of the armed forces of different countries. Patterns of military intervention or civil supremacy are related to institutional, sociological and ecological factors.

*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 a geographical area or functional issue providing 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: None*

An introduction to several concepts of international politics including realist theory and psychological explanations studied in the context of the contemporary period.

2.5 Credit Hours

**SS 482 Microeconomics: Theory and Application**

*Second Term — Prerequisites: SS 301, 303, or 351*

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 Seminar**

*Either Term — Prerequisite: None*

Course focuses on issues affecting U.S. security. Examination of the changing context in which U.S. foreign and defense policies operate, the formulation and execution of national security policy, and contemporary security postures and issues.

2.5 Credit Hours

**SS 484 International Economics and Economic Development**

*Second Term — Prerequisites: SS 301, 304, or 351*

Covers trade issues and theory, exchange rates, balance of payments, international monetary issues, world inflation/depression, multinational corporations, international investment, development 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, Latin America and Sub-Saharan Africa as they continue to modernize.

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. Case studies demonstrate how man adapts to diverse environmental challenges through his 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 argument focusing on substantive policy issues related to the national debate topic. Skills of effective research, analysis and presentation are emphasized.

2.5 Credit Hours

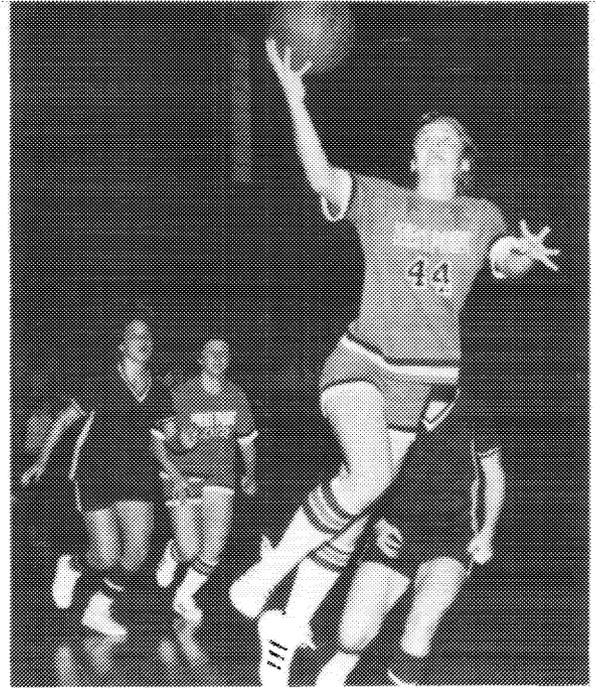
**SS 489 Advanced Individual Study in Social Sciences**

*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





*"I want an officer for a secret and dangerous mission. I want a West Point football player."*  
GENERAL GEORGE C. MARSHALL



# VII. ATHLETIC PROGRAM

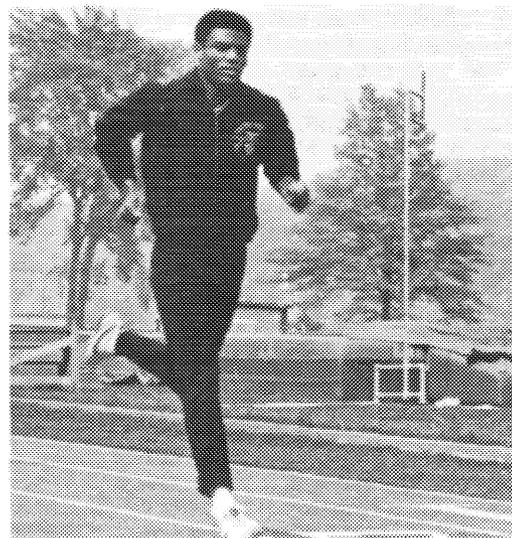
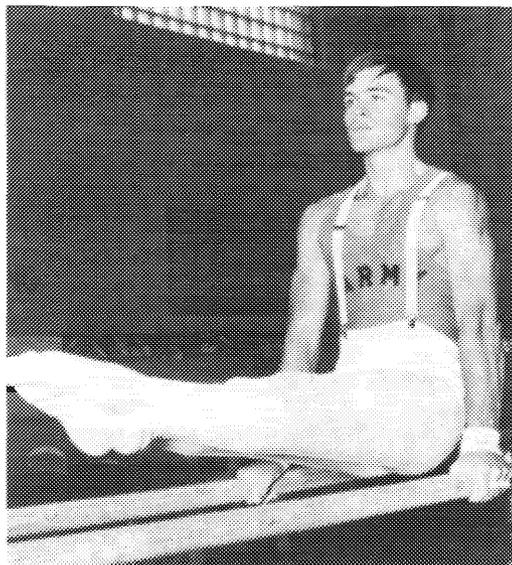
## EVERY CADET AN ATHLETE

Every cadet at West Point competes in inter-collegiate or intramural sports. Every cadet 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 cadets 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. Former Secretary of the Army Howard ("Bo") Callaway won five varsity letters. Colonel Pete Dawkins was an Army football captain, Heisman trophy winner, All-American half-back, 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.

The Military Academy has a sincere commitment to fully integrate women cadets into the athletic program—intercollegiate, club squad, and intramural. Women cadets can compete for positions on the following varsity squads: cross-country, golf, track, pistol, rifle, skiing, squash, swimming, tennis, and fencing. Women cadets will not be allowed to participate on the following men's sports teams: basketball, baseball, football, 150-lb football, ice hockey, lacrosse, soccer, or wrestling. Club sport teams have been established for women in gymnastics, basketball, softball, and volleyball. Other club teams will be developed as interests, abilities, and facilities warrant. After a transition period and upon demonstration by the women's club squad teams that they are ready for inter-collegiate competition, varsity intercollegiate

teams will be organized for basketball, gymnastics, softball, field hockey, volleyball, swimming, and tennis.

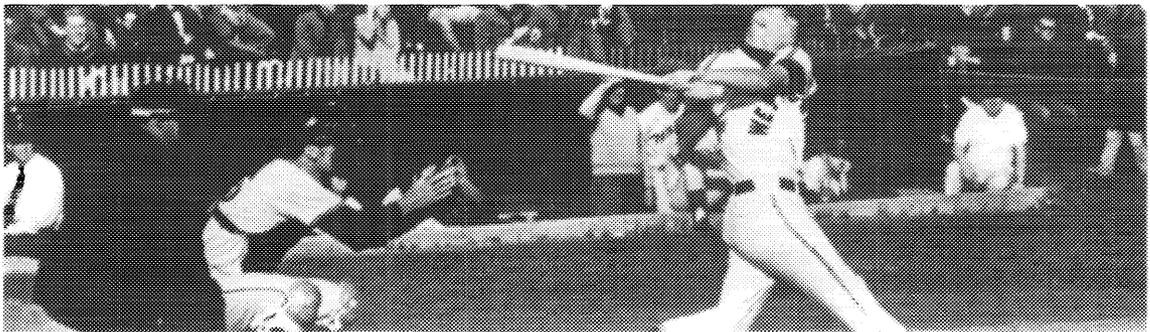
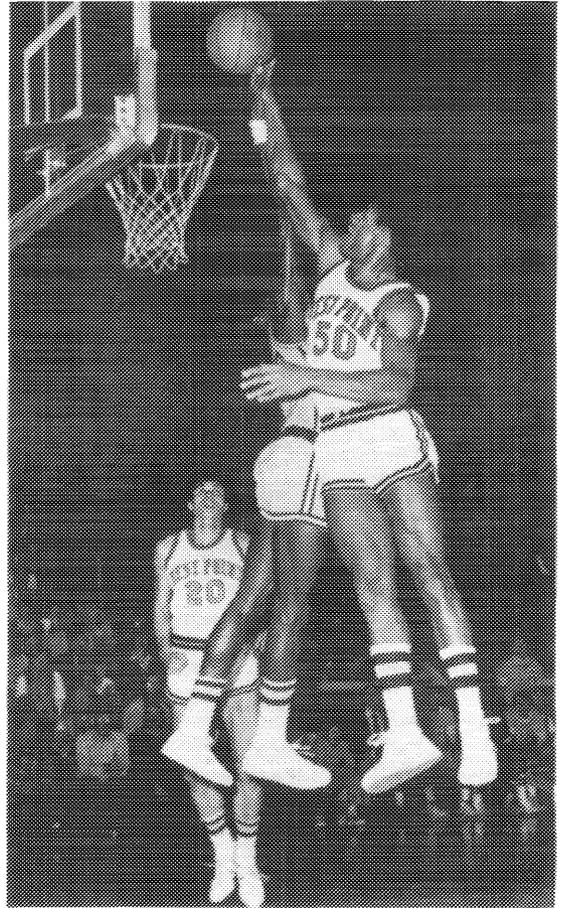


