

WEST POINT

UNITED STATES MILITARY ACADEMY





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1974/1975 CATALOG

One Hundred Seventy-Third Year

WEST POINT CALENDAR

- 1974** 8 July, Monday - Class of 1978 Enters
25 August, Sunday, - Reorganization Week Begins
30 August, Friday - Reorganization Week Ends
2 September, Monday - Labor Day, Holiday
3 September, Tuesday - First Term Begins
26 October, Saturday - Homecoming (Classes Suspended)
28 October, Monday - Veterans Day (Classes Suspended)
28-29 November, Thursday-Friday - Thanksgiving, Holiday
30 November, Saturday - Army-Navy Football Game
21 December, Saturday - Christmas Leave Begins (12:00 Noon)
- 1975** 5 January, Sunday - Christmas Leave Ends (5:30 PM)
10 January, Friday - Term End Examination Begin
18 January, Saturday - First Term Ends
20 January, Monday - Second Term Begins
17 February, Monday - Washington's Birthday, Holiday
22 March, Saturday - Spring Leave Begins (12:00 Noon)
31 March, Monday - Spring Leave Ends (5:30 PM)
19 May, Monday - Term End Examinations Begin
26 May, Monday - Memorial Day, Holiday
27 May, Tuesday - 2d Term Ends for 1st Class
29 May, Thursday - June Week Begins
29 May, Thursday - 2d Term Ends for Under Classes
4 June, Wednesday - Graduation Day, Class of 1975
7 July, Monday - Class of 1979 Enters

Admissions Calendar/Critical Dates

- March 1974 - January 1975--Request nomination from authorized sources; write Admissions, USMA, for file initiation
- 1 June 1974--Candidates may begin taking Medical Exams which will be valid for entrance in July 1975
- July 1974-January 1975--Receive nomination
- 19 October 1974--American College Testing (ACT) Program Exams
- 2 November 1974--College Entrance Examination Board, SAT
- 7 December 1974--College Entrance Examination Board, SAT
- 14 December 1974--American College Testing (ACT) Program Exams
- 1 February 1975--College Entrance Examination Board, SAT
- 22 February 1975--American College Testing (ACT) Program Exams
- 5 April 1975--College Entrance Examination Board Testing (Make-Up)
- *April 1975--Candidate Appointment (Offer of Admission to Selected Candidates)
- 7 July 1975--New Fourth Class Enters (Class of 1979)

**Early offers of admission are given to the outstanding candidates beginning 15 October; waiting-list selections are made during May and June.*



PROSPECTIVE WEST POINT CADET

Each high school graduate faces two important decisions: which profession or lifetime goal to pursue and what further education and training to undertake. Making the right choices requires careful thought and consideration.

If you welcome a challenge, enjoy variety, seek responsibility, want to lead, find fulfillment in service to others, and are willing to work hard, then you should consider attending West Point and becoming an officer in the United States Army. At West Point you will find challenges, experiences, opportunities, and advantages available nowhere else. Each cadet receives a full scholarship. In return, each West Point graduate enters active duty as an Army Officer.

The United States Military Academy offers its students a unique combination of a well-rounded education, a comprehensive athletic program, a broad spectrum of extracurricular activities, unsurpassed leadership training, and a solid foundation for a purposeful life as a soldier-leader and public servant. A West Point education and its training will prepare you for the achievement of excellence in virtually any field of endeavor.

Since 1802 West Point graduates have established a tradition and an ideal of service. Should you want to become a part of West Point and its tradition of dedication, service and be an officer in the United States Army, we will welcome your application for appointment to the United States Military Academy.

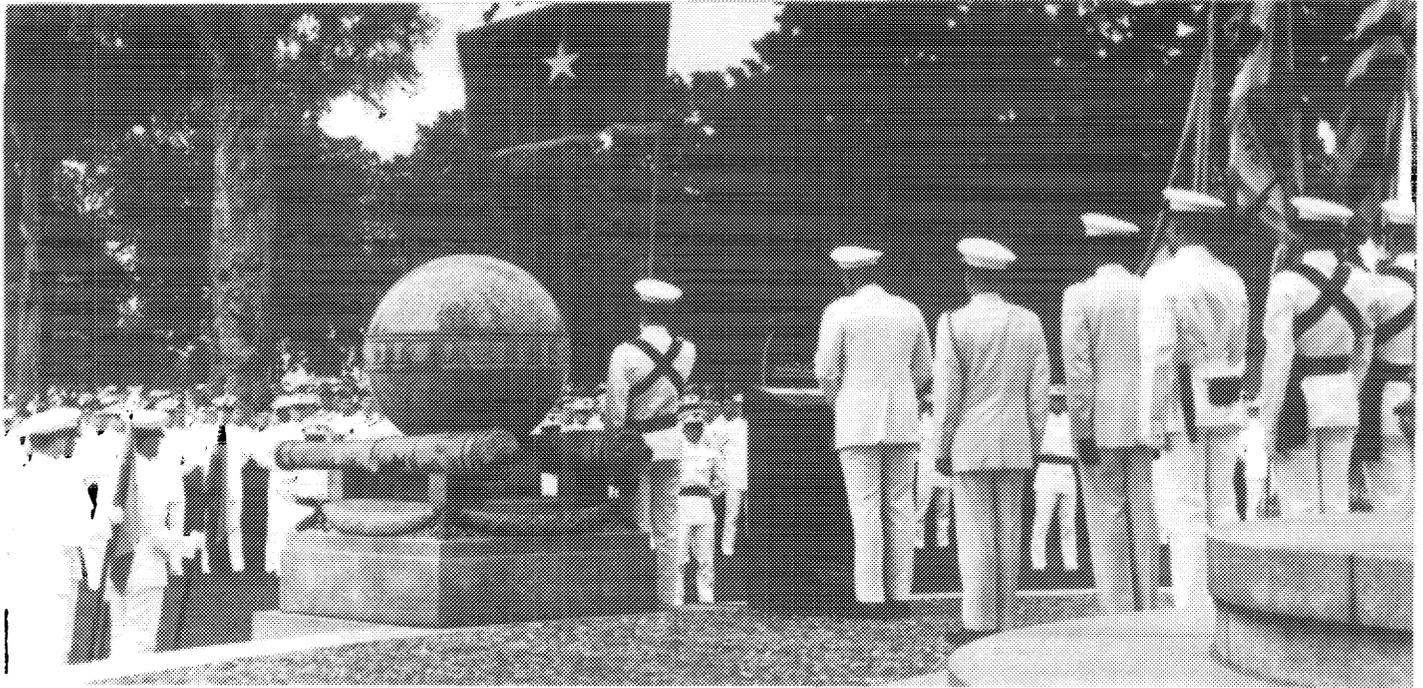
A handwritten signature in cursive script that reads "Sidney B. Berry". The signature is written in black ink and is positioned above the printed name and title.

SIDNEY B. BERRY
Major General, US Army
Superintendent

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Mission of the Military Academy

The mission of the United States Military Academy is to instruct and train the Corps of Cadets so that each graduate will have the qualities and attributes essential to his progressive and continued development throughout his career as an officer of the Regular Army.

Inherent in this mission are the following objectives:

Mental — To provide 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. This education leads to the Bachelor of Science degree.

Moral — To develop in the cadet a high sense of duty and the attributes of character with emphasis on integrity, discipline, and motivation essential to the profession of arms.

Physical — To develop in the cadet those physical attributes essential to a career as an officer of the Regular Army.

Military — To provide a broad military education rather than individual proficiency in the technical duties of junior officers. Such proficien-

cy is, of necessity, a gradual development, the responsibility for which devolves upon the graduates themselves and upon the commands and schools to which they are assigned after being commissioned.

ACCREDITATION

The Military Academy is accredited by the Middle States Association of Colleges and Secondary Schools.

Each graduate is awarded the Bachelor of Science degree.

COMMISSIONING OF GRADUATES

Graduated cadets are commissioned as second lieutenants in the Regular Army and are required to serve a minimum of five years in the United States Army immediately following the date of graduation.

Effective with the Class of 1975, all graduates of the United States Military Academy who are physically qualified for commissioning normally will be commissioned in the United States Army.



Administration

The United States Military Academy is under the general direction and supervision of the Department of the Army. The Secretary of the Army has designated the Chief of Staff of the Army as the officer in direct charge of all matters pertaining to West Point.

The immediate government and military command of the Academy and the military post at West Point are vested in the Superintendent. The Dean of the Academic Board coordinates the activities of the academic departments and advises the Superintendent on academic matters. The administration and military training of the Corps of Cadets are the responsibilities of the Commandant of Cadets, who is also head of the Department of Tactics.

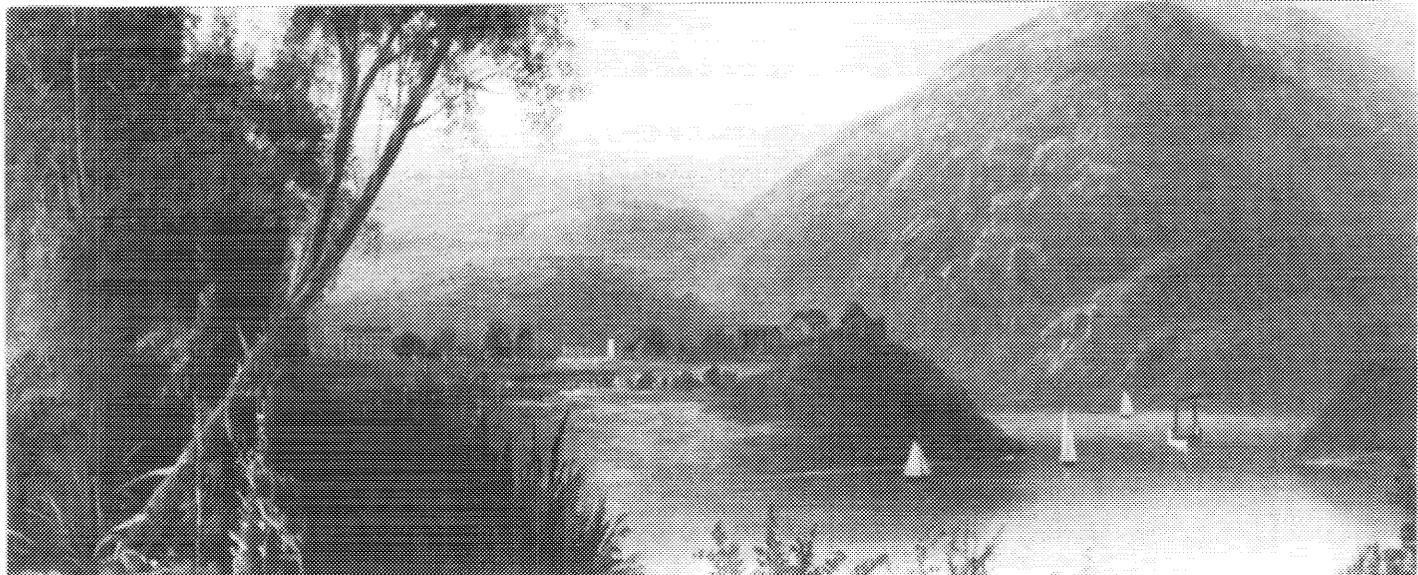
Major General Sidney B. Berry, USA
SUPERINTENDENT

Brigadier General Philip R. Feir, USA
COMMANDANT OF CADETS

Colonel John S.B. Dick, USA
ACTING DEAN OF THE ACADEMIC BOARD

Colonel George S. Webb, USA
CHIEF OF STAFF

Colonel Manley E. Rogers, USA
**DIRECTOR OF ADMISSIONS
AND REGISTRAR**



A Brief History of the United States Military Academy

The United States Military Academy, oldest of the service academies, has provided military leaders for the U.S. Army since its founding on March 16, 1802.

During the early years of our nation's independence, the establishment of a Military Academy had long been considered essential by many of the nation's leaders. Colonel Henry Knox first proposed such an institution in 1776 and was later supported by Thomas Pickering, Alexander Hamilton, and John Adams. George Washington, in one of his last public acts, urged that "The establishment of an institution of this kind, upon a respectable and extensive basis, has ever been considered by me as an object of primary importance to this country." Because of these strongly held views combined with the volatile international political climate of the late eighteenth century, Congress determined that an Academy devoted to the arts and sciences of warfare would be in the nation's best interests. Thus, on 16 March 1802, Congress authorized a Corps of Engineers to be stationed at West Point, New York (a garrison site which had been occupied by the Army since 1778) and to constitute a Military Academy. On 4 July 1802,

the Academy officially opened with a total complement of fifteen (ten cadets and five officers), with Major Jonathan Williams, grandnephew of Benjamin Franklin, as the first superintendent.

The early mission of the academy was to train military technicians for all branches of the military service, to encourage the study of military art nationally and thus raise the level of training of the militia, and to encourage the practical study of every science. Henry Adams, the most authoritative historian on that period of American life, wrote in his *History of the United States* that American scientific engineering "owed its efficiency and almost its existence to the military school at West Point."

On 29 April 1812, with the threat of war with England, Congress passed an Act which increased the strength of the Corps of Cadets to 250, enlarged the academic staff, established a set of published regulations to govern the daily lives of cadets, and required that each cadet be taught "all the duties of a private, a non-commissioned officer, and an officer." Graduates served well in the War of 1812, during the critical campaign of which, John Adams wrote, "The West Point En-

gineers doubled the capacity of the little American Army for resistance.”

After the War of 1812, the needs of the nation changed, and the young Academy changed with them. Responsible for the innovations at the Academy was Sylvanus Thayer, Superintendent from 1817-1833 and “Father of the Military Academy.” The cornerstone of Thayer’s philosophy was a demand that cadets possess an excellence of character and an excellence of knowledge. He emphasized habits of regular study, established that every cadet must pass every course or make up his deficiency, and limited classroom sections to from ten to fourteen members. Thayer saw the need of the country for engineers and he established civil engineering as the core of the curriculum. The Military Academy became the nation’s first engineering school. Its graduates were assigned around the globe, applying the engineering principles learned at the Academy to the problems of the new frontiers. Besides undertaking numerous construction jobs necessary to expand the nation’s frontiers, Academy graduates also directed such monumental tasks as the construction of the Panama Canal. Thayer’s innovations in engineering education led Francis Weyland, President of Brown University from 1827-1855, to say that Military Academy graduates did “more to build up the system of internal improvement in the United States than [the graduates of] all other colleges combined.” In October 1965, Thayer was elected to the Hall of Fame of Great Americans at New York University. His insistence on excellence of character and knowledge and many of his educational reforms remain important ingredients of Academy life.

But while improvement in education and excellence in civil engineering were important to the Academy, graduates in the nineteenth century were called repeatedly to serve their country on the fields of battle. The Civil War saw West Point graduates serving with distinction on both sides: Grant, Sherman, Sheridan, Meade, Lee, Jackson, Ewell, and Longstreet, to name a few.

During the Civil War period, the education of the Regular Army Officer at West Point underwent continuous changes. The birth of new technical and engineering schools in the United States allowed the Academy to drop its emphasis on a strictly civil engineering curriculum. Also, since several Army postgraduate schools had been established, USMA began to be looked upon as the first step in a continuing Army education.

The Academy’s centennial in 1902 marked the beginning of more changes. A new physical plant was constructed, using the Gothic architectural style. The Honor System grew stronger as cadets themselves began to administer it. General Albert L. Mills, the Superintendent, reassessed the military and the academic training program curriculum. The academic curriculum underwent a gradual liberalization until the outbreak of World War I; liberal arts subjects — English, foreign languages, history, and the social sciences — were strengthened or added to the course requirements.

In World War I, Academy graduates served with the Allied Expeditionary Forces (to include its commander, General of the Armies John J. Pershing). Although the four-year course at West Point was shortened to meet the demands of the war, it was quickly re-established at four years upon termination of hostilities.

Responsible for the continued development of the Academy after World War I was General of the Army Douglas MacArthur, who became superintendent on 12 June 1919. MacArthur quickly re-established pre-war academic standards. He instituted fundamental changes in the physical fitness and intramural athletic programs and introduced more liberal education into the curriculum. He also eliminated much of the personally degrading physical hazing.

The list of graduates serving in World War II is long and distinguished — Eisenhower, MacArthur, Bradley, Arnold, Clark, Patton and Wainwright — to name a few. The post-World War II period witnessed significant changes in the role of the officer and knowledge required of him. The

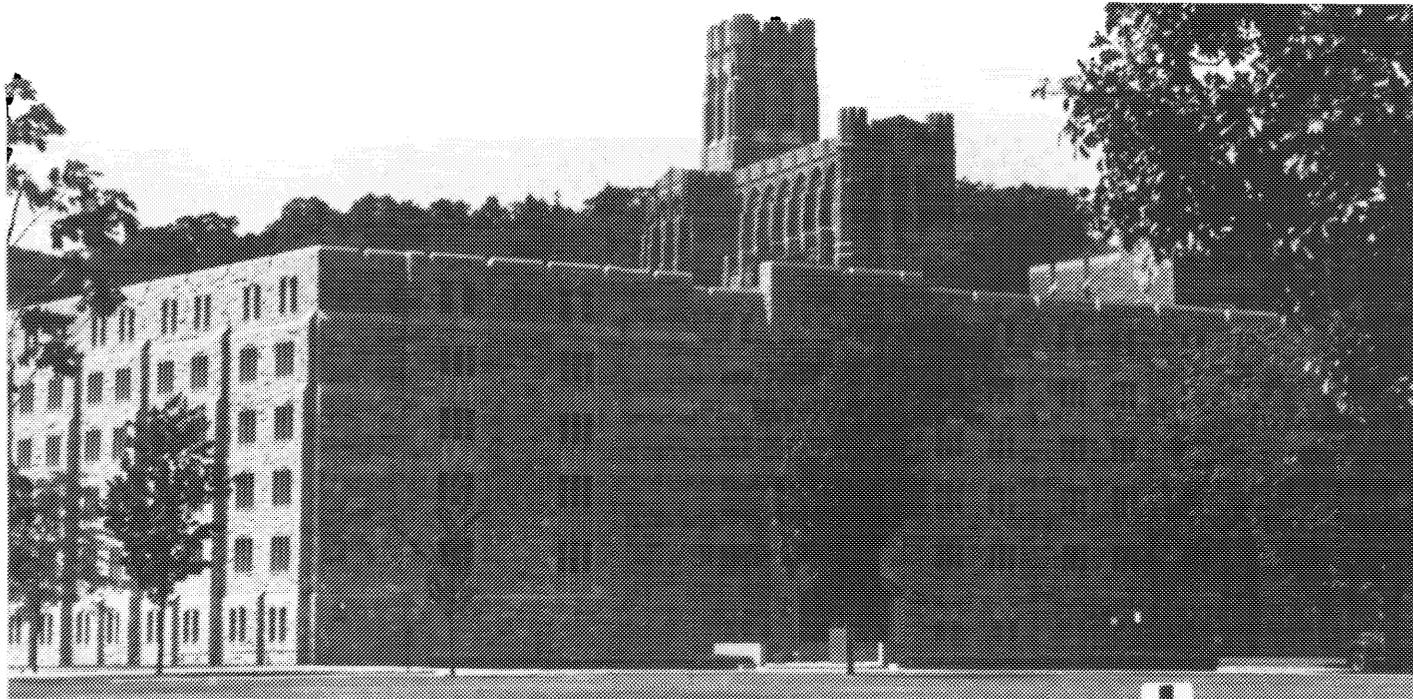


burgeoning of science and technology, the increasing need to understand the socio-political problems of other cultures and peoples, and the rising level of general education in the Army all had to be taken into account. As a result, in 1961, the Academy offered elective study programs for the first time. Curriculum changes continued throughout the 1960's as the Academy sought to continue to provide cadets with a broad educational background and at the same time to offer an increasing number of elective programs to fit expanding cadet interests and aptitudes. For the first time, cadets were allowed to validate courses and substitute electives of their own choosing. Today, although cadets must still complete a basic core curriculum, they may elect to specialize in one of four major study programs.

In 1964, President Johnson signed a bill increasing the authorized strength of the Corps of Cadets from 2529 to 4417. To keep pace with expanded curriculum and the increase in the size of the Corps, a major expansion of the Academy's physical plant was begun in mid-1964. The expansion of the Corps of Cadets is now complete. The expansion of the physical plant is nearing completion.

The academic and military training program at West Point is a vital one that is continuously examined and adjusted to the changing times. Among the more noted recent West Point graduates are Astronauts Frank Borman, Edwin "Buzz" Aldrin (fifth West Pointer in space and first West Pointer and second human to walk on the moon), and David R. Scott (sixth West Pointer in space and second West Pointer on the moon), all of whose accomplishments exemplify the soundness of the West Point system: a vital, continuously examined and adjusted academic and military training program, built on the cornerstone of the Thayer philosophy — leadership strengthened by excellence of character and knowledge.





Academy Facilities

The United States Military Academy reservation consists of approximately 16,000 acres, located in Orange County, New York, fifty miles north of New York City. The cadet area, framed by the Hudson Highlands, overlooks the Hudson River at its historic West Point. The main cadet complex retains the harmonious blend of Gothic style architecture and the natural beauty of the surrounding hills.

The focal point of the cadet area is Washington Hall, the cadet dining hall, where the entire Corps of Cadets assembles three times a day for high quality, family-style meals. In addition to the dining hall, Washington Hall contains the Offices of the Commandant of Cadets and his staff, two academic departments, classroom facilities, and other cadet support facilities.

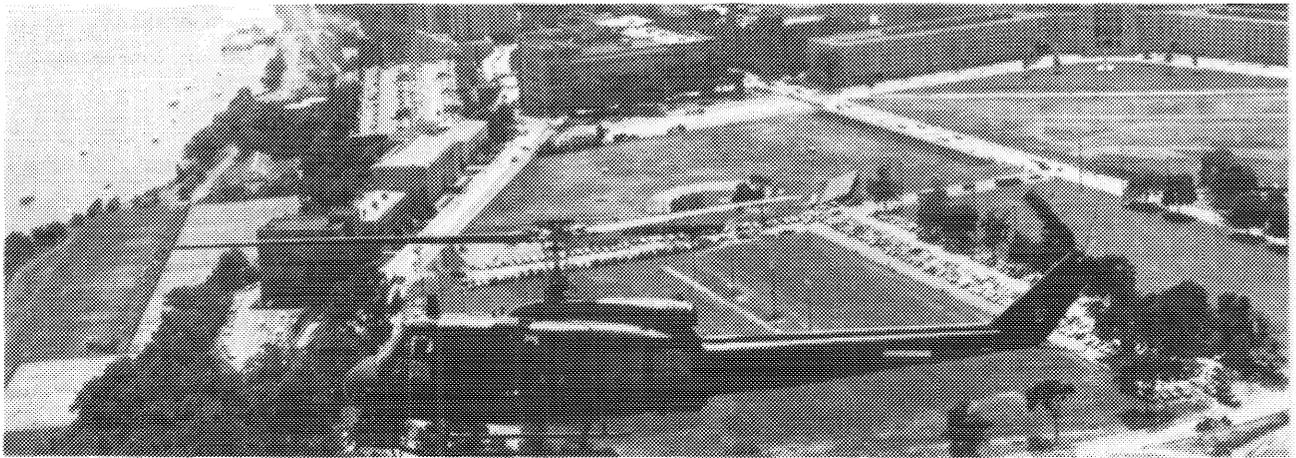
Flanking Washington Hall on the north, east, and south is the barracks complex which houses the Corps of Cadets. With the recent completion of new dormitory-style barracks cadets now live in comfortable surroundings, two cadets per room. Over half of the cadet rooms have been occupied less than six years. Even the older rooms, however,

have been renovated and equipped with modern furnishings.

Thayer, Bartlett, and Mahan Halls, adjacent to the cadet barracks complex, contain the remaining academic departments, classrooms, and laboratory facilities. Thayer Hall, a complete structure built over 20 years ago within the walls of the old riding hall, provides 98 classrooms, a computer center, a television studio, 800-seat and 1500-seat auditoriums, the Academy Museum and offices for academic departments. Bartlett Hall contains 73 classrooms, lecture halls, laboratories, and academic department offices. Classes were held in Mahan Hall for the first time in the fall of 1972. This new nine story building contains 74 classrooms, a 650-seat auditorium, engineering and mechanics laboratories, and administrative areas for three academic departments.

The Cadet Library, containing 370,000 volumes, reading rooms, seminar rooms, microfilm and audio-visual facilities, and rare book collections, is located within the barracks-academic complex.

The Administration Building, or Post Head-

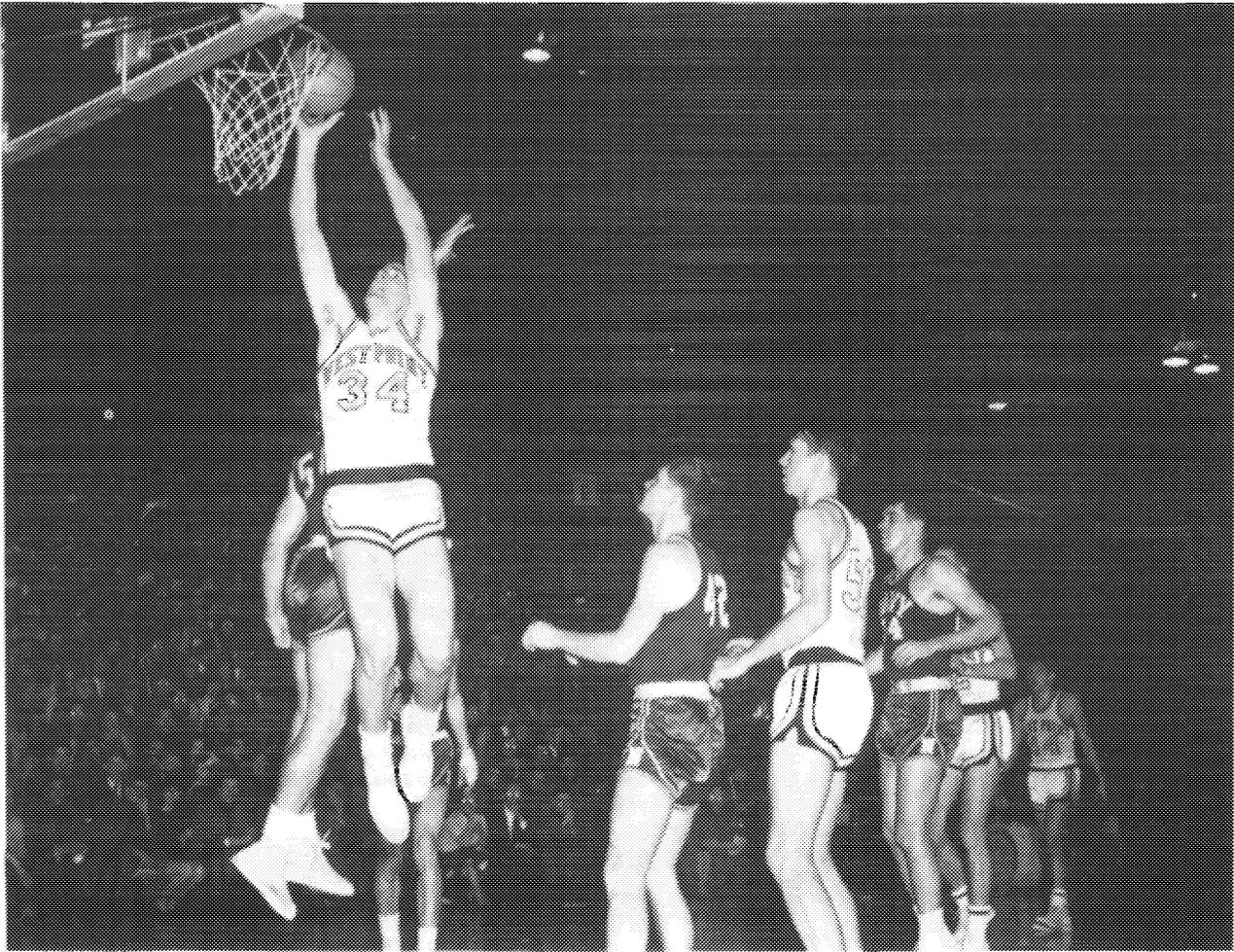


quarters, contains the offices of the Superintendent, the Dean of the Academic Board, and the Director of Admissions and Registrar and is also located adjacent to the barracks-academic complex.

West Point provides cadets with outstanding athletic facilities. The gymnasium building houses five gymnasiums and has recently been expanded to provide a new Olympic size swimming pool to complement the existing swimming facilities. In addition to the varsity sport facilities of Michie Stadium for football, Shea Stadium for track, Doubleday Field for baseball, Smith Rink for ice

hockey, the Field House for basketball and indoor track, and the new indoor rifle and pistol ranges, numerous athletic fields are located throughout the post. Just as Smith Rink provides a facility for the recreational ice skater and the ice hockey team, the Victor Constant Ski Slope is shared by the intercollegiate, intramural and recreational skier. The golf course is adjacent to the ski area, and multiple tennis courts and outdoor swimming facilities are found throughout the post.

Religious services are held in three separate chapels. The Cadet Chapel (containing the largest

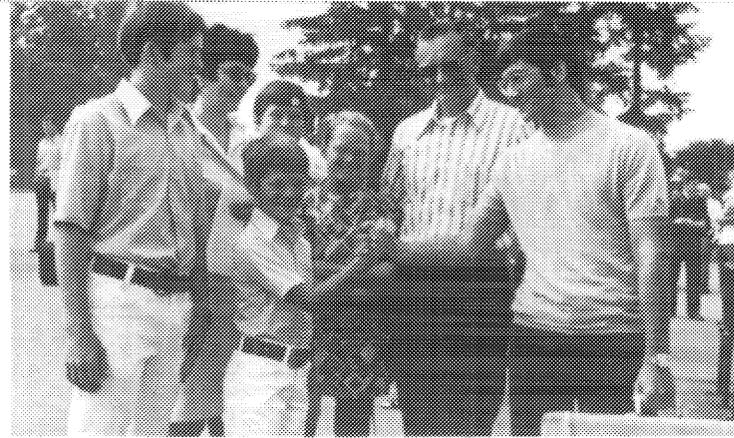


church organ in the Western Hemisphere) overlooks the cadet barracks and is used for Protestant services. Catholic services are held in the Chapel of the Most Holy Trinity, a copy of a parish church in County Essex, England. The Old Cadet Chapel at the West Point cemetery entrance is used for Lutheran services and funeral services.

Cadets have numerous clubs and activities for leisure time. Grant Hall, Cullum Hall, the Weapons Room and the First Class Club provide snack bar and lounge facilities for cadets and their guests. The government-owned Hotel Thayer provides hotel accommodations for the cadets' friends and

families. Additionally, a Cadet Activities Center provides a 4500-seat auditorium, a 1000-seat snack bar, a 1000-person multipurpose ballroom, a Cadet Hostess area, and a large reception area for cadet guests.

Each year hundreds of thousands of tourists visit West Point to observe the Corps of Cadets, the historic memorabilia and the natural beauty of the Academy in its Highlands setting. Visitors are urged to begin their tour at the Visitors Information Center near Thayer Gate where informative literature and suggested tour guidance is available.



Admissions

Director of Admissions and Registrar

COL MANLEY E. ROGERS

B.S., United States Military Academy
M.S.C.E., California Institute of Technology

Deputy Director of Admissions and Registrar

MR. JOHN I. WOODRUFF

Reserve Affairs Advisor

LTC HAROLD G. BEAL, JR.

B.A., Fordham College
M.A., Columbia University
Air War College

Associate Director of Admissions

MAJ DAVID E. ROESLER

B.S., United States Military Academy

Admissions Officers

CPT DONALD E. APPLER

B.S., United States Military Academy
M.S., University of Tennessee

CPT GEORGE R. BROCK

B.S., United States Military Academy
M.B.A., University of Maryland

CPT WILLIAM L. ENGLAND

B.S., Tuskegee Institute
M.A., Butler University

CPT LEO R. KENNEDY

B.S., United States Military Academy
M.Ed., University of Illinois

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M.S., University of Illinois

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M.Ed., University of Rhode Island

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CPT MICHAEL E. WIKAN

B.S., United States Military Academy
M.S., University of Michigan

1LT RODERICK H. MORGAN

B.S., United States Military Academy

Associate Director of Admissions

MAJ PIERCE A. RUSHTON, JR.

B.S., United States Military Academy
M.S., University of Alabama

Assistant Director of Admissions for Field Support Programs/CPRC

MAJ ROBERT B. TURNBULL (Ret.)

B.S., United States Military Academy

Admissions Information

MR. KENNETH M. PETRACK

B.A., M.A. (1965), M.A. (1966), Duquesne University

CPT BOBBY J. GOOD

B.S., Oklahoma State University

Associate Director for Data Processing

CPT FREDERICK G. ERNST

B.S., United States Military Academy
M.S.C.E., M.S.M.E., Stanford University

Assistant Director of Admissions for

Records and Testing

CPT ROBERT B. CATO

B.S., United States Military Academy
M.S., M.A., Stanford University

Candidate Testing Coordinator

MR. JAMES L. GAINES

Every year West Point selects approximately 1360 young men for admission to the United States Military Academy. These members of the plebe (freshman) class are traditionally from all fifty states, from every facet of American life, and of every race, color, religion and national origin represented in this country. This diversity is encouraged by West Point and contributes to the enrichment of the Corps of Cadets and insures a membership comprising multiple backgrounds, interests and talents.

All those who are candidates to become cadets must meet certain eligibility requirements, and must be qualified medically, academically and in physical aptitude. Moreover, candidates must secure a nomination from one of the various nominating categories. A step-by-step procedure guide is provided to assist prospective candidates.

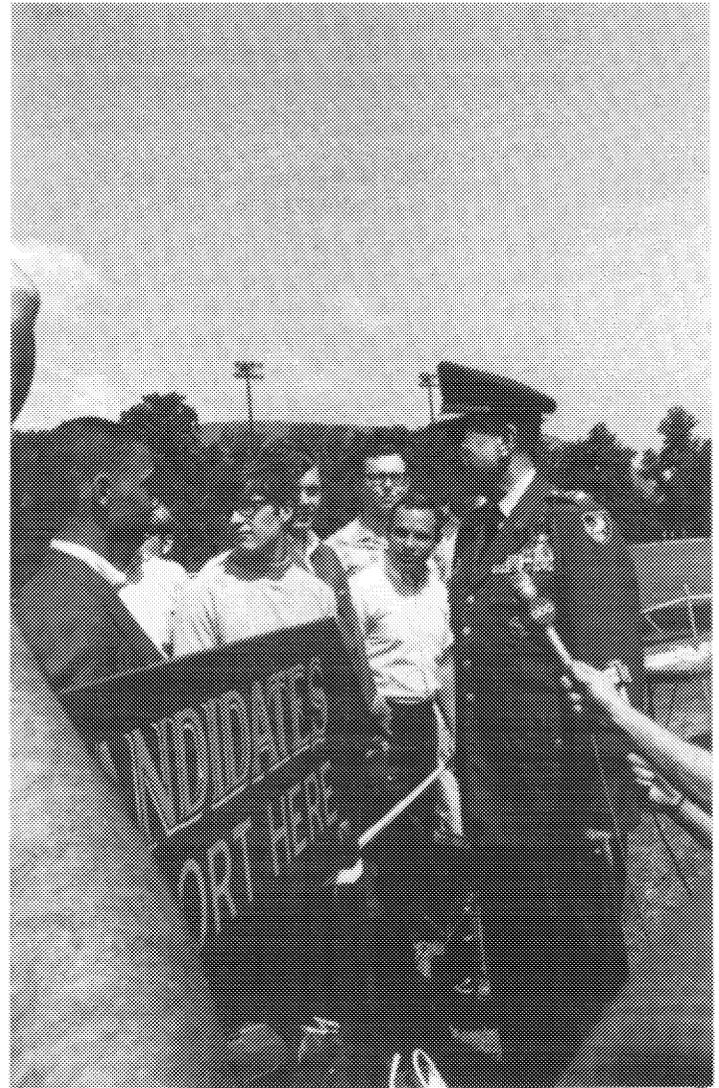
ADMISSIONS PROCEDURE GUIDE

1. Check the eligibility requirements cited below to see if you can qualify.
2. Study the criteria for the various nomination categories and make application for all those for which you are eligible, using the sample formats shown below.
3. If you are at least a high school junior, complete a Prospective Candidate Questionnaire which may be obtained by writing to Admissions, USMA, West Point, New York 10996. Have your guidance counselor forward it to Admissions, USMA, so that a prospective candidate admissions file may be started for you.
4. Arrange for and complete *either* the American College Testing (ACT) Assessment Program test or the College Entrance Examination Board Scholastic Aptitude Test (SAT), following the procedure outlined in the Academic Qualification section below.
5. Complete a Qualifying Medical Examination as directed by the Department of Defense Medical Review Board.
6. Upon receipt of instructions from Admissions, USMA, complete the Physical Aptitude Examination.

7. Insure that all forms received from Admissions, USMA, and the Military Academy Branch in Alexandria, Va., are completed and returned promptly.

8. After completing all examinations and requirements, await notification of your admission status.

9. If you believe there is a possibility that you will not be selected for admission, you may request consideration for attendance at the United States Military Academy Preparatory School; write to the Director of Admissions, USMA, West Point, New York 10996, prior to 15 April 1975. Annually, approximately 100 candidates are enlisted into the Army for attendance at the Preparatory School.



ENTRANCE REQUIREMENTS

In order to qualify for admission the candidate must be qualified academically, medically, and in physical aptitude. Additionally, he must meet certain general requirements specified by public law.

Age: On 1 July of the year he is to be admitted, a candidate must have attained the age of 17 years and must not have reached the age of 22.

Citizenship: A candidate must be a citizen of the United States at the time of enrollment. (Foreign students nominated by mutual agreement between the United States and the countries concerned are exempt from this requirement).

Marital Status: A candidate must never have been married nor may he marry while a cadet.

Character: Each candidate's record should show positive evidence that he is responsible, trustworthy, emotionally stable, and of good moral character.

Motivation: Motivation is one of the most important determinants of success and also the most difficult factor to measure. It is normal that some applicants may not be certain whether or not they desire to follow a lifetime career in the Regular Army; however, all nominees should possess the determination and pride of accomplishment necessary to surmount the challenges encountered at the Academy and during the five-year tour of obligated service after graduation.

QUALIFICATIONS

ACADEMIC QUALIFICATIONS

A candidate's academic qualification is determined by considering the following:

1. His entire scholastic record in secondary school (and college, if appropriate) to determine that he has the aptitude and demonstrated capability to succeed in the demanding curriculum required of all cadets.

2. His performance on either of the following:

- a. The College Entrance Examination Board Scholastic Aptitude Test (SAT)
- b. The American College Testing (ACT) Assessment Program test.

3. Recommendations from the principal, counselors, teachers, and other officials in a position to judge accurately the academic performance and potential of the candidate.

Aptitude Tests

All candidates for admission to West Point must take either the American College Testing (ACT) Assessment Program or the College Entrance Examination Board Scholastic Aptitude Test (SAT) exams.