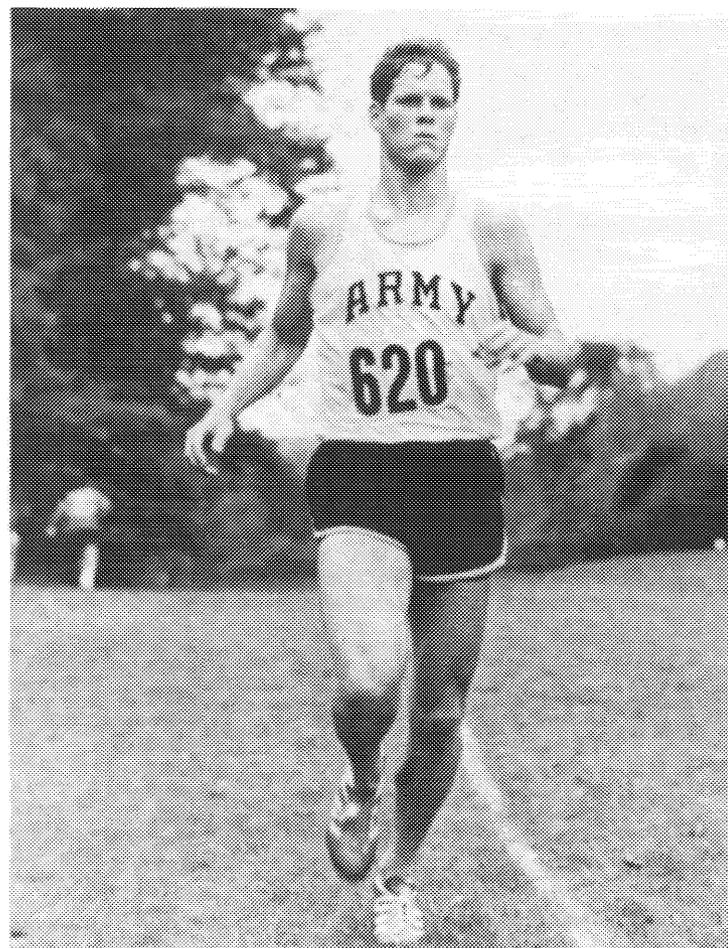
## INTERCOLLEGIATE ATHLETICS

Army teams are nationally known for their competitiveness. Nearly one-third of the Corps of Cadets participates in 22 varsity sports: football, lightweight football, soccer, cross-country, and water polo in the fall; basketball, fencing, gymnastics, ice hockey, pistol, rifle, skiing, squash, swimming, indoor track, volleyball, and wrestling in the winter; and baseball, golf, lacrosse, outdoor track, and tennis in the spring.

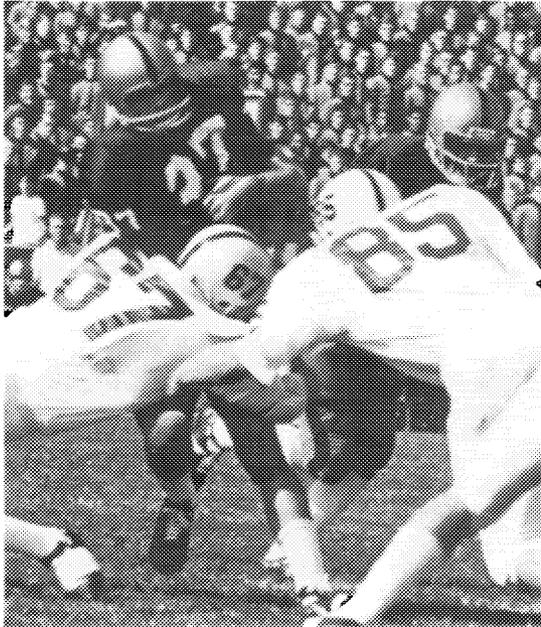
Several Army teams and individuals have done well in NCAA national championships. The soccer team has been invited to play in the NCAA tournament 11 times in the past 14 years. Lacrosse has been a frequent entrant in that sport's national competition. Army 150-pound football teams have won or shared the Eastern Intercollegiate Championship six of the last seven years for a total of 13 titles in 20 years of competition. Pistol and rifle teams have captured a number of national championships, while the Army basketball team has competed several times in the prestigious National Invitational Tournament (NIT) in New York City. The water polo team has been invited to the NCAA championships twice in recent years, and the volleyball team has played in the national championships three of the last four years.

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









## 1977 FOOTBALL SCHEDULE

### *September*

- 10 MASSACHUSETTS at West Point
- 17 VMI at West Point
- 24 BOSTON COLLEGE at Boston

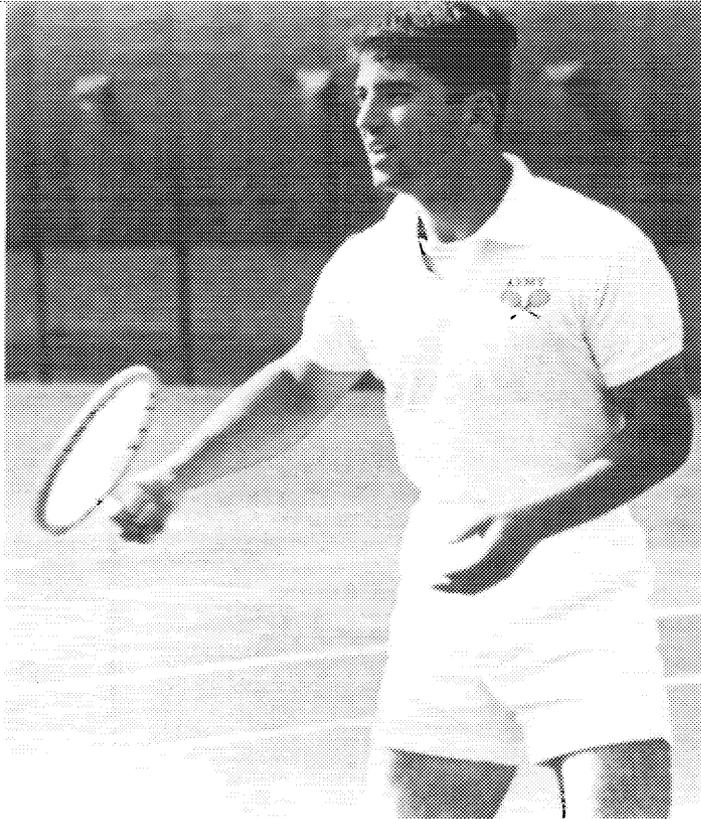
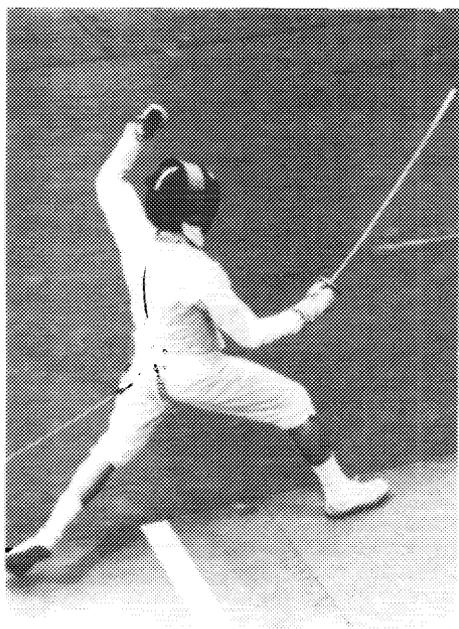
### *October*

- 1 COLORADO at West Point
- 8 VILLANOVA at West Point
- 15 NOTRE DAME at Giants Stadium
- 22 LAFAYETTE at West Point  
(Homecoming)
- 29 HOLY CROSS at West Point

### *November*

- 5 AIR FORCE at Colorado Springs
- 12 PITTSBURGH at Giants Stadium
- 26 NAVY at Philadelphia







## CLUB TEAMS

Club teams offer competition and fun in everything from cycling to rugby football. Many of these clubs are among the best in the nation. Team handball and orienteering clubs won national titles in 1976, and the sport parachute club placed second in the nation. The judo team won the Eastern Collegiate Championship and placed 6th in the Nationals. The karate team repeated as the New York Invitational Tae Kwon Do Tournament Champions. The riding club completed the year by being named Grand Champion in Region One of the Intercollegiate Horse Show Association. The pistol team won first place in the New York State Championship matches. Nineteen cadets ran in the Boston Marathon last year, and 21 have already met the stiffened requirements for the run this year. The addition of several women's clubs in 1976-1977 provides competition in basketball, gymnastics, softball, and volleyball. In these clubs, the cadets are the leaders, the planners, and the participants, and they do much of the coaching as well.

## INTRAMURAL ATHLETICS

At 3:40 p.m. every Monday through Thursday, the "fields of friendly strife" are flooded with intramural athletes. Normally, each cadet

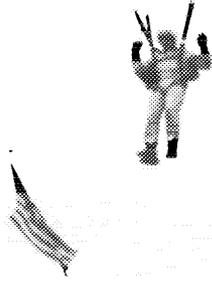
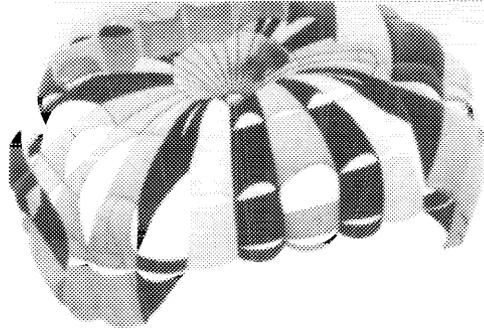
competes in intramurals twice weekly. Participation during the spring is voluntary. Intramurals give every cadet a chance to build strength, coordination, and endurance as well as an opportunity to blow off steam and have a little fun. Fall brings competition in flickerball, football (with full gear), 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 the first year with fundamentals of conditioning, combatives, swimming, gymnastics, and carryover sports. Carryover sports, activities cadets may engage in for the rest of their lives, receive progressively greater emphasis during upperclass years. Among such sports are golf, tennis, badminton, handball, bowling, ice skating, racquetball, personal conditioning, senior life saving, scuba, skiing, squash, volleyball, water safety instruction, and aerobics. Upperclass cadets also learn techniques of instruction and coaching, which provide additional leadership experience and help build confidence.