ACT

The ACT is administered at test centers through-



out the world. The testing fee is \$6.50, and advance registration of several weeks is required. For information on ACT testing in your locale, consult any high school counselor or write directly to:

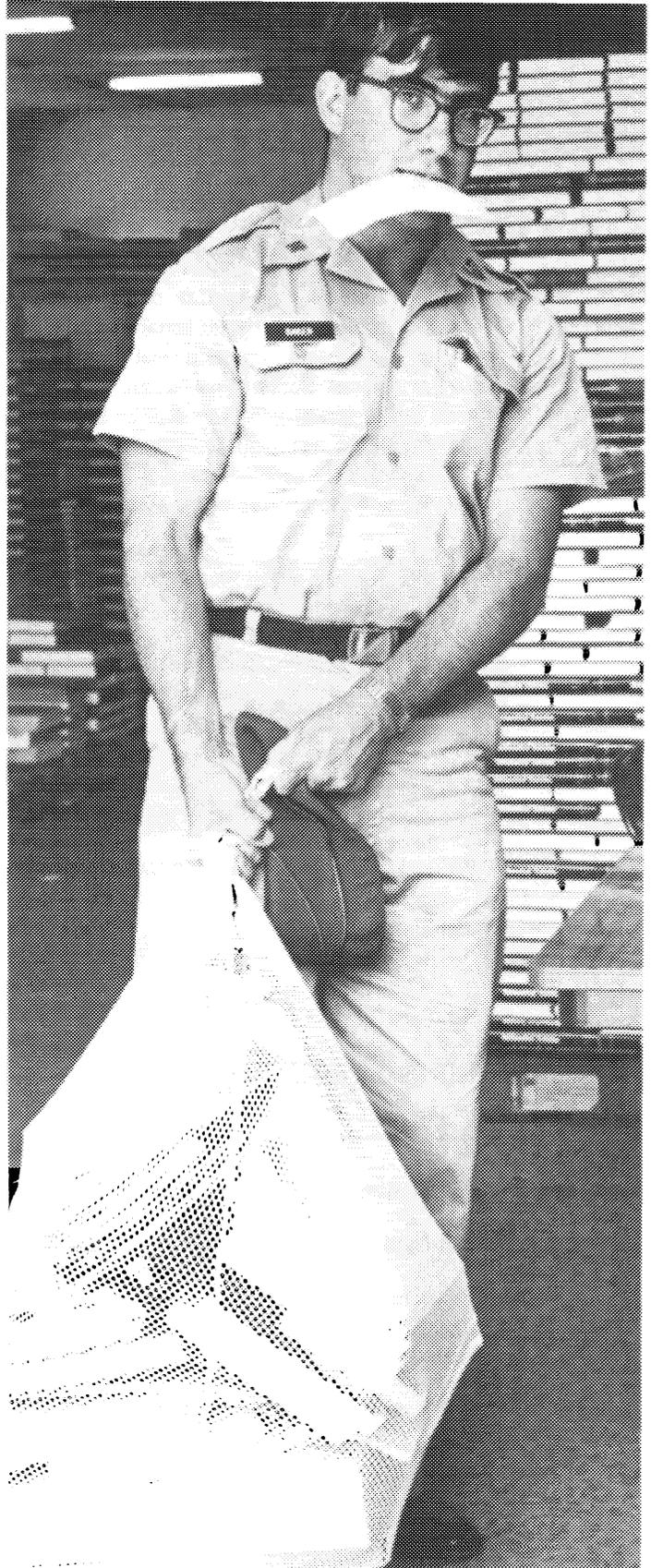
Registration Department
ACT Assessment Program
P.O. Box 414
Iowa City, Iowa 52240

The candidate is responsible for ensuring that ACT forwards his test results to West Point and to his Congressman. List the ACT college code number for USMA (2976) on your answer sheet. After taking the test, write to: ACT Assessment Program, Records Department, Box 451, Iowa City, Iowa 52240, requesting that the score report be sent to your Congressman — list his title, name and address; list your name, social security number, birth date, date of testing and test center; include fee (\$2.00 for each Congressional addressee).

SAT

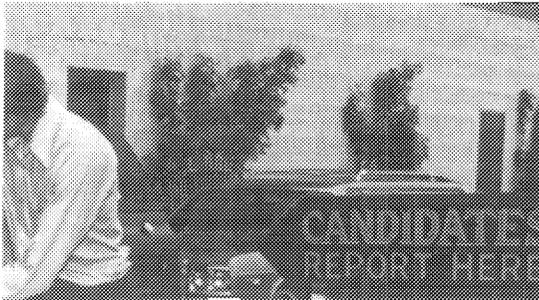
All candidates taking the College Entrance Examination Board exam for admission are required to take the Scholastic Aptitude Test.

The College Board has established examination centers throughout the world. To take these tests, you are required to register in advance (preferably 7 weeks) with the College Entrance Examination Board Office. If you desire to take the tests in Montana, Wyoming, Colorado, Oklahoma, Arkansas, Texas and states further west, you should apply to the College Entrance Examination Board, Box 1025, Berkeley, California 94701. To take the examinations in any other state you should apply to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540. For testing details applicable to your specific needs, consult any local high school counselor. Fee for the test, payable to the College Entrance Examination Board, is \$6.50. All applications and fees should reach the office of the College Board at least five weeks before the date



of the examination. It is the candidate's responsibility to ensure that the College Board forwards his test results to West Point and to his Congressman.

The CEEB college code number for West Point is **R2924**. For reporting scores to your Congressman, list, on the original Registration Form, or the subsequent Additional Report Request Form, your Congressman's title, name and address. Up to three addressees may be designated free of charge on the Registration Form. A fee of \$2.00 is charged for each addressee if a subsequent request is made on an Additional Report Request Form.



The Additional Report Request Form may be obtained from your high school or by writing to Educational Testing Service, Box 592, Princeton, New Jersey 08540.

If extenuating circumstances preclude completion of the SAT or ACT by the required February dates, the scheduled 5 April 1975 SAT may be accepted as a make-up exam. If, for a justifiable cause, you were unable to take the earlier exams, you should register for the April 5 SAT and write Admissions, USMA, West Point, New York 10996, explaining why you did not complete the testing by the required date. Final admissions decisions will be made in April 1975 from the data then present.



American College Testing (ACT) Assessment Program Dates for 1974-1975

Test Date	Registration Opens	Registration Closes
October 19, 1974	August 19, 1974	September 23, 1974
December 14, 1974	October 14, 1974	November 18, 1974
February 22, 1975	December 9, 1974	January 27, 1975

THE FINAL DATE FOR TAKING THE ACT TEST FOR WEST POINT IS 22 FEBRUARY 1975.

College Entrance Examination Board Scholastic Aptitude Test (SAT) Dates for 1974-1975

Test Date	Registration Closes	Late Registration Closes (Penalty imposed)
November 2, 1974	September 30, 1974	October 10, 1974
December 7, 1974	October 24, 1974	November 7, 1974
February 1, 1975	December 26, 1974	January 9, 1975

THE FINAL DATE FOR TAKING THE SAT FOR WEST POINT IS 1 FEBRUARY 1975.

PHYSICAL APTITUDE QUALIFICATIONS

Each candidate is required to establish his qualification in Physical Aptitude. Qualification is determined by an examination designed by the Military Academy to measure strength, coordination, muscular power, endurance, and agility.

Qualification is determined on the basis of total performance in four physical performance items (see Appendices for test items). A poor performance on a single item will not necessarily result in disqualification.

A candidate previously qualified in physical aptitude (during an earlier testing cycle) is not required to reestablish his qualification during the current year. However, a candidate is advised to retake the test, as a higher score will improve his chances of appointment.

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

The Physical Aptitude Examination is given at specified candidate test sites and is administered at the direction of the Admissions Office, USMA.

The Air Force Academy Physical Aptitude Examination is similar to the West Point examination and is an acceptable substitute. If the examination is administered by USAFA, it is the candidate's responsibility to have the results forwarded to the Director of Admissions at West Point.

MEDICAL QUALIFICATION

To qualify for admission with the Class of 1979, the candidate must undergo a Qualifying Medical Examination between 1 June 1974 and 1 July 1975. Only one Qualifying Medical Examination is required, regardless of the number of service academies to which he applies or the number of nominations he receives.

Procedures

The Qualifying Medical Examination is scheduled at a federal medical facility by the Department of Defense Medical Review Board (DODMRB), at the request of (1) a sponsoring Member of Congress, or (2) the Military Academy after a candidate has opened his Admissions file. A letter containing the location, date and time for the Qualifying Medical Examination is provided by the DODMRB. Travel



and personal expenses incurred in taking the examination are the responsibility of the candidate. All completed examination forms and records are sent by the medical facility to the DODMRB, which evaluates the examination and notifies the Military Academy of the results. USMA Admissions notifies both the candidate and the Member of Congress of the results.

The candidate may desire to be checked by his family physician and dentist for obviously disqualifying defects. For this purpose, USMA medical requirements are listed in the Appendix.

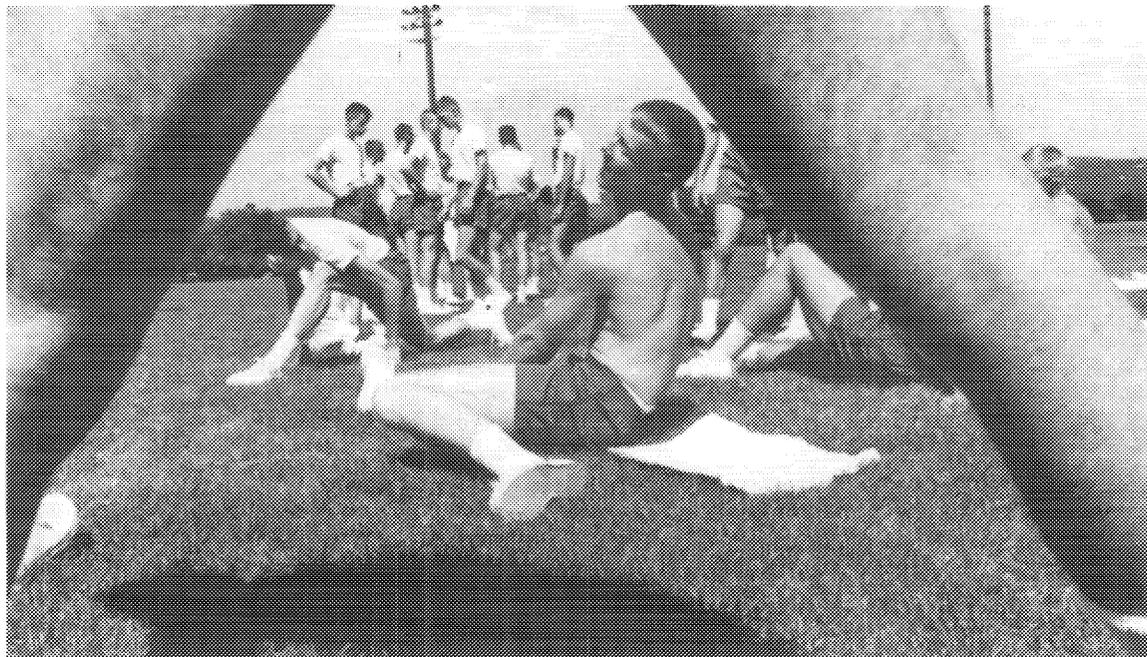
The results of the individual's Medical Examination will be forwarded to the nominating authority and to the candidate as soon as the evaluation is complete.

Evaluation

Medical qualification for admission is determined by the Department of Defense Medical Review Board; the medical facility administering the examination does not have the authority to determine medical qualification for any candidate. If a candidate is found disqualified for a non-

remediable condition, no further testing for the Military Academy is authorized. If the disqualification is remediable, the candidate will be notified by the DODMRB of the corrective measures required before reexamination. Minor disqualifying defects are automatically considered for waiver for the candidate who otherwise possesses outstanding qualifications; the candidate need not request waiver consideration. All inquiries concerning medical qualification should be addressed to the Director, Department of Defense Medical Review Board, U.S. Academy, Colorado 80840.

The Qualifying Medical Examination is the same for all service academies, although each academy's qualification standards differ somewhat based on the commissioning requirements of the individual Military Service. The Department of Defense Medical Review Board evaluates and files all candidate medical examination results; thus, when a candidate completes a medical examination, the results are provided to any service academy to which he applies.



CADETSHIPS AND NOMINATIONS

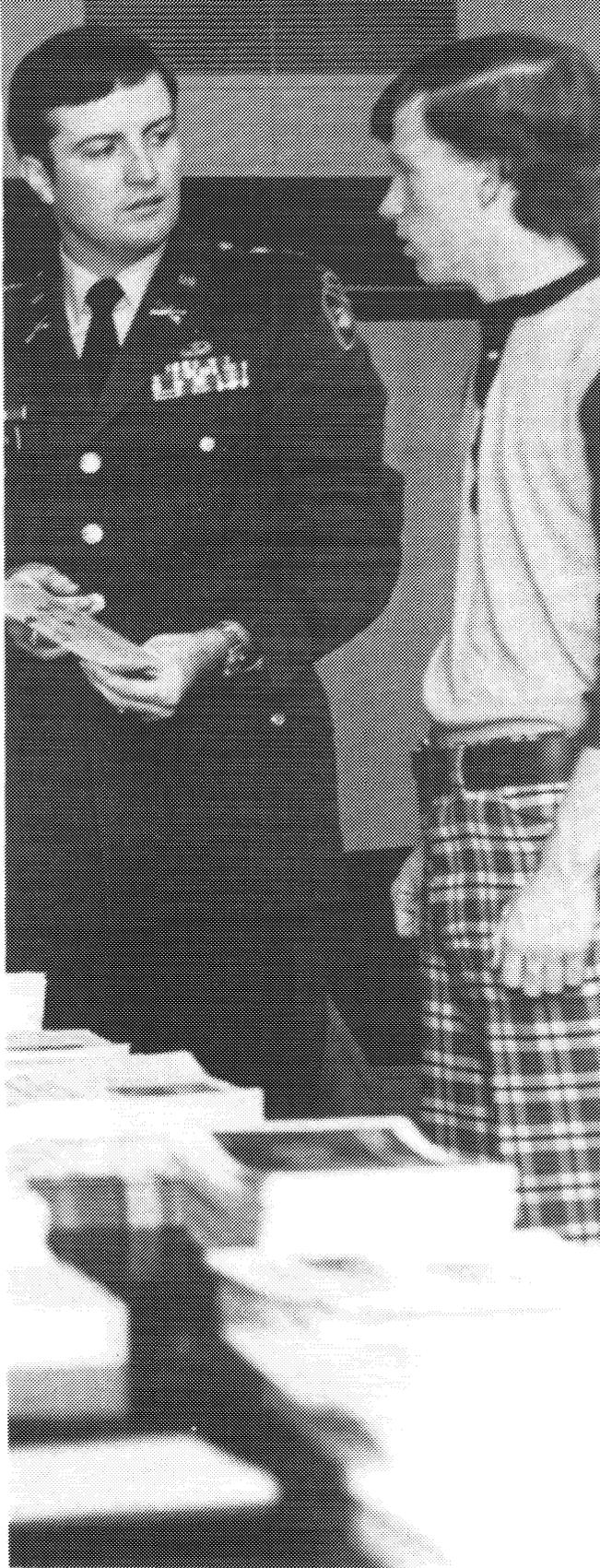
Each cadetship at the Military Academy is allocated by law to the Vice President, a specified Member of Congress, the Commissioner/Governor of Puerto Rico, the Delegate to the House of Representatives from Washington, D.C., the Department of the Army, and others. When a cadetship becomes vacant due to graduation or other causes, the nominating authority nominates individuals to fill the vacancy. A congressman to whom a vacancy is allocated transmits to the Department of the Army the names of up to ten young men to fill the vacancy.

CONGRESSIONAL CADETSHIPS

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

CONGRESSIONAL NOMINATIONS

The Vice President nominates from the United States at large. United States Senators and Representatives-at-Large nominate from their respective states at large. U.S. Representatives, other than those elected at large, nominate from their districts. The Delegate to the House of Representatives from the District of Columbia nominates from among the residents of the District. The Governor of the Canal Zone nominates from among the sons of civilians residing in the Canal Zone and from among the sons of civilian personnel of the U.S. Government and the Panama Canal Company residing in the Republic of Panama. The Governor of Puerto Rico must nominate a native of Puerto Rico to fill his single



cadetship. The Resident Commissioner nominates from among residents domiciled in Puerto Rico to fill the five cadetships allocated to him. The Governors of Guam, of the Virgin Islands and of American Samoa nominate from among the sons of U.S. citizens or nationals residing on their respective islands.

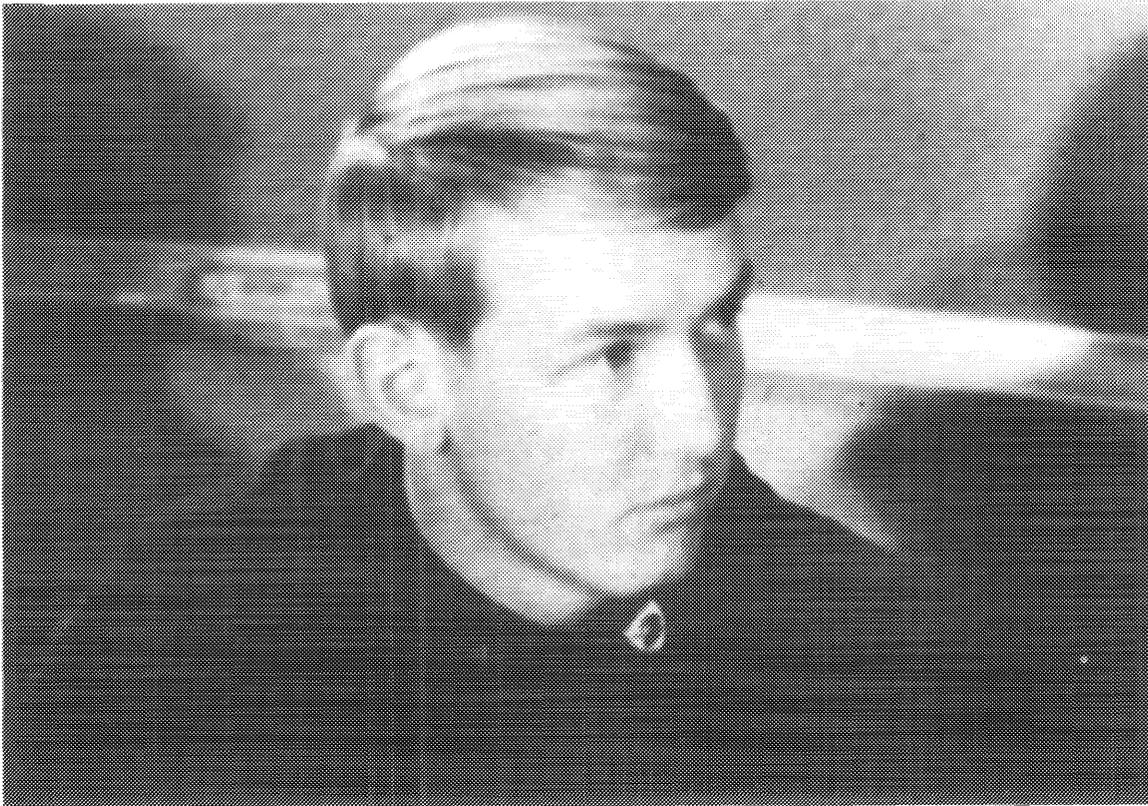
As most Congressional authorities conduct interviews and tests before selecting their nominees, it is important that a young man interested in entering the Military Academy apply for consideration to his authorized nominating sources at least one year prior to the time he expects to enter the Academy (July).

Congressional nominating authorities specify to the Department of the Army the method to be used in making the final selection of the candidate to fill the vacant cadetship. The most common methods are described as follows.

Congressional Competitor: In this method the Member of Congress submits his slate of nominees as competitors. The Academy evaluates all nominees competing for the vacancy and rank orders them. The best qualified candidate is then selected to fill the vacancy.

Principal with Competing Alternates: In this method the Member of Congress designates a principal nominee and, should the principal be disqualified, allows his alternates to compete for the vacancy.

Principal-Alternate: In this method the Member of Congress designates a principal and nine alternates. The Academy must first evaluate the principal nominee, and, if fully qualified, he is accepted to fill the vacancy. If the principal nominee is disqualified, each alternate, in designated succession, is evaluated until one is found fully qualified.



How to Apply for a Congressional Nomination

As a minimum, you should apply to your two United States Senators and your Representative in Congress, using the following format.

Request for Congressional Nomination Format

Honorable _____ House of Representatives Washington, D.C. 20515 Dear Mr. _____	OR	Date _____ Honorable _____ United States Senate Washington, D.C. 20510 Dear Senator _____
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 1975.		
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 request that a prospective candidate file be initiated for me at the West Point Admissions Office.		
Sincerely,		

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

MILITARY SERVICE CONNECTED NOMINATIONS

The Secretary of the Army's annual allocation of cadetships is distributed to the following specific categories:

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

Appointments to vacancies within each of the Army categories are awarded to the best qualified candidates within each category on a competitive basis. A detailed discussion of the competitive nomination categories follows.

Presidential

The Presidential category is reserved by law for the sons of career military personnel of the Army, Navy, Air Force, Marine Corps and Coast Guard, whether active, retired or deceased.

The term career includes members of the Reserve Components currently serving eight years or more of continuous active duty (other than active duty for training) and retirees receiving either retired or retainer pay. Note: Sons of Reservists retired while *not* on active duty are ineligible. These nominations are administered in Headquarters, Department of the Army. Interested young men should make application by letter to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Hoffman Bldg., Alexandria, Va. 22332, no later than 15 December.

An adopted son is eligible if he was adopted prior to his 15th birthday; a copy of the order of court decreeing adoption, duly certified by the clerk of the court, must accompany the application.

Regular Army

Nomination of candidates to fill the annual vacancies authorized for members of the Regular Army is outlined in AR 351-12. This publication may be obtained from the nearest Army installation; by writing to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Hoffman Bldg., Alexandria, Va 22332; or by writing to Admissions, USMA, West Point, N.Y. 10996. All Regular Army nominees are required to attend the USMA Preparatory School at Fort Belvoir, Virginia, during the year prior to entering the Military Academy.

Army Reserve/National Guard

Nominations to fill the annual vacancies authorized for members of the Reserve and National Guard are outlined in AR 351-12. This publication may be obtained from the nearest Army installation; by writing to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M; Hoffman Bldg., Alexandria, Va. 22332; or by writing to Admissions, USMA, West Point, N.Y. 10996.

Sons of Deceased and Disabled Veterans

Cadetships are provided for the sons of deceased Armed Forces personnel who were killed in action, died of wounds or injuries received or disease aggravated by active service, or have a service connected disability rated at not less than 100 percent resulting from wounds or injuries received or diseases contracted in active service, or pre-existing injury or disease aggravated by active service. Cadetships are also provided for the sons of military personnel or federally employed civilians who are now in a missing or captured status. The Veterans Administration determines eligibility, except in the case of sons of missing or captured persons, and its decisions are final and binding on the Department of the Army. Application should be made by a letter addressed to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Hoffman Bldg., Alexandria, Va. 22332. Application must be

made prior to 15 December. The letter of application should state the full name, date of birth, and address of the applicant (complete service address should be given if the applicant is in the Armed Forces); and the name, grade, service number, and last organization of the veteran parent, together with a brief statement concerning the time, place, and cause of death, details of disability, or details of missing or captured status, as appropriate. The claim number assigned to the veteran parent's case by the Veterans Administration must also be furnished.



Army ROTC

Any applicant who is enrolled in a recognized Army Reserve Officer Training Corps program — either junior or senior division — is eligible for a nomination. Applications are accepted from the beginning of each academic year until 15 December. To apply, a candidate should contact the Professor of Military Science or Senior Army Instructor at his school. Recommendation forms are provided to ROTC units in the early fall and upon request during the academic year.

In addition, any ROTC school/unit designated as an Honor Unit with Distinction by the Department of the Army General Orders covering the current year is authorized to recommend three "honor graduates" for nominations under a separate ROTC Honor Military category. Application procedures are the same as for other ROTC nominations. A candidate, however, may receive only one ROTC nomination during any admissions cycle; i.e., he may have either an ROTC nomination or an ROTC Honor Military nomina-

tion. Cadetships will be filled on a best qualified basis without regard for the schools from which nominations were made.

Sons of Persons Awarded the Medal of Honor

Sons of recipients of the Medal of Honor may be nominated and appointed to the Military Academy. The administration of these nominations is in the Department of the Army. Application by those eligible should be made by letter to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Hoffman Bldg., Alexandria, Va. 22332. The letter should contain the applicant's full name, address, and date of birth (complete service address should be given if the applicant is in the Armed Forces); the name, grade, and branch of service of the parent; and a brief statement of the date and circumstances of the award. There is no limitation upon this category and all candidates who are found fully qualified will be admitted as cadets.



How to Apply for a Service Connected Nomination

As a minimum, you should apply under each military service connected nomination for which you are eligible using the following format. (Enlisted applicants are referred to AR 351-12 dated 10 June 1969.)

Request for Service Connected Nomination Format

Date _____
Military Academy Branch
U.S. Army Military Personnel Center
DAPC-PAP-M
Hoffman Bldg.
Alexandria, Va. 22332
Dear Sir:
I request a nomination under the category for the class entering the United States Military Academy in July 1975 and submit the following data:
Name of Applicant: _____
Address: _____
Telephone Number: _____
Date of Birth: _____
Social Security Number: _____
Name of Parent: _____
Military Rank of Parent: _____
Service Number of Parent: _____
Component and Branch of Service of Parent: _____
Parent Retired or Deceased: (furnish date and copy of retirement 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,

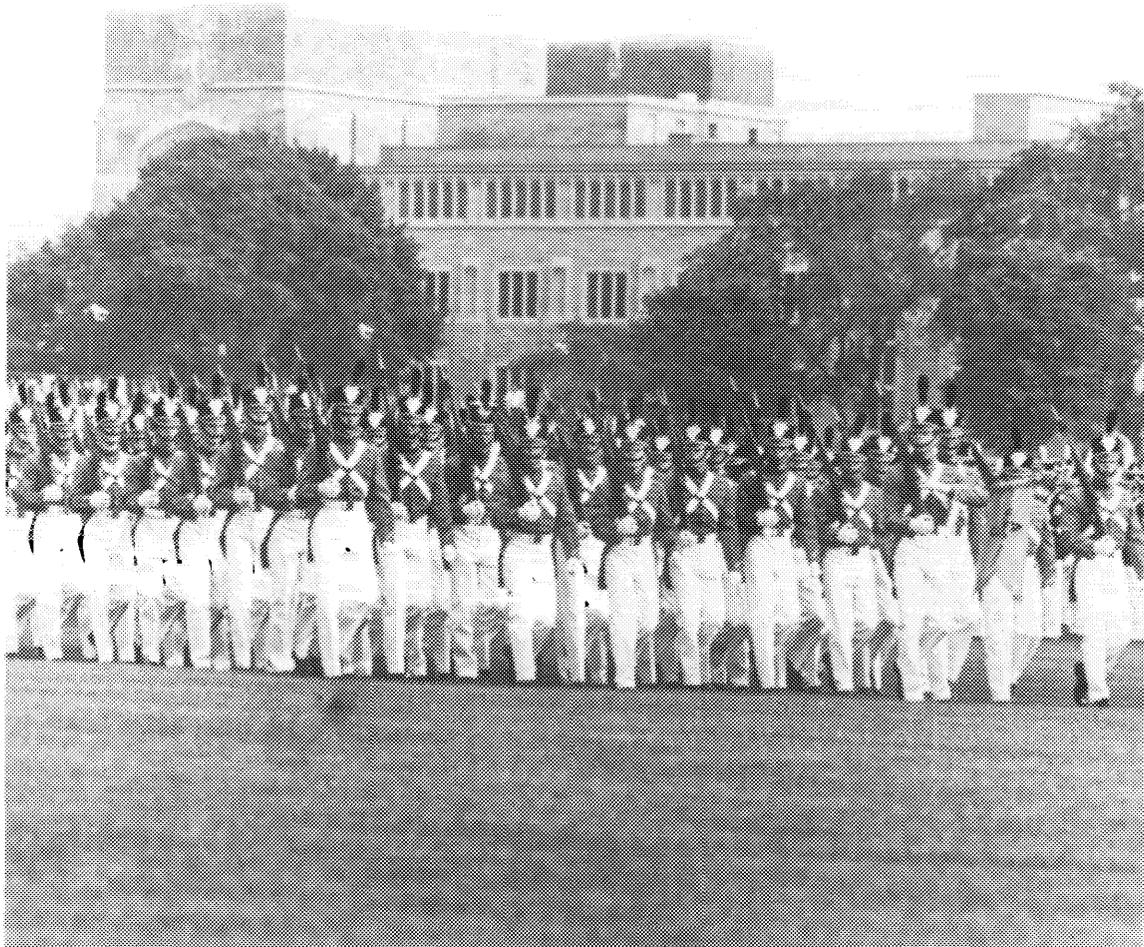
This format is intended as a guide.

Allied Cadets

Young men from the allied countries listed below may be designated by their governments to take the entrance examinations and if, qualified, be authorized to receive instruction at the Military Academy. Requirements for the admission, advancement from class to class, and graduation of allied cadets are the same as those for cadets of the United States. While cadets, they receive the same pay and allowances as cadets appointed from the United States. They are not entitled, however, by reason of their graduation, to appointment in the Armed Forces of the United States.

Republic of the Philippines. One Philippine national, from among those designated by the President of the Republic of the Philippines, selected on the basis of his academic record and College Board test scores, is authorized to enter with the new class each July.

American Republics. A total of not more than 20 citizens of the American republics may receive instruction at the Military Academy at any one time. Selection will be determined in the same manner as for nominees from the Republic of the Philippines. Not more than three persons from any one country may be cadets at the same time.



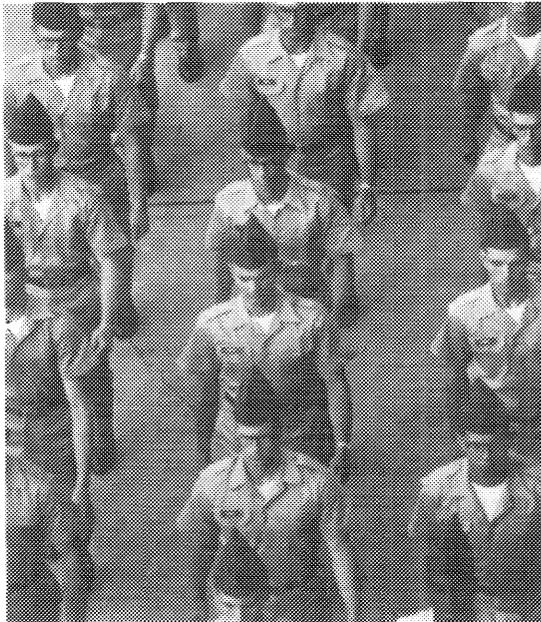
NOTIFICATION

Qualified principal nominees and other outstanding candidates will be offered admission as their records become complete.

All other qualification determinations will be dispatched beginning 1 April. Final admissions decisions will be made in April 1975 from the data then present.

Since some selected candidates will decline their offer of admission, additional qualified candidates will be selected as required. Thus, a few candidates will not be notified of their selection for admission until shortly before the entry date of 1 July. Offers of admission are conditional from the time of offer to date of admission.

Early Notification: Beginning 15 October, early notification is possible for fully qualified outstanding candidates who have completed all admissions requirements *and* have received a nomination. This notification is made without regard to type of nomination. Candidates who desire an early decision should inform Admissions, USMA, in writing and should complete all testing by 1 December.



PREPARATION

ACADEMIC

A sound secondary-school academic background is essential for a candidate to successfully complete the academic program offered at West Point. The academic pace is rapid and a thorough foundation in secondary-school subjects is assumed.

West Point does not require a specific number of courses or units of study, nor are there cut-off scores on the American College Testing (ACT) Assessment Program or the College Entrance Examination Board (SAT) test. Above average grades in secondary-school subjects, and on the ACT or SAT tests, obviously will enhance a candidate's chances for admission.

In order to prepare adequately for the required ACT or SAT tests, and to provide the necessary academic foundation for the West Point curriculum, a candidate should complete the following secondary-school courses:

English: Four years, emphasizing American and English literature, composition and grammar, oral communication, and reading with reasonable speed and comprehension.

Mathematics: Three years, including algebra, plane geometry (and fundamentals of solid geometry) and trigonometry. A fourth year of college preparatory mathematics is recommended.

Foreign Language: Two or three years, preferably in one of the foreign languages offered at West Point.

Basic Sciences: Standard courses in physics and chemistry, to include laboratory work. Additional courses in the sciences are desirable.

Social Sciences: A standard American History course is recommended. Additional American or European history, geography, government, and economics courses are helpful.

Candidates who have successfully completed college level courses, or who have attended college prior to entering West Point, and can demonstrate adequate proficiency may validate similar courses

in the Academy curriculum. Following admission, a cadet may qualify for accelerated or additional courses, based upon the requirements of the individual academic departments. Candidates are urged to take the College Entrance Examination Board Advanced Placement Examinations for those courses they desire to validate.

PHYSICAL

In order to prepare adequately for the Physical Aptitude Examination and for the physical demands placed upon the cadet, candidates are urged to attain the state of physical conditioning required for participation in a strenuous team sport. Vigorous conditioning exercises, cross country running and swimming are recommended. Emphasis should be placed upon a variety of strenuous activities rather than on one sport. A candidate should be able to swim and should have attained a high state of physical conditioning prior to entering West Point.

LEADERSHIP

A candidate should strive to develop the personal traits which mark him as a leader in school and community activities. A young man who is respected by his associates for his contributions to school and community affairs, and can subordinate his personal desires to group goals, has displayed leadership potential. Participation in secondary school extracurricular activities, both athletic and nonathletic, and the attainment of responsible positions in these activities, provide valuable leadership experience. Candidates should strive to make significant contributions in leadership positions on athletic teams, in club and class activities, and in civic and community activities.

The candidate who must work to provide family financial support has also demonstrated leadership potential. In the West Point admissions procedure this candidate is not penalized because he cannot participate in extracurricular activities.

USMA PREPARATORY SCHOOL

The United States Military Academy Preparatory School (USMAPS), located at Fort Belvoir, Virginia, 16 miles south of Washington, D.C., prepares and trains selected Army enlisted men to successfully compete for admission to West Point.

The Preparatory School operates on a 10 month school year, from August through May. During this time, candidates are prepared for entrance to the Academy through exposure to intensive academic, physical, and military training. Additionally, candidates are encouraged to participate in extracurricular, athletic and other student activities.

The academic program, consisting of English and mathematics, is subdivided into two courses: the *preparatory course* and the *advanced course*. The preparatory course is a comprehensive review of high school English and mathematics including English literature, basic writing and speaking, algebra, and geometry. The advanced course is an introduction to college level English composition, American literature, plane and spherical geometry, solid and analytical geometry, and advanced and matrix algebra.

Candidates are fully prepared for the Physical Aptitude Examination and the rigorous physical life they will encounter at the Military Academy. Through scheduled physical training and an extensive sports program, the candidates gradually build themselves into confident and well-conditioned young men. USMAPS currently offers varsity competition in eleven sports, while twelve sports are offered at the intramural level.

A limited amount of time is devoted to formal military training. The "Prepster," an enlisted man who has completed all or a major portion of basic training, is well prepared to adapt to the school's requirements. An evaluation system, consisting of tactical, academic and peer ratings, plus frequent counseling by the staff, assists candidates in preparing for further training and eventual cadet life at West Point. A wide variety of extracurricular activities are available including ski, skeet and photo clubs; school newspaper, social, and

30 ADMISSIONS

yearbook committees; post athletic teams and religious groups; and, of course, dances, picnics, and other social engagements with young ladies from local girls schools and colleges. The proximity of the Preparatory School to Washington, D.C., offers the cadet a multitude of cultural and entertainment activities.

To be eligible for admission to USMAPS, a candidate must meet the general requirements for entrance to West Point the following year; he must be a citizen of the United States, of good moral character, at least 17 and not more than 22 years old on 1 July of the year he plans to enter West Point, and must never have been married. Additionally, a candidate must be medically qualified for admission to West Point in order to be enrolled in the Prep School.

All applicants must be in an active duty enlisted status in the Army prior to entering the Preparatory School. Reservists may enter on active duty for a period of two years in order to attend USMAPS, provided advance authority is obtained from the Military Academy Branch, U.S. Army Military Personnel Center. Selected civilian candidates may, with the approval of the Military Academy Branch, be enlisted specifically to attend the Prep School.



Application procedures differ for USMAPS candidates depending on their status (Military or civilian) prior to entry. Active Army applicants must follow the format prescribed in AR 351-12. Army Reserve and National Guard personnel who are not on active duty must apply by letter to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Hoffman Bldg., Alexandria, Va. 22332. Civilian applicants should begin a file for admission to West Point and indicate in writing their desire to be considered for USMAPS should they not be selected for USMA. Each spring, the USMA Admissions Office screens, for USMAPS consideration, the list of qualified candidates who, at that time, are not selected for admission to West Point. Each young man so identified will be asked about his interest in attending the Preparatory School as an alternate route to gain admission to the Academy. Of those interested, a limited number will be selected, on a competitive basis, and referred to the Military Academy Branch for enlistment to attend the Prep School. Further information on the USMA Preparatory School may be obtained by writing to the Commandant, USMA Preparatory School, Ft. Belvoir, Virginia 22060; to the Director of Admissions and Registrar, USMA, West Point, N.Y. 10996; or to the Military Academy Branch, U.S. Army Military Personnel Center, DAPC-PAP-M, Hoffman Bldg., Alexandria, Va. 22332.

Academic Program

MISSION

To provide a broad collegiate education leading to the Bachelor of Science degree.

To build an academic foundation for future graduate study.

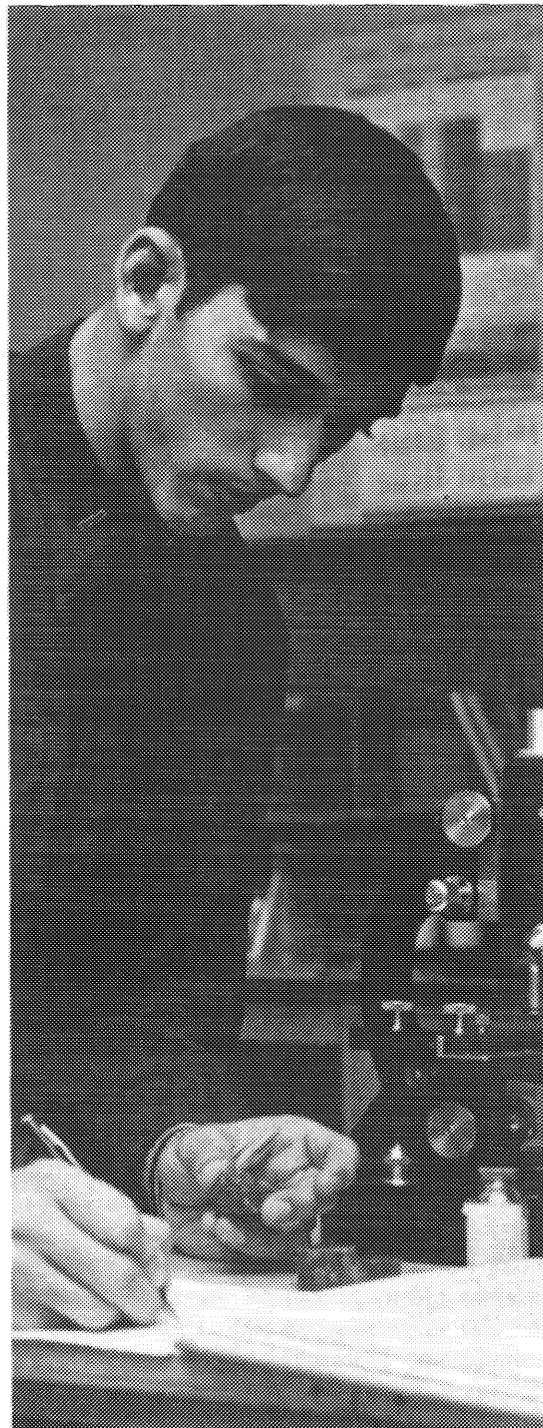
To stimulate and challenge intellectual curiosity and individual talents.