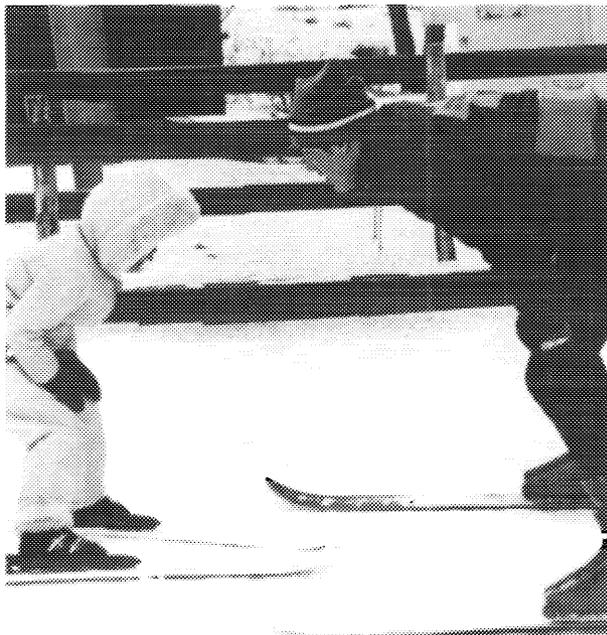
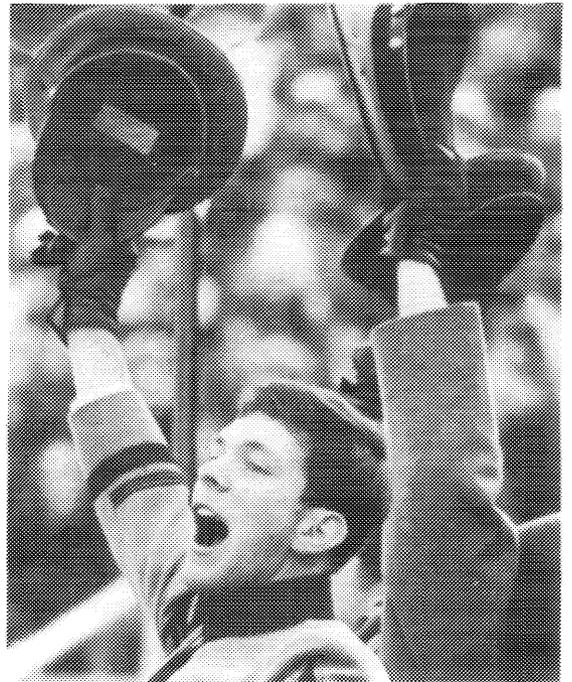
The program is administered by the Office of Physical Education (OPE), part of the Department of Tactics. An OPE instructor is assigned to each cadet company as Guidance Counselor. This Counselor maintains an overall physical progress record on each cadet; concerns himself with corrective assistance for 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.



*"Let it be your pride . . . to show all men everywhere not only what good soldiers you are, but also what good men you are."*

WOODROW WILSON



## VIII. EXTRACURRICULAR ACTIVITIES

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You can imagine what all work and no play would do to a cadet. So can we. Woods, lakes, ski slopes, sports fields, athletic buildings, lounges, golf courses, tennis courts—you name it—provide places for the cadet to get away from it all for a while. Diverse interests and know-how are important to the Army officer. So, time-out from studies and military training permits such relaxing activities as golfing, sailing, ice skating, fishing, canoeing, flying, 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 available to the cadets in addition to the normal Chapel services.

### SOCIAL LIFE

Cadets, like college students everywhere, find time for social activities. Frequent dances bring students from neighboring campuses. Cadets hold functions in the First Class Club, the Ski Lodge, the Golf Club, a remodeled railroad depot, two lake cabins, and even on a West Point excursion boat. The Military Academy's Hotel Thayer provides a place for cadets to dine with friends and families. First Class cadets (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 Eisenhower Hall (cadet activities center) are common weekend activities.

### THE ARTS

The Cadet Fine Arts Forum is the largest extracurricular group at West Point. Interests in archaeology, ballet, theater, photography, sculpture, painting, films, and music are pursued through the Forum's cadet-organized activities. In 1976-77, the Forum brought to West Point such performers as Andre Kostelanetz and the New York Philharmonic, Ella Fitzgerald, and

such productions as "Shenandoah," "Sherlock Holmes," and "The Nutcracker Suite."

In 1976, the Military Academy proudly opened the Class of 1929 Gallery in Eisenhower Hall. The new gallery opened with a major exhibition of works by the distinguished 19th Century American contemporary artist, Robert W. Weir, who taught at West Point from 1834-1876.

The traditional "100th Night Show," sponsored by the Dialectic Society 100 nights before graduation, is written, produced, directed, and performed by cadets. The Cadet Acting Troupe also produces and presents at least two stage plays each year. The musicals "Once Upon a Mattress" and "Music Man" are two of their recent successes.

Musical talents are exercised through the Cadet Band, dance combos, and the nationally famous Cadet Glee Club. WKDT, the cadet operated FM-stereo radio station, broadcasts music, news, and sports commentary.

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 very active West Point Debate Council and Forum is another popular activity at the Military Academy. Cadets speak out on current issues in competitions with their college peers at debate tournaments throughout the United States.

Cadets assimilate the literature and customs of foreign countries through these language clubs: Arabic, Chinese, French, 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, the Astronomy Club, the Engineering Forum, the Electronics Club, the Geology Club, and the Mathematics Forum are active in this category.



## COMMUNITY AFFAIRS GROUPS

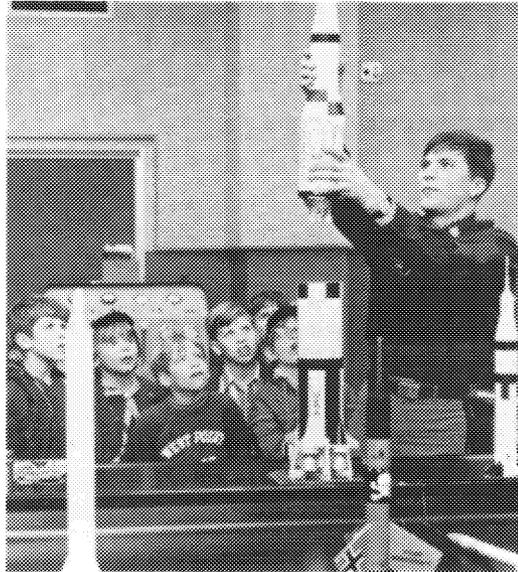
Many cadets step out of the West Point community to help in Veterans' Hospitals, juvenile correctional institutions, and young people's organizations. The Cadet Scoutmasters Council annually hosts a camporee which draws over 3,000 Scouts from all over the Eastern seaboard.

The Cadet Public Relations Council sponsors cadet appearances at junior and senior high schools, for 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 combine 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 revolve around the three West Point chapels. All cadets are encouraged, though not required, to become involved in religious activities.

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, and morning devotions are offered weekdays. Regular activities of the Fellowship of Christian Athletes include a monthly prayer breakfast in the cadet dining hall. Cadets may participate in certain authorized retreats on weekends. The Officers' Christian Fellowship features workshops, speakers, and Bible study. Specific denominational groups such as the Church of Jesus Christ of Latter Day Saints, Baptists, and Lutherans also get together on a scheduled basis.



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 may attend denominational worship services each Friday. Cadets participate in all services and actually lead many of them. 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.

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 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 cadets who participate in them. Sharing and fellowship make the Military Academy a close-knit community.



*“Leadership in a democratic army means firmness, not harshness; understanding, not weakness; justice, not license; humaneness, not intolerance; generosity, not selfishness; pride, not egotism.”*

GENERAL OMAR N. BRADLEY



Departing Superintendent, LTG Sidney B. Berry, discussing military leadership

# IX. ADMINISTRATION, STAFF, AND FACULTY

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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 Military 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 Military Academy's curriculum, policies, and equipment and submitted recommendations to the President of the United States.

## USMA Staff and Faculty

Listing as of spring semester, 1977 (except Superintendent — effective June, 1977)

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Andrew J. Goodpaster, LTG; B.S., USMA; M.S.E., A.M., Ph.D., Princeton.

### Superintendent's Staff

#### Protocol Officers

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Barbara Doornink, ILT; B.A., Washington State.

#### Aide-de-Camp

Louis J. Hansen, CPT; B.S., USMA.

### USMA Staff

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#### Secretary of the General Staff

John H. Campbell, MAJ; B.S., USMA; M.S., Missouri.

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Cornell McCullom, Jr., LTC; Stewart Army Subpost; B.S., USMA; M.S., Utah; M.B.A., Long Island.

Richard J. Mottl, LTC; West Point; B.S., Ohio; M.S.I.A., George Washington.

#### Deputy Chief of Staff, Comptroller

Alexander P. Polak, COL; DCSCompt; B.S., Fordham; M.B.A.; Indiana.

John J. Smith; Asst. DCSCompt.

Joseph A. Danieli, LTC; Finance & Acct. Officer; B.S., Boston College; M.B.A., Syracuse.

Berwyn L. Place, LTC; Ch., MIS Div.; B.S., South Dakota State; M.B.A., American.

Ray H. Smallen, LTC; Fiscal Policy Off.; 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.

Andrew J. Tuszynski, COL; Asst. DCSLOG; B.B.S., Loyola; M.B.A., City College, N.Y.

Donald J. Barlow, LTC; Treasurer; B.S., USMA; M.B.A., Syracuse.