To develop powers of analysis, reasoning, and expression.

To contribute to the building of character.

THE EDUCATIONAL PHILOSOPHY OF THE UNITED STATES MILITARY ACADEMY

The United States Military Academy prepares selected young men for service to their country as professional officers of the United States Army. Since it is the only institution of higher learning with this specific mission, its philosophy of education is unique. The Military Academy must produce enlightened military leaders of strong moral fiber whose minds are creative, critical, and resourceful. The academic curriculum and military training encourage logical analysis, clear and concise expression of considered views, and





independent thought and action along with a readiness, developed within the framework of military discipline, to carry out orders without reservation once a decision has been reached.

The total curriculum is designed to develop those qualities of character, intellect, and physical competence needed by the officer who is prepared to lead the smallest combat unit or to advise the highest governmental council. The program includes the sciences, the humanities, and military and physical training. It forms a basis both for graduate education and for further professional development.

In the academic curriculum, standard courses provide the essential core of knowledge of mathematics, science, engineering, the social sciences and the humanities, and an understanding of the application of this knowledge to the solution of problems. Advanced and elective courses afford the opportunity to develop intellectual capacities and to concentrate in areas

of particular interest.

Military training provides the requisite knowledge of professional fundamentals and doctrine and of the basic military skills. Service in positions of responsibility in the Corps of Cadets and participation in intensive summer training provide the opportunity to apply and test principles and to learn techniques by practice and observation.

Fitness for military leadership requires physical strength, agility, stamina, and a competitive spirit. These are acquired from a comprehensive course in physical education and from participation in intramural and intercollegiate sports.

The increasing complexity of the world scene requires constant adaptation by the military profession and by the institutions which prepare its leaders. But while adapting itself to the changing world, the Academy must continue to emphasize the devotion to Duty, Honor, and Country which has traditionally been the hallmark of its graduates.

THE USMA ACADEMIC CURRICULUM

The curriculum offered at the United States Military Academy, leading to a Bachelor of Science degree, is the product of an evolutionary development which, over the years, has reflected the changing requirements of the military profession and advances in the field of higher education. It includes a combination of courses from the liberal arts, the humanities, the sciences, and the engineering sciences, which, in their aggregate, comprise a basic foundation for a continuing program of education and professional development.

The curriculum consists of two complementary parts: a core program which is essentially prescribed, and an elective program which is, by and large, individually designed. The core program contains the elements of a broad, general education and is designed to give the cadet a fundamental knowledge of the arts and sciences. The elective program enables the cadet to experience a reasonable degree of concentration in areas in which he may have special interests or aptitudes.

The core program and the elective program are, of course, closely linked to one another in the sense that the latter is an extension of the former. Thus, the elective program offers the cadet a number of courses in each of four broad areas which have a substantial basis in the core curriculum. These are the Basic Sciences, the Applied Sciences and Engineering, the Humanities, and National Security and Public Affairs.

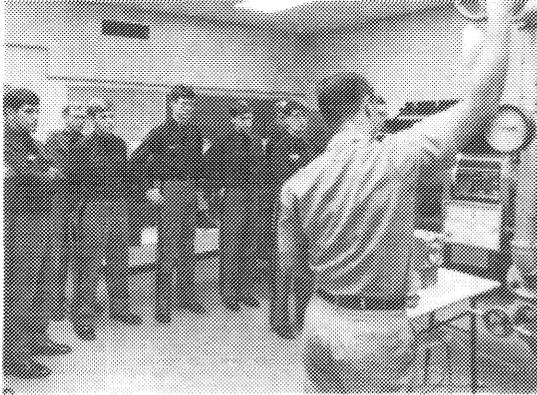
In the elective program, the individual student is given the option of concentrating his elective choices in one of these areas or of foregoing a concentration and spreading his selections over the entire spectrum of elective offerings. (Although majors and minors are not identified as such, the careful design of an elective program by an individual cadet can result in his completing the equivalent of a minor and, in some cases, approaching the course requirements for a major



34 ACADEMIC PROGRAM

as defined at many other institutions.)

Most graduates, as part of their career development as Army officers, receive graduate schooling at civilian institutions within a few years of their graduation from the Military Academy. Therefore, one of the primary aims of the curriculum at West Point is to prepare cadets for later admission to graduate schools in civilian universities in fields ranging from science and engineering to the social sciences and humanities.



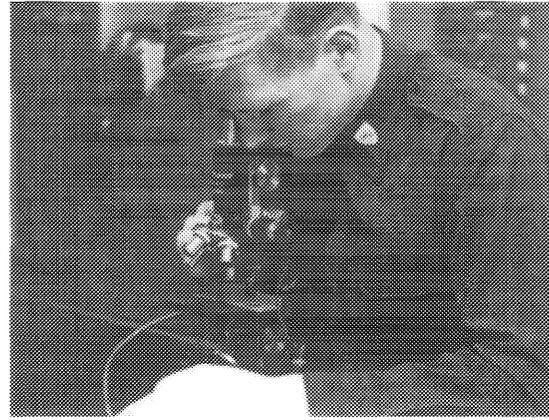
Methods of Instruction

Cadets attend classes in small sections of from 12 to 16 students, so that emphasis may be placed on daily student participation. Extra instruction is readily available for all cadets needing additional assistance to improve their understanding of any given subject.

Regular posting of grades allows the cadet to monitor his academic progress. Reports of each cadet's academic achievement are provided to parents twice each term.

Validation and Advanced Placement

A cadet who has sufficient knowledge of a subject to meet the appropriate department's requirements, may validate core curriculum courses. College Entrance Examination Board Advanced Placement test results should be submitted for validation consideration. However, validation will not result in a reduction of course load. The cadet is required to complete an elective course in lieu of the validated core course. A cadet who has prior



knowledge of a subject, although insufficient for validation, or who demonstrates unusual ability, may be enrolled in an advanced core course. Advanced courses normally are more intensive than standard courses and cover a broader range of subject material.

Candidates who have attended other colleges before entering the Academy have many opportunities for advanced study. It is important that a candidate complete the term in which he is enrolled and do as well as possible, so he may take advanced and elective courses.

Honors Courses

For selected cadets, Honors Courses are offered.

Course Designation

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

For core courses the third digit indicates the term in which the course is offered; odd digit for first term, even digit for second term. Elective courses 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 per week for an eighteen-week term.

A description of each course will be found under departmental offerings.

CORE ACADEMIC PROGRAM

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

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

**Those cadets enrolled in the Humanities and National Security and Public Affairs areas may substitute an elective for this course.

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

THE ELECTIVE PROGRAM

The elective program provides the opportunity for each cadet to take a minimum of six or seven elective courses depending on his choice of elective area of concentration. However, if qualified he may validate core courses and take additional elective courses in their place. *With approval of the Dean, cadets of the upperclasses may take elective courses in addition to their normal course loads.* The elective courses offered are listed in the following pages.

To aid cadets in the design of their individual academic programs, elective courses have been grouped into twenty-four fields under four areas of concentration.

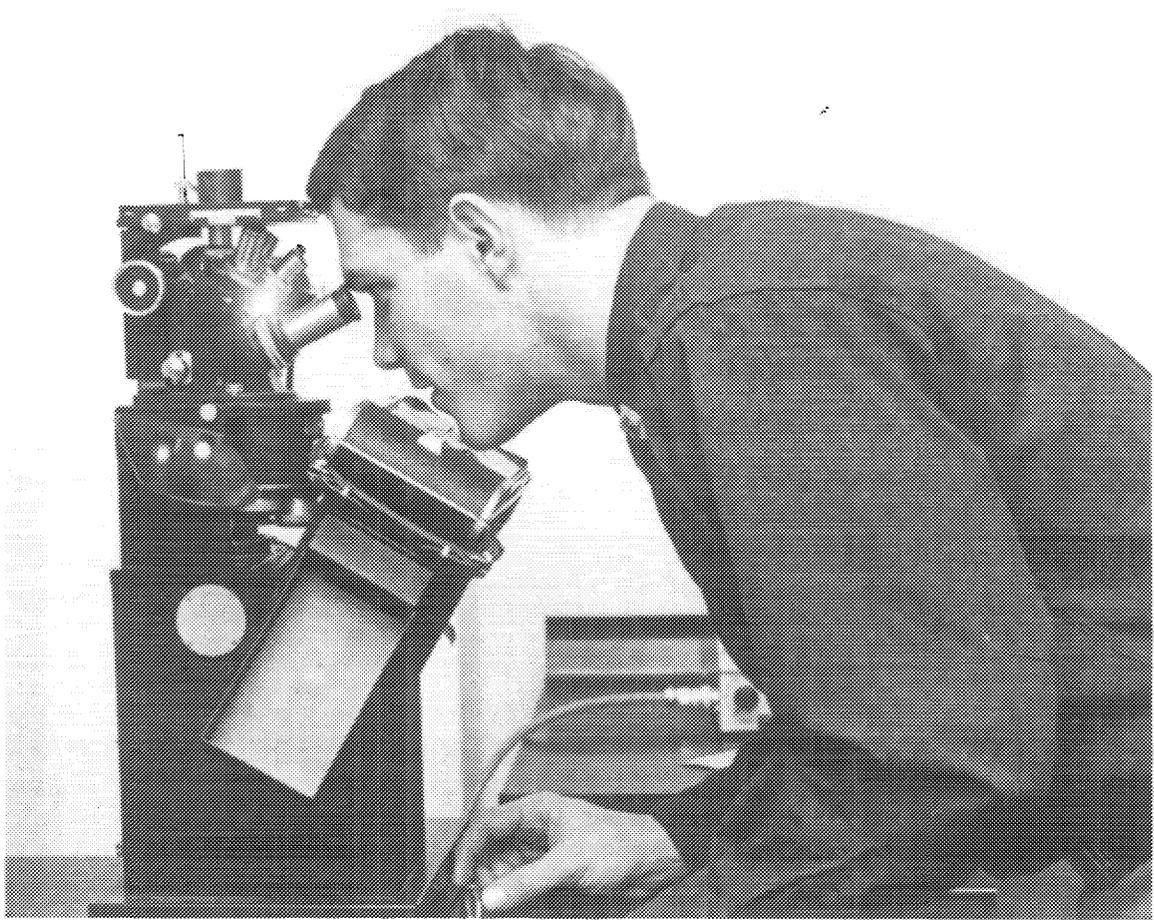
Areas of Elective Concentration and Associated Elective Fields

Applied Science and Engineering:

- Civil Engineering
- Electrical Engineering
- Engineering Mechanics
- Nuclear Engineering
- Weapon Systems Engineering

Basic Sciences:

- Chemistry
- Mathematics
- Physics
- Computer Science



Humanities:

American Studies
 Foreign Language, Chinese
 Foreign Language, French
 Foreign Language, German
 Foreign Language, Portuguese
 Foreign Language, Russian
 Foreign Language, Spanish
 Literature

National Security and Public Affairs:

Economics
 Geography
 History
 International Affairs
 Military Studies
 Political Science

Interdisciplinary Field:

Management



Courses within Areas of Concentration and Associated Elective Fields

BASIC SCIENCE AREA

Each cadet who elects to concentrate in the Basic Science Area must satisfy the following requirements:

- a. Complete a Core Academic Program as described on page 35.
- b. Complete a Core Program engineering sequence other than General Engineering.
- c. Complete six elective courses selected as follows:
 1. Five selected from Basic Science area list *and*
 2. One selected from among the entire elective course offerings.

Basic Science Area Elective Course List:

CH	383	Organic Chemistry I	EF	489A	Advanced Individual Study in Computer Science
CH	384	Organic Chemistry II	EF	489B	Advanced Individual Study in Geodetic Science
CH	481	Physical Chemistry I	EV	383	Astronomy
CH	482	Physical Chemistry II	EV	388	Physical Geology
CH	485	Human Biology I	EV	489	Advanced Individual Study in Environment
CH	486	Human Biology II	MA	473	Intermediate Probability and Statistical Applications
CH	489	Advanced Individual Study in Chemistry	MA	481	Linear Programming
EF	382	Computer Applications with FORTRAN	MA	482	Abstract Algebra
EF	383	Data Processing with COBOL	MA	484	Differential Equations (Intermediate)
EF	385	Cartography	MA	485	Complex Analysis
EF	488	Advanced Computer Programming	MA	486	Numerical Analysis with Digital Computation
			MA	487	Real Variable Theory
			MA	489	Advanced Individual Study in Mathematics
			PH	383	Introduction to Theoretical Physics I
			PH	384	Introduction to Theoretical Physics II
			PH	483	Solid State Physics
			PH	484	Quantum Mechanics
			PH	486	Experimental Physics
			PH	488	Nuclear Physics
			PH	489	Advanced Individual Study in Physics

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Chemistry Field

Elective courses required for concentration in the Chemistry Field of the Basic Science Area:

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

Principal Electives

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

Associated Electives

EF	382	Computer Applications with FORTRAN
EV	385	Issues Confronting Man and His Environment
MA	473	Intermediate Probability and Statistical Applications
MA	484	Differential Equations
MA	486	Numerical Analysis with Digital Computation
PH	483	Solid State Physics
PH	484	Quantum Mechanics
PH	488	Nuclear Physics

Computer Science Field

Elective courses required for concentration in the Computer Science Field of the Basic Science Area:

1. EF 382, EE 483 or EE 485, and one additional principal elective, *and*
2. Two additional courses chosen from the combined lists of principal and associated electives.

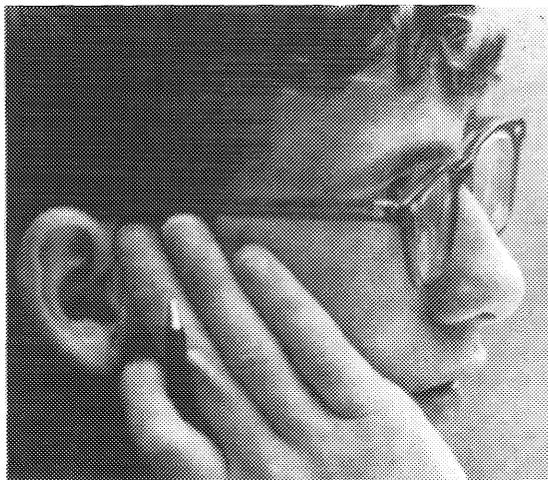
Principal Electives

EE	483	Digital Computer Systems
EE	485	Computer Engineering
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
MA	486	Numerical Analysis with Digital Computation

Associated Electives

GE	381	Scientific Management
GE	383	Systems Engineering and Decision Making
MA	481	Linear Programming
OE	385	Management Engineering
OE	487	Operations Research
SS	389	Managerial Economics





Mathematics Field

Elective courses required for concentration in the Mathematics Field of the Basic Science Area:

1. Four principal electives, *and*
2. One course chosen from the combined lists of principal and associated electives, or the Basic Science courses.

Principal Electives

MA	473	Intermediate Probability and Statistical Applications
MA	481	Linear Programming
MA	482	Abstract Algebra
MA	484	Differential Equations (Intermediate)
MA	485	Complex Analysis
MA	486	Numerical Analysis with Digital Computation
MA	487	Real Variable Theory
MA	489	Advanced Individual Study in Mathematics

Associated Electives

EE	483	Digital Computer Systems
EE	484	Communication Systems
EF	382	Computer Applications with FORTRAN
EF	383	Data Processing with COBOL
EF	489A	Advanced Individual Study in Computer Science
EV	383	Astronomy
ME	483	Space Mechanics
ME	484	Aerospace Structures
ME	485	Continuum Mechanics
ME	486	Mechanical Vibrations
OE	385	Management Engineering
OE	487	Operations Research
PH	383	Introduction to Theoretical Physics I
PH	384	Introduction to Theoretical Physics II
PH	484	Quantum Mechanics

Physics Field

Elective courses required for concentration in the Physics Field of the Basic Science Area:

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

Principal Electives

MA	484	Differential Equations (Intermediate)
PH	383	Introduction to Theoretical Physics I
PH	384	Introduction to Theoretical Physics II
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

CE	453-	
	454	Nuclear Engineering
EE	486	Solid State Electronics
EV	383	Astronomy
MA	473	Intermediate Probability and Statistical Applications
MA	485	Complex Analysis
MA	486	Numerical Analysis with Digital Computation
ME	483	Space Mechanics
OE	383	Engineering Materials



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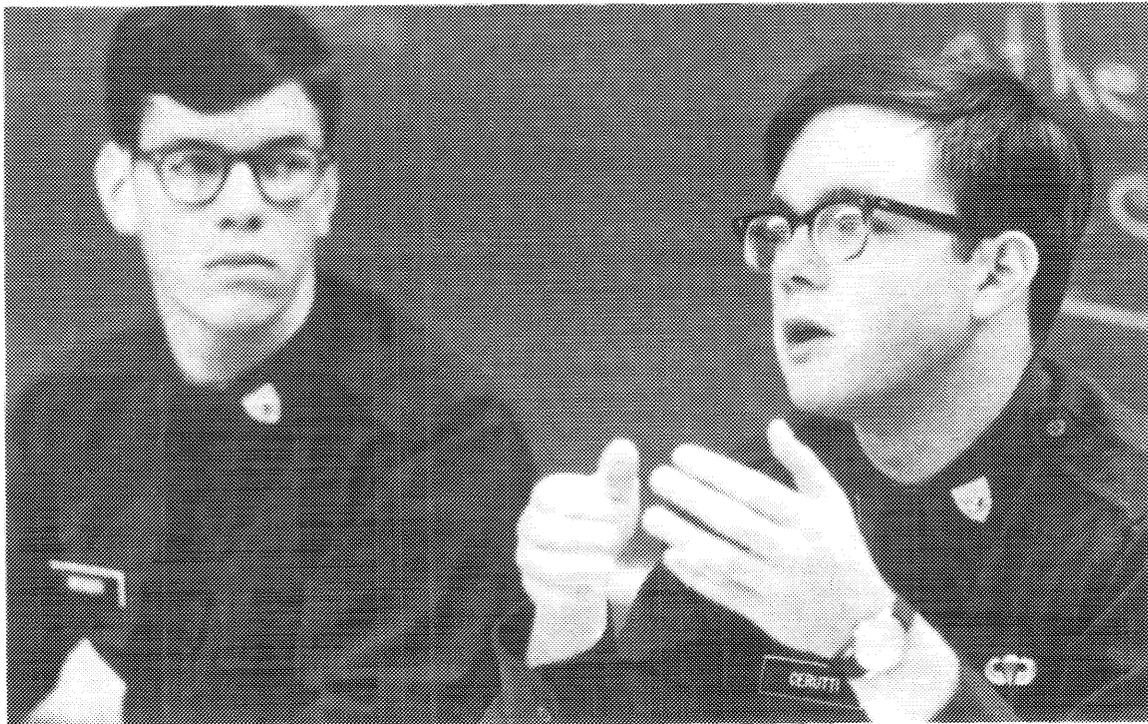
APPLIED SCIENCE AND ENGINEERING AREA

Each cadet who elects to concentrate in the Applied Science and Engineering Area must satisfy the following requirements:

- a. Complete a Core Academic Program as described on page 35.
- b. Complete a Core Program engineering sequence other than General Engineering.
- c. Complete six elective courses selected as follows:
 1. Five selected from the Applied Science and Engineering Area *and*
 2. One selected from among the entire elective course offerings.

Applied Science and Engineering Area Elective Course List:

CE	381	Soil Mechanics	EE	486	Solid State Electronics
CE	382	Engineering of Environmental Systems	EE	489	Advanced Individual Study in Electrical Engineering
CE	481	Design of Concrete Structures	EF	384	Principles of Surveying
CE	482	Advanced Structural Analysis	GE	381	Scientific Management
CE	489	Advanced Individual Study in Engineering	GE	383	Systems Engineering and Decision Making
EE	382	Electromechanical Energy Conversion	ME	384	Mechanics of Materials
EE	383	Electromagnetic Fields	ME	387	Introduction to Applied Aerodynamics
EE	483	Digital Computer Systems	ME	388	Aerodynamics of V/STOL Flight
EE	484	Communication Systems	ME	471	Aerospace Propulsion
EE	485	Computer Engineering	ME	472	Direct Energy Conversion
			ME	473	Experimental Mechanics
			ME	481	Compressible Aerodynamics
			ME	482	Heat Transfer
			ME	483	Space Mechanics
			ME	484	Aerospace Structures
			ME	485	Continuum Mechanics
			ME	486	Mechanical Vibrations
			ME	488	Flight Mechanics
			ME	489	Advanced Individual Study in Mechanics
			OE	383	Engineering Materials
			OE	385	Management Engineering
			OE	481	Automotive Engineering
			OE	483	Helicopter Engineering
			OE	487	Operations Research
			PH	487	Nuclear Reactor Theory



Civil Engineering Field

Courses required for concentration in the Civil Engineering Field of the Applied Science and Engineering Area:

1. Four principal electives to include ME 384, *and*
2. At least one additional course chosen 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.

Principal Electives

CE	381	Soil Mechanics
CE	382	Engineering of Environmental Systems
CE	481	Design of Concrete Structures
CE	482	Advanced Structural Analysis
CE	489	Advanced Individual Study in Engineering
EF	384	Principles of Surveying
GE	383	Systems Engineering and Decision Making
ME	384	Mechanics of Materials
OE	385	Management Engineering

Associated Electives

EF	382	Computer Applications with FORTRAN
EF	489A	Advanced Individual Study in Computer Science
EV	385	Issues Confronting Man and His Environment
EV	388	Physical Geology
GE	381	Scientific Management
MA	473	Intermediate Probability and Statistical Applications
MA	481	Linear Programming
MA	484	Differential Equations (Intermediate)
MA	486	Numerical Analysis with Digital Computation
ME	473	Experimental Mechanics
ME	484	Aerospace Structures
ME	485	Continuum Mechanics
ME	486	Mechanical Vibrations
OE	383	Engineering Materials

Electrical Engineering Field

Courses required for concentration in the Electrical Engineering Field of the Applied Science and Engineering Area:

1. All principal electives listed below, *and*
2. At least two associated electives.
3. Cadets concentrating their electives in electrical engineering must take EE 401-402 as their required core engineering course sequence.

Principal Electives

EE	382	Electromechanical Energy Conversion
EE	383	Electromagnetic Fields
EE	484	Communication Systems

Associated Electives

EE	483	Digital Computer Systems
EE	485	Computer Engineering

EE	486	Solid State Electronics
EE	489	Advanced Individual Study in Electrical Engineering
EF	382	Computer Applications with FORTRAN
EF	489A	Advanced Individual Study in Computer Science
MA	484	Differential Equations (Intermediate)
MA	485	Complex Analysis
MA	486	Numerical Analysis with Digital Computation
ME	472	Direct Energy Conversion
ME	486	Mechanical Vibrations
OE	383	Engineering Materials
PH	483	Solid State Physics
PH	484	Quantum Mechanics



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Engineering Mechanics Field

Elective courses required for concentration in the Engineering Mechanics Field of the Applied Science and Engineering Area:

1. Four principal electives, *and*
2. At least one course chosen from the combined lists of principal and associated electives.

Principal Electives

ME	384	Mechanics of Materials
ME	387	Introduction to Applied Aerodynamics
ME	388	Aerodynamics of V/STOL Flight
ME	471	Aerospace Propulsion
ME	472	Direct Energy Conversion
ME	473	Experimental Mechanics
ME	481	Compressible Aerodynamics
ME	482	Heat Transfer
ME	483	Space Mechanics
ME	484	Aerospace Structures
ME	485	Continuum Mechanics
ME	486	Mechanical Vibrations
ME	488	Flight Mechanics
ME	489	Advanced Individual Study in Mechanics

Associated Electives

EE	402	Automatic Control Systems
EF	382	Computer Applications with FORTRAN
CE	381	Soil Mechanics
CE	481	Design of Concrete Structures
CE	482	Advanced Structural Analysis
MA	485	Complex Analysis
MA	486	Numerical Analysis with Digital Computation
OE	383	Engineering Materials
OE	481	Automotive Engineering
OE	483	Helicopter Engineering
PH	383	Introduction to Theoretical Physics I

Nuclear Engineering Field

Courses required for concentration in the Nuclear Engineering Field of the Applied Science and Engineering Area:

1. Four principal electives to include PH 487, *and*
2. At least one course 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.

Principal Electives

EF	382	Computer Applications with FORTRAN
GE	383	Systems Engineering and Decision Making
MA	484	Differential Equations (Intermediate)
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	Engineering of Environmental Systems
CE	489	Advanced Individual Study in Engineering
EE	401	Electronic Circuits
EE	402	Automatic Control Systems
EF	488	Advanced Computer Programming
MA	473	Intermediate Probability and Statistical Applications
MA	485	Complex Analysis
MA	486	Numerical Analysis with Digital Computation
PH	383	Introduction to Theoretical Physics I
PH	384	Introduction to Theoretical Physics II
PH	483	Solid State Physics
PH	486	Experimental Physics
PH	489	Advanced Individual Study in Physics



Weapon Systems Engineering Field

Courses required for concentration in the Weapon Systems Engineering Field of the Applied Science and Engineering Area:

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

Principal Electives

CE	489	Advanced Individual Study in Engineering
GE	383	Systems Engineering and Decision Making
MA	484	Differential Equations (Intermediate)
ME	384	Mechanics of Materials
ME	388	Aerodynamics of V/STOL Flight
ME	483	Space Mechanics
ME	484	Aerospace Structures
ME	486	Mechanical Vibrations
OE	383	Engineering Materials
OE	385	Management Engineering
OE	481	Automotive Engineering
OE	483	Helicopter Engineering

Associated Electives

EE	402	Automatic Control Systems
EF	382	Computer Applications with FORTRAN
GE	381	Scientific Management
MA	473	Intermediate Probability and Statistical Applications
MA	481	Linear Programming
MA	485	Complex Analysis
MA	486	Numerical Analysis with Digital Computation
ME	387	Introduction to Applied Aerodynamics
ME	471	Aerospace Propulsion
ME	481	Compressible Aerodynamics
ME	482	Heat Transfer
ME	488	Flight Mechanics
OE	487	Operations Research

HUMANITIES

Each cadet who elects to concentrate in the Humanities Area must satisfy the following requirements:

- a. Complete a Core Academic Program as described on Page 35.
- b. Complete GE 401-402 (cadets who so desire may substitute any other of the two-term engineering sequences.)
- c. Complete seven elective courses selected as follows:
 1. Six selected from the Humanities Area list *and*
 2. One selected from among the entire elective course offerings.

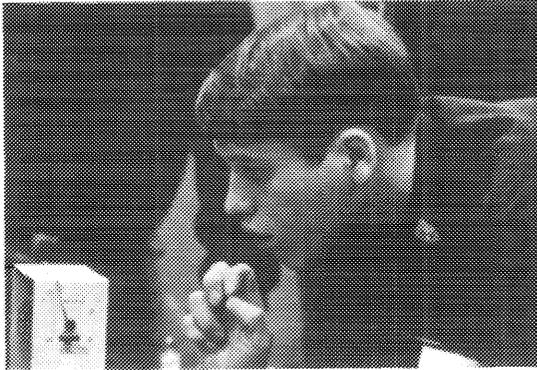
Course List:

EN	381	Survey of British Literature
EN	383	Period Studies in Literature
EN	385	Background in American Studies
EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
EN	481	Aspects of Literature
EN	482	Aspects of American Studies
EN	483	Seminar in American Studies
EN	485	Seminar in Major British Authors
EN	486	Seminar in Major American Authors
EN	489	Advanced Individual Study in English
HI	371	History of Russia
HI	372	History of U.S. Foreign Relations
HI	373	Topics in American History
HI	379	Topics in European History
HI	375	History of the Far East
HI	376	The Black in American History
LC	383	Chinese Literature and Culture I
LC	384	Chinese Literature and Culture II
LC	485	Readings in Modern Chinese
LC	486	Chinese Military Readings
LF	381	French Language through Literature
LF	382	Military and Scientific Readings in French
LF	483	History of French Civilization I
LF	484	History of French Civilization II
LF	485	Survey of French Literature
LF	486	Modern French Literature
LF	487	Directed Studies in French
LF	488	Directed Studies in French
LG	381	German Language through Literature
LG	382	Military and Scientific Readings in German
LG	483	History of German Civilization
LG	484	Contemporary German
LG	485	Survey of German Literature
LG	486	Modern German Literature
LG	487	Directed Studies in German
LG	488	Directed Studies in German
LP	381	Portuguese Language through Literature
LP	382	Survey of Brazilian Literature
LP	383	Military Readings in Portuguese
LP	485	Directed Studies in Portuguese
LP	486	Directed Studies in Portuguese
LR	381	Advanced Russian Language
LR	382	Russian Language through Literature
LR	473	Russian and Soviet Civilization
LR	474	Soviet Russian Literature
LR	475	Military and Scientific Readings in Russian
LR	476	Soviet Expository Writings
LS	381	Spanish Language through Literature
LS	382	Military Readings in Spanish
LS	483	Survey of Spanish-American Literature
LS	484	Modern Spanish-American Literature
LS	485	Survey of Spanish Literature

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LS	486	Modern Spanish Literature
LS	487	Directed Studies in Spanish
LS	488	Directed Studies in Spanish

NOTE: Cadets who receive approval to concentrate their elective courses in Humanities may take an elective course in lieu of ME 302.



American Studies Field

Elective courses required for concentration in the American Studies Field of the Humanities Area:

1. EN 385 if the cadet has not taken EN 151-152 as a Fourth Classman. EN 385 is not open to cadets who have completed EN 151-152.
2. Four principal electives to include EN 482A (Expositors of 19th Century American Thought), EN 482B (Social Criticism in 20th Century American Prose), and one other seminar. EN 385 (see a. above) may be counted as one of the four principal electives.
3. Three other courses selected from the combined list of principal and associated electives.

Principal Electives

EN	383B	American Literature of the 19th Century
EN	385	Background to American Studies
EN	482A	Expositors of 19th Century American Thought
EN	482B	Social Criticism in 20th Century Prose
EN	483	Seminars in American Studies
EN	489	Advanced Individual Studies in English
EV	384	Regional Geography of the United States
HI	373	Topics in American History
HI	376	The Black in American History
SS	387	Seminar in Public Policy

Associated Electives

EN	383A	Contemporary Literature
EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
EN	486	Seminar in Major American Authors
HI	372	History of U.S. Foreign Relations

HI	373	20th Century Warfare
HI	481	Seminar in History
LW	481	International Law
LW	482	Seminar: Military Aspects of International Law
PL	482	Sociology
SS	386	Political Philosophy
SS	483	National Security Seminar

Literature Field

Elective courses required for concentration in the Literature Field of the Humanities Area:

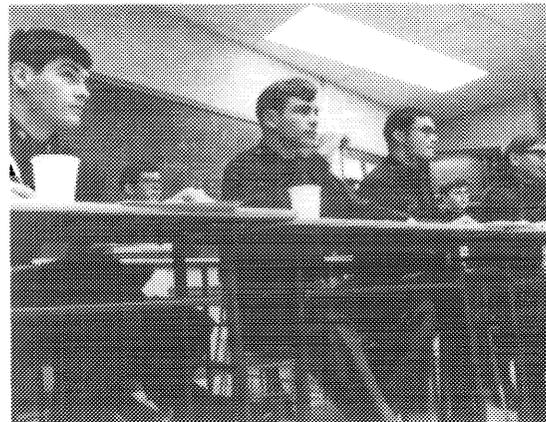
1. Five principal electives to include three of the following:
 - EN 381A British Literature to 1660
 - EN 381B British Literature, 1660-1900
 - EN 383B 19th Century American Literature
 - EN 485Q Shakespeare
2. At least two courses chosen from the combined list of principal and associated electives.

Principal Electives

EN	381	Survey of British Literature
EN	383	Period Studies in Literature
EN	481	Aspects of Literature
EN	485	Seminars in Major British Authors
EN	486	Seminars in Major American Authors
EN	489	Advanced Individual Study in English

Associated Electives

EN	385	Background to American Studies
EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
EN	482	Aspects of American Studies
EN	483	Seminars in American Studies
HI	373	Topics in American History
HI	374	Topics in European History
HI	481	Seminar in History
PL	482	Sociology
PL	483	Social Psychology
PL	484	Psychology II



SS 386 Political Philosophy

Any Foreign Language Course in the 300 or 400 series for which the individual is qualified.

Chinese Language Field

Elective courses required for concentration in the Chinese Language Field of the Humanities Area:

1. Four principal electives to include three LC courses and
2. At least three courses selected from the combined lists of principal and associated electives.

Principal Electives

EV	382	Geography of the People's Republic of China
LC	383	Chinese Literature and Culture I
LC	384	Chinese Literature and Culture II
LC	485	Readings in Modern China
LC	486	Chinese Military Readings

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

Associated Electives

EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
HI	375	History of the Far East
HI	381	Revolutionary Warfare
LW	481	International Law
LW	482	Seminar in Military Aspects of International Law
PL	482	Sociology
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	471	Major Political Systems of East Asia
SS	476	International Affairs: Theory and Applications
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology

French Language Field

Elective courses required for concentration in the French Language Field of the Humanities Area:

1. Five principal electives to include four LF courses, and
2. At least two courses selected from the combined lists of principal and associated electives.

Principal Electives

LF	381	French Language through Literature
LF	382	Military and Scientific Readings in French
LF	483	History of French Civilization I
LF	484	History of French Civilization II
LF	485	Survey of French Literature
LF	486	Modern French Literature
LF	487	Directed Studies in French
LF	488	Directed Studies in French

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

*Associated Electives*

EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
HI	374	Topics in European History
HI	381	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	482	Sociology
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	476	International Affairs: Theory and Applications
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology

German Language Field

Elective courses required for concentration in the German Language Field of the Humanities Area:

1. Five principal electives to include four LG courses, and
2. At least two courses selected from the combined list of principal and associated electives.

Principal Electives

LG	381	German Language through Literature
LG	382	Military and Scientific Readings in German
LG	483	History of German Civilization
LG	484	Contemporary Germany
LG	485	Survey of German Literature
LG	486	Modern German Literature
LG	487	Directed Studies in German
LG	488	Directed Studies in German

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

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Associated Electives

EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
HI	374	Topics in European 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	482	Sociology
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	476	International Affairs: Theory and Applications
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology

Portuguese Language Field

Elective courses required for concentration in the Portuguese Language Field of the Humanities Area:

1. Five principal electives to include four LP courses, *and*
2. At least two courses selected from the combined lists of principal and associated electives.

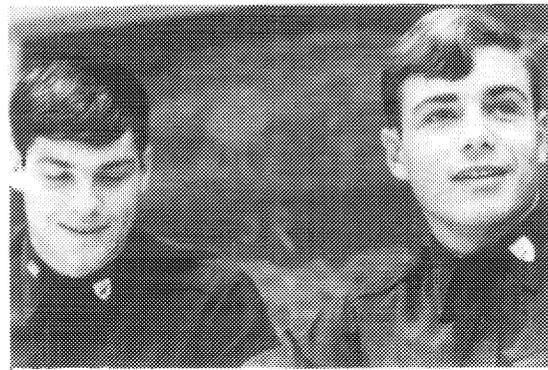
Principal Electives

LP	381	Portuguese Language through Literature
LP	382	Survey of Brazilian Literature
LP	383	Military Readings in Portuguese
LP	485	Directed Studies in Portuguese
LP	486	Directed Studies in Portuguese
SS	384	Government and Politics of Latin America

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

Associated Electives

EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
HI	374	Topics in European 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	482	Sociology
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	476	International Affairs: Theory and Applications
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology



Russian Language Field

Elective courses required for concentration in the Russian Language Field of the Humanities Area:

1. Five principal electives to include four LR courses, *and*
2. At least two electives selected from the combined lists of principal and associated electives.

Principal Electives

EV	381	Geography of the USSR
HI	371	History of Russia
LR	381	Advanced Russian Language
LR	382	Russian Language through Literature
LR	473	Russian and Soviet Civilization
LR	474	Soviet Russian Literature
LR	475	Military and Scientific Readings in Russian
LR	476	Soviet Expository Writings
LR	487	Directed Studies in Russian
LR	488	Directed Studies in Russian
SS	475	Government and Politics of the USSR

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

Associated Electives

EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
HI	374	Topics in European History
HI	381	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	482	Sociology
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	476	International Affairs: Theory and Applications
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology

Spanish Language Field

Elective courses required for concentration in the Spanish Language Field of the Humanities Area:

1. Five principal electives to include four LS courses, *and*
2. At least two courses selected from the combined lists of principal and associated electives.

Principal Electives

LS	381	Spanish Language through Literature
LS	382	Military Readings in Spanish
LS	483	Survey of Spanish-American Literature
LS	484	Modern Spanish-American Literature
LS	485	Survey of Spanish Literature
LS	486	Modern Spanish Literature
LS	487	Directed Studies in Spanish
LS	488	Directed Studies in Spanish
SS	384	Government and Politics of Latin America

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

Associated Electives

EN	391	Introduction to Fine Arts (overload only)
EN	392	Introduction to Music (overload only)
HI	374	Topics in European History
HI	381	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	482	Sociology
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	476	International Affairs: Theory and Applications
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology

EV	384	Regional Geography of the U.S.
EV	385	Issues Confronting Man and His Environment
EV	489	Advanced Individual Study in Environment (if Geography)
HI	371	History of Russia
HI	372	History of U.S. Foreign Relations
HI	373	Topics in American History
HI	374	Topics in European History
HI	375	History of the Far East
HI	376	The Black in American History
HI	381	Revolutionary Warfare
HI	383	20th-Century Warfare
HI	384	Topics in Military 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
LW	488	Business and Procurement Law
PL	481	Managerial Psychology
PL	482	Sociology
PL	483	Social Psychology
PL	484	Psychology II
SS	372	Policy and Administration
SS	373	Quantitative Analysis in the Social Sciences
SS	383	Middle Eastern Studies
SS	384	Government and Politics of Latin America
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	387	Seminar in Public Policy
SS	388	Macroeconomics
SS	389	Managerial Economics
SS	471	Major Political Systems of East Asia
SS	475	Government and Politics of the Soviet Union
SS	476	International Affairs: Theory and Applications

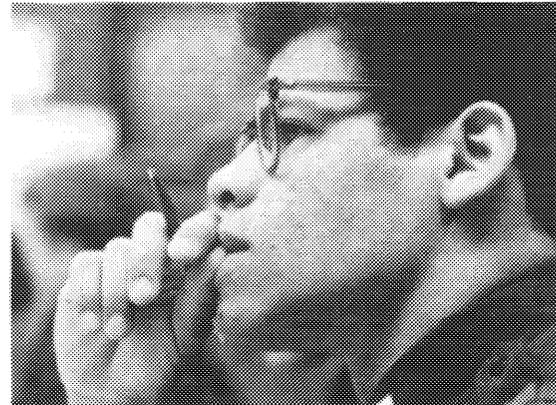
NATIONAL SECURITY AND PUBLIC AFFAIRS AREA

Each cadet who elects to concentrate in the National Security and Public Affairs Area must satisfy the following requirements:

- a. Complete GE 401-402 (cadets who so desire may substitute any other two-term engineering sequence).
- b. Complete seven elective courses selected as follows:
 1. Six selected from the National Security and Public Affairs Area, *and*
 2. One selected from among the entire elective course offerings.

National Security and Public Affairs Elective Course List:

EV	381	Geography of the USSR
EV	382	Geography of the People's Republic of China



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SS	482	Microeconomics: Theory and Applications
SS	483	National Security Seminar
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology
SS	487	Public Policy Decision-Making and Debate
SS	489	Advanced Individual Study in the Social Sciences

NOTE: Cadets who receive approval to concentrate their elective courses in National Security and Public Affairs may take an elective course in lieu of ME 302.

Economics Field

Elective courses required for concentration in the Economics Field of the National Security and Public Affairs Area:

1. Four principal electives to include SS 482, and
2. At least three courses selected from the combined lists of principal and associated electives.

Principal Electives

SS	373	Quantitative Analysis in the Social Sciences
SS	385	Comparative Economic Systems
SS	388	Macroeconomics
SS	389	Managerial Economics
SS	482	Microeconomics: Theory and Applications
SS	484	International Economics
SS	489	Advanced Individual Study in the Social Sciences

Associated Electives

EF	382	Computer Applications with FORTRAN
EN	483	Seminar in American Studies
EV	385	Issues Confronting Man and His Environment
GE	381	Scientific Management
GE	383	Systems Engineering and Decision-Making
HI	373	Topics in American History (when economic history)

LW	488	Business and Procurement Law
MA	473	Intermediate Probability and Statistical Applications
MA	481	Linear Programming
OE	385	Management Engineering
OE	487	Operations Research
PL	481	Managerial Psychology
PL	482	Sociology
PL	483	Social Psychology
PL	484	Psychology II
SS	372	Policy and Administration
SS	387	Seminar in Public Policy
SS	483	National Security Seminar
SS	485	Problems of Developing Nations
SS	487	Public Policy Decision-Making and Debate

Geography Field

Elective courses required for concentration in the Geography Field of the National Security and Public Affairs Area:

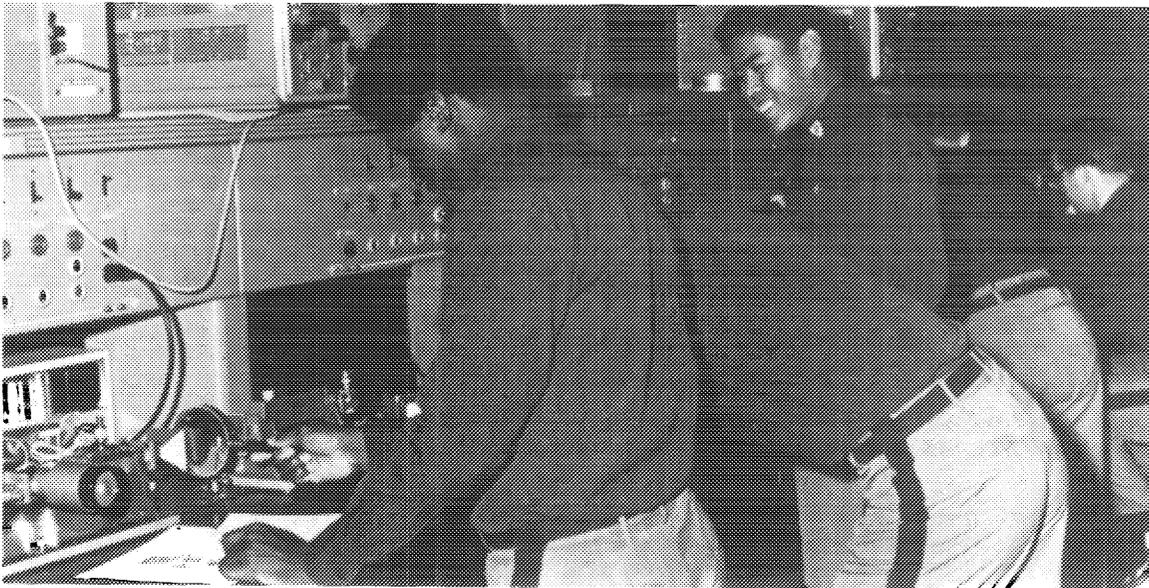
1. Four principal electives to include at least one course from EV 381, EV 382 and EV 384, and
2. At least three courses selected from the combined list of principal and associated electives.

Principal Electives

EV	381	Geography of the USSR
EV	382	Geography of the People's Republic of China
EV	384	Regional Geography of the United States
EV	385	Issues Confronting Man and His Environment
EV	388	Physical Geology
EV	489	Advanced Individual Study of Environment
EF	385	Cartography
PL	482	Sociology
SS	486	Political and Cultural Anthropology

Associated Electives

EF	382	Computer Applications with FORTRAN
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EN	483	Seminars in American Studies
HI	371	History of Russia
HI	373C	Turbulence and Change in American History
HI	375	History of the Far East
LC	-----	Elective Language Course
LR	-----	Elective Language Course
MA	473	Intermediate Probability and Statistical Applications
SS	373	Quantitative Analysis in the Social Sciences
SS	385	Comparative Modern Economic Systems
SS	471	Major Political Systems of East Asia
SS	475	Government and Politics of the Soviet Union
SS	484	International Economics and Economic Development
SS	485	Problems of Developing Nations

History Field

Elective courses required for concentration in the History Field of the National Security and Public Affairs Area:

1. Four principal electives to include HI 481 or HI 489, and
2. At least three courses selected from the combined lists of principal and associated electives.

Principal Electives

HI	371	History of Russia
HI	372	History of U.S. Foreign Relations
HI	373	Topics in American History
HI	374	Topics in European History
HI	375	History of the Far East
HI	376	The Black in American History
HI	381	Revolutionary Warfare
HI	383	Twentieth Century Warfare
HI	384	Topics in Military History
HI	481	Seminar in History
HI	489	Advanced Individual Study in History

Associated Electives

EN	381B	British Literature, 1660 to 1900
EN	383B	19th Century American Literature
EN	385	Background to American Studies
EN	482A	Expositors of the 19th Century American Thought
EN	482B	Social Criticism in 20th Century American Prose
EN	483	Seminars in American Studies
EV	381	Geography of the USSR
EV	382	Geography of the People's Republic of China
EV	384	Regional Geography of the U.S.
L	-----	Any Foreign Language elective course using historical materials
LW	481	International Law
LW	482	Seminar in Military Aspects of International Law
PL	482	Sociology
PL	483	Social Psychology

SS	372	Policy and Administration
SS	383	Middle Eastern Studies
SS	384	Government and Politics of Latin America
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	471	Political Systems of East Asia
SS	483	National Security Seminar
SS	486	Political and Cultural Anthropology

International Affairs Field

Elective courses required for concentration in the International Affairs Field of the National Security and Public Affairs Area:

1. Four principal electives to include HI 372, and
2. At least three courses chosen from the combined lists of principal and associated electives. Only one associated language elective may be selected in fulfillment of this requirement.

Principal Electives

HI	372	History of U.S. Foreign Relations
LW	481	International Law
SS	373	Quantitative Analysis in the Social Sciences
SS	476	International Affairs: Theory and Applications
SS	483	National Security Seminar
SS	484	International Economics
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology
SS	489	Advanced Individual Study in the Social Sciences

Associated Electives

EV	381	Geography of the USSR
EV	382	Geography of the People's Republic of China
HI	371	History of Russia
HI	373	Topics in American History
HI	374	Topics in European History
HI	375	History of the Far East
HI	381	Revolutionary Warfare
HI	383	20th Century Warfare
HI	384	Topics in Military History
HI	481	Seminar in History
HI	489	Advanced Individual Study in History
L	-----	Elective Language course (300 or 400 series)
LW	482	Seminar in Military Aspects of International Law
PL	482	Sociology
PL	483	Social Psychology
SS	383	Middle Eastern Studies
SS	384	Government and Politics of Latin America
SS	385	Comparative Economic Systems
SS	386	Political Philosophy
SS	471	Major Political Systems of East Asia
SS	475	Government and Politics of the Soviet Union
SS	487	Public Policy Decision-Making and Debate



Military Studies Field

Elective courses required for concentration in the Military Studies Field of the National Security and Public Affairs Area:

1. Four principal electives to include HI 383 and either HI 381 or HI 384, *and*
2. At least three courses selected from the combined list of principal and associated electives.

Principal Electives

HI	381	Revolutionary Warfare
HI	383	20th Century Warfare
HI	384	Topics in Military History
HI	481	Seminar in History (on militarily-related topic)
HI	489	Advanced Individual Study in History
PL	482	Sociology
PL	483	Social Psychology
SS	483	National Security Seminar

Associated Electives

HI	372	History of U.S. Foreign Relations
HI	373	Topics in American History (on militarily-related topic)
HI	374	Topics in European History (on militarily-related topic)
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	484	Psychology II
SS	482	Microeconomics: Theory and Application
SS	485	Problems of Developing Nations

Political Science Field

Elective courses required for concentration in the Political Science Field of the National Security and Public Affairs Area:

1. Four principal electives to include SS 386, *and*
2. At least three courses selected from the combined lists of principal and associated electives.

Principal Electives

PL	482	Sociology
SS	372	Policy and Administration
SS	373	Quantitative Analysis in the Social Sciences
SS	386	Political Philosophy
SS	387	Seminar in Public Policy
SS	483	National Security Seminar
SS	485	Problems of Developing Nations
SS	486	Political and Cultural Anthropology
SS	489	Advanced Individual Study in the Social Sciences

Associated Electives

EN	483	Seminar in Aspects of American Culture
EV	385	Issues Confronting Man and His Environment
HI	371	History of Russia
HI	372	History of U.S. Foreign Relations
HI	373	Topics in American History
HI	374	Topics in European History
HI	375	History of the Far East
HI	376	The Black in American History
HI	381	Revolutionary Warfare
HI	383	20th-Century Warfare
HI	384	Topics in Military History
HI	481	Seminar in History
HI	489	Advanced Individual Study in History
LW	481	International Law

- PL 483 Social Psychology
- PL 484 Psychology II
- SS 383 Middle Eastern Studies
- SS 384 Government and Politics of Latin America
- SS 385 Comparative Economic Systems
- SS 388 Macroeconomics
- SS 471 Major Political Systems of East Asia
- SS 475 Government and Politics of the Soviet Union
- SS 476 International Affairs: Theory and Applications
- SS 482 Microeconomics: Theory and Applications
- SS 484 International Economics
- SS 487 Public Policy Decision-Making and Debate

Interdisciplinary Field
(Not Associated with an Area of Concentration)

Management

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

1. GE 381 Scientific Management
2. PL 481 Managerial Psychology
3. OE 385 Management Engineering *or*
OE 487 Operations Research
4. SS 482 Microeconomics: Theory and Applications
or
SS 389 Managerial Economics
5. Free choice from among the combined lists of principal and associated electives.
6. Free choice from among all electives

Principal Electives

- EF 382 Computer Applications with FORTRAN
- EF 383 Data Processing with COBOL
- GE 381 Scientific Management
- GE 383 Systems Engineering and Decision-Making
- MA 481 Linear Programming
- MA 473 Intermediate Probability and Statistical Applications
- OE 385 Management Engineering
- OE 487 Operations Research
- PL 481 Managerial Psychology
- PL 483 Social Psychology
- SS 373 Quantitative Analysis in the Social Sciences
- SS 389 Managerial Economics
- SS 482 Microeconomics: Theory and Applications

Associated Electives

- LW 488 Business and Procurement Law
- MA 486 Numerical Analysis with Digital Computation
- PL 482 Sociology
- PL 484 Psychology II
- SS 372 Policy and Administration
- SS 489 Advanced Individual Study in the Social Sciences



THE ACADEMIC BOARD

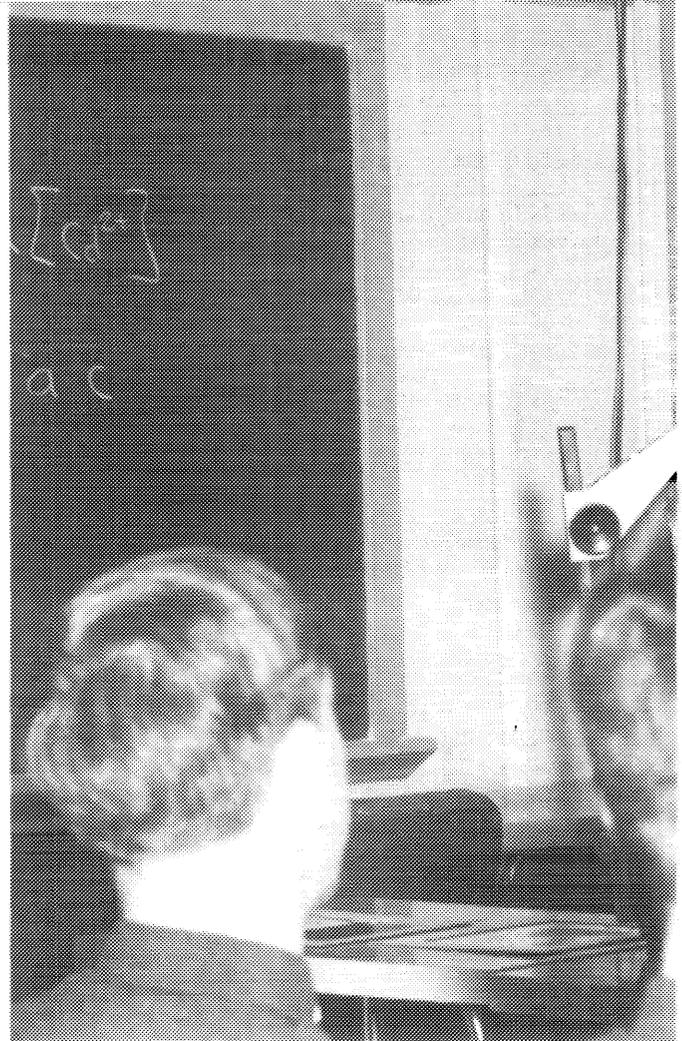
The Academic Board establishes standards and procedures for admission, readmission, advanced placement, validation, academic proficiency, advancement from class to class, graduation, and for granting diplomas and commissions. The Board recommends separation of cadets for deficiency in academic studies, in conduct, in physical education, and in aptitude for the service. The Board approves courses of instruction, methods of instruction, schedules of instruction, and changes in institutional facilities.

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 PhD., Rensselaer Polytechnic Institute

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 M.S., Rensselaer Polytechnic Institute
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 M.S., PhD., University of Colorado
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 M.A., The Johns Hopkins University

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 M.A., University of North Carolina
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 M.S., Worcester Polytechnic Institute
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 M.S., Rensselaer Polytechnic Institute
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 M.S., Rensselaer Polytechnic Institute
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 B.S., United States Military Academy
 M.S., Pennsylvania State University

56 ACADEMIC PROGRAM

STANDARD COURSE

CH 201-202 General Chemistry

A two-semester course in general college chemistry with emphasis on the fundamental concepts, principles, theories, and laws of chemistry, to include an introduction to organic chemistry. An integrated laboratory program includes practical exercises illustrating fundamental chemical theory discussed in the classroom. 7 Credit Hours

ADVANCED COURSE

CH 251-252 Advanced General Chemistry with Analysis

A rigorous treatment of the fundamental principles of chemistry. An integrated laboratory program includes experiments of a quantitative nature which illustrate the fundamental concepts of chemistry and a series of semimicro qualitative analysis exercises stressing equilibrium principles. 7 Credit Hours

ELECTIVE COURSES

CH 383-384 Organic Chemistry

Prerequisite: CH 202 or CH 252, or validation thereof

A comprehensive study of the nature, preparation, and reactions of the compounds of carbon. The latest theories of chemical bonding are presented. Emphasis is placed on the relationship of structure to chemical reactivity. The laboratory program includes the application of modern instrumentation, synthesis, and an introduction to qualitative analysis. 7 Credit Hours

CH 481-482 Physical Chemistry

Prerequisite: CH 202 or CH 252, or validation thereof

This course relates certain theoretical aspects to the laws of chemical interaction. The coverage includes standard topics in classical physical chemistry as well as an introduction to quantum chemistry and spectroscopy. The laboratory program includes experiments illustrating the fundamental topics and the application of ultraviolet, visible and infrared spectroscopy. 7 Credit Hours

CH 485-486 Human Biology

Prerequisite: CH 202 or CH 252, PH 202 or PH 204, or validation

This course develops the fundamental principles of human structure and function. With primary emphasis on physiology, it includes sufficient elements of cell morphology and functions, and human anatomy, to preclude the necessity of prior formal training in the biological sciences. A small number of laboratory exercises are included. 5 Credit Hours

CH 489 Advanced Individual Study in Chemistry

Either Term – Prerequisites: CH 384 and CH 482

Individually supervised research in a selected problem area. Research projects are approved by the department and require the cadet to outline his approach, determine necessary laboratory equipment, and evolve the techniques and procedures required. The project terminates in the writing of a research paper covering all aspects of the project. 2.5 Credit Hours



**DEPARTMENT OF EARTH, SPACE
AND GRAPHIC SCIENCES**



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M.S., California Institute of Technology
Army War College

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Ph.D., Cornell University
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M.S., University of Michigan
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M.A., Syracuse University
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B.S., M.S.C.E., University of Michigan
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M.S., University of Michigan

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M.A., University of Oklahoma

CPT DAVID G. KIRKPATRICK
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M.S., University of Colorado

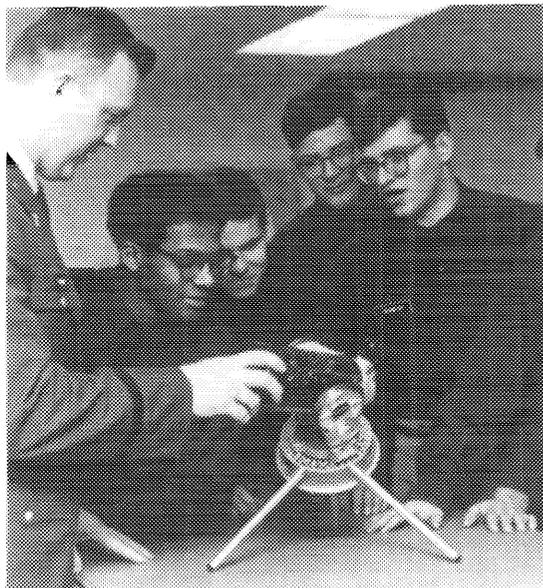
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M.S., Purdue University

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M.A., Syracuse University

CPT THEODORE T. SENDAK
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M.E., Auburn University

1LT STEVEN C. FOSTER
B.S., Brigham Young University
M.S., Western Kentucky University

1LT VIRGINIA K. FRY
B.A., M.A., Florida State University

STANDARD COURSES**EF 101 Engineering Fundamentals***First and Second Terms - Prerequisites: None*

The use of graphical methods for analysis, communication and design is emphasized. Representative problems concerning empirical relationships and vector systems illustrate analysis by graphical methods. Orthographic drawing and pictorial representation are included, and the engineering design process is introduced through individual design projects. 2.0 Credit Hours

EF 102 Engineering Fundamentals*First and Second Terms - Prerequisites: None*

Programming digital computers using the FORTRAN IV language is introduced. Practical problems in the computer laboratory employing batch processing and time-share systems develop and reinforce concepts. Use of the slide rule is considered, and an elementary treatment of the theory of errors and measurements is included with surveying techniques and instruments used in practical applications. 2.0 Credit Hours

EV 101 Planetary Science*First Term - Prerequisites: None*

The course treats certain physical aspects of the earth and atmospheric sciences which pertain to the nature of the solar system, the Earth as a planet, and natural processes acting upon and altering the Earth's surface. The principles of Newtonian mechanics are applied to planetary motions and man's space exploration. Emphasis is given to man and nature's role in changing the face of the Earth and attendant environmental problems. 2.5 Credit Hours

EV 102 World Regional Geography*Second Term - Prerequisites: None*

An introductory study of man's physical and cultural environments. The course consists of three modules: Concepts in geography, developed regions (Anglo America, Western Europe, the USSR, Japan), and developing regions (Latin America, Africa, People's Republic of China). The diversity, yet interdependence, of developed and developing regions is stressed, as well as the dynamic role of culture in altering the character of a region. 2.5 Credit Hours

ADVANCED COURSES**EF 153 Advanced Engineering Fundamentals***First Term - Prerequisites: Demonstration of required degree of proficiency by a placement examination. Offered in lieu of EF 101-102.*

This course contains programming the digital computer using the FORTRAN IV language. Instruction in the slide rule is conducted while several topics in graphical analysis and communication are studied. Field measurements are made using surveying techniques and methods. 2.0 Credit Hours

EF 154 Advanced Engineering Fundamentals*Second Term - Prerequisites: EF 153*

The course permits a cadet, working individually or as a team member, to investigate and attempt solutions to basic engineering problems employing graphical methods for analysis, communication and design. Problems derive from the fields of architecture and computer graphics, and the course concludes with oral and written presentations by the cadets. 2.0 Credit Hours

EV 152 Advanced Environment*Second Term - Prerequisite: Demonstration of proficiency in geography by examination. Offered in lieu of EV 102.*

An advanced course for selected cadets which gives expanded treatment of geographic concepts and methods for regional analysis. Emphasizing the variety of physical and human factors shaping man's perception and use of his environment, the cadet traces the origins, development, and spatial organization of two major culture regions, Western Europe and Latin America. Extensive use is made of case studies and simulation models. 2.5 Credit Hours

EV 151 Advanced Planetary Science*First Term - Prerequisite: Demonstration of proficiency in planetary and earth science by a special examination. Offered in lieu of EV 101.*

An advanced course for selected cadets with high aptitude and above-average preparation in physics, astronomy, or earth science. The course enlarges upon the subject matter of EV 101, in that coverage is accelerated and in greater depth with additional studies in astronomy, geophysics, and environmental problems. 2.5 Credit Hours

ELECTIVE COURSES**EF 382 Computer Applications with FORTRAN***First and Second Term - Prerequisite: EF 102, 151 or validation exam*

An advanced computer application course which develops experience in using the computer as an aid to decision making in business and engineering applications. Emphasis is placed on developing programming skill in applying FORTRAN IV with time-sharing terminals and punched cards. Advanced topics include building and searching large data files, Monte Carlo simulation, and graphical output. 2.5 Credit Hours

EF 383 Data Processing with COBOL*First and Second Term - Prerequisite: EF 102 or 153*

A comprehensive introduction to the COBOL programming language and its application to large-scale data control and processing techniques. The course includes the COBOL programming techniques for creating, maintaining and processing files of management data, the structure of data files necessary to accommodate large volumes of information, and the fundamentals of information control and retrieval systems. 2.5 Credit Hours

EF 384 Principles of Surveying*Second Term - Prerequisite: EF 101-102 or EF 153*

This course provides a foundation in the principles of surveying sufficient to permit application to topographic mapping and construction, artillery, and route surveys. Use of instruments, equipment and methods employed in modern surveying is included. Theoretical concepts of errors, measurements and tachometry are studied. 2.5 Credit Hours

EF 385 Cartography*Second Term - Prerequisites: EF 101-102 or 153*

This course provides an understanding of the principles and methodologies employed in modern cartographic techniques. The focus is on the planning for, gathering, analysis, design, and presentation of both real and abstract data in visual form. The second half of the course

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allows for an individual project in a cartographic area of the cadet's choice.
2.5 Credit Hours

EF 488 Advanced Computer Programming

First and Second Term - Prerequisite: EF 382 or EF 383
A computer science course which covers the General Macro Assembly Program (GMAP) language for the H-635 computer which is representative of assembly languages for large scale computer systems. Important topics of the course are: representation of information in machine code, data movement instructions, Boolean operations, symbolic addressing, and software operations. Term project includes modifying a source assembler.

2.5 Credit Hours

EF 489A Advanced Individual Study in Computer Science

First and Second Term - Prerequisite: Permission of Department Head

The course permits advanced or specialized study in meaningful problem areas subject to solution on the electronic digital computer using advanced programming techniques.

2.5 Credit Hours

EF 498B Advanced Individual Study in Geodetic Science

First and Second Term - Prerequisite: Permission of Department Head

The course permits advanced or specialized study of significant problems related to the many aspects of measuring and representing the earth.

2.5 Credit Hours

EV 381 Geography of the USSR

First Term - Prerequisite: EV 102

A comprehensive spatial treatment of the physical, population, and economic geography of the USSR. Soviet man-land relationships are examined in a regional framework, emphasizing the complexity and diversity of the physical and cultural environments and USSR potential for economic growth.

2.5 Credit Hours

EV 382 Geography of the People's Republic of China

Second Term - Prerequisite: EV 102

A study of the physical and cultural environments of mainland China, emphasizing the physical and resource base, spread and development of early Chinese civilization, current population distribution, problems of overpopulation, and agricultural-industrial patterns and potentials. Included is an examination of China's major regions, bases of national power, impact on rimland cultures, and international boundary problems.

2.5 Credit Hours

EV 383 Astronomy

Second Term - Prerequisites: EV 101-102

A study of the principles and tools of astronomy through detailed examination of planetary motions, stellar structure and evolution, galaxies, the solar system, and cosmological models. Then follows study of analytical views of man's potential environment beyond Earth, incorporating recent discoveries made by space exploration. Celestial telescopic observation is included.

2.5 Credit Hours

EV 384 Regional Geography of the United States

First Term - Prerequisite: EV 102

A systematic study of the physical and cultural geography of the United States, emphasizing significant aspects of

the physical environment, historic settlement process, contemporary population movements, and agricultural-industrial patterns which illuminate regional culture variations and interdependence. Also examined from a spatial perspective is the impact of an urban-industrialized economy on resource utilization and related man-environment problems.

2.5 Credit Hours

EV 385 Issues Confronting Man and His Environment

First and Second Term - Prerequisite: EV 101-102

A geographical approach toward the study of the man-environment ecosystem emphasizing technological man's continuing use and misuse of his physical and biotic resources. Case studies in air and water pollution, population-resource balances, urban-industrial complexities and conflicting views concerning environmental management and problem solving are examined in detail. Field trips provide first-hand exposure to environmental problems in the Mid-Hudson Valley and New York Metropolitan Area.

2.5 Credit Hours

EV 388 Physical Geology

Second Term - Prerequisites: EV 101-102

A systematic treatment of the principles and methods of physical geology with emphasis on the Earth's primary features and the processes which produce and modify them. Topics include the nature and origin of Earth materials, plate tectonics, landform analysis, extra-terrestrial geology, and the environmental impact of energy consumption, resource depletion and natural geologic hazards. Local field trips are included.

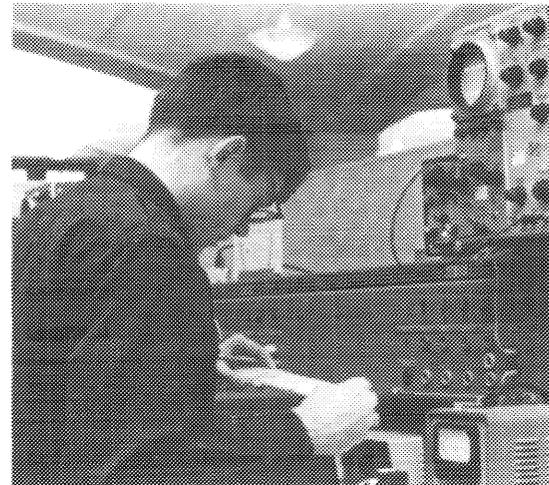
2.5 Credit Hours

EV 489 Advanced Individual Study in Environment

Either Term - Prerequisite: Permission of Department Head

Advanced study of topics in the fields of geography or geology, selected by the cadet and approved by the faculty advisor. The cadet prepares a research and study proposal setting forth objectives, scope, and anticipated accomplishments of his efforts for the semester. The individual study program usually culminates in a research paper and oral report presented to interested students and faculty.

2.5 Credit Hours



**DEPARTMENT OF
ELECTRICAL ENGINEERING**



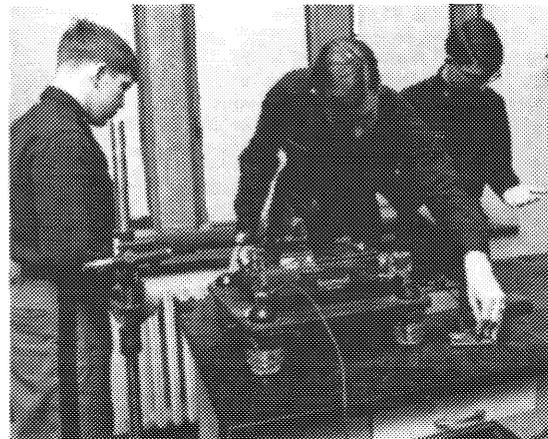
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STANDARD COURSES

EE 301 Electric Circuits

First Term - Prerequisites: PH 202 and MA 207

Basic electric circuit theory and analysis. Electric Circuit fundamentals to include charge, current, voltage, Kirchhoff's Laws and Ohm's Law. Resistive networks, inductance, capacitance, impedance, RLC networks, and transient analysis. Lectures on the physical basis of electronics. Laboratories emphasize fundamental concepts, practical circuit construction and use of meters and oscilloscopes. 3.5 Credit Hours

EE 304 Electronics

Second Term - Prerequisite: EE 301

Electronic devices, circuits, and systems with emphasis on communications applications. Power circuits, regulation, efficiency, transformers. Communications circuits, modulation, frequency selectivity. Electronic devices, diodes, transistors, vacuum triode. Modulators and detectors, amplifiers, oscillators. AM radio system, FM and other communications systems. Lectures and demonstrations cover additional topics. Extensive laboratory work. 3.5 Credit Hours

EE 401 Electronic Circuit (Engineering Sequence)

First Term - Prerequisite: EE 304

Advanced electronic circuits. Emphasis on analysis and design. Transistor amplifiers, cascaded amplifiers, large signal amplifiers, feedback oscillators, power supplies, switching circuit and microelectronics are covered. Strong emphasis on laboratory techniques and circuit construction. 3.5 Credit Hours

EE 402 Automatic Control Systems (Engineering Sequence)

Second Term - Prerequisite: EE 304

Introduction to theory and techniques of automatic control system analysis and design. Electrical, mechanical, electromechanical, thermal and hydraulic linear feedback systems are examined. Root locus, Bode diagrams, Nyquist plots are developed as analysis/design techniques. Modeling, stability, steady-state errors, state variable methods, and non-linear systems are discussed. Electro-mechanical servo-trainer and analog computer used in laboratory support work. 3.5 Credit Hours

ELECTIVE COURSES

EE 382 Electromechanical Energy Conversion

Second Term - Prerequisite: EE 301

Includes examination of DC motors and generators; AC induction motors; AC synchronous motors and generators. Emphasis is on the conversion of energy using basic concepts of current, voltage, magnetic fields and force. A general model for all electromechanical machines is studied and automatic control of machines is introduced. 3.5 Credit Hours

EE 383 Electromagnetic Fields

First Term - Prerequisites: PH 202 and MA 206

Introduces basic field theory using Maxwell's equations. Examines electrostatic and magnetostatic fields, and time-varying fields. Application of field theory to transmission lines, resonant cavities, radiation, antennas and antenna arrays, propagation, and radar. 3.5 Credit Hours

EE 483 Digital Computer Systems

First Term - Prerequisite: EE 304 or Department permission

Organization and operation of general purpose digital computer. Operation and interconnection of components examined at the block diagram level. Simple software systems are introduced. Future trends in computer operation and organization are discussed. Laboratory exercises with digital computer and logic modules illustrate principles discussed in class. 2.5 Credit Hours

EE 484 Communication Systems

First Term - Prerequisites: EE 304 and MA 206

Includes theory of communication and information transmission. Signal analysis; suppressed-carrier and single-sideband transmission; frequency, phase and pulse modulated systems. Laboratory work includes selected exercises illustrating basic concepts. 2.5 Credit Hours

EE 485 Computer Engineering

Second Term - Prerequisite: EE 304

Provides understanding of the electronics of digital computers. Design of gates, inverters, and flip-flops are studied in light of data storage and manipulation. Boolean Algebra is developed as the tool for analyzing switching circuits. Laboratory exercises supplement classroom work. 2.5 Credit Hours

EE 486 Solid-State Electronics

Second Term - Prerequisites: EE 304 and PH 303

Introduces the physical basis of semiconductor devices. Valenceband and energy-band models are developed. P-N junction theory, p-n junction devices, lasers, field-effect and bipolar junction transistors, and integrated circuits are introduced. Practical work in laboratory periods supplement classroom work. 2.5 Credit Hours

EE 489 Advanced Individual Study in Electrical Engineering

Either Term - Prerequisite: EE 304, Electrical Engineering concentration and permission of department

Designed to provide opportunity to study Electrical Engineering at a level beyond standard and regular elective courses. A detailed syllabus will be tailored to the needs and interests of each individual cadet permitted to enroll. 2.5 Credit Hours



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Laboratory Officer
CW4 HAROLD L. KILLIAN

STANDARD COURSES

CE 401 - Structural Analysis

First Term - Prerequisites: ME 303

or ME 353 (ME 384 is suggested).

The analysis of structural stresses and deflections; determination of reactions, shear, moment and axial forces in structures by approximate and analytical methods including virtual work, moment area theorems, slope deflection and moment distribution; and use of influence lines to determine optimum load placement. The role of analysis in design (engineering decision making) is emphasized. 3.5 Credit Hours

CE 402 - Structural Design

Second Term - Prerequisite: CE 401

The determination of structural form and proportions emphasizing systems engineering concepts including modeling and optimization; design of steel tension members, columns, beams, beam-columns, and connections; introduction to timber design; and a comprehensive design problem requiring applications of the principles of analysis, synthesis and design. The decision making process is emphasized. 3.5 Credit Hours

GE 401 - General Engineering

First Term - Prerequisite: ME 301 and ME 303

A study of the principles of engineering design emphasizing the logical reasoning process. Interior, exterior, and terminal ballistics, recoil and control mechanisms of various weapon systems serve as the first term vehicle for exploring the morphology of decision-making. Economic and reliability considerations, modeling, and analog computer techniques are introduced. 3.5 Credit Hours

GE 402 - General Engineering

Second Term - Prerequisite: GE 401

Continued study of engineering design with emphasis on civil engineering systems; covers reactions, shear, flexure, and deflection characteristics of structural elements, use of influence lines and other tools of analysis which lead to a comprehensive design project combining elements of both GE 401 and 402. 3.5 Credit Hours

OE 401 - Weapon Systems Engineering

First Term - Prerequisites: ME 301 and ME 303

Mathematical and analog computer techniques, principles of material science, fundamentals of synthesis, analysis, and the decision making process are combined with other engineering tools in the study of the design of weapon system components such as gun tubes, recoil mechanisms, and control and guidance elements. 3.5 Credit Hours

OE 402 - Weapon Systems Engineering

Second Term - Prerequisite: OE 401

A continued study of weapon system design and analysis including concepts of exterior ballistics, solid and liquid propellant rockets, land mobility, internal combustion engines and vehicular power trains. Laboratory exercises and design projects complement classroom work. 3.5 Credit Hours

ADVANCED COURSES

CE 451 - Honors Course in Structural Analysis

First Term - Prerequisite: ME 303 or ME 353 (ME 384 is

recommended); standing in top 10% of class; permission of Head of Department

Teaching techniques emphasizing individual tutorial study are employed to cover topics cited in CE 401 at an accelerated pace. Time saved permits study in more depth and 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, PH 303, MA 202-206, PH 487, or the equivalent advanced courses. PH 487 may be taken concurrently with CE 453.