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

Nicholas J. Craddock, LTC; Ch., Sup. & Svc. Div.; B.S., Rhode Island; M.S., AFIT.  
 Raymond E. Dubois, LTC; Ch., Trans. Div.; A.B., New Hampshire; M.A., Kansas.  
 Kenneth J. Offan, LTC; Ch., A-V Sys. Div.; B.S.S., Loyola.  
 Bertram W. Ferrie, LTC; B.A., Providence; M.S.A., George Washington.  
 James J. Fitzpatrick, MAJ; OIC, Corps Support Br.; B.S., St. Peter's; M.C., Richmond.  
 Darman C. Place, MAJ; Ch., Purch & Cont. Div.; B.S., E. Tenn. State.  
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 Henry T. Glisson, MAJ; OIC, Cadet Mess; B.S., N. Georgia; M.S., Pepperdine.  
 Ernest F. Poland, CPT; Asst. Treas.; B.S., Purdue; M.B.A., Michigan State.  
 Ronald E. Fruin; Ch., Housing Div.

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 Dennis Fogarty, CPT; Security Off.; B.S., Nebraska.  
 Gary W. Halstead, CPT; Opns. Off.; B.S., USMA.

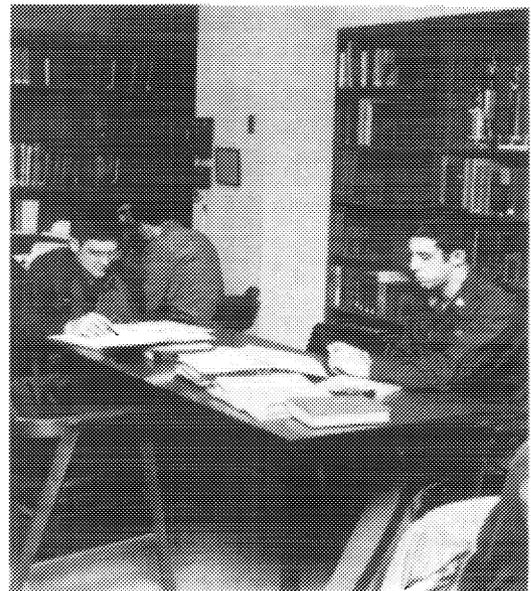
**Deputy Chief of Staff, Personnel and Administration**

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 Lawrence K. Montgomery, LTC; Rec. Svcs. Off.; B.A., Morgan State.

George L. Nipper, LTC; Provost Marshal; B.S., Washington; M.A., Sacramento State; M.S., USC.  
 Arthur J. Reimers, Civ. Pers. Off.; B.S., Iowa State.  
 Ernest E. Rigrish, LTC; Ch., Pers. Svcs. Div.; B.A., Eastern Kentucky.  
 J. Earl Andrews, Ch(LTC); Post Chaplain; A.B., Asbury; M.Div., Emory; M.A., Boston U.  
 Ernest K. Wilson, Jr., MAJ; Inst. Club Mgr.; B.S., Cornell.

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 William J. Diehl, Jr., CPT; B.A., Minnesota.  
 Alfred V. Konecny; B.S., SUNY  
 Patricia Y. Carter; B.A., M.A., Washington State.  
 Sunny Jones; B.A., Samford.



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### **Facilities Engineer**

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Don H. Pfeil; B.S., U.S. Merchant Marine Academy.

Raymond G. Cox; B.S., Upper Iowa.

Joseph A. Paes; B.S., USMA; M.S., California.

Martin F. Henry; B.S., Fordham.

### **USMA Band**

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Adolph L. Harstad, CWO; Bandmaster; B.A., Luther; M.M.E., Montana State.

### **Chaplains, United States Corps of Cadets**

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

David McDowell, Rev.; Asst. USMA Chaplain; B.A., Wheaton (Ill.); M.Div., Gordon-Conwell Theo. Sem.

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

Teddy G. Davidson; B.S., Washington; M.S., U.S. Naval Postgrad. School.

Paul T. Hirth; Ch., Data Proc.; B.S., Norwich; M.S., MIT.

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

Michael F. Orban; B.A., Metro. State.

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

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

Robert W. Fisch; Curator.

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

Michael E. Moss; B.A., Ohio State; M.A., Case Western Reserve.

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

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James L. Gaines, Candidate Testing Coordinator.

### **Admissions Branch**

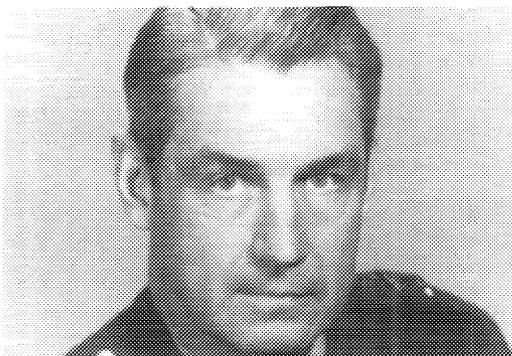
Robert F. Danner, LTC; Assoc. Dir.; B.M.E., Wheaton (Ill.); M.A., George Washington.  
N. Blaine Ballantyne, MAJ; B.S., Fla. Southern; M.Ed., William & Mary.  
Patricia P. Hickerson, CPT; B.Mus., M.Mus., Converse.  
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Enzio Napoli; B.A., Long Island.

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Richard Bowman; Football; B.S., M.Ed., Oklahoma.  
John Bradley, LTC; Squash; B.S., USMA; M.A., Rice.  
Howard Brosseau, CSM(Ret.); Skiing.  
Edmund Crossley; Gymnastics; B.A., Springfield.  
Robert T. Dwyer; Basketball; B.A., Wake Forest.  
Richard Edell; LaCrosse; B.S., Towson State; M.Ed., Western Maryland; M.S., Baltimore.  
Ronald Feher, CPT; Fencing; B.S., USMA; M.S.N.E., MIT.  
Peter J. Gaudet; Basketball; B.S., Boston U.  
Kenneth Hamill, MSG; Rifle.  
Paul Kirkegaard, MAJ; Golf; B.S., USMA; M.A., Auburn.  
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John Randolph; Track/Cross Country; B.A., M.Ed., William & Mary.  
John P. Riley; Hockey; B.A., Dartmouth.

John E. Ryan, Jr.; Swimming (Head); B.S., M.A., Ohio State.  
Homer Smith; Football (Head); A.B., Princeton; M.B.A., Stanford.  
John Steigman; Football; B.S., Williams.  
Bruce Tarbox, Football; B.S., Syracuse.  
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John Wade; Football; B.S., S.C. State.

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Thomas N. Swett, MAJ; Asst. Prof.; B.S., USMA; M.S.C.E., M.P.W., Pittsburgh.

## Department of Behavioral Science and Leadership

### Director

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

### Associate Professor

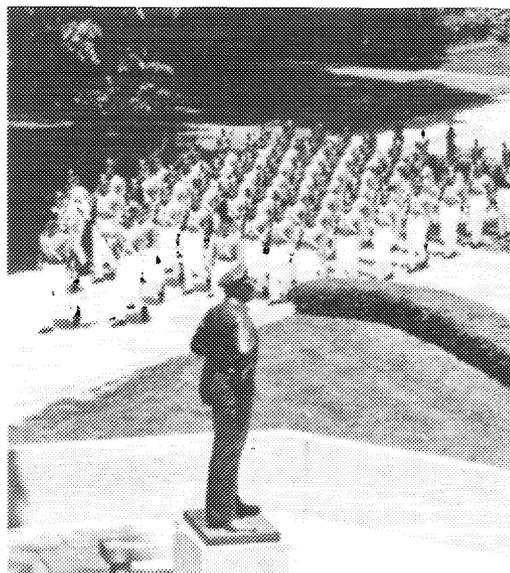
Paul M. Bons, LTC; B.S., USMA; M.S., Wayne State; Ph.D., Washington.

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Robert N. Seigle, MAJ; B.S., USMA; M.S., Utah.  
Alan G. Vitters, CPT; B.S., USMA; M.S., Utah.

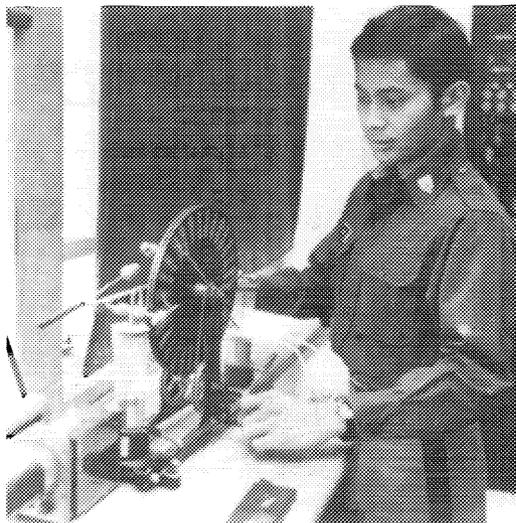
### **Instructors**

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James R. Swinney, CPT; B.S., USMA; M.A., New Hampshire.  
David L. Taylor, CPT; B.S., USMA; M.S., Washington.

## **Department of Chemistry**

### **Professor and Head of Department**

Donald G. MacWilliams, COL; B.S., USMA; M.S., Ohio State; Ph.D., RPI.



### **Associate Professor and Deputy Head of Department**

Wilford J. Hoff, Jr., COL; B.S., The Citadel; M.A., Ph.D., Princeton.

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George W. Chancellor, COL; B.S., USMA; M.S., Purdue; Ph.D., Arizona State.  
George F. Palladino, MAJ; B.S., Siena; M.S., Ph.D., Massachusetts.

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Daniel E. Adams, CPT; B.S., USMA; M.S., MIT.  
Lynn P. Beaulieu, CPT; B.S., VMI; M.A., North Carolina.  
Michael J. Fisher, CPT; B.S., USMA; M.E., Virginia.  
Russell L. Fuhrman, CPT; B.S., USMA; M.S., Penn State.  
Robert L. Harris, Jr., CPT; B.S., USMA; M.S., Georgia Tech.  
William J. Matlach, CPT; B.S., USMA; M.A., Washington (Mo.).  
Jerry C. Pate, CPT; B.S., Mid. Tennessee State; M.S., Georgia Tech.  
William R. Pennington, CPT; B.S., USMA; M.S., Georgia Tech.