This course includes an introduction of principles needed to produce useful energy from fission in a central station power reactor; systems engineering and optimization; power plant thermodynamics; major components of power reactor systems; heat transfer by conduction, convection, and boiling; incompressible fluid flow; and steady-state homogeneous reactor analysis by diffusion and two-group theory. 3.5 Credit Hours

CE 454 - Introduction to Nuclear Engineering

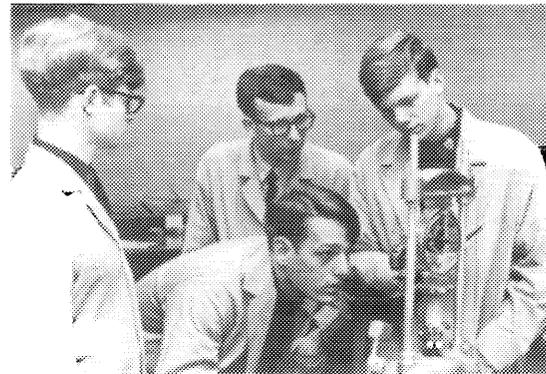
Second Term - Prerequisite: CE 453

Coverage includes steady-state analysis of heterogeneous reactors; investigation of time-dependent reactor phenomena; biological effects of radiation; radiation shielding design; and engineering economics applied to nuclear power stations, culminated with an individual power reactor design project. Emphasis is given to the engineering decision making process. 3.5 Credit Hours

OE 451 - Honors Course in Weapon Systems Engineering

First Term - Prerequisites: ME 301 and ME 303; standing in top 10% 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 topics cited in OE 402 at an accelerated pace. Time gained is used to pursue an individual research project which incorporates the full range of OE 451 and OE 452 material in the design of a major weapon system. 3.5 Credit Hours

ELECTIVE COURSES

CE 381 - Soil Mechanics

Either Term - Prerequisite: ME 303 or ME 353
 Soil is studied as an engineering material. Soil properties – permeability, compressibility, and strength – are combined with basic principles of solid mechanics and hydraulics to solve practical problems of settlement, seepage flow, earth forces, and slope stability. Retaining walls, footings, pile and raft foundations, and earth dams are analyzed and designed. 2.5 Credit Hours

CE 382 - Engineering of Environmental Systems

Either Term - Prerequisite: (EV 385 is suggested but not required)
 Environmental resource systems are analyzed from the engineering, management, and planning viewpoints. Solution techniques for current environmental problems stress the systems engineering approach and the decision making process. Topics studied include 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.)
 This structures course is a study of the ultimate strength theory of reinforced concrete which includes analysis and design of beams, one-way slabs, columns, footings and retaining walls. The course 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 (ME 384 is recommended).
 This complementary extension of CE 401 introduces the theory of more advanced techniques such as finite differences, displacement and direct element matrix methods, and plastic analysis as applied to determinate and indeterminate structures. Independent analysis and design problems using the computer emphasize practical applications of the concepts studied. 2.5 Credit Hours

CE 489 - Advanced Individual Studies in Engineering

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

GE 381 - Scientific Management

Either Term
 Scientific Management is an interdisciplinary presentation

of the fundamental processes and issues of management, unifying the management-related topics presented throughout the total academic program. A pragmatic approach is emphasized; examples are drawn from industry and the military. 2.5 Credit Hours

GE 383 - Systems Engineering and Decision Making

Either Term - Prerequisite: Second Class Standing
 This systems study familiarizes cadets with the concept of the systems approach to problem-solving. Quantitative and qualitative factors are included in this interdisciplinary approach. A methodology of solving problems and of decision making related to engineering design and management is considered. Techniques for optimizing solutions are also studied. 2.5 Credit Hours

OE 383 - Engineering Materials

Either Term - Prerequisites: CH 201-202
 Engineering materials encompasses the principles that govern physical and mechanical properties of metals and plastics. The course includes crystal and molecular structures, elastic and plastic behavior, failure, methods to enhance material properties, and microscopic analysis of materials. Integrated laboratory experiments analyze the microscopic and macroscopic structures to determine engineering characteristics of the material. 2.5 Credit Hours

OE 385 - Management Engineering

Either Term
 Quantitative methods of management are surveyed to develop a facility in techniques that aid decision making and improve managerial abilities. Instruction covers a wide range of both deterministic and statistical techniques, to include, decision and cost analysis, forecasting, quality control, analysis of variance, and linear programming. 2.5 Credit Hours

OE 481 - Automotive Engineering

Either Term - Prerequisites: ME 301, 303 (ME 303 may be taken concurrently)
 The course encompasses analysis and design of internal combustion engines, power trains, suspension systems, and running gear of modern passenger automobiles in the context of total vehicle performance. Unconventional power sources are also considered. Laboratory experiments are conducted to determine the influence of primary parameters on engine performance. 2.5 Credit Hours

OE 483 - Helicopter Engineering

Second Term - Prerequisites: ME 302 or ME 352; ME 388
 The helicopter design course relates aerodynamic theory to design considerations. The design of a rotor blade is considered in detail. Available power, desired payload and forward speed relationship are optimized. Controls and stability are introduced. The interaction between helicopter components are examined to obtain a total system design. 2.5 Credit Hours

OE 487 - Operations Research

Either Term
 This course develops in considerable depth the established quantitative methods used to analyze engineering decision making and managerial-type problems. It includes the study of Competitive Strategies, Dynamic Programming, Probability Theory, Inventory Theory, Waiting-Line Analysis, Simulation Techniques, and Model Building. 2.5 Credit Hours

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M.L.S., Pratt Institute
Senior Lecturer in Fine Arts

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STANDARD COURSES

EN 101 Communication Skills: Logic and Composition
First Term - Prerequisites: None
 Instruction in logic, rhetoric, evaluation of ideas, and public speaking. Course reading provides the basis for practical analysis, discussion and theme writing. Emphasis in writing instruction is on the production of effective argumentative prose. *2.5 Credit Hours*

EN 102 Communication Skills: Composition and Imaginative Literature
Second Term - Prerequisite: EN 101 or EN 151
 Continuation of EN 101 in a variety of writing and speaking situations, including a research paper and public-speaking requirements. The latter portion of the semester is devoted to an introduction to major literary forms. *2.5 Credit Hours*

EN 201 Comparative Literature
 Major literary figures of Western civilization (e.g., Homer, Dante, Shakespeare, Cervantes, Moliere, Ibsen, Tolstoy). Emphasis on qualities of enduring imaginative literature and its role in enhancing understanding of human nature. Several themes and one substantial research paper continue to foster cadet writing skills. Stress on effective speaking in class. *2.5 Credit Hours*

EN 402 Readings in Philosophy: Inquiries into Ethical, Aesthetic, and Spiritual Values
 Within a broad philosophical context, this course focuses on human values which have evolved in man's quest for security amidst life's uncertainties. Readings include expository essays, philosophic discourse, and imaginative

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literature ranging among eminent ancient and modern authors. Continuing emphasis is placed upon development of oral and written expression. 2.5 Credit Hours

ADVANCED COURSES

EN 151 American Thought and Literature to 1865

First Term - Prerequisite: Selection by Department

A Fourth Class interdisciplinary course in American Studies, this course examines American religious, political, and social thought, and the aesthetic ideas and cultural criticisms of several writers who have scrutinized American society. Among the authors studied are Taylor, Woolman, Edwards, Franklin, Jefferson, Cooper, Emerson, Thoreau, Hawthorne, Poe, and Melville. 2.5 Credit Hours

EN 152 American Thought and Literature since 1865

Second Term - Prerequisite: EN 151 or EN 101

A continuation of EN 151, this course focuses on the development and ideas of recent American thought and literature. Among the authors studied are Whitman, Twain, Howells, Dreiser, Adams, Crane, Sandburg, Eliot, Wright, Fitzgerald, O'Neill, Hemingway, Miller, Albee, and Bellow. 2.5 Credit Hours

ELECTIVE COURSES

EN 381 British Literature Survey

Prerequisite: Credit for EN 201

This survey course introduces cadets to the genesis of various forms of prose, poetry, and drama in English, to the continuity and trends in these forms, and to major authors. This course offers two topics: British Literature to 1660 (1st Term) and British Literature, 1660-1900 (2nd Term). 2.5 Credit Hours

EN 383 Period Studies in Literature

Prerequisite: Credit for EN 201

This course acquaints cadets with a recognized period in the development of our literary heritage through a detailed study of major writers and works of that period. Topics offered in this course include: American Literature of the 19th Century (both terms), Contemporary Literature (2nd Term), and Victorian Literature. 2.5 Credit Hours

EN 385 Background to American Studies

Prerequisite: Credit for EN 201. Not open to cadets who have completed EN 152.

This course examines the genesis and development of American religious, political, and social thought through a study of the aesthetic ideas and cultural criticism of several authors who have scrutinized American society. Among the authors studied are Franklin, Cooper, Emerson, Hawthorne, Poe, Melville, Whitman, Twain, Crane, Fitzgerald, O'Neill, and Hemingway. 2.5 Credit Hours

EN 391 Introduction to Fine Arts

Overload Elective. Prerequisite: Approval by Office of the Dean

This survey course acquaints cadets with dominant themes in the visual art: from primitive cultures, Eastern and Western, to the present. It relates aspects of today's environment--such as architecture, engineering and automotive design, photography, and television graphics--to the history and meaning of art of the past. 2 Credit Hours

EN 392 Introduction to Music

Overload Elective. Prerequisite: Approval by Office of the Dean

This course discusses the characteristics of musical tone and musical instruments and the fundamental concepts of rhythm, melody, polyphony, harmony, and form. These concepts are then correlated with the historical development and repertory of music in order to provide the cadet with a musical orientation upon which he can build. 2 Credit Hours

EN 481 Aspects of Literature

Prerequisite: Credit for EN 201

This course examines the genesis and development of specific genres of literature both as literary forms and as cultural and historical documents. This course offers several topics: The Novel (1st Term), Poetry, Drama, and Classical Literature in Translation. 2.5 Credit Hours

EN 482 Aspects of American Studies

Prerequisite: Credit for EN 201 and EN 151-152 or EN 385

This course examines the ideas of Americans whose writings have significantly influenced our national thought in more than one field or discipline. This course offers three topics: Expositors of 19th Century American Thought (1st Term), Social Criticism in 20th Century American Prose (2nd Term), and American Thought Since 1945. 2.5 Credit Hours

EN 483 Seminars in American Studies

Prerequisite: EN 201 and HI 203-204

Each topic of this interdisciplinary course permits cadets to study in depth some particular phase, movement, school, or theme within American culture. The specific topic offered is determined by student demand and available faculty. Topics offered include: The Cinema in America and The Influence of Scientific Thought on American Life. 2.5 Credit Hours

EN 485 Seminar in Major British Authors

Prerequisite: EN 201 and EN 381

This course provides interested cadets the opportunity to study in depth the works of selected major British authors. Heavy emphasis is placed on individual research and reading. This course offers several topics including: Shakespeare (both terms), Chaucer, Donne and the Metaphysicals, and Yeats and the Irish Revival. 2.5 Credit Hours

EN 486 Seminar in Major American Authors

Prerequisite: EN 201 and EN 383

This course provides interested cadets the opportunity to study in depth the works of selected major American authors. Heavy emphasis is placed on individual research and reading. This course offers several topics including: William Faulkner, Arthur Miller, and Herman Melville. 2.5 Credit Hours

EN 489 Advanced Individual Studies in English

Prerequisite: Selection by Department

This course permits the cadet of superior ability and extensive background in Literature or American Studies to develop an original project through independent study. With his faculty advisor he develops a project and then conducts extensive research, the findings of which are normally presented in a monograph. 2.5 Credit Hours

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STANDARD COURSES

LC 101-102-Chinese; LF 101-102-French
LG 101-102-German; LP 101-102-Portuguese;
LR 101-102-Russian; LS 101-102-Spanish

Prerequisites: None

A basic course in the language. In keeping with the primary objectives of speaking and understanding, oral work is stressed. Audio-lingual skills are developed by reading aloud, repetition drills, question and answer exercises, prepared and extemporaneous dialogues, individual short talks, and frequent use of the language laboratory. After the first month of the course, classroom work is normally in the foreign language.

5 Credit Hours (2.5 each term)

LC 201-202-Chinese; LF 201-202-French;
LG 201-202-German; LP 201-202-Portuguese;
LR 201-202-Russian; LS 201-202-Spanish

Prerequisite: The 101-102 courses in the appropriate language

A continuation of the 101-102 courses, with increased



emphasis on applied grammar through discussions, dialogues, individual talks and frequent aural comprehension exercises. Periodic themes are used in conjunction with reading and discussion of several literary works and of historical, geographical, and military material of current interest. Lectures are included on the history and civilization of the people whose language is being studied. All work is conducted in the foreign language. *6 Credit Hours (3 each term)*

ADVANCED COURSES

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

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

A 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;
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 241-242-French; LG 241-242-German;
LS 241-242-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 five or six lectures on various cultural aspects of the people whose language is being studied. All classroom work is in the foreign language. *6 Credit Hours (3 each term)*

LF 251-252-French; LG 251-252-German;
LR 251-252-Russian; LS 251-252-Spanish

Prerequisite: The 151-152 courses in the corresponding language

Increased use of audio-lingual techniques, talks, debates, and interpreter exercises. Reading in a wider field of literature. Greater emphasis upon the culture and history of the countries concerned, including several lectures. Some reading of military writings. All classroom work is in the foreign language. *6 Credit Hours (3 each term)*

ELECTIVE COURSES

LF 381 French Language Through Literature
LG 381 German Language Through Literature
LP 381 Portuguese Language Through Literature
LS 381 Spanish Language Through Literature

First Term - Prerequisites: The 201-202 or 241-242 courses in the corresponding languages

(Not open to cadets who have completed the applicable 251-252 courses)

Readings in literary works by French, German, Portuguese, Spanish, or Latin American writers. Class discussions, oral and written reports, all in the appropriate foreign language. *2.5 Credit Hours*

LR 381 Advanced Russian Conversation

First Term - Prerequisite: LR 201-202

A continuation of LR 201-202, with increased emphasis on the contemporary forms of spoken Russian and on the acquisition of a broad, general vocabulary. *2.5 Credit Hours*

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

Second Term - Prerequisites: The 201-202 or 241-242 or 381 courses in the corresponding language

Military and scientific readings. Class discussions, themes, and translation into and from the foreign language. *2.5 Credit Hours*

LP 382 Survey of Brazilian Literature

LR 383 Russian Language Through Literature

Second Term - Prerequisites: The appropriate 381 course, plus demonstrated ability to use the language in more complex situations

Studies in the history and literature of respective countries. Class discussions, comparative studies, oral and written presentation of material, all in the appropriate foreign language. *2.5 Credit Hours*

LS 382 Military Readings in Spanish

Second Term - Prerequisites: LS 202, LS 242 or validation

Selected military readings on Spanish American armies and their activities. Classroom discussions, oral and written reports, and exercises emphasizing military terminology, all in Spanish. *2.5 Credit Hours*

LC 383 Chinese Literature and Culture

First Term - Prerequisite: LC 202

This course utilizes essays on China's culture and civilization and contemporary Chinese writings to increase the student's proficiency in the language. Increased stress is placed on individual talks, writing, group discussions and the development of rapid character reading skill. *2.5 Credit Hours*

LC 384 Chinese Literature and Culture II

Second Term - Prerequisite: LC 383

Continuation of LC 383. *2.5 Credit Hours*

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LP 383 Military Readings in Portuguese

First and Second Terms - Prerequisite: LP 381
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 251-252 or LF 381-382 or LF 241-242 (upper half) courses
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 251-252 or LF 381-383 or LF 241-242 (upper half)
Continuation of LF 483. 2.5 Credit Hours

LG 483 History of German Civilization

First Term - Prerequisite: LG 382 or LG 252
This course, a comprehensive survey, is an integrated study of the geography, history, and culture of Germany, introducing the cadet to the most significant political, social economic, and artistic events of each period in the country's growth and development. Emphasis is placed on the German contributions to Western Civilization. Classroom work is in the foreign language. 2.5 Credit Hours

LG 484 Contemporary Germany

Second Term - Prerequisite: LG 382 or LG 252
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 251-252 or LR 381-382
A greater proficiency in the language is acquired through a survey of the historical and cultural elements that have developed the USSR and the Russian people. Classroom work is in the foreign language. 2.5 Credit Hours

LR 475 Military and Scientific Russian

First Term - Prerequisites: LR 251-252 or LR 381-382
Intensive readings in scientific and military works to prepare the student to read and understand current Russian publications on these subjects. 2.5 Credit Hours

LS 483 Survey of Spanish-American Literature

First Term - Prerequisites: LS 252, LS 381-382, validation or any other 400 level course
A study of some of the outstanding modern authors of Spanish-American literature. The development and transformation of existing literary genres; new literary forms; Hispanic-American literature as a mirror of history and society of the nations involved. Classroom work is in the foreign language. 2.5 Credit Hours

LS 484 Modern Spanish-American Literature

Second Term - Prerequisites: LS 381-382, validation or any other 400 level course

Continuation of LS 483 with a survey of current Spanish-American literature. 2.5 Credit Hours

LC 485 Readings in Modern Chinese

First Term - Prerequisite: LC 384
This course utilizes articles on a variety of subjects taken from books, magazines, and political treatises, to increase the cadet's skill in speaking, reading, and writing. 2.5 Credit Hours

LF 485 Survey of French Literature

LG 485 Survey of German Literature

LS 485 Survey of Spanish Literature

First Term - Prerequisites: The appropriate 251-252 or 381-382 courses, or validation
A survey course of the literature of France, Germany 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

LF486 Modern French Literature

LG 486 Modern German Literature

LS 486 Modern Spanish Literature

Second Term - Prerequisites: The appropriate 252 or 381-382 courses or validation
Advanced studies in the contemporary literature of France, Germany, and Spain, with class discussions themes, etc., in the appropriate foreign language. 2.5 Credit Hours

LP 485 Directed Studies in Portuguese

LF 487 Directed Studies in French

LG 487 Directed Studies in German

LS 487 Directed Studies in Spanish

First Term - Prerequisites: LP 381 or LF 485-486 or LG 485-486 or LS 483-484 or LS 485-486

These courses are intended for those cadets who have demonstrated language ability and a strong personal desire to accomplish a more detailed study of a particular period of history or literature. All work will be done in the foreign language. 2.5 Credit Hours

LP 486 Directed Studies in Portuguese

LF 488 Directed Studies in French

LG 488 Directed Studies in German

LS 488 Directed Studies in Spanish

Second Term - Prerequisites: LF 487 or LP 381-382 or LG 487 or LS 487
Continuation of LP 485, LF 487, LG 487, LS 487 – Directed Studies in Portuguese, French, German, or Spanish. 2.5 Credit Hours

LR 474 Soviet Russian Literature

Second Term - Prerequisite: LR 252 or LR 382 or LR 473 or LR 475

A course on the literature of Soviet Russia. Class discussions, talks, outside reading in Russian. 2.5 Credit Hours

LR 476 Soviet Expository Writing

Second Term - Prerequisite: LR 473 or LR 475

Advanced studies based on readings from Soviet publications, class discussion, talks, outside reading in Russian 2.5 Credit Hours

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STANDARD COURSES

HI 201 History of Modern Europe, 1500-1815

First Term - Prerequisites: None

A series of problem studies, dealing with medieval society, the Renaissance and Reformation, the Scientific Revolution and Enlightenment, and the development of the modern state. The course is designed to enable each cadet to understand the general nature of the evolution of Western man's thought, institutions, and culture ; to learn new techniques of historical research, analysis, and writing; and to develop attitudes, insights, and values which comprise a personal philosophy of history.

2.5 Credit Hours

**HI 202 History of Modern Europe, 1815-1945***Second Term - Prerequisite: HI 201 or the equivalent*

A continuation of the first semester, the course is a detailed study of the major problems and developments of the 19th Century, completed by consideration of the two World Wars of the 20th. The central themes stressed are social, political, and intellectual developments, including where appropriate the interrelationships of European and non-European cultures. Using the seminar technique as a vehicle, cadets choose an in-depth study of a particular topic on which they write research paper.

*2.5 Credit Hours***HI 203 History of the United States to 1877***First Term - Prerequisites: None*

A survey of the major developments in American history from the Age of Discovery to the end of Reconstruction. The course stresses the impact of selected social, political and economic forces on the evolution of a distinctive American character.

*2.5 Credit Hours***HI 204 History of the United States Since 1877***Second Term - Prerequisite: HI 203 or the equivalent*

A survey of the major trends in American history since Reconstruction. Social, political, and economic developments of continuing influence are stressed, particularly the rise of the United States to world power. Selected historical issues are examined using the seminar technique.

*2.5 Credit Hours***HI 401-402 History of the Military Art***Prerequisite: HI 201-202 or HI 203-204*

This course examines man in his application of military power and traces the evolution of the art of war. Beginning with the military experiences of the Ancient Greeks, this course explores the entire spectrum of war, emphasizing the development of national armies; logistics and administration; military theory and doctrine; technological developments; strategy and tactics; total war, limited war, and unconventional warfare; the great military leaders; and the interaction of war and the political, social, and economic fabric of nations.

*7 Credit Hours***ADVANCED COURSE****HI 451-452 Advanced History of the Military Art***Prerequisites: HI 201-202 or HI 203-204 and approval of the Course Director*

In scope, this course is comparable to the standard course (HI 401-402) except that the student progresses at a faster rate and is introduced to additional materials; he thus gains a broader perspective of the nature of war and a deeper understanding of the men who wage it. The course stresses historical analysis and critique, and requires more extensive student participation.

*7 Credit Hours***ELECTIVE COURSES****HI 371 History of Russia***Second Term - Prerequisite: HI 201 - 202 or HI 203-- 204*

A survey of the history of Russia with emphasis on the 19th and 20th Centuries. The fundamental theme is the dynamic for social change resulting from the complex relationship of Russia with the West. The demands for "Westernization" are seen as developing pressures which result in the Russian Revolutions of the 20th Century. The continuing problem of competition with the West during the Soviet period is discussed. The course ends with Khrushchev's removal from power.

*2.5 Credit Hours***HI 372 History of United States Foreign Relations, 1898-1960***Either Term - Prerequisites: HI 201-202 or HI 203-204*

A study of American diplomacy from the Spanish-American War thru the Eisenhower Administration. The course provides an understanding of historical factors in the development of foreign policy, a knowledge of the American diplomatic heritage, and an historical perspective for the evaluation of present and future foreign policies of the nation.

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

This course offers the cadet a variety of American History topics for in-depth study. Topics customarily differ each semester and are focused on certain periods of the American past or on certain continuing aspects of American life.

*2.5 Credit Hours***HI 373C Turbulence and Change in American History***First Term, AY 1974-75*

The course examines incidents of violence from the Regulator movements of the colonial period to the urban upheavals of the 1960's. Both isolated incidents and nation-wide disturbances are treated. The economic, political, and social implications of labor disorders, racial disturbances, and law-and-order movements are examined.

HI 373D Civil War and Reconstruction, 1840-1880*Second Term, AY 1974-75*

The course studies the entire spectrum of the ante-bellum American life as a prelude to the Civil War. A treatment of the war is followed by an examination of Reconstruction with particular attention to the forces which laid the foundations for 20th Century America.

HI 374 Topics in European History*Either Term - Prerequisite: HI 201-202 or HI 203-204**(May not be taken concurrently)*

This course offers the cadet a variety of European history topics for in-depth study. Topics customarily differ each

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semester and are focused on issues and subjects of Western and European development; national histories are presented, as well as histories of science, diplomacy, and religion. *2.5 Credit Hours*

HI 374C Prelude to the First World War, 1870-1914

First Term, AY 1974-75

A study of the diplomacy during the period which led to World War I. While consideration is given to all European powers, primary emphasis is placed on the Anglo-German political and economic rivalry and the role this rivalry played in the development of competing alliance systems, chauvinist hysteria, and imperial rivalries.

HI 374D The French Revolution and Napoleon, 1789-1815

Second Term, AY 1974-75

A study of the course and consequence of the French Revolution and Napoleon's rule, both within France and throughout Western Europe. The course begins with a brief investigation of the *Ancien Regime* and the events leading up to the Revolution, shifting then to focus on the Revolution, Napoleon, and their impact on Western European society.

HI 375 History of the Far East

First Term - Prerequisites: HI 201-202 or HI 203-204

A survey of the major cultures and civilizations of the Far East and the impact made on them by an expanding Western civilization. Emphasis is on the crucial century, 1830-1950. Particular attention is directed toward China and Japan. *2.5 Credit Hours*

HI 376 The Black in American History

Second Term - Prerequisites: HI 201-202 or HI 203-204

The nature and complexities of interrelationships between black and white Americans from 1619 to the present provide the investigative focus for the course. Particular emphasis is placed on the Black response to slavery, nationalism, segregation, and integration. *2.5 Credit Hours*

HI 381 Revolutionary Warfare

Either Term - Prerequisites: HI 201-202 or HI 203-204

This course is a history of the theory and practice of modern revolutionary warfare. The causes and forms of modern revolutionary warfare are developed as the course focuses on the writings of selected revolutionary theorists and the experiences of counter-revolutionary practitioners. *2.5 Credit Hours*

HI 383 20th Century Warfare

Either Term - Prerequisites: HI 201-202 or HI 203-204

This course examines the military systems of the major world powers, their civil military relations, strategic concepts and problems to provide an understanding of the ways in which wars have been waged in the 20th Century. Particular attention is given to the problems of coalition warfare, and the problems of collective security in the post-World War II period. *2.5 Credit Hours*

HI 384 Topics in Military History

Either Term - Prerequisites: HI 201-202 or HI 203-204 (May not be taken concurrently)

This course offers the cadet a variety of reinforcing semester-long topics devoted to the study of military history in depth. The topics, which differ each semester, focus primarily on the broader, non-operational areas of military history. *2.5 Credit Hours*

HI 384C The Development of Air Power

First Term, AY 1974-75

Beginning with World War I, this topic traces the development of the theory, doctrine and employment of air power to the present. Although emphasis is on the United States, the role of air power in the development of military and national strategies of other major powers is investigated.

HI 384D History of the American Army

Second Term, AY 1974-75

The American military system developed as it accommodated to changes in national power and policy from the nation's beginnings to the present. The course covers the militia system, the American concept of professionalism, the frontier army, coast defense, modernization and the general staff system, and the growth of the Army in the 20th Century.

HI 481 Seminar in History

Either Term - Prerequisites: HI 201-202 or HI 203-204

A study of theories and methods used in historical analysis of man's developing institutions and ideas. Seminar members read representative works of eminent historians and thinkers, analyzing their use of sources, interpretive philosophies, and styles. They apply these ideas to an investigation of suitable historical topic selected from the period of Western history under analysis by the seminar. *2.5 Credit Hours*

HI 481C European Imperialism in Africa

First Term, AY 1974-75

A study of the nature and course of European imperialism in 19th Century Africa. Particular emphasis is placed on British, French, and German imperial ventures in West Africa. Cadets investigate topics including the slave trade, the rise of legitimate commerce, the growth of European settlements, the "scramble for Africa," and a general investigation of the impact of colonialism of African cultures.

HI 481D History of Asian Religions

Second Term, AY 1974-75

An examination of the history of Asian religious expression and thought; focusing on the development of Hinduism, the beginnings of Buddhism, the growth of Taoism and Confucianism in China, the development of Zen and Shinto in Japan, and the spread of Islam to Asia.

HI 489 Advanced Individual Study in History

Either Term - Prerequisites: Limited to cadets in the first Class; approval required from Head of Department.

This course affords the cadet the opportunity to select an historical topic in consultation with his faculty advisor, and proceed independently with either (1) Guided Reading and Reporting, in which the cadet studies and reports on selected books and documents or (2) Research in which the cadet investigates and writes a comprehensive in-depth research report. Each cadet project is evaluated in an oral defense before a faculty committee. *2.5 Credit Hours*

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STANDARD COURSES

LW 301 Introduction to Law and Constitutional Law
First Term - Prerequisites: None
 The introductory phase includes analysis of principal theories of law and court functioning. The Constitutional concept of the United States government is examined, including 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 includes a study of criminal and administrative law and an introduction to International Law. The Criminal Law subcourse covers criminal acts and intent, evidence, search and seizure and self-incrimination, and judicial and nonjudicial punishment. The Administrative Law subcourse includes delegation of administrative powers, grounds for discharge and administrative responsibility for injury to property or person. The Introduction to International Law includes the Law of War and Geneva Conventions. *2.5 Credit Hours*

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ELECTIVE COURSES

LW 481 International Law

Either Term - Prerequisite: LW 301-302

Theories and rules governing the relationships among states are analyzed through selected cases and materials. Students gain an appreciation of the nature, sources and applications of international law while discussing legal problems of recognition, jurisdiction, and responsibilities of states; international agreements and diplomatic intercourse; 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

The course requires class analysis of selected case studies involving significant modern international law episodes. Class teams study hypothetical problems involving

international confrontations. These problems require research and presentation of solutions applying international law norms. Each cadet researches and reports on a current international problem susceptible of a legal solution. *2.5 Credit Hours*

LW 488 Business and Procurement Law

Second Term - Prerequisites: LW 301, 302

This course covers contracts, the Uniform Commercial Code, principles of agency, Government procurement, and the law of property, using a problem-oriented method of instruction. The procurement law section will highlight principles of Government contracting and responsibilities of contracting officers. An understanding of commercial and legal terms, rights, duties, and liabilities is emphasized. *2.5 Credit Hours*



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 M.S., Engineer, Stanford University

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 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 for the Classes of 1977 and 1978 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

First year, MA 101-102 (Class of 1978);
 second year, MA 201-207 (Class of 1978);
 second year, MA 205-206 (Class of 1977).

STANDARD PROGRAM: (NSPA/HUM)
 (Class of 1977 only)

Second year, MA 207.

ADVANCED PROGRAM I

First year, MA 101-152 (Class of 1978);
 second year, MA 201-207 (Class of 1978);
 second year, MA 207 plus one elective (MA 484 recommended) (Class of 1977).

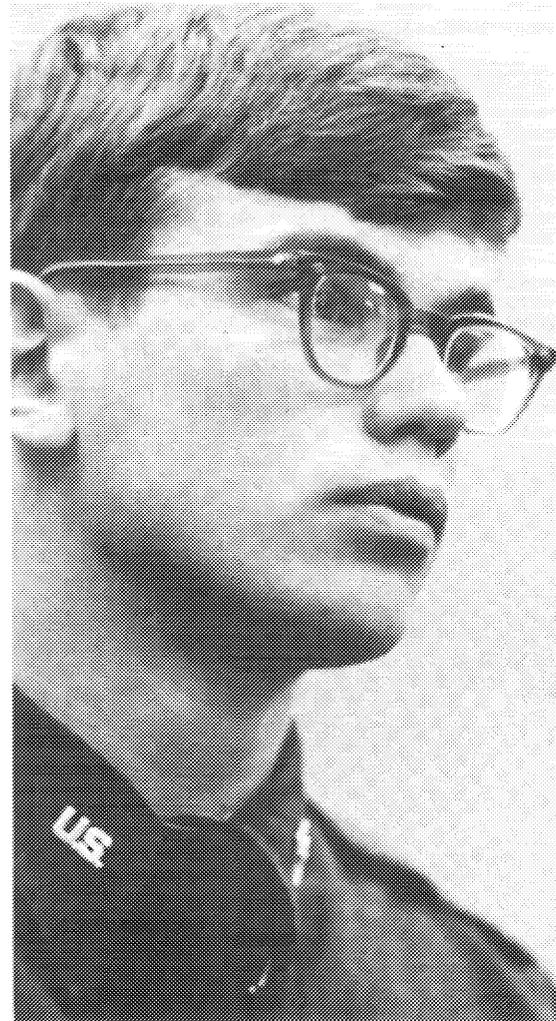
ADVANCED PROGRAM II (Class of 1978)

First year, MA 153-154;
 second year, MA 207 plus one elective (MA 484 recommended).

ADVANCED PROGRAM III (Classes of 1977 and 1978)

First year, MA 155-156;
 second year, two electives (MA 484 and MA 485 recommended).

The subject matter content of the individual courses is described in the outlines that follow.



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STANDARD PROGRAM COURSES

MA 101-102 Calculus

Prerequisite: None

The first term of the two term Standard Program in calculus and plane analytic geometry begins with a brief introduction to set theory and inequalities. This is followed by a rigorous treatment of differential and integral calculus of algebraic functions of a single variable that is coordinated with plane analytic geometry and appropriate practical applications. The second term encompasses the study of the calculus of transcendental functions, polar coordinates and plane vectors. The course concludes with the study of infinite series and a brief introduction to matrix algebra. *12 Credit Hours*

MA 201 Multivariable Calculus

Prerequisite: MA 102 or MA 152 (Class of 1978)

This course covers solid analytic geometry, vector calculus and the calculus of functions of several variables. Included are such topics as partial differentiation, multiple intergration, vector differentiation, line integrals and consideration of Green's Theorem. *3.5 Credit Hours*

MA 205-206 Differential Equations, Probability Theory and Statistical Inference, and Linear Algebra

Prerequisite: MA 108 (Class of 1977)

Methods of solution to first and higher order linear differential equations are studied including undetermined coefficients, variation of parameters, Laplace transforms, and differential operators. Approximate series solutions are presented. Included in the coverage of probability and statistics are probability fundamentals, random variables, discrete and continuous distributions, moment generating functions, the Central Limit Theorem, sampling distributions, theory of estimation, confidence intervals, hypothesis testing, correlation and regression analysis. Linear Algebra includes the study of matrices, determinants, systems of linear equations, vector spaces, linear transformations, characteristic values and quadratic forms. Linear programming is introduced. *7 Credit Hours*

MA 207 Differential Equations and Probability Theory and Statistical Inference

Prerequisite: MA 108 or MA 158 (Class of 1977)

MA 154 or MA 201 (Class of 1978)

Methods of solution to first and higher order differential equations are studied including undetermined coefficients, variation of parameters, Laplace transforms, and differential operators. Series solutions are introduced. Included in the coverage of probability and statistics are probability fundamentals, random variables, discrete and continuous distributions, Central Limit Theorem, sampling distributions, theory of estimation, confidence intervals, hypothesis testing, regression and analysis, and correlation. *3.5 Credit Hours*

ADVANCED PROGRAM I COURSE

MA 152 Calculus and Introduction to Linear Algebra

Prerequisites: MA 101 and selection by Head of Department

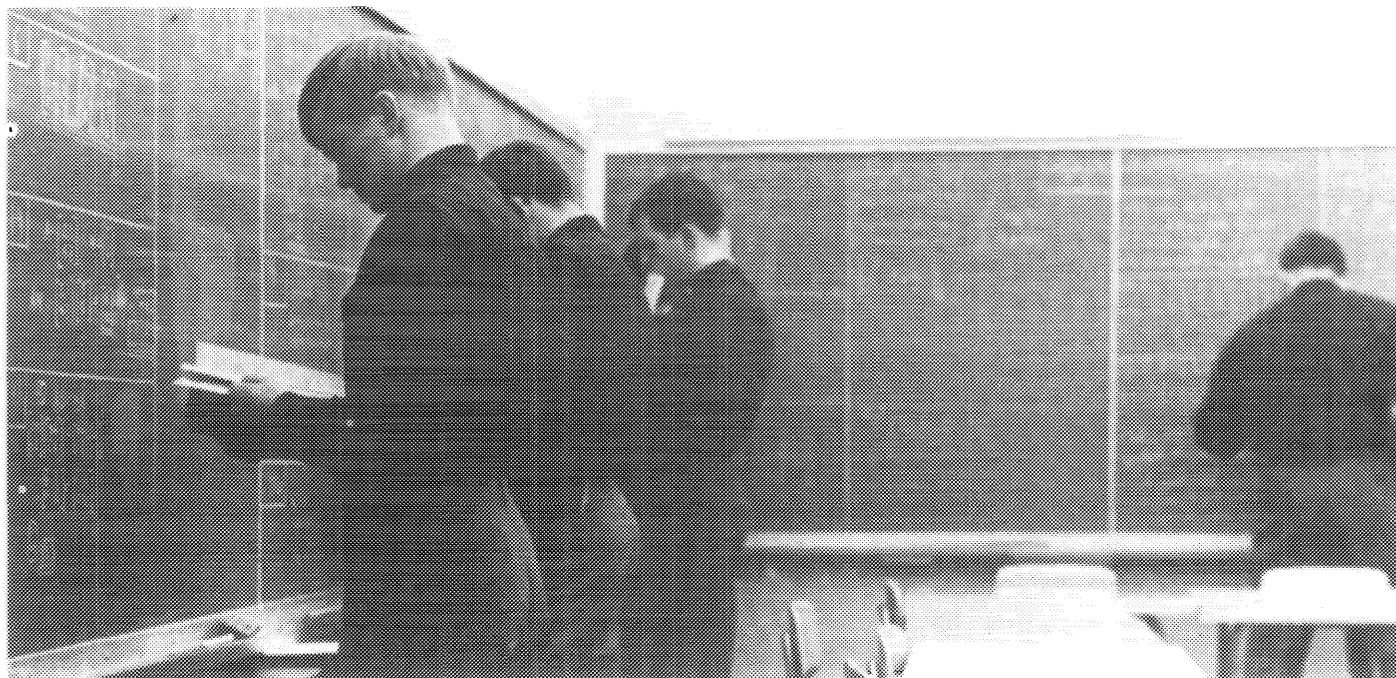
This course is given in the second term of the first year to selected cadets who complete MA 101 with high standing and thereby become eligible for Advanced Program I. The course coverage is the same as in MA 102 plus an introduction to linear algebra with coverage of vector spaces, matrices, determinants, linear transformations, systems of linear equations, and characteristic values. *6 Credit Hours*

ADVANCED PROGRAM II COURSES

MA 153-154 Advanced Placement Calculus, Multivariable Calculus, and Introduction to Linear Algebra

Prerequisite: Selection by Head of Department

This course is designed for the cadet with at least one semester of prior study of college-level calculus. It covers in two semesters the topics of calculus, linear algebra, and multivariable calculus normally covered in the Standard Program sequence MA 101-102 and MA 201. The cadet who successfully completes this course has gained sufficient time for one additional elective following study of MA 207 in Third Class Year. *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

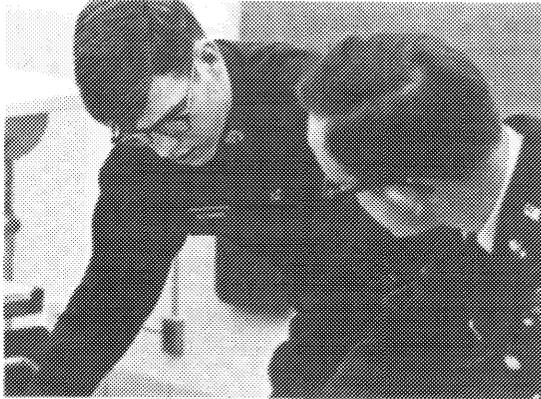
These courses comprise the most rapidly paced program which is designed for the cadet with a year's prior study of college calculus. The first semester covers all the calculus and introduction to linear algebra treated in the two semester sequence, MA 101-152. The second semester encompasses those topics of multivariable calculus, differential equations, and probability theory and statistical inference normally studied in MA 201-207. The cadet who successfully completes this sequence has gained sufficient time for two additional electives later in his academic program. *12 Credit Hours*

ELECTIVE COURSES

MA 473 Intermediate Probability and Statistical Applications

Second Term - Prerequisite: Completion of the Mathematics core curriculum

This course introduces models and stochastic processes in which Markov chains, reliability and life testing are discussed. Sampling distributions are derived. Theory and applications of statistical inference are further developed to include: Maximum likelihood, method of moments, Neyman-Pearson Theorem, sufficiency, consistency, and nonparametric methods. These concepts are fully applied to statistical experiments. *2.5 Credit Hours*



MA 481 Linear Programming

Either Term - Prerequisite: Completion of the Mathematics core curriculum

This course emphasizes the applications of optimal solutions to linear algebraic systems using the original and revised simplex computational procedures. Additional computational techniques applicable to specific mathematical models such as the transportation problem and the theory of games are investigated. Problems illustrating applications are integrated throughout the course. *2.5 Credit Hours*

MA 482 Abstract Algebra

First Term - Prerequisite: Completion of the Mathematics core curriculum and permission of Head of Department

This is an introductory course in modern algebra for

cadets who plan to take graduate work in mathematics or work of a theoretical nature in physical science or engineering. The course concentrates on the study of groups, rings, integral domains and fields and culminates in the study of Kronecker's Extension Theorem. *2.5 Credit Hours*

MA 484 Differential Equations (Intermediate)

Either Term - Prerequisite: Completion of the Mathematics core curriculum including Linear Algebra (Not open to cadets who have completed an intermediate level course in Differential Equations.)

This course explores the theory of linear differential equations, as well as the theory of existence and uniqueness of solutions. The solution of partial differential equations employing Sturm-Liouville boundary value problem techniques and Fourier Series methods is studied in detail. Other Topics include: Systems of differential equations, nonlinear differential equations and numerical approximation of solutions. *2.5 Credit Hours*

MA 485 Complex Analysis

Either Term - Prerequisite: Completion of the Mathematics core curriculum. (Not open to cadets who have completed a course in Complex Analysis.)

This course presents a logical development of those parts of the classical theory which lead to the most prominent applications. Applications are introduced, including the use of residue theory and contour integrals in evaluating real integrals. The capstone of the course is the application of conformal mapping to problems in potential theory, steady state heat flow, and the laminar flow of fluids. *2.5 Credit Hours*

MA 486 Numerical Analysis with Digital Computation

Second Term - Prerequisite: Completion of the Mathematics core curriculum.