John S. Polles, CPT; B.S., Carnegie Tech.; M.S., Purdue.

Richard G. Whitney, CPT; B.S., USMA; M.S., Penn. State.

#### **Instructors**

Richard A. Armstrong, 1LT; B.A., Hartwick; Ph.D., Stanford.

Richard E. D'Andrea, CPT; B.S., Massachusetts; M.S., Utah.

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Charles E. Figgins, CPT; B.S., USMA; M.S., Penn. State.

John C. Gale, CPT; B.S., USMA; M.S., RPI.

Ray A. Gross, MAJ; B.S., Tulsa; M.S., Ph.D., Oklahoma.

Louis M. Jackson, CPT; B.S., Tuskegee Institute; M.A., Duke.

John S. Jewell, CPT; B.A., Texas Christian; M.S.E., Ohio State; Ph.D., Queen's University (Canada).

J. Harold Mashburn, MAJ; B.S., East Tennessee State; M.S., Tennessee.

Robert O. Neff, 1LT; B.S., Missouri; Ph.D., Indiana.

Glenn J. Niedermeyer, CPT; B.S., Washington State; M.S., Oregon State.

Lawrence S. Sagan, CPT; B.S., St. Mary's; Ph.D., Texas A&M.

Dwight S. Springer, CPT; B.Ch.E., Delaware; Ph.D., Minnesota.

## **Department of Earth, Space and Graphic Sciences**

### **Professor and Head of Department**

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

### **Associate Professors**

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Allan C. Biggerstaff, COL; B.S., USMA; M.S., Arizona; Ph.D., Cornell.

John B. Garver, Jr., COL; B.S., USMA; M.A., Syracuse.

Donald J. Koterwas, MAJ; B.S., USMA; M.S., Arizona.

Farrell G. Patrick, LTC; B.S., USMA; M.A., Ph.D., American.

James G. Tilson, MAJ; B.S., Eastern Tennessee State; M.S., Tennessee.

### **Assistant Professors**

Richard P. Amatulli, CPT; B.S., USMA; M.A., Illinois.

John W. Arrington, MAJ; B.S., USMA; M.A., Texas.

William G. Bray, Jr., MAJ; B.A., M.A., Oklahoma.

Russell P. Bonasso, Jr., CPT; B.S., USMA; M.S., Stanford.

Robert E. Case, MAJ; B.S., USMA; M.S., Air Force Institute of Technology.

Timothy E. Daly, MAJ; B.S., USMA; M.S., M.A., Syracuse.

Harry J. Dempsey, MAJ; B.A., Georgia; M.A., Catholic University of America.

John C. Eberle, MAJ; B.S., USMA; M.S., Purdue.

Cameron A. Ely, MAJ; B.S., USMA; M. OR., Tulane.

Grosvenor W. Fish, Jr., MAJ; B.S., USMA; M.E., Florida.

Clark W. Fuller, CPT; B.A., Eastern Kentucky; M.A., Ohio.

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John A. Glasier, CPT; B.A., California (Santa Barbara); M.S., Oregon State.  
 Jerome R. Hackett, CPT; B.S., USMA; M.S., George Washington.  
 George H. Harmeyer, MAJ; B.A., Western Maryland; M.A., Washington.  
 Frank M. Hock, MAJ; B.S., USMA; M.S., Newark College of Engineering.  
 James T.R. Johnson, Jr., MAJ; B.S., USMA; M.S., Tennessee.  
 Warren A. Johnson, MAJ; B.S., USMA; M.S., Georgia Tech.  
 John F. Langowski, Jr., CPT; B.S., Gannon; M.S., Michigan.  
 Kendall M. Lemley, MAJ; B.S., USMA; M.S., UCLA.  
 Edward J. Lorentzen, CPT; B.S., USMA; M.A., Texas.  
 John H. Munson, CPT; B.S., USMA; M.A., Syracuse.  
 James P. Reams, CPT; B.S., USMA; M.A., Minnesota.  
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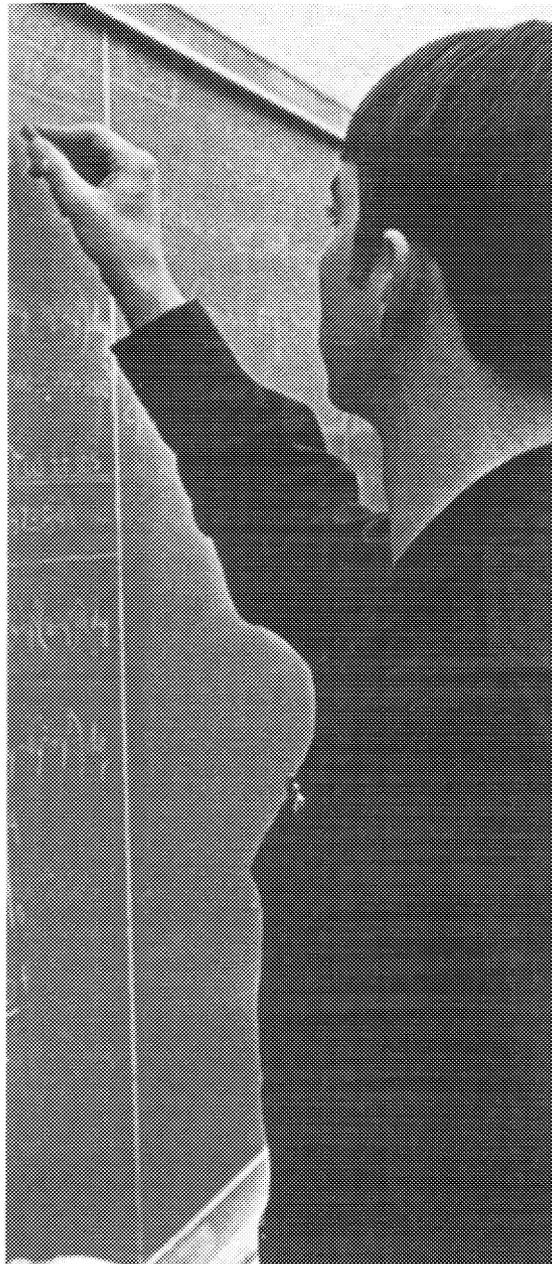
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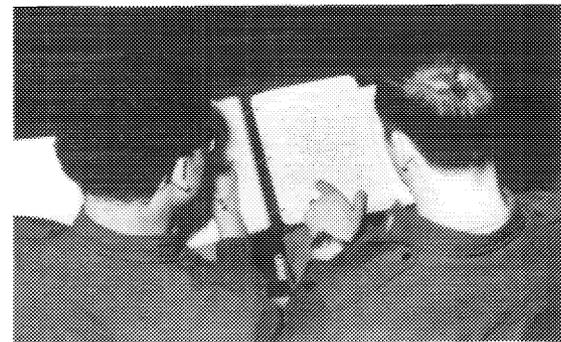
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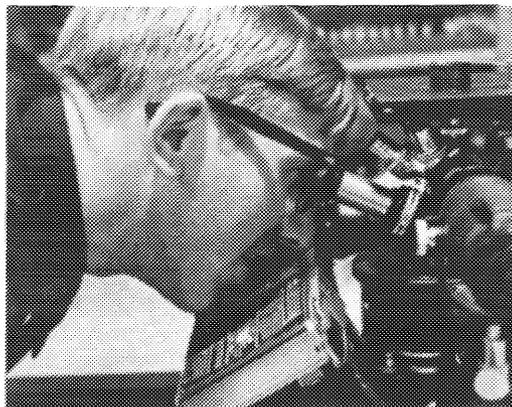
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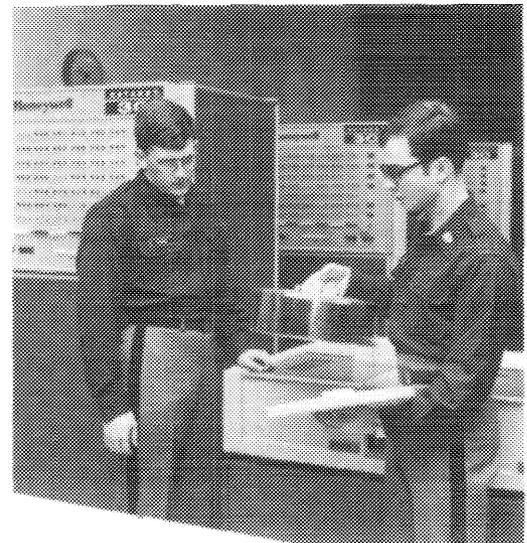
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Thomas A. Green, CPT; Tac. Off.; B.S., Maine.  
Boyd M. Harris, MAJ; Tac. Off.; B.S., USMA; M.A.C.T., North Carolina.  
Roger C. Lee, MAJ; Tac. Off.; B.S., USMA; M.B.A., Syracuse.  
Jerry D. Morelock, CPT; Tac. Off.; B.S., USMA; M.S., Purdue.  
Christopher J. Polk, (USAF), CPT; Tac. Off.; B.A., New York.  
Kenneth A. Rice, CPT; Tac. Off.; B.S., USMA; M.S., Purdue.  
Donald B. Smith, CPT; Tac. Off.; B.S., USMA; M.S., Southern California.  
Robert J. St. Onge, CPT; Tac. Off.; B.S., USMA; M.S., Purdue.