This course investigates methods of approximating the solution of mathematical problems using the digital computer. It utilizes the cadet's entire mathematical background in a context of modern numerical methods. Investigation of the generation, propagation, significance and control of error is emphasized. Special programming problems involve the solution of relevant problems. *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.

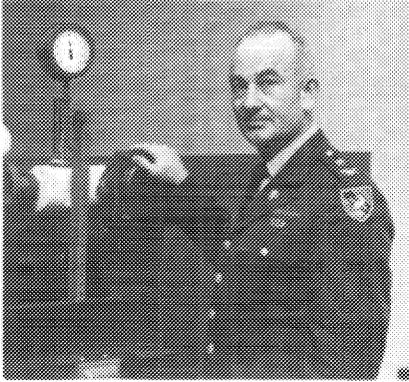
This course offers a rigorous approach to the foundations of analysis. Concepts of topology provide the basis for a formal discussion of differentiability, integrability, and uniform convergence of sequences and series of functions. The concepts of monotone functions, bounded variation and Stieltjes integration are introduced. *2.5 Credit Hours*

MA 489 Advanced Individual Studies in Mathematics

Either Term - Prerequisite: Completion of the Mathematics core curriculum and Complex Analysis. Permission of Head of Department.

This is an intensive tutorial course, offered only to a limited number of highly qualified cadets who have completed available mathematics elective courses and express a wish to pursue advanced study in the field of mathematics. Course work is tailored to meet individual needs. *2.5 Credit Hours*

DEPARTMENT OF MECHANICS



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STANDARD COURSES**ME 301 Thermodynamics***Either Term*

This course is a study of energy, energy transfer and the media used to accomplish this transfer including fundamentals, types of energy, properties, the first and second laws of thermodynamics, the ideal gas, processes, cycles, mixtures, nozzles and jet propulsion, refrigeration and heat transfer. Laboratory work supplements classroom instruction. *3.5 Credit Hours*

ME 302 Fluid Mechanics*Either Term*

A study of the laws of mechanics as they apply to liquids and gases, with emphasis on physical concepts. Seminars, films, and laboratory periods augment classroom work to introduce applications in such varied areas as weather, pipe flow, mass transportation, sports, modeling techniques, basic aerodynamics, and fluidics. *3.5 Credit Hours*

**ME 303 Engineering Mechanics***Either Term*

The relationships between external effects and force systems for static particles and rigid bodies are developed by vector mathematics. The deformations of bodies resulting from simple loadings are also examined. Newton's Second Law, work-energy and impulse-momentum methods are used in both particle and rigid body dynamics. *3.5 Credit Hours*

ADVANCED COURSES**ME 351 Advanced Thermodynamics**

Either Term - Prerequisite: Demonstrated superior ability in Chemistry, Physics and Mathematics, and/or Fluid Mechanics and Engineering Mechanics

A more sophisticated coverage of the subject matter of ME 301 with the addition of such material as microscopic concepts, non-reacting and reacting mixtures, fluid flow, heat transfer, and direct energy conversion devices. Emphasis is placed on fundamental concepts, models, and laws of thermodynamics. *3.5 Credit Hours*

ME 352 Advanced Fluid Mechanics

Either Term - Prerequisite: Demonstrated superior ability in Physics, Chemistry, Mathematics, and other Mechanics courses.

A vector-oriented development of the fundamental laws of science applied to fluids with strong emphasis on real world applications. Practical exercises in the laboratory illustrate theories developed in class. Equipment available include wind tunnels, pumps, turbines, flow measurement and visualization devices, and nozzles. *3.5 Credit Hours*

ME 353 Advanced Engineering Mechanics

Either Term - Prerequisite: Demonstrated superior ability in Physics and Mathematics

Coverage of the subject material of ME 303 is accelerated. Also included are space trusses, virtual work, stability, gyroscopic motion, general space motion of a rigid body, and a section on dynamics of non-rigid systems which includes generalized coordinates, Lagrange's equations and Hamilton's principle. *3.5 Credit Hours*

ELECTIVE COURSES**ME 384 Mechanics of Materials**

Either Term - Prerequisite: ME 303 or ME 353

This course develops the elastic and inelastic relationships between external forces acting on structural members and the stresses and deformation produced. The study included axial torsional, flexural and combined loading, beam theory, column theory, and the influence of

properties of materials. Laboratory exercises illustrating the above principles are conducted. *3.5 Credit Hours*

ME 387 Introduction to Applied Aerodynamics

Either Term Prerequisite: ME 302 or ME 352

A course designed to provide an understanding of modern aerodynamics and a foundation in aircraft design considerations. A concentration in airfoil theory and aerodynamic forces is followed by studies in static aircraft performance and flight stability. Wind and smoke tunnels and an aerial demonstration flight augment classroom work. *2.5 Credit Hours*

ME 388 Aerodynamics of V/STOL Flight

Either Term - Prerequisite: ME 302 or ME 352

Course coverage includes the aerodynamics of vertical/short take-off and landing (V/STOL) vehicles with an emphasis on helicopters. After a review of basic aerodynamics and a development of actuator disk and blade element theory, the course analyzes the performance of helicopters, tilt wings, fan-in-wing aircraft, and hovercraft. *2.5 Credit Hours*

ME 471 Aerospace Propulsion

Either Term - Prerequisite: ME 301 or ME 351

This course covers the fundamentals of propulsion as applied to jet and rocket engines. The course includes a development of the mechanics and thermodynamics of fluid flow in jets and rockets and a study of turboprop, turbojet, ramjet, turbofan, chemical rocket, nuclear rocket and electric propulsion engines. *2.5 Credit Hours*

ME 472 Direct Energy Conversion

Either Term - Prerequisites: EE 301 and ME 301 or ME 351

This course in modern conceptual thermodynamics begins with a review of classical thermodynamics and an introduction to statistical mechanics, transport theory, electromagnetic theory and solid state theory. The course then treats in turn the five major methods of direct energy conversion; thermoelectricity, photovoltaics, thermionics, magnetohydrodynamics and fuel cells. *2.5 Credit Hours*

ME 473 Experimental Mechanics

Either Term - Prerequisites: ME 301 or ME 351, ME 302 or ME 352, ME 303 or ME 353

This course begins with an introduction to experimental planning execution. The cadet then performs several experiments. Instruction on instrumentation and measurement techniques is integrated into the experimental portion of the course. Modern equipment includes wind tunnels, open channel flow devices, electromechanical shaker, materials testing equipment and polariscopes. *2.5 Credit Hours*

ME 481 Compressible Aerodynamics

Either Term - Prerequisite: ME 302 or ME 352

A coverage of the basic principles of fluid dynamics and thermodynamics to include both subsonic and supersonic compressible flow. Principal analysis is one-dimensional covering isentropic flow, normal shock waves, flow with either friction or heat transfer. *2.5 Credit Hours*

ME 482 Heat Transfer

Either Term - Prerequisite: ME 302 or ME 352

This course covers the development of the basic principles

of heat transfer by conduction, convection and radiation. Application of these basic fundamentals is made to boilers, condensers, heat exchangers, ablative protection of reentry vehicles and thermal control in aerospace vehicles. Mass and momentum transfer are discussed through their similarity to heat transfer. *2.5 Credit Hours*

ME 483 Space Mechanics

Either Term - Prerequisite: PH 201 or PH 251

An introduction to the trajectory problem of the space vehicle. The course includes a study of central force motion, and dynamics of two body conic orbits, ballistic missile trajectories, principal coordinate systems, orbit determination, interplanetary trajectories, orbit transfer and rendezvous. *2.5 Credit Hours*

ME 484 Aerospace Structures

Either Term - Prerequisite: ME 303 or ME 353

This course applies the principles of classical mechanics to the structural analysis of thin-walled, reinforced, determinate and indeterminate aerospace structures. The course includes an introduction to variational methods, potential and complementary energy, and energy principles of elasticity. Deflection analysis and the effects of taper are also considered. *2.5 Credit Hours*

ME 485 Continuum Mechanics

Either Term - Prerequisite: ME 384

The modern tools of tensor analysis and index notation are developed and used. States of stress and strain are reexamined and the concepts of equilibrium and compatibility are employed. Boundary value problems for elastic materials are the principal area of interests but other materials are also considered. *2.5 Credit Hours*

ME 486 Mechanical Vibrations

Either Term - Prerequisite: ME 303 or ME 353

This course examines free, damped, and forced vibrations of the linear single degree of freedom system in detail. Multi-degree of freedom systems are studied with particular attention on matrix analysis. Analytical methods for determining the characteristics of dynamic response are frequently verified by classroom and laboratory demonstrations. *2.5 Credit Hours*

ME 488 Flight Mechanics

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

Aircraft performance and static stability are analyzed. The generalized equations of motion in terms of stability derivatives are developed, linearized, and used to analyze the dynamic stability of aircraft and the effects of aircraft design on dynamic stability. Laboratory exercises and an aerial flight supplement classroom instruction. *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

This course permits the cadet to do advanced or specialized study or an undergraduate research project in the field of Applied Mechanics, Aerodynamics, Aerospace Structures, or Astronautics. The cadet chooses a plan for his own program and is individually supervised by a faculty advisor. *2.5 Credit Hours*

DEPARTMENT OF MILITARY HYGIENE



Professor and Head of Department
COL LLOYD B. McCABE
M.D., Saint Louis University School of Medicine

The Department of Military Hygiene presents instruction to all four cadet classes.

Fourth Classmen receive instruction in Personal Hygiene, Field Sanitation, Self and First Aid, Sex Hygiene, and Adverse Effects of Alcohol, Tobacco and Drugs.

Third Classmen receive instruction on Medical Department Organization and Support of the Army,

effects of the environment on military operations and troops in the field and additional instruction in First Aid, with emphasis on the responsibility of the Commander at the unit level.

Third, Second and First Classmen receive additional instruction in Drug Abuse with emphasis on the aspects of troop leadership and, for First Classmen, the additional aspect of heads of family responsibilities. Additional instruction in Sex Hygiene is presented to Second Classmen during pre-AOT. Pre-marital instruction and counseling are available to First Classmen.



DEPARTMENT OF PHYSICS



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M.S., United States Naval Postgraduate School

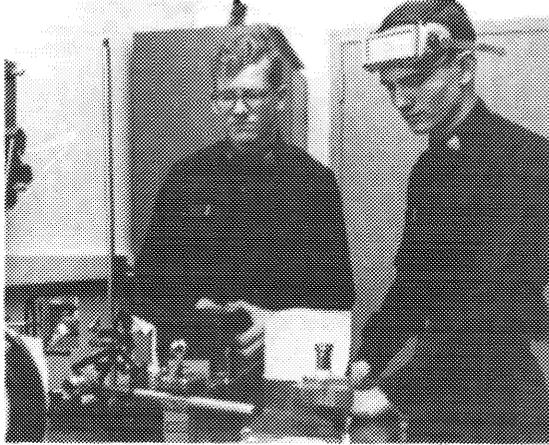
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STANDARD COURSES

PH 201 Physics I*First Term - Prerequisites: None*

This course provides a common introduction to two distinct physics sequences which begin in the second term. The course is a comprehensive calculus-based study of mechanics to include translational and rotational motion, conservation principles and oscillatory motion. An integral laboratory program illustrates basic scientific techniques and reinforces fundamental physical concepts.

3.5 Credit Hours

PH 202 Physics II*Second Term - Prerequisites: PH 201*

This course is a calculus-based study of the fundamentals of electricity, magnetism, and optics. A comprehensive laboratory program is an integral part of the course. The emphasis is on problem solving and experimental techniques in support of future work in the sciences or engineering.

3.5 Credit Hours

PH 204 Physics II*Second Term - Prerequisites: PH 201*

This course is a calculus-based study of the fundamentals of electricity, magnetism, and optics. Emphasis is placed on understanding the nature and significance of the basic physical principles. A program designed to acquaint the student with the history and philosophy of science and the interface of physics with other disciplines is begun.

3.5 Credit Hours

PH 303 Physics III*Either Term - Prerequisites: PH 201 and PH 202 (Students from PH 204 may be permitted to take this course with Department permission.)*

A continuation of the PH 201-202 sequence designed to provide students interested in science or engineering with the fundamentals of modern physics in the areas of quantum, atomic and nuclear physics, and with important applications arising therefrom. An integral laboratory program stresses analysis of quantum interactions and spectroscopic measurements.

3.5 Credit Hours

PH 305 Physics III*Either Term - Prerequisites: PH 201 and PH 204 (Students from PH 202 may be permitted to take this course 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 physics, special relativity, and the structure of matter on the microscopic scale. The program begun in PH 204 concerning the impact of science and technology on society, the history of science and the interface of physics with other disciplines is continued.

3.5 Credit Hours

ELECTIVE COURSES

PH 383 Introduction to Theoretical Physics I*First Term - Prerequisite: PH 201*

An intermediate development of selected topics in theoretical physics. Topics covered include the Lagrangian formulation of mechanics, with selected problems in dynamics, central force motion, rigid body motion, and a study of vibration and wave phenomena to include free and forced vibrations, normal modes, and progressive waves.

2.5 Credit Hours

PH 384 Introduction to Theoretical Physics II

Second Term - Prerequisite: PH 202

An intermediate development of selected topics in theoretical physics. Topics covered include Maxwell's equations, interactions of electromagnetic waves with boundary surfaces and a study of special relativity.

2.5 Credit Hours

PH 483 Solid State Physics

Second Term - Prerequisite: PH 303

A course in the fundamentals of solid state physics covering crystal structure and the important mechanical, electrical, magnetic and thermal properties of crystals. Included are discussions of the band theory of metals and semiconductors and classical and quantum statistics pertinent to solid state theory.

2.5 Credit Hours

PH 484 Quantum Mechanics

First Term - Prerequisite: PH 303

An introductory course stressing the physical meaning of quantum theory to include the mathematical methods employed in the Schroedinger formulation of quantum mechanics. The solutions of barrier problems, the harmonic oscillator, and the hydrogen atom problem are investigated. Perturbation and scattering theories are developed.

2.5 Credit Hours

PH 486 Experimental Physics

Either Term - Prerequisites: PH 303 and one elective in Physics.

Individual advanced laboratory experiments selected by the student and designed to develop experimental ability

and to introduce techniques of laboratory research. Possible experiments include: normal modes of coupled systems, laser optics, electron paramagnetic resonance, Mossbauer effect, Compton scattering, scintillation spectrometry and various nuclear experiments.

2.5 Credit Hours

PH 487 Nuclear Reactor Theory

Either Term - Prerequisite : PH 303

An introductory course covering the physical principles underlying the theory and operation of thermal reactor, including radiation detection, neutron diffusion and moderation, homogeneous and heterogeneous reactors, transient effects and reactor controls. An integral laboratory program includes radiation detection, neutron activation and cross-section determination, thermal diffusion and flux distribution measurement.

2.5 Credit Hours

PH 488 Nuclear Physics

Second Term - Prerequisite: PH 303

A study of selected topics in nuclear physics designed to develop an appreciation for the structure of the nucleus, the role of quantum mechanics in nuclear phenomena, and the nature of observed nuclear reactions. Included are studies of alpha decay, the deuteron, nuclear forces, nuclear models, scattering, and an introduction to fundamental particle classification.

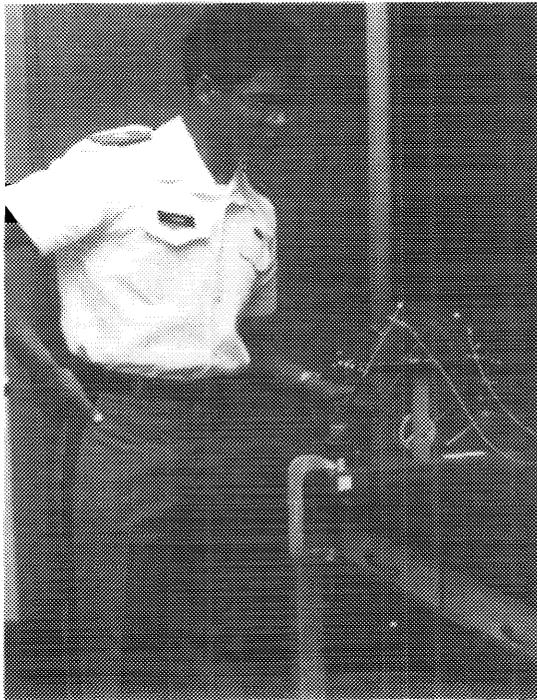
2.5 Credit Hours

PH 489 Advanced Individual Study in Physics

Either Term - Prerequisites: PH 303, two electives in Physics, and permission of Head of Department.

Individually supervised research and study in a selected problem area.

2.5 Credit Hours



DEPARTMENT OF SOCIAL SCIENCES



DEPARTMENT OF SOCIAL SCIENCES

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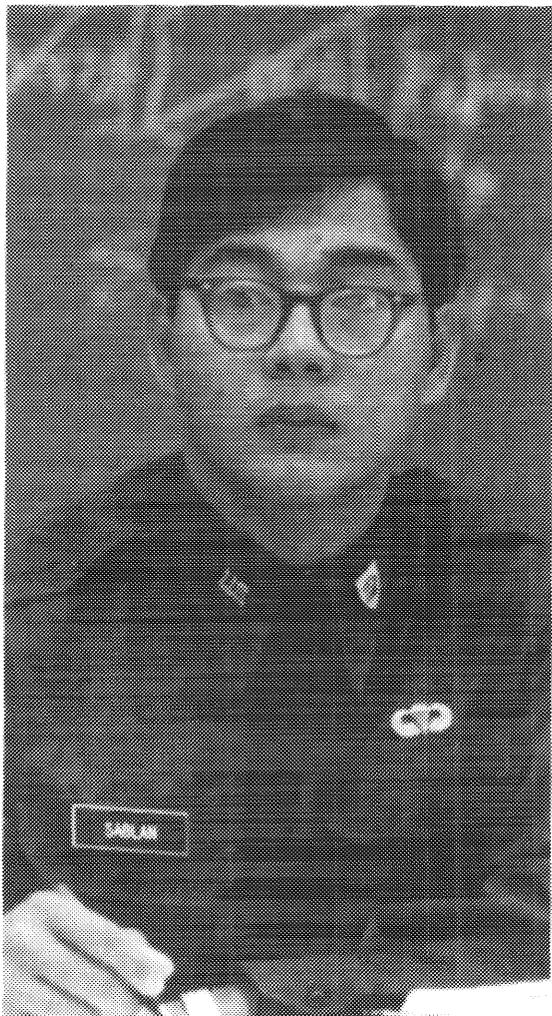
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92 ACADEMIC PROGRAM

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CPT JOSEPH ANDERSON
B.S., United States Military Academy
M.A., University of California at Los Angeles
CPT ROGER ARANGO
B.S., United States Military Academy
M.A., University of Pittsburgh
CPT WILLIAM K. BERGMAN
B.S., United States Military Academy
M.A., University of Groningen/The American University
CPT JAMES R. GARDNER
B.S., United States Military Academy
M.P.A., Princeton University
CPT DENNIS R. HAYDON
B.S., United States Military Academy
M.B.A., Harvard University
CPT JACK H. JACOBS
B.A., M.A., Rutgers University
CPT KENT KRAUS
B.S., United States Military Academy
M.A., Vanderbilt University
CPT RICHARD A. KNUDSON
B.S., United States Military Academy
M.P.A., Harvard University
CPT THOMAS E.C. MARGRAVE
B.S., United States Military Academy
M.A., Syracuse University
CPT BARRY R. McCAFFREY
B.S., United States Military Academy
M.A., American University
CPT HOBART PILLSBURY
B.S., United States Military Academy
M.P.A., Harvard University
CPT GERALD THREADGILL
B.S., United States Military Academy
M.A., University of Chicago
CPT ST. ELMO P. TYNER
B.S., United States Military Academy
M.A., The Johns Hopkins University (SAIS)

STANDARD COURSES**SS 301 Economic Principles and Problems***First Term - Prerequisites: None*

A survey in basic economic principles and their application to public policy in this and following courses. Macroeconomic and microeconomic analysis, and rational decision making methods are studied. Analysis is applied in economic policy case studies. *2.5 Credit Hours*

SS 302 United States Government and Economics of National Security*Second Term - Prerequisites: None*

A study of the American political system with emphasis on the processes and problems of the national government, including a survey of basic aspects of state and local administration. The sub-course in Economics of National Security studies defense decision-making as a problem of resource allocation within the political and economic environment of the nation. *2.5 Credit Hours*

SS 401 Comparative Political Systems: Europe and Asia*First Term - Prerequisites: None*

A foundation of fundamental concepts of political science, particularly of comparative politics, and an analysis of various political systems of Europe (Great Britain and the USSR) and Asia (China and Japan). The study of the Asian nations includes a survey of the nations' historical backgrounds. *3.5 Credit Hours*

SS 407 International Relations*Second Term - Prerequisites: None*

An interdisciplinary study of the relations between nations, building upon previous Social Sciences courses, with particular emphasis on the role of the United States in the international system. Both action and interaction theory are studied. *3.5 Credit Hours*

ADVANCED COURSES**SS 351 Economics: Principles and Problems***First Term - Prerequisite: Permission of Instructor*

This course provides qualified volunteers with (1) a rigorous understanding of the basic principles of microeconomic and macroeconomic theory and (2) competence in an analytic method which can be applied to a wide range of optimization and public policy problems. *2.5 Credit Hours*

SS 352 United States Government and Economics of National Security*Second Term - Prerequisite: Permission of Instructor*

Analysis of the political process as a vehicle for governmental policy development. The course presents in depth the complex interplay between politics and substantive issues in public policy. Extensive use of case materials drawn from contemporary issues in government. *2.5 Credit Hours*

SS 451 Comparative Political Systems: Europe and Asia*First Term - Prerequisite: Student selection is based upon demonstrated performance in the Social Sciences.*

This course will emphasize a developmental approach to the comparative study of selected political systems in Europe and Asia. Problems and prospects of modernization and political development will be examined. Case studies will be utilized to provide greater appreciation of the dimensions of the problems and political processes in the states studied. *3.5 Credit Hours*

**SS 457 Advanced International Relations***Second Term - Prerequisite: Permission of Instructor*

This advanced course covers the concepts, theories, and methodologies pertaining to the academic pursuit of international politics. The course is tailored to allow cadets to pursue their individual interest in the field. In this sense, it is a capstone course that builds not only on previous Social Sciences courses but on the total academic program as well. *3.5 Credit Hours*

ELECTIVE COURSES**SS 372 Policy and Administration***Either Term - Prerequisite: SS 302 or SS 352. May be taken concurrently.*

The focus of the course is upon modern methods of policy development and control including organizational, personnel, budgetary and analytical techniques. Cadets are exposed to the central position of public administrators in the governmental process, and the problems of policy control in large bureaucratic organizations. *2.5 Credit Hours*

SS 373 Quantitative Analysis in the Social Sciences

First Term - Prerequisite: MA 205 or MA 207. May be taken concurrently with SS 301.

This course is designed to develop skills in the application of quantitative analytical tools to problems in political science, international relations, and economics. After gaining a degree of facility with quantitative methods, the cadet will design, research, and execute an original analysis of a policy issue or problem in his specific area of interest in the Social Sciences. *2.5 Credit Hours*

SS 383 Middle Eastern Studies

Second Term - Prerequisites: None

An introduction to the problems of the contemporary Middle East and North Africa. An intensive study of the national political goals, social problems, and economic prospects of the present day. The Arab-Israeli conflict and the Soviet-American rivalry in the region also receive special attention. *2.5 Credit Hours*

SS 384 Government and Politics of Latin America

First Term - Prerequisites: None

This course surveys the economic, social, cultural, and political systems of contemporary Latin America. Special emphasis is given to the demands of peasants, workers, urban poor, traditional conservatives, military and middle sectors, and to Latin American styles of political decision making. *2.5 Credit Hours*

SS 385 Comparative Economic Systems

First Term - Prerequisite: SS 301. May be taken concurrently.

This course analyzes Capitalism, Market Socialism, and Command Socialism as economic systems. Divergent

methods of solving problems associated with efficient allocation of resources, distribution of income, economic growth, and stability are analyzed and compared. *2.5 Credit Hours*

SS 386 Political Philosophy

Either Term - Prerequisites: None

An introduction to the classic writings of Western political philosophy with a consideration of their application to contemporary problems. The course examines in particular the philosophy of American government and the challenges presently facing it. The course also examines certain concepts of moral, legal and general philosophy and their relation to political philosophy. *2.5 Credit Hours*

SS 387 Seminar in Public Policy

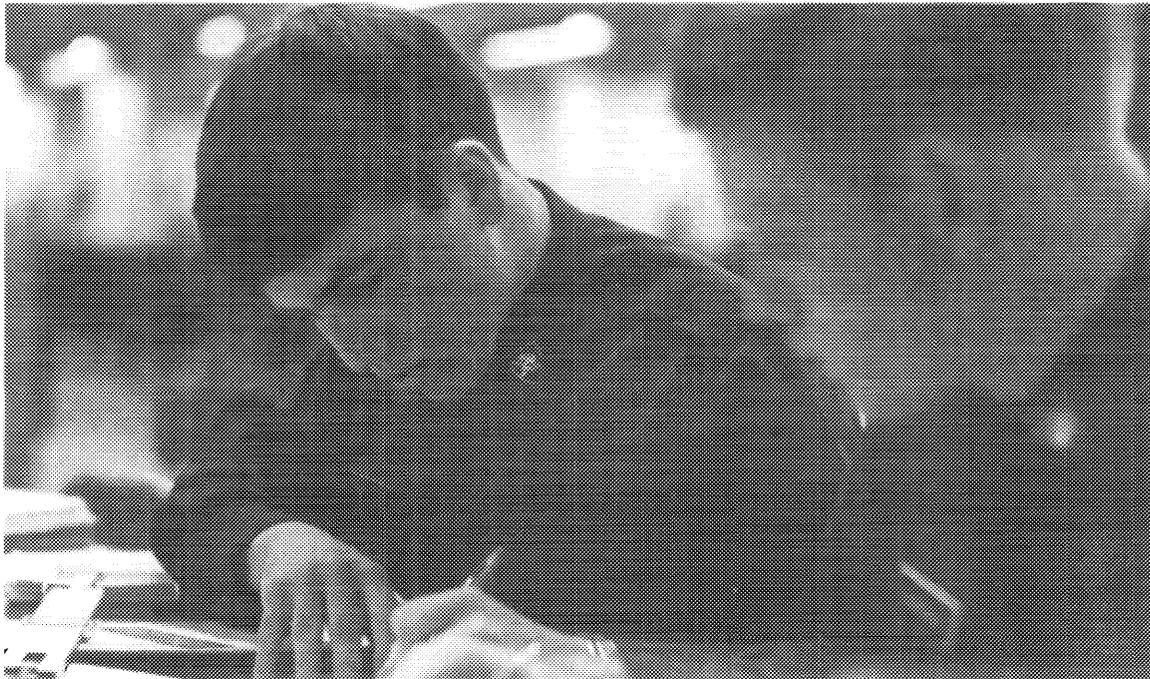
Either Term - Prerequisites: SS 301 and SS 302 or their equivalent. May be taken concurrently with SS 302.

The seminar provides cadets with an opportunity to read and analyze the nature and dimensions of America's urban problem. Emphasis is placed on the economic and political aspects of the domestic problems throughout the country, and the ability of our political process to resolve these domestic problems. *2.5 Credit Hours*

SS 388 Macroeconomics: Theory and Policy

Second Term - Prerequisite: SS 301

This course covers the primary aspects of macroeconomic theory and national economic policy. Models of the economy will be analyzed and evaluated in light of such economic goals as full employment, price stability and economic growth. The course is designed to offer a blend of aggregate economic theory, empirical analysis and policy considerations. *2.5 Credit Hours*



SS 389 Managerial Economics*Either Term - Prerequisites: SS 301*

The course is a study of managerial decision-making in directing and controlling an on-going organization. Managerial accounting is used to enable cadets to analyze and use financial information in realistic case studies. Cost accounting provides the primary discipline of study with an emphasis toward problem solving. 2.5 Credit Hours

SS 471 Major Political Systems of East Asia*Second Term - Prerequisites: None*

The course examines the transformation of East Asia in the 19th and 20th centuries and the salient features of the contemporary political systems of the People's Republic of China. 2.5 Credit Hours

SS 475 Government and Politics of the Soviet Union*Second Term - Prerequisites: None*

An interdisciplinary study of the Soviet political system, which begins with a survey of the traditional concepts of Karl Marx and their application to a modernizing Russia. Emphasis will be placed on structure, functions, interaction, and problems involved in the working of the system. 2.5 Credit Hours

SS 476 International Affairs: Theory and Applications*Second Term - Prerequisite: Approval of Instructor*

A study in depth of the traditionalist view of international politics, and some of its more modern challengers. Emphasis is placed on a realistic assessment of capabilities and limitations of theories and the problems of practical application in the world arena. 2.5 Credit Hours

SS 482 Microeconomics: Theory and Applications*Second Term - Prerequisite: SS 301*

This is an intermediate level course in microeconomics theory which emphasizes applications of economic analysis to defense and other governmental decisions and to the decision making problems of business. The concepts and principles of marginal analysis are applied to the development of efficient defense policies, the examination and economic evaluation of various social issues, and to an analysis of the decision problems faced by business. 2.5 Credit Hours

SS 483 National Security Seminar

Either Term - Prerequisites: SS 301 and SS 302. Course may be taken concurrently with SS 301 by cadets who have completed or validated SS 302, or concurrently with SS 302.

The National Security Seminar focuses upon the fundamental issues affecting the military security of the United States. Participants examine the changing context within which U.S. foreign and defense policies must operate, and the critical issues which those policies must seek to resolve over the next decade. Throughout, the intent is to understand the complex and vital role of the United States in the maintenance of international order. 2.5 Credit Hours

SS 484 International Economics and Economic Development*Second Term - Prerequisite: SS 301*

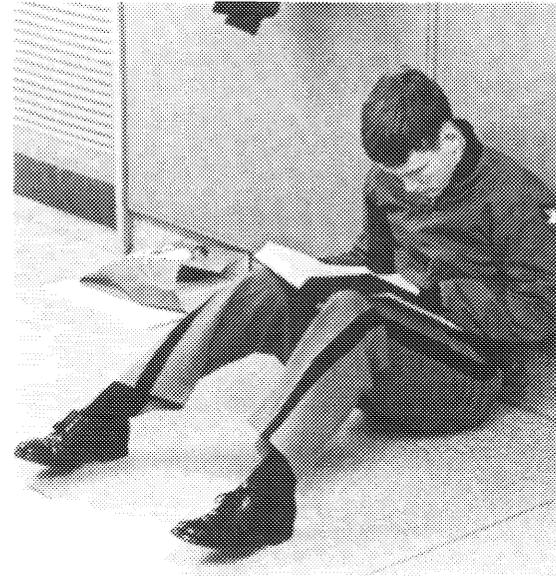
This course provides a foundation in international economic theory and the theory of economic growth and uses it in the study of problems and issues in economic development. It covers the classical theory of comparative advantage and its modifications. 2.5 Credit Hours

SS 485 Problems of the Developing Nations*Either Term - Prerequisite: SS 302. May be taken concurrently.*

The course attempts to develop analytical tools and concepts useful for understanding the political processes, social structures and economic organization normally associated with traditional societies. The course draws upon the literature of political science, sociology, economics, and cultural anthropology, and focuses upon selected case studies in East Asia and Sub-Saharan Africa. 2.5 Credit Hours

SS 486 Political and Cultural Anthropology*Either Term - Prerequisites: None*

This course emphasizes the comparative analysis of various levels of society and examines the general theories about the role of culture as man's major adaptive mechanism in negotiating social and political change. Case studies of several diverse societies, ranging from the primitive to the complex industrial state are made in order to point out the value and applicability of anthropology. 2.5 Credit Hours

**SS 487 Public Policy Decision Making and Debate***First Term - Prerequisite: Permission of Course Director*

The course provides formal instruction in the techniques of rational decision making and persuasive argumentation, to develop in-depth skills of research in the area of governmental policy making, and to provide detailed, substantive knowledge concerning the policy issues of the national debate topic. 2.5 Credit Hours

SS 489 Advanced Individual Studies in Social Sciences*Either Term - Prerequisite: Approval of the Head of Department*

This course permits the cadet, in an environment that is conducive to independent effort, to accomplish original research or specialized study in the fields of economics, political science, or international affairs. 2.5 Credit Hours

LECTURE PROGRAM

The Academic Departments and various activities sponsor a comprehensive lecture program. Guest lecturers are drawn from every walk of life and include recognized authorities in various academic disciplines, political scientists, economists, historians, noted authors, playwrights, religious and civic leaders, scientists, businessmen and military leaders. In almost every case the lectures are selected to complement and enhance the Military Academy's course of instruction.

INSTRUCTION SUPPORT DIVISION

Director, Associate Professor
COL WILLIAM F. LUEBBERT
B.S., United States Military Academy
M.S., E.E.A., Ph.D., Stanford University
Army War College

Deputy Director, Assistant Professor
LTC FRANCIS KAYE
B.A., Dickinson College
M.B.A., George Washington University

**U.S. Army Computer Systems Command
Liaison Officer**
CPT NORRIS C. MIDDLETON
B.S., Hampton Institute

ACADEMIC COMPUTER CENTER

**Chief, Academic Computer Center, Assistant
Professor**
MAJ ROBERT A. KAISER
B.S., E.E., Detroit University
M.S., Stanford University



Chief, Computer Systems Branch, Instructor
CPT CHARLES P. HERNANDEZ
B.S., United States Military Academy
M.S., Stanford University

Senior Systems Programmer
MR. EDWARD A. RADEK
B.S., Stevens Institute of Technology

INSTRUCTIONAL TECHNOLOGY CENTER

**Chief, Instructional Technology Center,
Instructor**
MAJ WILLIAM W. COX
B.S., East Tennessee State University
M.S., Baylor University

Audio-Visual Production Officer
MR. FURMAN S. BALDWIN
B.A., M.A., University of Buffalo

INSTRUCTOR GROUP

Chief, Instructor Group, Assistant Professor
MAJ HENMAR R. GABRIEL
B.S., United States Military Academy
M.S.E., Arizona State University

Chief, Consultant Services, Instructor
CPT JAMES D. CHIPPS
B.S., College of William and Mary
M.S., Pennsylvania State University

**Instructional Materials Development Officer,
Instructor**
CPT JOHN E. NEWTON
B.S., United States Military Academy
M.S., Cornell University

ACADEMIC MANAGEMENT INFORMATION CENTER

**Chief, Academic Management information Center,
Instructor**
CPT JARED E. FLORANCE
B.S., United States Military Academy
M.S., U.S. Naval Postgraduate School

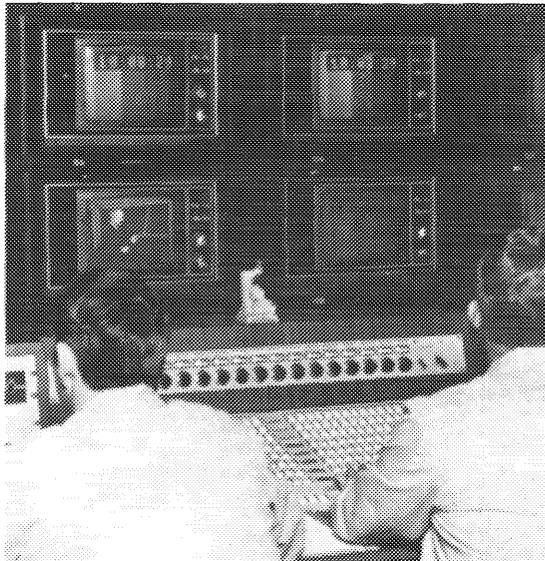
Data Base Manager, Instructor
1LT RICHARD L. MIDDLETON
B.S., M.S., Kansas State University

The Instruction Support Division provides a variety of computer and media technology services to the academic departments, provides technical advice and support for cadet courses as well as faculty training programs, and

provides automatic data processing support for cadet record keeping.

The Academic Computer Center operates the large, third-generation Honeywell-635 Computer System. Unlike many other university computer facilities, the USMA computer can be used freely by all cadets and faculty through 135 remote time-sharing terminals located in special computer rooms in every cadet barracks, in academic building computer laboratories, and in other locations such as academic department offices. Portable terminals can be taken to any classroom or to the individual rooms in cadet barracks. Cadets and faculty may also use "run-it-yourself" and "across the counter" facilities for punch-card programs. Of special interest are the 23 graphics terminals which display pictorial computer output. By integrating the computer with the television facilities, an instructor may present computer output on his classroom TV set, controlling it through a terminal in the classroom.

The Instructional Technology Center has the capability of making and presenting a wide variety of educational aids and instructional materials. Instructional technologists work in a close team effort with the academic departments to produce television programs, multimedia, and multi-screen AV productions, motion pictures, slides, audio tapes, and virtually anything that an instructor may need to improve the quality and interest of his instruction. A professional quality color TV studio, in conjunction with a closed-circuit TV system, broadcasts instructional films and tapes, commercial network or PBS educational TV, special computer graphics, and computer status information. Every classroom and laboratory, cadet



barracks study room, the library, and other locations are served by this network. Portable video taperecorders, audio recorders, and various projectors are available for cadet and faculty use, and the Center provides training in instructional technology and the use of this equipment.

The Instructor Group conducts instruction programs in both computer and media skills, provides computer programming consultation services to cadets and faculty, and renders technical assistance to instructors in developing and applying computers, television, and other educational media to the academic program. The instructor group also conducts the Dean's Reading Improvement Program for cadets and faculty, and writes and publishes reference manuals for users of the computer system.

The Academic Management Information Center employs the computer to provide data processing, programming, and system analysis services to aid in managing the academic program. It maintains the data base for all cadet records, which, among other things, allows cadets to use the computer to retrieve their current academic standing and course grades at any time.

SCIENCE RESEARCH LABORATORY

Director, Assistant Dean for Academic Research,
Permanent Associate Professor

LTC WILLIAM B. STREETT, JR.

B.S., United States Military Academy

M.S., Ph.D., University of Michigan

Research Officer

CPT ROBERT J. YORK

B.S., Bucknell University

M.S., Ph.D., University of Massachusetts

Research Officer

LT MARC COSTANTINO

B.S., Rensselaer Polytechnic Institute

Ph.D., Princeton University

Research Officer

LT D. FOSS SMITH, JR.

B.S., Georgia Institute of Technology

Ph.D., University of Minnesota

This facility, supervised by the Dean, affords the Academy faculty an opportunity to conduct original research. The research, much of which is supported by grants, includes meaningful projects in areas such as infrared spectroscopy and high-pressure physics.