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J. Thomas Martin, CPT; B.S., USMA.  
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### Associate Professors

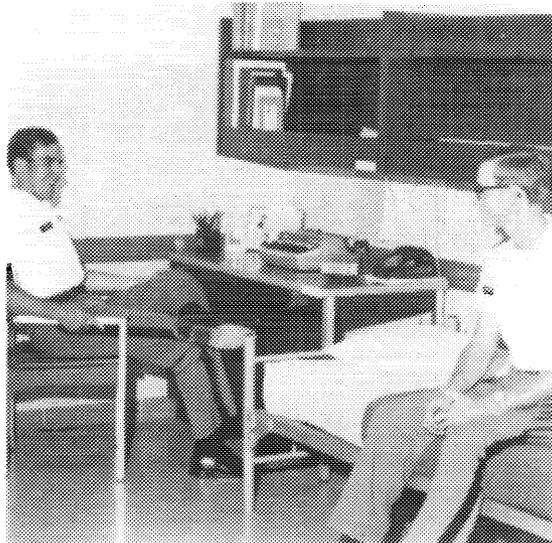
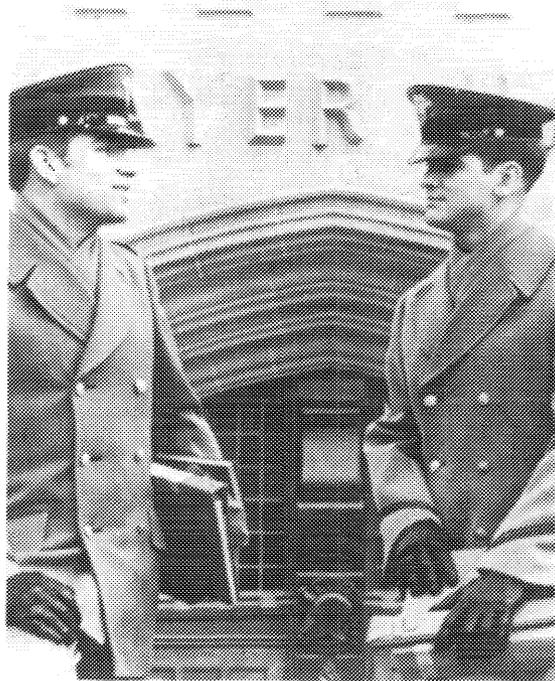
Herbert J. Kroeten; B.A., M.Ed., Minnesota.  
William F. Lewis; B.S., Springfield; M.A.,  
New York.  
George W. Linck; B.S., Springfield; M.A.,  
Columbia.  
James A. Peterson, Dr.; B.S., California (Berkeley);  
M.S., Ph.D., Illinois.  
Robert W. Stauffer, Dr.; B.S., Frostburg State;  
M.S., Virginia; Ed.D., Temple.

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Alfred F. Girardi, MAJ; B.S., USMA; M.S.,  
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Earl D. Greer, CPT; B.S., Central Missouri  
State.  
Robert A. Redmond, MAJ; B.S., USMA; M.S.,  
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### Instructors

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Robert A. Bertucci; B.S., Springfield.  
Lawrence F. Butler; B.S., Penn. State.  
George G. Cantlay, CPT; B.S., USMA; M.S.,  
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Roger J. Capan; B.S., New York; M.S., Illinois.  
James H. Cowles, MAJ; B.S., USMA; M.S.,  
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Edmund O. Crossley; B.S., M.E., Springfield.  
Richard I. Edell; B.S., Towson State; M.S.,  
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Larry R. Ellis, CPT; B.S., Morgan State; M.S.,  
Indiana.  
Robert A. Frank, MAJ; B.S., USMA; M.S.,  
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Dennis S. Forbes; B.S.; M.S., Wichita State.  
Francis E. Garren, E6, U.S.A.  
Robert J. Hoffman, CPT; B.S., USMA; M.S.,  
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Eileen R. Johnston, 1LT; B.S., Central Missouri  
State; M.A., Washington.



Paul J. Kirkegaard, MAJ; B.S., USMA; M.A., Auburn.  
 John D. Lemperle; B.S., Utah; M.S., Idaho State.  
 Joanne S. Micka; B.S., Westchester State; M.A., Wake Forest.  
 Joseph M. Palone; B.S., Cortland State; M.A., NYU.  
 Susan L. Peterson; B.S., California (Berkeley); M.S., Illinois.  
 Ronald V. Pifer; B.S., Penn. State; M.S., Wisconsin State.  
 Daniel P. Riley; B.S., Keene State; M.S., Indiana.  
 Patrick J. Simpson, MAJ; B.S., Oregon; M.S., Indiana.  
 William R. Schutsky, CPT; B.S., USMA; M.S., Indiana.  
 Michael T. Spinello, CPT; B.S., USMA; M.S., Indiana.  
 Garrett C. Starr, MAJ; B.S., Dayton.  
 Joseph W. Sutton, CPT; B.S., Ohio; M.S., Indiana.  
 Gene B. Tomlinson, MAJ; B.S., USMA; M.S., Indiana.  
 Henry J. Veix; B.S., Cortland State; M.A., Columbia.  
 David M. Yates; B.A., M.S., Delaware.  
 James W. Zuckerman, SP; B.S., Wisconsin.



### **Trainers**

Thomas W. Kurtz, SP; B.S., M.S., Wisconsin.  
 Chris L. Smith, SP; B.S., Purdue.  
 Louis F. Tomasi; B.S., Vermont; M.S., E. Stroudsburg State.

## **Board of Visitors, 1976**

### **From the United States Senate**

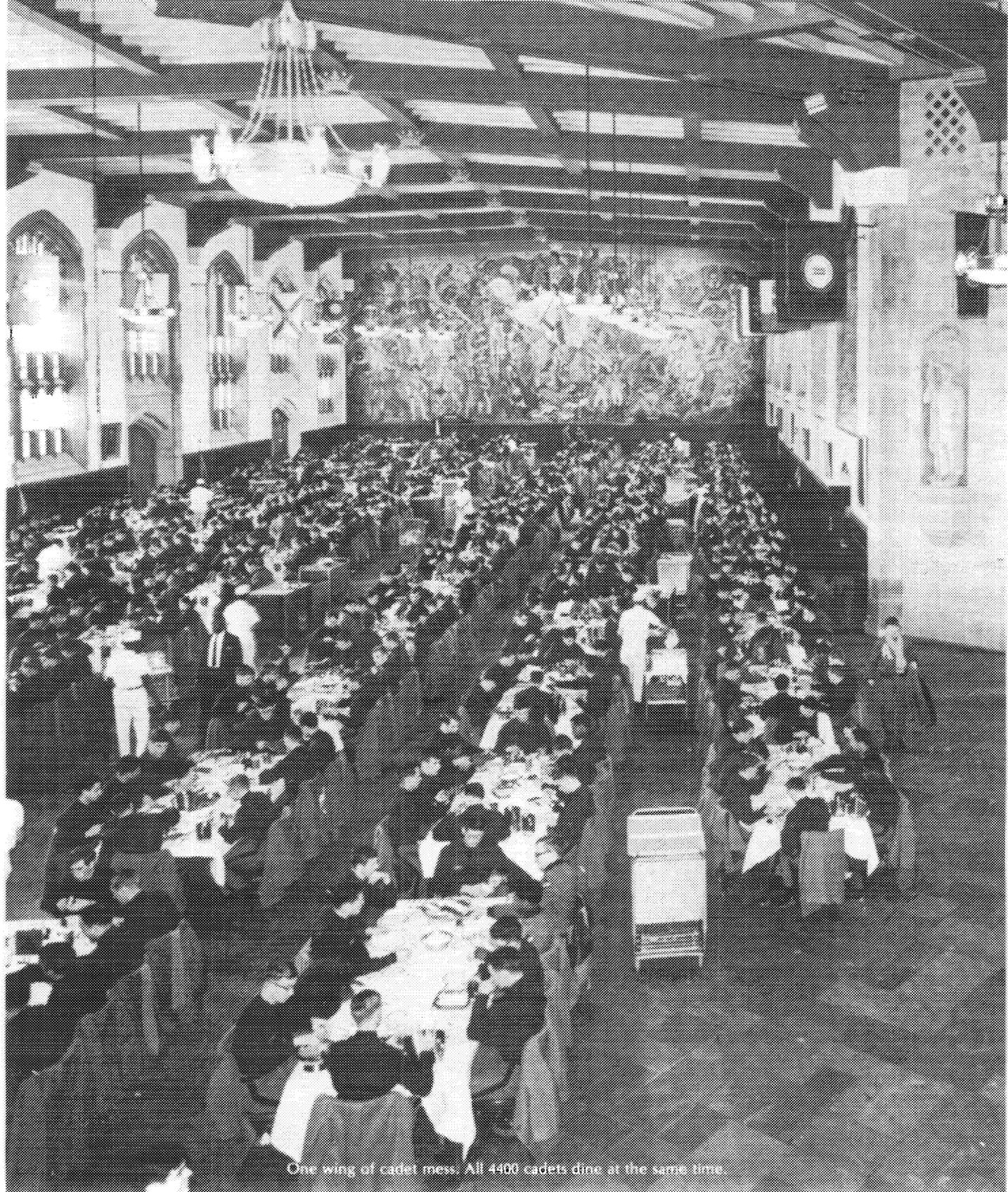
Honorable Dewey F. Bartlett, Oklahoma (representing John C. Stennis, Chairman of the Committee on Armed Services)  
 Honorable Thomas F. Eagleton, Missouri  
 Honorable Charles McC. Mathias, Maryland  
 Honorable John O. Pastore, Rhode Island