USMA LIBRARY

Librarian, USMA

MR. EGON A. WEISS
B.A., Harvard University
M.A., Boston University
M.L.S., Simmons College

Associate Librarian

MR. J. THOMAS RUSSELL
A.B., Kenyon College
M.A.L.S., University of Michigan

Assistant Librarian, Collection Development and Technical Services

MR. NORMAND L. VARIEUR
B.A., M.S.T., Ph.B., Catholic University of Ottawa
M.L.S., Catholic University of America

Assistant Librarian, Public Services

MRS. MARILYNN K. SMITH
B.A., Butler University
M.A., University of Colorado
M.S., Columbia University

Assistant Librarian, Reference and Resource Utilization

MISS ANN K. HARLOW
A.B., Duke University
B.L.S., University of North Carolina

Assistant Librarian, Special Collections

MR. ROBERT E. SCHNARE
B.A., William Paterson College
M.A., University of Connecticut
M.L.S., University of Pittsburgh

Chief, USMA Archives

MR. STANLEY P. TOZESKI
A.B., Clark University
M.A., University of Massachusetts
Institute of Modern Archives Administration
American University and National Archives
and Records Service

Acquisitions

MR. MICHEL H. RIDGEWAY
B.A., Bowdoin College
M.L.S., Columbia University

Archives

MR. KENNETH W. RAPP
Certificate in Archival Management,
National Archives and Record Services

Cataloging

MISS ANNA E. PIERCE
B.S., State University of New York at Geneseo
MISS ELIZABETH K. DUNN
A.B., University of Kansas
M.L.S., University of Denver
MISS SHARON F. WILBUR
B.A., M.L.S., Texas Woman's University

Fine Arts

MRS. ELIZABETH M. LEWIS
B.A., Purdue University
M.L.S., Pratt Institute
Senior Lecturer in Art

Government Documents

MISS IRENE FEITH
B.A., Ladycliff College

Maps and Manuscripts

MRS. MARIE T. CAPPS
B.A., Central Washington State College
M.L.S., State University of New York
at Albany

Media Specialist

MR. ALLEN DEAN HOUGH
B.A., Kearney State College
M.L.S., Syracuse University

Military History

MR. ALAN C. AIMONE
B.S., Eastern Illinois University
M.A.L.S., Rosary College

Orientalia

MR. PINGKUN LEE
LL.B., University of Peiping
M.S.L.S., Catholic University of America



Periodicals

MR. NICHOLAS S. BATTIPAGLIA, JR.
 B.A., State University of New York at Albany
 M.L.S., Florida State University

Rare Books

MR. EDWARD P. RICH
 B.A., Haverford College
 D.D.S., University of Pennsylvania
 M.L.S., Drexel Institute
 Lilly Fellowship in Rare Books, Indiana University

Reader Advisory, Reserve Books and Circulation

MISS ELIZABETH J. CONNOLLY
 B.A., St. Joseph's College

Serials

MRS. JOHANNA R. DE ONIS
 B.A., State University of New York at New Paltz
 M.L.S., State University of New York at Albany

Special Projects

MISS MARTHA M. EARL
 B.A., B.L.S., University of California at Berkeley

The library book collection contains 370,000 volumes. The building, however, has a storage capacity for 500,000 volumes and provides seating for over 1,000 readers. Current subscriptions include 1,600 periodicals and 64 newspapers, domestic and foreign. Microfilm and microcard readers and printers are available in sufficient number to make possible effective use of the library's expanding microform holdings. The audio-visual resources include approximately 8,300 disc records and tapes of linguistic materials, drama, poetry, classical and popular music. Audio booths are equipped for stereophonic listening and recording. In addition, visual materials are available in the form of prints, slides, drawings and mounted pictures.

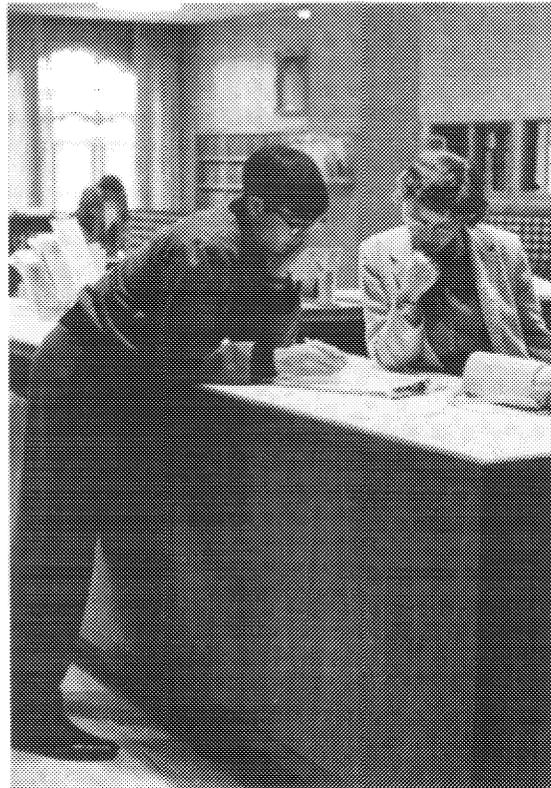
The library is designated a partial depository for the publications of the United States Government. United Nations, NATO, SEATO and regional publications are housed in the documents room of the library.

The library book collection represents the first federal library and antedates the founding of the Academy in 1802 by almost a quarter of a century. The first substantial acquisitions were made between 1815 and 1817 when Major Sylvanus Thayer, Superintendent USMA, 1817-1833, on official duty in Europe was authorized by the Secretary of War, James Monroe, to purchase landmark texts in the arts and sciences. Major Thayer obtained about 1,000 volumes which formed the basis for early engineering education in the United States.

The present library resources are similar to those of a liberal arts college and reflect considerable strength in the mathematical, scientific, and technical fields. The library's extensive holdings in the areas of military art, history and technology have established its reputation as a research library of national importance.

The Special Collections Division includes substantial manuscript and rare book holdings which are concerned primarily, though by no means exclusively, with the history of the U.S. Army, the Military Academy, and persons of the military profession. The USMA Archives maintains cadets records and the Military Academy's administrative records.

Cadets have free access to the library stack areas. Oral and written instructions guide them in the use of catalogs, bibliographies and other reference resources. The facilities of the library are available to *bona fide* researchers. During the Academic Year the library is open from 8:00 A.M. to 11:00 P.M., Monday to Thursday, 8:00 A.M. to 10:00 P.M., Friday, 8:00 A.M. to 9:00 P.M., Saturday, and 1:30 to 11:00 P.M., Sunday. The Special Collections Division and the USMA Archives are open from 8:00 A.M. to 4:30 P.M. Monday through Friday.



GRADUATE CIVIL SCHOOLING

The expanding world commitments of the Army, and technological advances, have created an increasing requirement for officers to attend civilian graduate institutions. It is anticipated that approximately 80 percent of Academy graduates remaining on active duty will attend graduate school under the auspices of the Army Civil Schooling program or on a scholarship or fellowship.

Army Civil Schooling Program

Qualified graduates may anticipate selection for attendance at graduate school in a master's or doctoral program between their fourth and tenth year of military service.

Rhodes Scholarships

From the first USMA participation in the Rhodes Scholarship program in 1923, fifty-three Military Academy graduates have been awarded Rhodes Scholarships to attend Oxford while on active duty as commissioned officers.

Elections for Rhodes Scholarships are held every year in December for entrance into Oxford in October of the following year. The scholarships are for a minimum period of two years; a third year may be awarded if the Rhodes scholar presents a plan of study acceptable to his service and to the Rhodes trustees.

Cadets desiring to compete for a scholarship from their home, or New York State, must be accredited by the Academic Board. A Committee of Selection in each state recommends two candidates yearly to a six-state District Committee, which then selects the most outstanding four scholars.

Selection is based upon that section of Cecil Rhodes' will in which are mentioned the four groups of desired qualities: (1) literary and scholastic ability and attainments; (2) qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindness, unselfishness, and fellowship; (3) exhibition of moral force of character and of instincts to lead and to take an interest in his schoolmates; and (4) physical vigor as shown by fondness for and success in manly sports.

Scholars are not chosen, however, from a system of averaging the above prerequisites. The first two groups of qualities are considered the most important, and committees are particularly interested in distinction of intellect and character giving promise of outstanding achievement in later life. Rhodes hoped that the scholar would "esteem the performance of public duties as his highest aim."



Olmsted Scholarships

The George Olmsted Foundation annually awards two scholarships to graduates of the Military Academy for two years of study at a foreign university in an other than English speaking country. Officers are considered for scholarships upon completion of a minimum of three years of service. The Foundation makes the selection from names submitted for consideration to the Department of the Army by the Academic Board. Selection criteria consist of both demonstrated scholastic ability and character and leadership traits at the United States Military Academy and in the military service after graduation. Universities attended by Military Academy graduates under this program have included those in Geneva, Grenoble, Heidelberg, Brussels, Tokyo, Freiburg, Paris, Lyons, Madrid, Bonn, and Sao Paulo.

National Science Foundation Fellowships

Cadets annually compete for the one or two-year National Science Foundation Graduate Fellowships, which provide for outstanding students to pursue graduate studies at the university of their choice. Selection is based upon academic records and examinations administered by the National Science Foundation. Since cadets began competing in 1961, a total of 24 have been awarded fellowships and 94 have received honorable mention.

Hertz Foundation Fellowships

Since 1973, cadets have been permitted to compete for the Hertz Foundation Fellowships. These Fellowships are for a period of three to four years and lead to a Doctor's (Ph.D.) degree in an Applied Physical Science.

Cadet competitors must be accredited by the Academic Board and are then selected by the Hertz Foundation based on academic performance, recommendations, and personal interviews.

Military Program

Mission

To develop the qualities and attributes of leadership with emphasis on character as exemplified by integrity, morality, discipline and a strong sense of duty and responsibility.

To provide a broad basic military education.

To develop high standards of physical fitness.

To instill the motivation essential to the profession of arms and to provide orientation for a career in the United States Army.

Military instruction concentrates on the fundamental principles and concepts of tactics, study of leadership techniques, training in physical education, and indoctrination in career planning and motivation. It provides study, practice and orientation in the history, materiel, methods, and techniques of the Army and the other services of the Armed Forces of the United States. With this background the graduate has the foundation necessary for his progressive and continued development throughout his career as an officer of the Regular Army.

PROGRAMS AND OFFICES OF INSTRUCTION

DEPARTMENT OF TACTICS

Commandant of Cadets

BG PHILIP R. FEIR

B.S., United States Military Academy
M.S., Georgia Institute of Technology
M.S.I.A., George Washington University
National War College

Aide-de-Camp

1LT DONALD I. PRATT, JR., INFANTRY

B.S., United States Military Academy

Deputy Commandant

COL THOMAS E. FITZPATRICK, INFANTRY

B.S., United States Military Academy
M.A., Michigan State University
National War College



S1, USCC

LTC HENRY S. LARSEN, JR., FIELD ARTILLERY

B.S., United States Military Academy
M.S., Purdue University

Assistants, S1

MAJ PHILIP E. PONS, JR., INFANTRY

B.S., United States Military Academy
M.S., Purdue University

MAJ DAVID L. COLE, FIELD ARTILLERY

B.S., United States Military Academy
M.S., Purdue University

CPT ROBERT W. HIGGINS, INFANTRY

B.S., United States Military Academy
M.S., Syracuse University

Operations Officer

LTC JAMES F. MAC GILL, INFANTRY

B.S., United States Military Academy

102 MILITARY PROGRAM

Assistant Operations Officers

MAJ GEORGE M. SECKINGER, JR., FIELD ARTILLERY
B.S., United States Military Academy
CPT JAMES E. BRYAN, INFANTRY
B.S., United States Military Academy
MAJ (RET) LUIS J. FLANAGAN
B.S., United States Military Academy

S4, USCC

MAJ (P) MICHAEL J. FLETCHER, INFANTRY
B.S., United States Military Academy

Assistants S4

MAJ JOSEPH F. MANZI, JR., CORPS OF ENGINEERS
B.S., University of New Hampshire
M.E., Texas A & M University
CPT FREDERICK A. KYLE, ARMOR
B.S., Virginia Polytechnic Institute and State University
M.S., University of Utah

CAO

COL JOSEPH J. SKAFF, FIELD ARTILLERY
B.S., United States Military Academy
West Virginia University
M.S., George Washington University
Army War College

Assistant CAO

CPT STEPHEN J. KEMPF, AIR DEFENSE ARTILLERY
B.S., United States Military Academy
M.A., University of Minnesota

Royal Military Academy LNO

CPT GERALD C. WERNER, ARMOR
B.S., United States Military Academy
M.S., Purdue University

1st Regiment

Commander

COL CHARLES A. HOENSTINE, JR.,
FIELD ARTILLERY
B.S., United States Military Academy
M.S., Ohio State University
Army War College

Executive Officers

LIEUTENANT COLONEL MICHAEL S. SIRKIS,
AIR DEFENSE ARTILLERY
B.S., United States Military Academy
M.S., George Washington University
National War College

S1

CPT COLIN O. HALVORSON, ARMOR
B.S., United States Military Academy
M.S., University of Colorado

Tactical Officers

MAJ EUGENE S. ANDREWS, INFANTRY
B.S., Boston University
M.A., Syracuse University
MAJ GORHAM L. BLACK, 111, INFANTRY
B.A., Howard University
M.A., Syracuse University
MAJ THOMAS E. BURCH, USAF
B.S., United States Naval Academy
CPT JAMES B. BRIGGS, FIELD ARTILLERY
B.S., M.S., Texas A & M University

Tactical Officers

CPT THOMAS R. GENETTI, INFANTRY
B.S., United States Military Academy
M.S., Syracuse University
CPT GEORGE S. GEHRINGER, AIR DEFENSE ARTILLERY
B.S., United States Military Academy
M.S., University of Texas at El Paso
CPT CLOVIS O. LaFOND, CORPS OF ENGINEERS
B.S., United States Military Academy
M.A., George Washington University
CPT FREDDY E. McFARREN, FIELD ARTILLERY
B.S., United States Military Academy
M.Ed., Duke University
CPT THOMAS A. SCHWARTZ, INFANTRY
B.S., United States Military Academy
M.Ed., Duke University

2d Regiment

Commander

COL WALTER C. COUSLAND, ARMOR
B.S., United States Military Academy
M.A., University of Pennsylvania

Executive Officer

LTC JOHN E. BLANCK, FIELD ARTILLERY
B.S., United States Military Academy

S1

MAJ GLYNN C. MALLORY, JR., INFANTRY
B.S., United States Military Academy
M.A., University of Georgia

Tactical Officers

MAJ PAUL J. KIRKEGAARD, INFANTRY
B.S., United States Military Academy
M.A., Auburn University
MAJ PHILLIP R. STEWART, FIELD ARTILLERY
B.S., United States Military Academy
M.A., Xavier University

MAJ JAMES M. CARSON, JR., INFANTRY

B.S., United States Military Academy
M.S., George Washington University

CPT EMMETTE Y. BURTON III, INFANTRY

B.A., University of Virginia
M.A., Texas Tech University

CPT THOMAS B. SURLES, ARMOR

B.A., Auburn University
M.A., Syracuse University

CPT FRANK M. APPLIN, FIELD ARTILLERY

B.S., United States Military Academy
M.S., Syracuse University

CPT JAMES R. FOWLER, AIR DEFENSE ARTILLERY

B.S., Washington State University

CPT PETER J. LONG, INFANTRY

B.S., United States Military Academy
M.A., University of North Carolina

CPT JOHN R. HAYES, JR., ARMOR

B.S., United States Military Academy
M.A., University of North Carolina

3d Regiment

Commander

COL HUGH G. ROBINSON, CORPS OF ENGINEERS

B.S., United States Military Academy
M.S., Massachusetts Institute of Technology

Executive Officer

LTC RONALD C. OLSON, FIELD ARTILLERY

B.S., United States Military Academy

S1

MAJ JON F. NITKOWSKI, FIELD ARTILLERY

B.S., United States Military Academy
M.S., University of Utah

Tactical Officers

MAJ WILLIAM H. GAVAN, INFANTRY

B.S., United States Military Academy
M.S., North Carolina State University

MAJ IAIN REILLY, SIGNAL CORPS

B.S., United States Military Academy
M.S., Naval Post Graduate School

CPT JIMMIE B. QUINN, ARMOR

B.S., Henderson State College
M.B.A., University of Arkansas

CPT JAMES H. WOOD, INFANTRY

B.S., United States Military Academy
M.S., Syracuse University

CPT TERRY G. STULL, INFANTRY

B.S., United States Military Academy
M.A., University of Georgia

CPT CHRISTOPHER Q. HERRICK, FIELD ARTILLERY

B.A., LaSalle College
M.A., Purdue University

CPT JAMES M. HAYES, INFANTRY

B.S., United States Military Academy
M.Ed., Duke University

CPT ROBERT A. GUY, INFANTRY

B.S., United States Military Academy
M.A., Purdue University

CPT MORGAN G. ROSEBOROUGH, JR., ARMOR

B.S., United States Military Academy
M.Ed., Duke University

4th Regiment

Commander

COL JOHN D. FOLDBERG, INFANTRY

B.S., United States Military Academy
M.S., George Washington University

EXECUTIVE OFFICER/S3

LTC JOSEPH A. BEBEN, CORPS OF ENGINEERS

B.S., United States Military Academy
M.S., University of Illinois

S1/S4

MAJ CHARLES L. SCHMIDT, ARMOR

B.S., United States Military Academy

Tactical Officers

MAJ DALE W. SHIPLEY, INFANTRY

B.S., United States Military Academy
M.A., Purdue University

MAJ JAMES A. SCOTT III, FIELD ARTILLERY

B.S., United States Military Academy
M.S., Purdue University

MAJ JOHN F. SOBKE, CORPS OF ENGINEERS

B.C.E., Cornell University
M.S., Princeton University
M.P.S., Auburn University

CPT (P) SETH F. HUDGINS, ARMOR

B.S., United States Military Academy
M.A., Syracuse University

CPT (P) RICHARD G. STILWELL, INFANTRY

B.S., Georgetown University
M.A., George Washington University

CPT JOHN M. HOWELL

B.S., United States Military Academy
M.B.A., University of Southern California

CPT HERBERT J. SMITH, III, AIR DEFENSE ARTILLERY

B.S., United States Military Academy

CPT GERALD T. CECIL, INFANTRY

B.S., United States Military Academy
M.A., Duke University

CPT DAVID W. ARTHUR, INFANTRY

B.S., United States Military Academy
M.S., Syracuse University

OFFICE OF MILITARY INSTRUCTION



Director

COL HAL B. RHYNE, ARMOR
B.S., United States Military Academy
M.A., American University
Command and General Staff College
Armed Forces Staff College
Army War College

Deputy Director

COL JOHN B. TANZER, FIELD ARTILLERY
B.S., United States Military Academy
Command and General Staff College
Army War College

Career Branch

CHIEF: LTC ARVID E. WEST, JR., INFANTRY
B.S., United States Military Academy
M.S., Naval Postgraduate School
M.S., Shippensburg State College
Command and General Staff College
Army War College

SR ADA INSTR: MAJ STANLEY E. THOMPSON, ADA
B.S., United States Military Academy
Command and General Staff College

SR ARMOR INSTR: MAJ MICHAEL S. DAVISON, JR.,
ARMOR

B.S., United States Military Academy
M.S., Georgetown University
Command and General Staff College

SR ENGR INSTR: MAJ RICHARD D. SCHARF,
CORPS OF ENGINEERS

B.S., United States Military Academy
M.S., Stanford University
Command and General Staff College

SR FIELD ARTILLERY INSTR: MAJ LEONARD D. HARDY,
FIELD ARTILLERY

B.S., United States Military Academy
Command and General Staff College

SR INFANTRY INSTR: MAJ RICHARD G. WHITCOMB,
INFANTRY

B.A., University of Washington
M.S., George Washington University
Naval Command and Staff College

INFANTRY INSTR: CPT SEALON R. WENTZEL, INFANTRY

B.S., United States Military Academy

SR MILITARY INTELLIGENCE INSTR: CPT JAY VAUGHN, MI

B.S., United States Military Academy
M.S., Tulane

Command and General Staff College

SR SIGNAL INSTR: MAJ PAUL T. ZMUIDA, SIGNAL CORPS

B.S., United States Military Academy
M.S., Naval Postgraduate School

Command and General Staff College

AVIATION INSTR: MAJ GEORGE D. FULLER, ARMOR

B.S., United States Military Academy
Command and General Staff College

M.A., University of Southern California

CBT SPT INSTR: CPT LOUIS J. HANSEN, FIELD ARTILLERY

B.S., United States Military Academy

Military Science Branch

CHIEF: LTC RICHARD F. ASCHETTINO, SIGNAL CORPS

B.S., Penn Military College

M.A., University of Kansas

Command and General Staff College

Operations Officer

CPT JOHN N. ABRAMS, ARMOR

B.S., Bowling Green State College

Education Director

MAJ RICHARD M. SCOTT, INFANTRY

B.A., University of Omaha

Command and General Staff College

Course Directors:

MAJ LARRY OGLE, UNITED STATES MARINE CORPS

B.S., University of New Mexico

MAJ FRANK N. CREMER, AIR DEFENSE ARTILLERY

B.S., United States Military Academy

Naval War College

MAJ NEIL A. SMART, CORPS OF ENGINEERS

B.S., United States Naval Academy

M.S., University of Missouri

MAJ JOHN M. LENTI, INFANTRY

B.S., United States Military Academy

M.A., Fairleigh Dickinson University

Command and General Staff College

MAJ JAMES D. GEORGE, INFANTRY
B.A., Wofford College
M.A., University of Alabama
Command and General Staff College
CPT TED C. CHILCOTE, INFANTRY
B.A., Virginia Military Institute
LL.B., University of Texas
CPT GUY DONALDSON II, CORPS OF ENGINEERS
B.S., Auburn University
M.S., Purdue University

MAJ ROBERT J. HODGES, BRITISH ARMY
British Staff College Camberley
CPT JOHN T. MELVIN, INFANTRY
B.S., Hampton Institute
M.A., Hampton Institute
CPT TIMOTHY C. BEUMLER, MILITARY POLICE CORPS
B.S., University of Arizona
M.A., University of Arizona

Plans Branch:

CHIEF: LTC JAMES M. MC FADDEN, INFANTRY
B.A., University of Nebraska;
M.S., Purdue University;
Air Force Staff College

Programs Officer

MAJ RONALD O. PRUITT, FIELD ARTILLERY
B.S., Panhandle A&M;
M.A., Georgia State University
Command and General Staff College
CPT HAROLD W. FULLER, ARMOR
B.S., Arkansas University

Plans Officer

MAJ JOHN B. SEELY, FIELD ARTILLERY
B.S., United States Military Academy
M.S., George Washington University
Naval War College

Fourth Class Military Instruction

Summer

Fourth Class Summer Training

The summer period consists of basic military training in preparation for military life and orientation and indoctrination in duty, honor and the traditions of West Point. The period in New Cadet Barracks is one of intensive fundamental military training to include qualification with the U.S. Army rifle and basic individual training designed to prepare the new cadet to take his place in the Corps when it reassembles late in August. *8 Weeks. Ungraded*

Academic Year

Military Science I

MS 101 Introduction to Military Science

The instruction is designed to develop in the cadet an appreciation of the history and traditions of the profession of arms and to instill a pride in that profession; to provide the cadet with a working knowledge of basic map reading in preparation for subsequent military training. *1 Credit Hour*



MS 102 Small Unit Tactics I

This instruction introduces the cadet to tactics at platoon level, continues his education in map reading and navigational skills and combines them with exercises in tactics to give him his first complete knowledge of basic tactics. *1 Credit Hour*

THIRD CLASS MILITARY INSTRUCTION

Summer

Third Class Summer Training

To enhance soldier skills in marches, fieldcraft, communications, land navigation, adjustment of indirect fire, first aid, mountaineering, hand to hand combat and survival; to provide familiarity with the mission, organization and employment of the infantry, tank and armored cavalry platoons to include the firing of many weapons organic to the maneuver battalion, the M60 tank, the Vulcan air defense system, the mortar; to provide experience in small unit tactics at squad and platoon level in both daylight and night operations; to provide orientation on the combat support role of the Field Artillery Battery, Air Defense Artillery, the Combat Engineer Company, and the Communications Platoon; to provide an orientation on the planning and conduct of airmobile operations; to develop self-confidence through performance under conditions of mental and physical stress; to provide high standards of physical conditioning, appearance, discipline and esprit; and to provide leadership experience through troop leading in a simulated combat environment. *8 Weeks. Ungraded*

Academic Year

Military Science II

MS 202 Small Unit Tactics II

This instruction is designed to teach the cadet the fundamentals and principles of combat operations, employing the Mechanized Infantry Company the assets of the Combat Support Company, and the Headquarters Company as vehicles for instruction. *1.5 Credit Hours*

SECOND CLASS MILITARY INSTRUCTION

Summer

Second Class Summer Training

The cadet has an opportunity to participate in one of the following regular Army training programs: Airborne or Ranger at Fort Benning, Georgia; Jungle Warfare in Panama; Northern Warfare in Alaska; Aviation at Fort Rucker, Alabama; and Arctic Training in Canada under the auspices of the Canadian Armed Forces Mobile Command. Most cadets will also serve one month of Army Orientation Training as a platoon leader in a regular U.S. Army unit in the United States, Alaska, Panama or Europe. *7 Weeks. Ungraded*

Academic Year

Military Science III

MS 301 The Combat Arms Team

This course teaches the cadet the fundamentals and principles of the Combined Arms Team. It employs a task force as the vehicle and teaches the impact of combat support and service support capabilities on this task force while conducting combat operations. *1 Credit Hour*

FIRST CLASS MILITARY INSTRUCTION

Summer

First Class Summer Training

First Classmen serve as instructors, counselors and commanders during New Cadet Barracks for incoming class, during Camp Buckner for the Third Class and as cadre and command for selected Second Class training programs. *8 Weeks. Ungraded*

Academic Year

Military Science IV

MS 402 First Class Career Course

This course is a series of conferences on career planning designed to assist the cadet in choosing his future branch and assignments; the course includes selected Military Science subjects in seminar, conference and lecture with emphasis on his role as a junior officer. *Ungraded*



**OFFICE OF MILITARY
LEADERSHIP**

Director

COL HARRY A. BUCKLEY, JR.
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M.S., Purdue University
Ph.D., Purdue University

Associate Professor

LTC ROBERT C. LOSIK
B.S., Wisconsin State College
M.A., University of North Carolina

Associate Directors

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B.S., United States Military Academy
M.B.A., University of Alabama
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B.S., United States Military Academy

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M.S., University of Pittsburgh
MAJ LESLIE P. MASON
B.S., United States Military Academy
M.A., University of North Carolina
MAJ JAMES F. X. LOORAM
B.S., United States Military Academy
M.A., University of Hawaii
MAJ MICHAEL J. BARTELME
B.S., United States Military Academy
M.A., University of Alabama
CPT JOHN H. DARROW
B.S., United States Military Academy
M.B.A., Harvard Business School
CPT FRANK L. SLAUGHTER
B.S., Southern University
M.A., Louisiana State University

CPT RUSSELL A. CAMPBELL, JR.
B.S., United States Military Academy
M.B.A., University of New Hampshire
CPT LOUIS S. CSOKA
B.S., United States Military Academy
Ph.D., University of Washington
CPT NORMAN L. GRUNSTAD
B.S., United States Military Academy
Ph.D., Ohio State University
CPT DENNIS M. KOWAL
B.S., University of California
M.S., San Jose State University
Ph.D., Claremont Graduate School

Assistant Directors

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B.S., United States Military Academy
M.A., George Washington University
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B.S., United States Military Academy
M.A., University of Minnesota
CPT STEPHEN D. CLEMENT
B.S., United States Military Academy
M.S., Purdue University
Ph.D., Purdue University
CPT WAYNE R. WHEELER
B.S., United States Military Academy
Ph.D., Ohio State University
CPT STEPHEN T. LIFRAK
B.A., University of Rhode Island
M.A., University of Rhode Island
Ph.D., University of Rhode Island

Instructors

MAJ JAMES D. BLUNDELL
B.S., United States Military Academy
M.S., University of Pittsburgh
MAJ WILBURN L. BOOZER
B.S., United States Military Academy
M.S., Purdue University
MAJ JERRY W. WITHERSPOON
B.S., United States Military Academy
M.A.C.T., University of North Carolina
MAJ JOHN C. GILBREATH
B.S., University of Miami
M.S., University of California, Irvine
MAJ JOHN L. NOVOTNY
B.S., United States Military Academy
M.S., Purdue University
CPT DONALD C. ROJAS
B.S., University of California Los Angeles
M.S., University of Oregon
CPT WALTER J. MARM
B.A., Duquesne University
M.S., University of Georgia

- CPT FREDERICK W. TIMMERMAN
 B.S., United States Military Academy
 M.S., Duke University
 Ph.D., Duke University
- CPT HAROLD A. JENKINS, JR.
 B.S., United States Military Academy
 M.S., Purdue University
- CPT JOSEPH W. GALLOWAY
 B.A. and M.A., Western Kentucky
- CPT PETER M. ELSON
 B.S., United States Military Academy
 M.S.I.R., Purdue University
- CPT GLADE M. BISHOP
 B.S., United States Military Academy
 M.A., Ohio State University
- CPT JON W. BLADES
 B.S., United States Military Academy
 M.S., University of Washington



STANDARD COURSES

PL 202 General Psychology

Both Terms - Prerequisites: None

Provides the cadet with an understanding of scientific psychology required in the development of an understanding of the human aspects of command, military operations, and technology. Specific aims and areas of

study are to engender a basic usable understanding of human development and individual differences, perception, learning, thinking, motivation, and emotion, adjustment, personality, social relations, the beginnings of leadership and applied psychology. *2.5 Credit Hours*

PL 252 Advanced General Psychology

Both Terms - Prerequisites: First 10 periods of PL 202
 The course amplifies the basic content of PL 202, General Psychology, by presenting to selected cadets additional course material and experimentation necessary to develop an appreciation of psychological research. This course utilizes a laboratory program to develop an understanding of scientific methodology used in the behavioral sciences and current research being conducted in the field of psychology. *2.5 Credit Hours*

PL 401 Military Leadership

Both Terms - Prerequisites: PL 202, 252 or validation
 The course contributes to the leadership development of cadets through an in-depth interdisciplinary study of theories, models and behavioral science information related to leadership and the effective application of this information in a military environment. Topical problems are considered in the light of contemporary human and organizational behavior theory. *2.5 Credit Hours*

ELECTIVE COURSES

ELECTIVE COURSES

PL 481 Managerial Psychology

Both Terms - Prerequisites: PL 202, PL 252 or validation
 This course provides the cadet with 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 482 Sociology

Both Terms - Prerequisites: PL 202, PL 252 or validation
 This course provides the cadet a further understanding of human behavior by focusing on the impact of social organization and culture on individual behavior and by discussing the dynamics of groups and group situations. Additional emphasis is placed on primary groups, social stratification, collective behavior, urbanization, and current social problems facing the military and society. *2.5 Credit Hours*

PL 483 Social Psychology

Both Terms - Prerequisites: PL 202, PL 252 or validation
 Provides the cadet with an understanding of how individual behavior is shaped and modified through interaction with others, to include interpersonal perception, social motivation, and attitude formation and change — concepts which color the individual's outlook toward his physical and social environment. *2.5 Credit Hours*

PL 484 Psychology II

Both Terms -
 This course provides the cadet with an advanced, in-depth study of selected topics in psychology. It concentrates on the scientific method motivation and emotion verbal behavior, development of thought processes, the causes and effects of stress, the development of personality and abnormal behavior and therapy. From an in-depth study of selected areas, this course represents a specialized study of the influence process entitled Military Leadership. *2.5 Credit Hours*

OFFICE OF PHYSICAL EDUCATION

**Permanent Professor and Director of Physical Education**

COL FRANK J. KOBES, JR., PROFESSOR
 B.S., United States Military Academy
 B.A., Doane College
 M.A., New York University

Deputy Director

LTC JAMES L. ANDERSON, INFANTRY
 B.A., United States Military Academy
 M.S., Indiana University
 Ph.D., Indiana University

Chief of Instruction

LTC DWAIN T. MOENTMANN, FIELD ARTILLERY
 B.S., United States Military Academy
 M.S., Columbia University

Associate Professors

DR. ROBERT W. STAUFFER
 B.S., Frostburg State College
 M.S., University of Virginia
 E.D.D., Temple University

MR. GEORGE W. LINCK
 B.S., Springfield College
 M.A., Columbia University

MR. WILLIAM F. LEWIS
 B.S., Springfield College
 M.A., New York University

MR. HERBERT J. KROETEN
 B.A., University of Minnesota
 M.Ed., Ohio State University

Assistant Professors

MAJ DAVID P. GLEICHENHAUS, FIELD ARTILLERY
 B.S., United States Military Academy
 M.S., University of Wisconsin

MAJ DENNIS A. LEACH, INFANTRY
 B.S., United States Military Academy
 M.S., University of Wisconsin

MAJ CORDELL S. GODBOLDTE, INFANTRY
 B.S., West Chester State College
 M.S., Indiana University

CPT JOHN R. MALPASS, INFANTRY
 B.S., United States Military Academy
 M.S., Indiana University

LT JAMES A. PETERSON, FIELD ARTILLERY
 B.S., University of California at Berkeley
 M.S., University of Illinois
 Ph.D., University of Illinois

Instructors

LTC DONALD V. ADKINS, ARMOR
 B.S., Marshall College
 M.S., University of Southern California

MAJ JOSEPH F. BLACKGROVE, INFANTRY
 B.S., United States Military Academy
 M.S., Indiana University

MAJ EUGENE B. BLACKWELL, INFANTRY
 B.S., United States Military Academy
 M.S., Indiana University

MAJ RONALD E. BOEHME, MILITARY POLICE CORPS
 B.S., University of Toledo
 M.S., Kansas State University

MAJ WADE E. HAHN, AIR DEFENSE ARTILLERY
 B.S., University of Arkansas
 M.S., University of Arkansas

MAJ WILEY W. McCRARY, FIELD ARTILLERY
 B.S., United States Military Academy
 M.S., Indiana University

MAJ CLIFF M. NATVIG, FIELD ARTILLERY
 B.S., United States Military Academy
 M.S., Indiana University

MAJ JAMES T. PIERSON, FIELD ARTILLERY
 B.S., Washington State University
 M.S., Indiana University

MAJ ROBERT A. REDMOND, FIELD ARTILLERY
 B.S., United States Military Academy
 M.S., Indiana University

MAJ ROBERT G. SAUSSER, FIELD ARTILLERY
 B.S., United States Military Academy
 M.S., Indiana University

CPT WILLIAM M. ANNAN, INFANTRY
 B.S., United States Military Academy
 M.S., Indiana University

CPT STEVEN D. BERRY, INFANTRY
 B.S., United States Military Academy
 M.S., Indiana University

110 MILITARY PROGRAM

CPT GERALD E. DIXON, FIELD ARTILLERY

B.S., United States Military Academy
M.S., University of Wisconsin

CPT DAVID A. NCKNIGHT, MILITARY INTELLIGENCE

B.S., Texas Western College
M.S., Indiana University

CPT DOUGLAS A. SIMS, AIR DEFENSE ARTILLERY

B.S., United States Military Academy
M.S., Indiana University

LT EDWIN H. MARKS, III, ADJUTANT GENERAL CORPS

B.A., University of Virginia

MR. LEROY A. ALITZ

B.A., University of Iowa
M.S., University of Massachusetts

MR. EDMUND O. CROSSLEY

B.S., Springfield College
M.E., Springfield College

MR. DENNIS S. FORBES

B.S., Wichita State University
M.S., Wichita State University

MR. JOHN D. LEMPERLE

B.S., University of Utah
M.S., Idaho State University

MR. JOSEPH M. PALONE

B.S., Cortland State College
M.A., New York University

MR. HENRY J. VEIX

B.S., Cortland State College
M.A., Columbia University

SP S. C. NELSON

B.S., Western Carolina University

PFC T. L. BOYES, JR.

B.S., Keene State College

PFC R.F. CONROY

B.S., North Michigan University

PFC B. W. CRANFIELD

B.S., Pembroke State University

PFC PROVINCHER

B.S., Keene State College

PFC D. P. RILEY

B.S., Keene State College

Trainers

MR. JOHN W. POWELL

B.S., Michigan State University
M.S., Indiana University

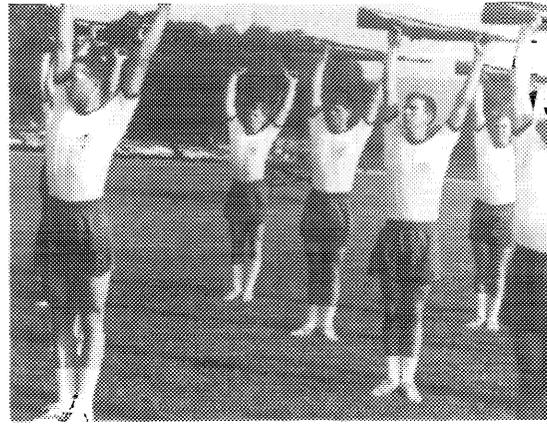
PFC S. M. CARLAND

North Hennepin State Junior College

PFC G. S. RICHARDSON

B.S., University of Wisconsin (Platteville)

The physical education program is designed to develop muscular strength, agility, endurance and coordination; to enhance mental health and overall efficiency; and to contribute to the development of certain personal attitudes essential to effective military leadership.