### **From the House of Representatives**

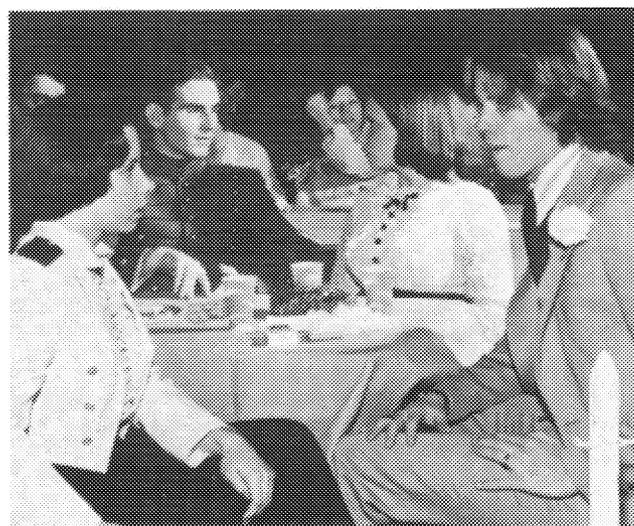
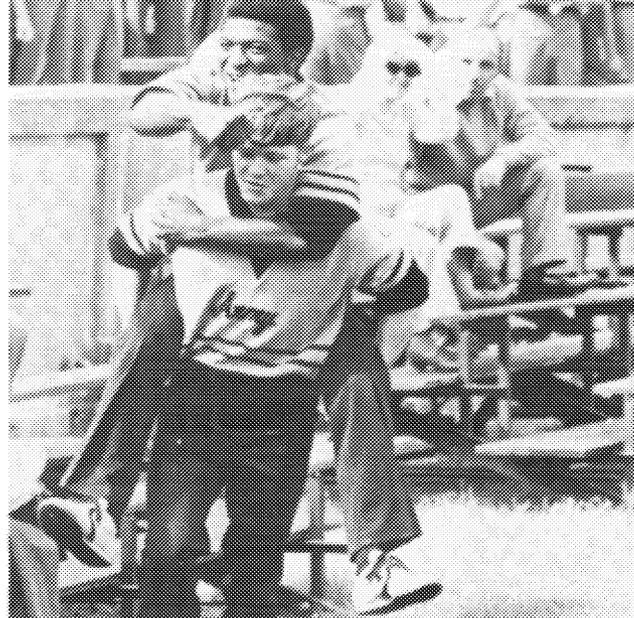
Honorable W.C. Daniel, Virginia (representing Melvin Price, Chairman of the Committee on Armed Services)  
 Honorable Elford A. Cederberg, Michigan  
 Honorable Benjamin Gilman, New York  
 Honorable Clarence D. Long, Maryland  
 Honorable John M. Murphy, New York

### **Appointed by the President of the United States**

Mr. Cary Hall, Consulting Engineer, Hampton, Georgia (appointed in 1974 to serve through 1976)  
 Major General Howard S. Wilcox, USAR, Indianapolis, Indiana (appointed in 1974 to serve through 1976)  
 Mr. Carleton J. King, Senior Member, Law Firm of King, Murphy, F. Fitzpatrick (appointed 1975 to serve through 1977)  
 Mr. Joseph T. Power, General President, Operative Plasterers and Cement Masons International Association of the United States and Canada (appointed in 1975 to serve through 1977)  
 Major General George H. Olmsted, USAR (Ret), President and Chairman of the Board, International Bank of Washington, D.C. (appointed 1976 to serve through 1978)  
 Ms. Helen N. Wilkins, President, Servo-Tek Products, Hawthorne, New Jersey (appointed 1976 to serve through 1978)



One wing of cadet mess. All 4400 cadets dine at the same time.



*“ . . . Encourage us in our endeavor to live above the common level of life. Make us choose the harder right instead of the easier wrong, and never to be content with a half truth when a whole can be won . . . . ”*

CADET PRAYER

# X. SUPPORTING ACTIVITIES

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

## THE MUSEUM

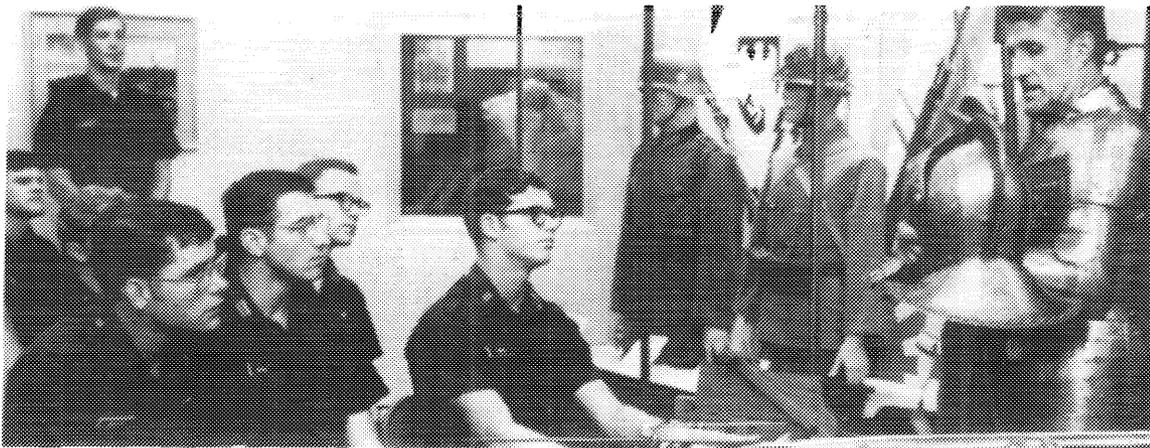
The West Point Museum allows cadets to see first hand our nation's colorful military heritage. Its collection of military relics is thought to be the largest in the Western Hemisphere. Lectures and demonstrations, loans to instructors and cadets, and rotating exhibits in cadet areas make the museum a 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 are on display at Trophy Point. 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 weapons, 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 the Military Academy's 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 displaying the 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 Military Academy better understand itself. It conducts various research projects for the Superintendent and supports studies by other individuals and departments of the Military Academy. The primary research programs focus 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. Membership in the Association is open to all graduates of the Military Academy and former cadets who spent at least one academic term here. Over 98 percent of the 25,049 living graduates are members.

Since its foundation in 1869 under the personal leadership of Sylvanus Thayer, "Father of the Military Academy," and Robert Anderson, Commander of Fort Sumter at the start of the Civil War, 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 is support of the West Point Fund. Tax-deductible donations and bequests to the Fund add to programs, equipment, facilities, and other improvements at the Military 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 Military Academy and the

Association in perpetuity. Conditional gifts are accepted only if their provisions are acceptable to the Military Academy or the Association; unrestricted gifts are preferred.

Four annual events supported by the Association have grown into important traditions at the Military Academy. The Long Gray Line gathers each June Week for the Alumni Parade. Since 1958 alumni have been returning to West Point to take part in the Homecoming football game 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, Omar N. Bradley, and Averell Harriman.

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 Military 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

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## 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. Agreement to Serve

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

#### IV. Statement of Policies

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

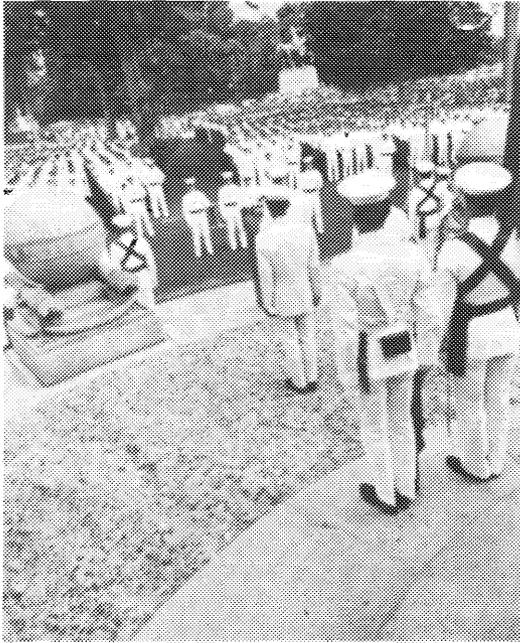
a. A cadet who enters the United States Military Academy directly from a civilian status assumes a military service obligation of six years (10 USC 651).

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

c. A cadet who enters the Military Academy directly from a civilian status and resigns or is separated from the Military Academy prior to the commencement of the Second Class Academic Year will be discharged. A resignation tendered by a Fourth or Third Class cadet will be accepted when found to be in the best interests of the service. A cadet who tenders a resignation will be required to state a specific reason for the action.

d. A cadet who enters the Military Academy from the Regular or Reserve Component of any military service and 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 unless sooner discharged. 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 Class cadet who resigns or is separated prior to completing the course of instruction, except for physical disqualification, misconduct, 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 any 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 Class cadet 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)).

## 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 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 male candidate should be from 60" to 80" tall (measured to the nearest half-inch). Each female candidate should be 58" to 72" tall (measured to the nearest half-inch). Anyone below the minimum height requirements will automatically be considered for a waiver if he or she 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.)	
	Male	Female*
58	-----	90 to 121
59	-----	92 to 123
60	100 to 158	94 to 125
61	102 to 163	96 to 127
62	103 to 168	98 to 129
63	104 to 174	100 to 135
64	105 to 179	102 to 136
65	106 to 185	104 to 140
66	107 to 191	106 to 144
67	111 to 197	109 to 147
68	115 to 203	112 to 152
69	119 to 209	115 to 158
70	123 to 215	118 to 162
71	127 to 221	122 to 168
72	131 to 227	125 to 171
73	135 to 233	-----
74	139 to 240	-----
75	143 to 246	-----
76	147 to 253	-----
77	151 to 260	-----
78	153 to 267	-----
79	159 to 273	-----
80	166 to 280	-----

\*The upper end of each female weight range is subject to change downward.

### 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:

Must be removed 3 days prior to examination.

### 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, subtract 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 Eustachian 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 Qualifying Medical 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 allergy 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.

In addition to the abnormalities of the bladder and kidneys listed above, the following disqualifications apply exclusively to females: Bartholinitis, Bartholin cyst; cervicitis, manifested by vaginal discharge; dysmenorrhea, incapacitating to a degree which necessitates recurrent absences of more than a few hours from scheduled activities; endometriosis; hermaphroditism; menopausal syndrome manifested by more than mild constitutional or mental symptoms (in all cases of artificial menopause, a clinical diagnosis fully

reported, and surgical and pathological reports will be obtained and recorded); menstrual cycle, irregularities of, including heavy menses, bleeding between menses, menses more than one every 28 days, or lack of menses; tumors of the internal or external genitals, except for single uterine fibroid, subserous, asymptomatic, less than 3cm in diameter, with no general enlargement of the uterus; acute or chronic inflammation of the ovaries or tubes; pregnancy; cervical polyps; cervical ulcer or marked erosion; generalized enlargement of the uterus due to any cause; malposition of the uterus if more than mildly symptomatic; congenital abnormalities or severe lacerations of the vagina; leukoplakia of the vulva; chronic or acute vulvitis; major abnormalities or defects of the genitalia, such as a change of sex, a history thereof or complications residual to surgical correction of these conditions.

#### **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 evalua-

tion. 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 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

conditions 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 interfere 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 (For Men):** From the arm hang position on a horizontal bar, palms away from the face, elevate the body until the chin is above the bar.

**Flexed-Arm Hang (For Women):** With arms fully flexed, grasp the bar with the palms of the hands away from the face, the thumbs under the bar, and chin over the bar. Hold this position for time.

**Standing Long 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 Physical Aptitude 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

	FLEXED ARM		STANDING		BASKETBALL		300 YARD		PERCENTILE
	PULLUPS (MEN)	HANG (WOMEN)	LONG JUMP (MEN)	LONG JUMP (WOMEN)	THROW (MEN)	THROW (WOMEN)	SHUTTLE* (MEN)	SHUTTLE* (WOMEN)	
TOP QUINTILE	19	59 sec	8'8"	7'11"	90'	62'	55 sec	60 sec	100%
	15	51 sec							
	13	45 sec			80'	54'			80%
	12	40 sec	8'0"	6'11"	75'	50'	56 sec	63 sec	
MIDDLE QUINTILE	11	36 sec			70'	47'	57 sec		60%
	9	34 sec	7'8"	6'8"	67'	46'	58 sec	66 sec	
		30 sec	7'6"	6'7"					
	8				65'	44'			40%
	7	28 sec	7'4"	6'4"	61'	42'	59 sec	67 sec	
	6	26 sec	7'2"	6'2"			61 sec	68 sec	
BOTTOM QUINTILE					60'	39'	62 sec	69 sec	20%
	5	22 sec	7'0"	6'0"	55'	36'	64 sec	72 sec	
	4	18 sec							
	3	16 sec	6'8"	5'9"	50'	33'			
	1	11 sec			40'	25'	65 sec	75 sec	
			6'4"	5'5"			68 sec	78 sec	

\*run on a 25-yard course

## 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 .....  
Street City State

ZIP CODE  SSN --

YEAR OF HIGH SCHOOL GRADUATION  SEX  MALE  FEMALE

Data you voluntarily submit will be used for fulfilling your request for admission information to USMA, as authorized by 10 USC 4346. Failure to provide data may preclude action on your inquiry.

**K**

---

Please send information concerning Admission to West Point to:

(Please print or type)

NAME .....  
Last First MI

ADDRESS .....  
Street City State

ZIP CODE  SSN --

YEAR OF HIGH SCHOOL GRADUATION  SEX  MALE  FEMALE

Data you voluntarily submit will be used for fulfilling your request for admission information to USMA, as authorized by 10 USC 4346. Failure to provide data may preclude action on your inquiry.

**K**

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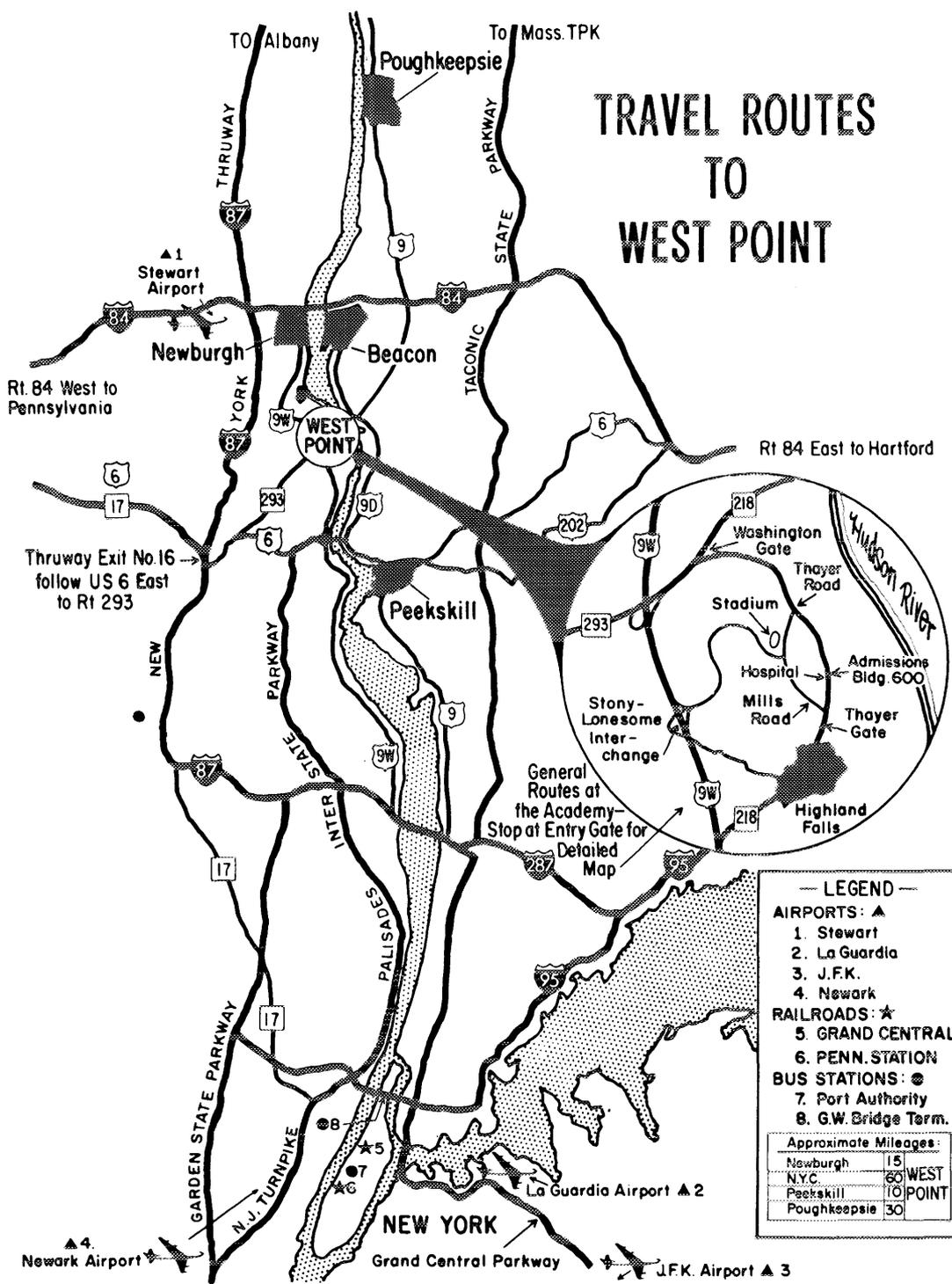
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# TRAVEL ROUTES TO WEST POINT



**— 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 WEST
Peekskill	10 POINT
Poughkeepsie	30



## West Point Calendar

1977

August 28, Sunday - **Reorganization Week Begins**  
September 5, Monday - **Labor Day** (Holiday)  
September 6, Tuesday - **First Term Begins**  
October 22, Saturday - **Homecoming** (Classes Suspended)  
October 24, Monday - **Veterans Day** (Holiday)  
November 24-25, Thursday-Friday - **Thanksgiving** (Holiday)  
November 26, Saturday - **Army-Navy Football Game** (Classes Suspended)  
December 21, Wednesday - **Christmas Leave Begins** (12:00 Noon)

1978

January 4, Wednesday - **Christmas Leave Ends** (5:30 p.m.)  
January 13, Friday - **Term End Examinations Begin**  
January 21, Saturday - **First Term Ends**  
January 23, Monday - **Second Term Begins**  
February 20, Monday - **Washington's Birthday** (Holiday)  
March 25, Saturday - **Spring Leave Begins** (12:00 Noon)  
April 2, Sunday - **Spring Leave Ends** (5:30 p.m.)  
May 22, Monday - **Term End Examinations Begin**  
May 27, Saturday - **Second Term Ends for 1st Class**  
May 29, Monday - **Memorial Day** (Holiday)  
May 31, Wednesday - **June Week Begins**  
June 1, Thursday - **Second Term Ends**  
June 7, Wednesday - **Graduation Day, Class of 1978**  
- Beginning of approximately 4 weeks of leave for new 3rd Class prior to reporting to Camp Buckner for 8 weeks of summer training.  
July 5, Wednesday - **Reporting Day, entering Class of 1982** (Tentative)

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