STANDARD COURSES

PE 100 Foundations in Physical Education

This course emphasizes the development of basic physical abilities in boxing, gymnastics, swimming, and wrestling. Instruction is provided in applied physiology, as well as in the carry-over sports of golf and tennis. Active participation in the athletic program of the Academy is required. Standards of physical performance must be met in semester-end tests. *3 Credit Hours*

PE 200 Sports Orientation

This course provides basic instruction in carry-over sports skills and instruction and experience in conducting physical training activities. Active participation in the athletic program of the Academy is required. Standards of physical performance must be met in semester-end tests. *1.5 Credit Hours*

PE 300 Sports Leadership

This course emphasizes leadership development in physical education by means of further instruction in sports skills, instructor preparation, coaching techniques, and athletic coaching experience. Active participation in the athletic program of the Academy is required. Standards of physical performance must be met in semester-end tests. *1 Credit Hour*

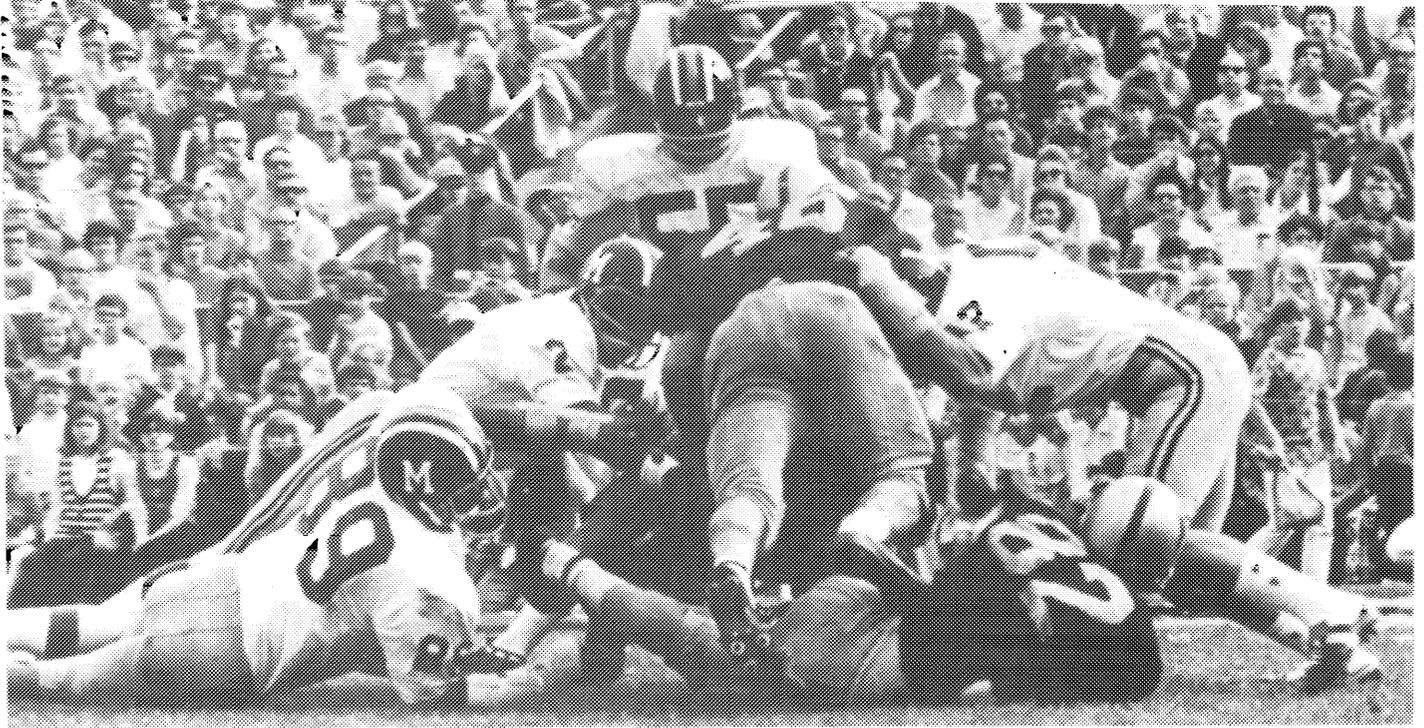
PE 400 Advanced Sports Leadership and Athletic Skills

This course develops instructor and leadership ability through the administration of the third and fourth class summer physical training programs. Instruction in additional individual and team sports is provided. Active participation in the athletic program of the Academy is required, with emphasis on coaching and officiating. Standards of physical performance must be met in semester-end tests. *1.5 Credit Hours*

ADDITIONAL COURSES

Individual Instruction

Special programs of instruction are available in weight control, reconditioning, basic swimming, posture, corrective exercise, and physical conditioning to assist those who experience difficulty in achieving minimum standards of proficiency. Open to all classes.



Intercollegiate Athletics

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Chairman

COL JOHN S. B. DICK

COL FRANK J. KOBES

COL GILBERT W. KIRBY, JR.

COL WILLIAM J. SCHUDER, Secretary

Director of Athletics

COL WILLIAM J. SCHUDER

B.S., United States Military Academy

M.S., Princeton University

Deputy Director of Athletics for Administration and Logistics

LTC R. H. HOISINGTON

B.S., United States Military Academy

Special Assistant to the Director of Athletics

COL WILLIAM T. CALL (Ret.)

B.A., University of New Hampshire

Deputy Director of Athletics for Business

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B.S., St. John's University (Minnesota)

Assistant Director of Athletics

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Assistant Director of Athletics

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B.S., M.A., Ohio State University

Assistant Director of Athletics

THOMAS B. CAHILL

B.S., Niagara University

Administrative Officer

CPT JAMES H. FLOWERS

B.S., Trinity University

Director for Admissions Support

TAD SCHROEDER

B.A., LL.D., University of Cincinnati

Assistant Director for Admissions Support

GEORGE STORCK

B.S., United States Military Academy

COACHING STAFF

Baseball and 150 lb. Football

ERIC TIPTON
B.A., Duke University

Basketball

DAN DOUGHERTY (Head Coach)
B.S., St. Joseph's
M.A., Villanova University
ED HOCKENBURY
B.S., Boston College

Cross Country and Track

CARLETON CROWELL
Ph.D., University of Wisconsin

Fencing

JOHN GERACI
B.S., Newark College of Engineering
Fencing Master International Academie D'Escrime

Football

HOMER SMITH (Head Coach)
A.B., Princeton University
M.B.A., Stanford University
JOHN STIEGMAN
B.A., Williams College
FRANK GANSZ
B.S., United States Naval Academy
BRUCE TARBOX
B.A., Syracuse University
JOHN WADE
B.S., South Carolina State
TROY WINSLOW
B.S., University of Southern California
RICHARD BOWMAN
B.S., M.Ed., University of Oklahoma

Golf

CHRIS GURRY
B.A., Harvard University

Gymnastics

EDMUND CROSSLEY
B.S., M.Ed., Springfield College

Hockey

JOHN P. RILEY
B.A., Dartmouth College

Wrestling

LEROY ALTIZ
B.S., State College of Iowa
M.A., University of Iowa

Skiing

SGM HOWARD BROSEAU (Ret.)

Chief Athletic Trainer

EDWARD PILLINGS
• B.S., B.Ed., Washington State College
M.A., Columbia University

Lacrosse

ALFRED F. PISANO
B.A., Cortland State Teachers College
M.A., Pennsylvania State University

Pistol

MSG EMIL HEUGATTER

Rifle

SGM A. O'NEILL

Soccer

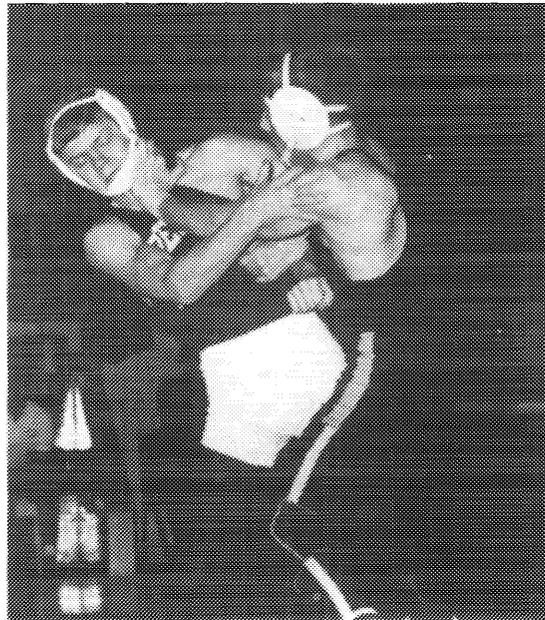
JOSEPH PALONE
B.S., Cortland State College

Squash and Tennis

RON HOLMBERG
B.A., Tulane University

Swimming

JOHN E. RYAN, JR.
B.S., M.A., Ohio State University

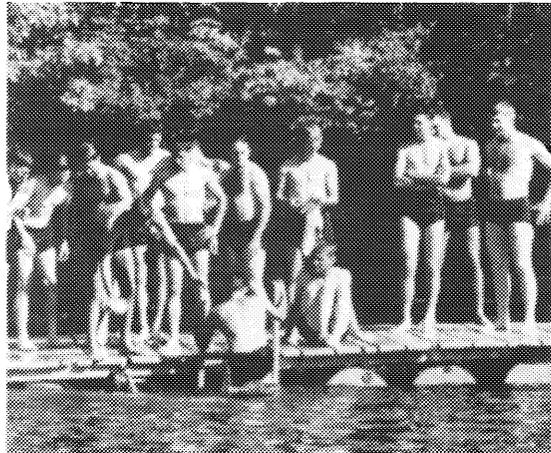
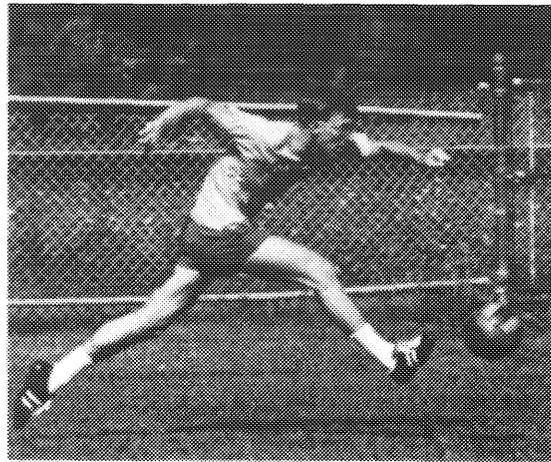


PROGRAM

The Director of Athletics is responsible to the Superintendent for the conduct of the intercollegiate athletic program and the operation of the Army Athletic Association (AAA). The Athletic Board, composed of five senior officers on active duty at West Point, serves as an advisory council to the Superintendent on policies pertaining to intercollegiate athletics. The intercollegiate athletic program is financed by the AAA, which is a self-supporting and nonprofit organization consisting of approximately 14,000 graduates of the Military Academy.

Army Teams are well known for their great spirit and desire. Nearly one-third of the Corps of Cadets engages in twenty competitive sports: football, 150-pound football, soccer and cross country in the fall; basketball, indoor track, wrestling, skiing, swimming, fencing, gymnastics, hockey, rifle, pistol and squash in the winter; and baseball, lacrosse, track, tennis and golf in the spring. Each fall, the Army Football Team plays before capacity crowds against some of the nation's top teams.

The schedule, which features games with teams from all sections of the country, is capped by the nationally televised sport spectacular — the Army-Navy Game.



1974 FOOTBALL SCHEDULE

SEPTEMBER

- 14 LAFAYETTE at West Point
- 21 TULANE at West Point
- 28 CALIFORNIA at Berkeley

OCTOBER

- 5 PENN STATE at West Point
- 12 DUKE at Durham
- 19 NOTRE DAME at Notre Dame
- 26 HOLY CROSS at West Point

NOVEMBER

- 2 VANDERBILT at West Point
- 9 AIR FORCE at West Point
- 16 NORTH CAROLINA at Chapel Hill
- 30 NAVY at Philadelphia*

*NAVY is host team.

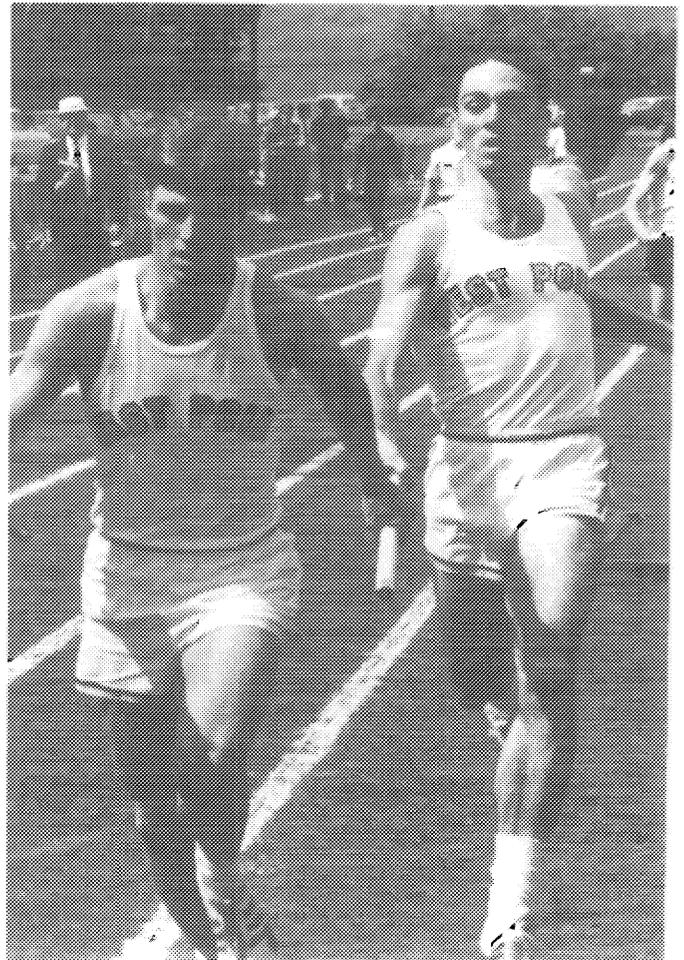
Many Army teams and individual cadets have participated in NCAA National Championships. The Army soccer team has participated in nine NCAA soccer tournaments in the past ten years. Army's lacrosse team has participated in both NCAA tournaments since their inception in 1971. In 150-pound football, the cadets have won or shared ten Eastern Intercollegiate Lightweight League titles in sixteen years. Other national honors have been won by the rifle and pistol teams. In addition, the Army basketball team appeared in the National Invitational Tournament in Madison Square Garden six times in nine years, reaching the semi-finals on five occasions. In the three seasons from 1968 to 1970, Army led the entire nation in team defense.

Cadets taking part in intercollegiate athletics are recognized as representatives of the Military Academy and the Corps of Cadets and consequently the teams increase the identity every cadet feels with all athletics. Athletic competition is important in the development of a

cadet, and every effort is made to provide excellent facilities, equipment and coaches.

Realizing the value of athletics to the Army, General Douglas MacArthur, who was Superintendent shortly after World War I, reorganized and strengthened the athletic system. "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," General MacArthur said.

Former President Dwight D. Eisenhower and Generals Omar N. Bradley and James A. Van Fleet are among the many distinguished wearers of the Army "A." Lt. Col. Pete Dawkins was an Army football captain, Heisman Trophy winner, All-American halfback and Rhodes Scholar. The late Lt. Col. Ed White, the first astronaut to walk in space, was a track star at the Military Academy and fellow astronaut, Col. Frank Borman, also won an Army "A."





Cadet Life

The United States Corps of Cadets Organization

The student body at West Point is called the United States Corps of Cadets. The approximately 4,000 cadets of the Corps are organized into a brigade of four regiments. A cadet regiment consists of three battalions containing three companies, for a total of 36 companies in the brigade. Cadets of all four classes are assigned to each company, giving each company a strength of approximately 105 cadets.

The officer and senior noncommissioned officer positions within the cadet brigade are filled by cadets selected from the First (senior) Class. In command of the brigade is the Brigade Commander (Cadet First Captain) who has a staff consisting of Deputy Brigade Commander, a Brigade Adjutant, a Brigade Operations Officer, a Brigade Supply Officer, a Brigade Activities Officer, and a Brigade Athletic Officer. The four cadet regimental commanders and twelve cadet battalion commanders have staffs similar to that of the Brigade Commander. A cadet company commander is in charge of each company with subordinate cadet officers and noncommissioned officers in charge of smaller elements.

Pay and Allowances

Cadets are members of the Regular Army and receive one-half of the basic pay of a Second Lieutenant with under two cumulative years' service. This amount exceeds \$3,600 per year from which they must pay for their uniforms, textbooks, and incidentals. Room and board, and medical care are provided. The pay and allowances received are adequate to cover all expenses.

Appointment upon Graduation

When a cadet has completed the course of instruction and meets required standards, he is, upon graduation, appointed a Second Lieutenant in the Regular Army of the United States.

Leadership Evaluation System

The Leadership Evaluation System supports the basic mission of the Military Academy in producing qualified leaders for the Army. The system is designed to assist in fully developing the leadership capabilities of each cadet to insure that each graduate meets the standards required of an officer. The system provides for evaluating the leadership performance and assessing the leadership potential of each cadet, counseling and



guidance in those areas where any weakness is detected, and separating any cadet who, over an extended period of time, proves incapable of achieving the required standards of leadership.

Leadership evaluation is accomplished through a program of objective ratings by officers and cadets which are combined to establish a relative standing for each cadet. These ratings are supplemented by descriptive comments regarding performance of specific duties and overall potential. The narrative ratings provide information regarding observed leadership strengths and weaknesses of each cadet and greatly assist the tactical officer in his counseling efforts. The tactical officer collates this information and holds a series of counseling sessions with each cadet. During these sessions he discusses the cadet's leadership performance and suggests possible means of improvement.

The Honor Code

The development of character and integrity in the members of the Corps of Cadets is a basic objective of the Academy. The Cadet Honor Code and System are officially recognized as primary means through which this objective is attained.

From the earliest days of recorded history it has been universally recognized that unquestioned integrity is an essential trait of the military leader. Colonel Sylvanus Thayer, the father of the Military Academy, determined that the Academy should produce leaders whose foundation was built on honor, integrated with a strong sense of discipline and excellence of knowledge. Since his day the Honor System has belonged to and been administered by the Corps of Cadets. General Douglas MacArthur, shortly after World War I, was instrumental in formalizing the Honor Code and System and making them officially sanctioned means of building character. Today, the Honor Code is a most cherished possession of the Corps of Cadets and of the "Long Gray Line" of graduates.

The Honor Code has never outgrown its original and simple meaning — that a cadet will not lie, cheat, or steal, or tolerate those who do. The Code requires complete integrity in both word and deed of all members of the Corps and permits no deviation from those standards. Not only is the cadet expected to tell the truth on all occasions but also to avoid quibbling or evasive statements. In the classroom a cadet does his own work. Under no circumstances will he take unfair advantage of his classmates. The maintenance of these high honor standards is the responsibility of each cadet, and each cadet is expected to report himself or any other cadet for violations of the Honor Code. These exacting standards are rigidly enforced, and any intentional violation by a cadet is cause for his separation from the Military Academy.

The Honor System is an integral part of the Honor Code and is the method by which the Honor Code is applied in the highly organized life of a cadet. As an example, cadets may account for their absence from their rooms simply by marking in their absence cards. This marking is accepted

as the cadet's word that his absence is authorized, and that he will remain within applicable limits. Cadets are also often required to indicate by signature that they have complied with official instructions. These devices are part of the Honor System that requires the cadet to make decisions based on his sense of honor many times a day during his 4 years at the Academy. In this respect the Honor System serves as a training vehicle to instill within each cadet the desire to abide by the precepts of the Honor Code.

For its success the Honor Code depends upon the Corps. The Cadet Honor Committee, elected by the Corps, monitors the operation of the Honor Code and System. It explains to the Corps the principles upon which the Code is based and guards against practices inconsistent with that Code. Thus, this Committee insures that the high standards of the Code are maintained and transmitted, undiluted, from class to class. Its procedures follow a set pattern, and its members have responsible authority. The Committee has no punitive powers, its functions being entirely investigative and advisory. If the Committee



reports a cadet to the Commandant for an honor violation, the Commandant takes appropriate official action to insure that the standards of the Code are upheld while protecting the rights of the cadet in accordance with the provisions of the Uniform Code of Military Justice.

One of the Honor Committee's most important tasks is to supervise the indoctrination of the new cadets in the principles of the Code. This indoctrination is both intensive and continuous and includes informal discussions as well as scheduled lectures. New cadets are expected to adhere to the same standards as other cadets under the Honor Code. It is soon apparent to new cadets that all members of the Corps share an inherent pride in upholding the exalted position of the Code. This observation, coupled with the indoctrination program, raises the varying standards of honor of an entering class to the uniformly high plane which the Corps has established and expects from its members.

The devotion of the Corps to the Honor Code is especially strong. In the opinion of both cadets and graduates, it is a particularly vital part of their education, training, and character-building at the Academy and makes a lasting impression on them.

TYPICAL DAILY SCHEDULE

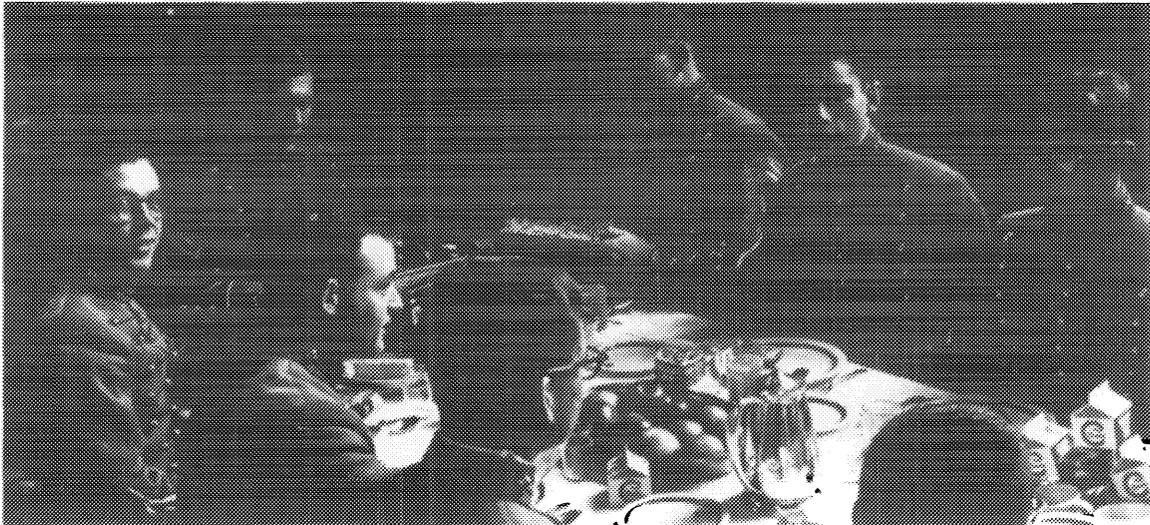
Morning:

6:15	Reveille
6:15-7:00	Breakfast
7:50-11:50	Class or study
12:15-1:00	Lunch

Afternoon:

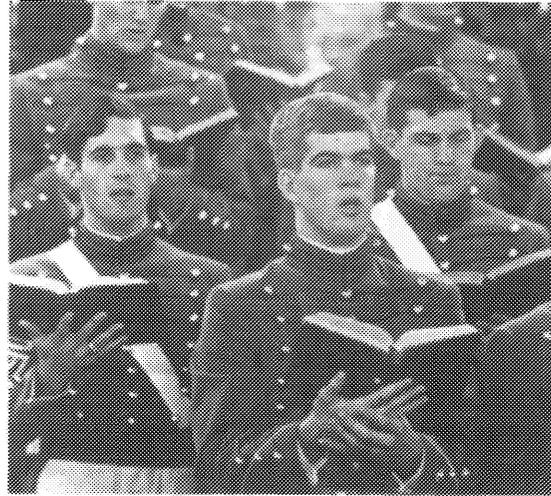
1:05-3:15	Class or study
3:15-6:00	Intramural/ intercollegiate athletics, or study time, parades, or extracurricular activities
6:15-7:00	Dinner
8:00-11:00	Study time
11:00	Taps. Late lights authorized for study purposes.

The schedule shown above is a typical daily schedule for a cadet during the academic year, September through May. Cadets also attend classes on Saturday morning. During the summer months, June through August, cadets take leave for approximately one month and devote the remaining time to military training.



RELIGIOUS ACTIVITIES

Protestant. Protestant services are held in the Cadet Chapel every Sunday during the academic year and out of doors during the summer months. The Reverend James D. Ford, B.D., is the Chaplain, USMA; the Reverends Richard P. Camp, Jr. and Nelson W. Koscheski, Jr., are his assistants; and Dr. John A. Davis, Jr., is Organist and Choirmaster. At the Morning Worship Service the form of worship is interdenominational in character. Among the religious activities in which cadets take part are the Cadet Chapel Choir, the West Point Sunday School of 300 children of the Post taught entirely by 100 cadet teachers, the Cadet Chapel Acolytes, a program of Morning Devotions conducted every weekday at 6:15 A.M., evening discussion groups and annual religious retreats.



Catholic. Catholic cadets attend Holy Trinity Chapel, which is the Catholic Chapel on the Post. The Reverend Robert F. McCormick is the Rector and the Reverends Thomas J. Curley and Paul J. Duff are his assistants. Each Sunday, Catholic members of the Cadet Regiments alternate in attending the early and late Masses to give opportunity for assisting at the late Mass. A Cadet Catholic Choir sings at the Masses and other liturgical ceremonies. Cadet lectors and servers assist at all Cadet Masses. Daily Mass is celebrated at 6:20 A.M. throughout the academic year. Confessions are heard on Friday, daily at Mass time, and as desired. A Cadet Cardinal Newman Forum meets each week. By means of lectures, instructions, and seminars, it treats of religion morals and philosophy. Cadets teach Sunday School every week to preschool and kindergarten children. Weekend retreats are also scheduled.

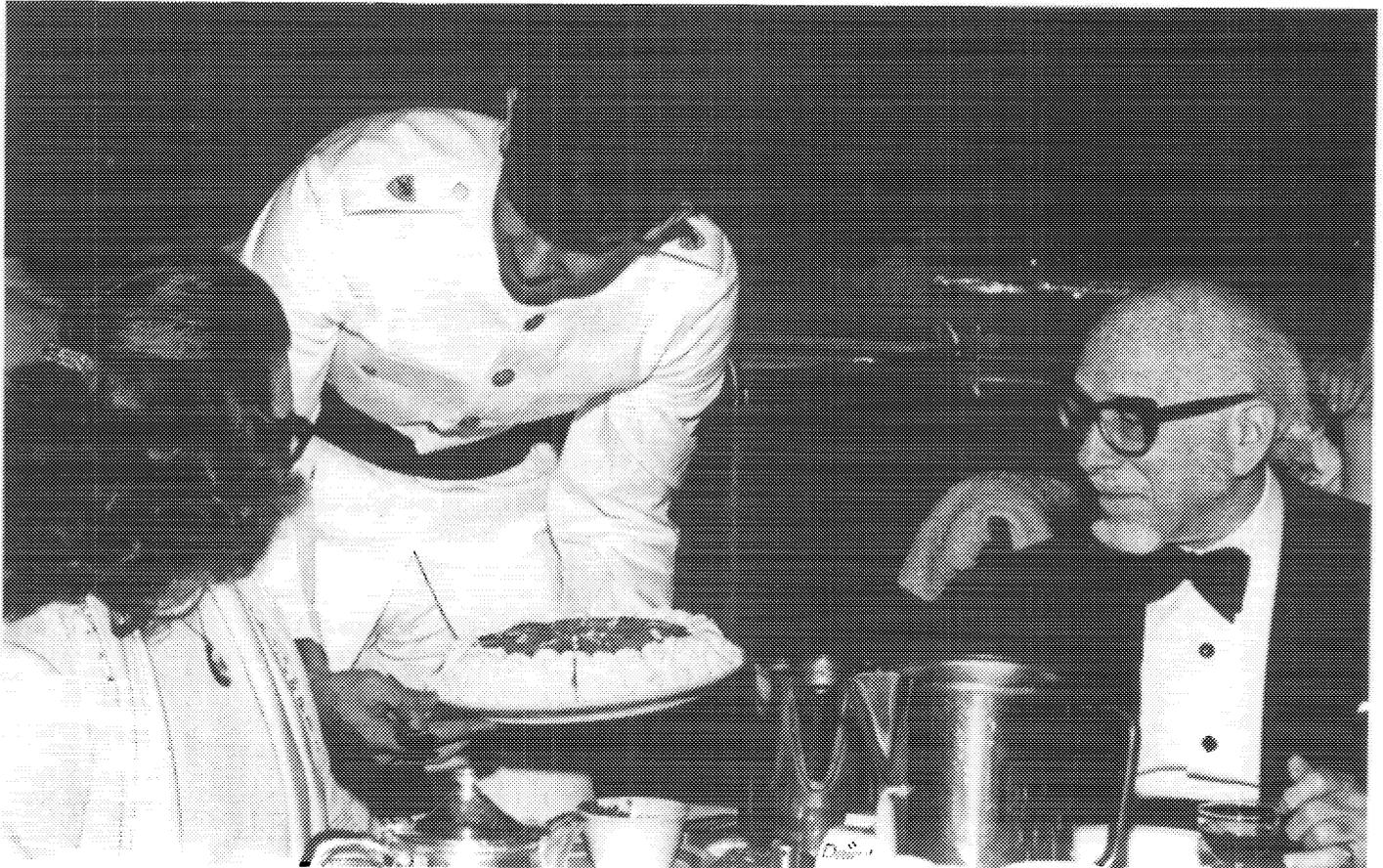
Jewish. Jewish worship services are held each Friday for cadets and Post personnel. Rabbi Avraham Soltes is the Jewish Chaplain. The Jewish Chapel Choir sings liturgical music at every service and takes trips to neighboring congregations. The Jewish cadets also participate in the reading of the liturgy and in the Torah service. Religious instruction for Post children of the Jewish faith is conducted by cadets on Sunday morning.

CADET EXTRACURRICULAR ACTIVITIES

A West Point cadet is one of the busiest college students in the nation. Yet, despite a tight schedule including studies, classes, parades, and other military functions, he manages to take advantage of the 73 extracurricular clubs and activities offered at the United States Military Academy.

As a future officer, the cadet must be a many-faceted individual. To cope with the complexity of modern warfare and the requirements inherent in leadership, cadets will need to acquire confidence and a working knowledge in a variety of fields. Extracurricular and recreational activities, in conjunction with the Military Academy's academic and military requirements, help give cadets the varied interest, knowledge, and experience in working with others needed for their future careers.

During the summer, facilities are provided for swimming and picnicking at Delafield Pond and Camp Buckner, and picnicking at Constitution Island. Picturesque Flirtation Walk winds for three-quarters of a mile along the majestic Hudson, offering a peaceful and shady retreat from the walls of the barracks. Cadets of the Third Class undergoing their military training at Camp Buckner during the summer months enjoy swimming, canoeing, fishing, skeet and trap shooting, water skiing and sailing. In the fall, the Corps takes one or more football trips to metropolitan areas. During the winter months, ice skating at Smith Rink and skiing at the Victor Constant Ski Slope are extremely popular. The snow-making capabilities, ski lifts, and ski trails are probably among the finest found on any campus in America. In addition, night skiing on the main slopes is available on the Military Reservation. Throughout the academic year, frequent hops



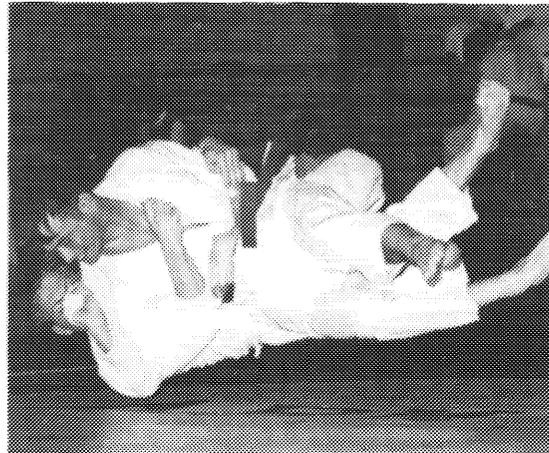
(dances) are held in the Gymnasium and Cullum Hall, and movies are shown in the various theaters. Prominent entertainers are frequently brought to the Academy for performances. A new Cadet Activities Building was completed in the spring of 1974. The Activities Building provides an auditorium with a 4,500 seating capacity, a large ballroom, a Hostess Office, a games area, and a snack bar.

In addition to the general recreational, entertainment and social activities, there are numerous organized and active extracurricular activities.



Academic Group

- Aeronautics and Astronautics Club
- Amateur Radio Club
- Astronomy Club
- Audio Club
- Behavioral Science Club
- Chinese Language Club
- Computer Forum
- Debate Council and Forum
- Engineering Forum
- Fine Arts Forum
- French Language Club
- Geology Club
- German Language Club
- Mathematics Forum
- Military Affairs Club
- Portuguese Language Club
- Rocket Society
- Russian Language Club
- Spanish Language Club



Academy Support Group

- Cadet Glee Clubs
- Information Detail
- Public Relations Council
- Scoutmasters' Council

Competitive Athletic Group

- Bowling Club
- Handball Club
- Judo Club



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- Karate Club
- Rugby Football Club
- Sailing Club
- Volleyball Club
- Water Polo Club

Corps Support Group

- Bugle Notes*
- Cadet Band
- Class Committees (4)
- Dialectic Society
- Hop Committees (4)
- Ring and Crest Committees (4)
- Hop Bands
- Howitzer*
- The Pointer*
- Rabble Rousers
- Slum and Gravy*
- WKDT Radio Staff

Military Skills Group

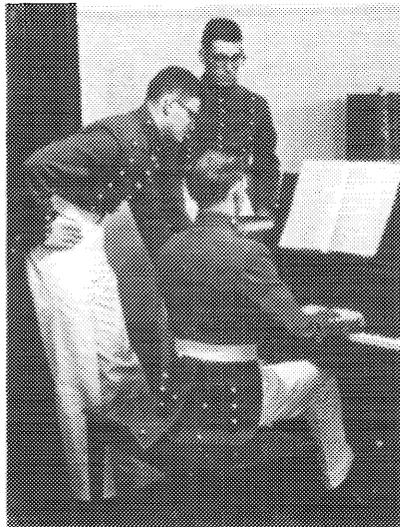
- Mountaineering Club
- Pistol Club
- Riding Club
- Rifle Club
- SCUBA Diving Club
- Skeet and Trap Club
- Sport Parachute Club
- Triathlon Club
- Marathon Team

Recreational Group

- Chess Club
- Cycling Club
- Outdoor Sportmen's Club
- Ski Club

Religious Participation Group

- Cadet Chapel Choir Acolytes and Chimers
- Cadet Chapel Sunday School Teachers
- Cardinal Newman Forum
- Catholic Chapel Choir and Acolytes
- Catholic Chapel Sunday School Teachers
- Fellowship of Christian Athletes
- Jewish Chapel Choir and Sunday School Teachers
- Protestant Discussion Group
- Other Religious Groups



The clubs under the Academic Group supplement the academic pursuits of cadets. The largest extracurricular activity at West Point is the Cadet Fine Arts Forum. Through a variety of seminars, cadets have the opportunity to expand their interests and academic studies in area such as archeology, ballet, theater, photography, sculpture and painting. In addition, the Forum sponsors many cultural projects at the Academy, including art exhibitions, classic films, displays, concerts and performances by well-known personalities. Another large and active club is the West Point Debate Council and Forum. Through participation, the future officer gets practice in public speaking and in the art of persuasion. The Student Conference of United States Affairs (SCUSA) held at the Military Academy brings together students and leaders from throughout the United States. The Cadet Band, known to the Corps as the "Rally Band," and a variety of hop combos are popular among those cadets who play musical instruments. For the singers, there are the nationally-famous Cadet Glee Club, the Chapel choirs and the Fourth Class Glee Club. Members of the Cadet Public Relations Council represent the Academy before various civic groups around the country. The Information Detail prepares news items for newspapers, radio and television stations. Cadets teach Sunday School for children of military personnel living at West Point. The Scoutmasters' Council annually hosts a Camporee which draws over 3,000 Boy Scouts to West Point.

Club teams have opened new and exciting fields for the cadets and the Cadets' accomplishments and recognitions are noteworthy. The Sport Parachute Team placed first in the NCAA National Championships, defeating 43 other teams. The Triathlon Team placed second in the nation, being defeated only by the U.S. Pentathlon Team. (The West Point Triathlon Team did, however, defeat the Canadian Pentathlon Team.) The Cadet Volleyball Team placed fourth in the NCAA Championships. The Cadet Water Polo Club completed a winning season and finished third in the Easterns. The Cadet Skeet and Trap Team placed second in the nation in international skeet

and fourth in trap shooting at the National ACU-I Tournament. The Rifle Club Team won the First Master title at the National Matches at Camp Perry, Ohio. Cadet Club Teams of a more regional nature also creditably represented USMA. The newly-formed Marathon Team competed in one event at Atlantic City and, in that race, qualified 12 of the 16 starting runners for starting position in the Boston Marathon. The Cadet Riding Team won several trophies in the Intercollegiate Horse Show Association, including the Heiberg Trophy for Horsemanship, the Eyster Trophy and the Novice Jumping Trophy.



Literary experience is another aspect of cadet extracurricular activities. Cadets publish their own yearbook, the *Howitzer*; their own monthly magazine, *The Pointer*; a small handbook called *Bugle Notes* to acquaint Fourth Classmen (freshmen) with customs, traditions, and history of the Military Academy; and *Slum and Gravy*, a monthly sports publication covering all of the Varsity, Intramural, and Club sports. WKDT, the Cadet AM/FM radio station, is fully equipped for voice broadcasting.

The Dialectic Society provides musical and acting outlets for cadets. Highlighting its annual activities is the time-honored "100th Night Show," presented, as the name implies, 100 nights before graduation of the First Classmen. The show is written, produced, and directed by the cadets, who also provide all the actors.

Student government activities include the Class Committees, Ring and Crest Committee, and the Hop Committees in each class.

Organized extracurricular activities are directed and administered almost entirely by the cadets, subject to the approval of the Commandant of Cadets. There is a volunteer Officer-in-Charge of each activity, who acts in an advisory capacity in addition to his other duties. Participation in these activities provides cadets an opportunity to acquire a wealth of knowledge and skills, and to develop leadership and administrative talents which subsequently will serve them well in their careers as Army officers.

The Cadet Activities Officer, a member of the Commandant of Cadets' Staff, in conjunction with the Cadet Hostess, helps plan the social and recreational programs for the Corps of Cadets. The Cadet Hostess also assists cadets in obtaining accommodations for their guests during the year.



THE CADET PUBLIC RELATIONS COUNCIL

The Cadet Public Relations Council sponsors cadet appearances at junior and senior high schools, before military and civic organizations, on radio and TV, and in newspaper interviews. Major programs are scheduled in conjunction with cadet leave periods. Cadets talk about their experiences and cadet life with students and counselors and make extensive use of slides and other visual aids. Members of the Council have been widely praised for their professional manner and their ability to relate to audiences of all types.

During the 1973-74 academic year, cadets made appearances in about 3,700 high schools and spoke to several hundred civic and military organizations. They also appeared on 225 radio and television programs and, in all, reached an audience of more than four million people.

Periods of major activity for the 1974-75 academic year are during Christmas Leave in December, and Spring Leave in March or April.

The Council also sponsors visits by cadets to a limited number of special events throughout the school year. These special programs are admissions-related or of significant public or community relations benefit to the Military Academy.

Requests for cadet speakers either for a regular program or for a special event should be addressed to Officer-in-Charge, Cadet Public Relations Council, Admissions, USMA, West Point, New York 10996 (Phone 914-938-2423) and must arrive not later than 30 days prior to the proposed engagement.

COUNSELING AND ADVISING

The Office of the Dean, the Academic Departments, the Department of Tactics, Chaplain, Surgeon, Treasurer, Registrar, and upper class cadets are available at all times to assist and offer guidance to cadets.

The Commandant is responsible for the overall counseling and administration of cadets. He exercises this function directly through Company Tactical Officers of the Department of Tactics, the Cadet Counseling Service of the Office of Military Leadership, the Director of Physical Education, Cadet Officers, the Cadet Hostess, and through referral to the academic counselors in the Office of the Dean, faculty members, Chaplain, Surgeon, or Treasurer. Each Company Tactical Officer is responsible for the administration, training, welfare, and morale of his cadet company. Through daily, personal contact, the Tactical Officer is able to provide advice and guidance in overcoming personal problems that do not require professional care. The Cadet Chain of Command is also extremely effective in dealing with cadet problems on a peer counseling basis.

Professional counseling and advising is likewise provided by the Cadet Counselors and the Cadet Chaplains. Assistance in Physical Education matters is provided by the Office of Physical Education Staff Officers assigned to each company as a guidance counselor. Assistance concerning social problems is available through the Cadet Hostess.

Career counseling is also the responsibility of the Commandant, jointly through the Company Tactical Officer and the Office of Military Instruction. The Career Branch of the Office of Military Instruction includes a senior branch instructor from each of the combat and combat support arms to facilitate career counseling prior to branch selection and commissioning for each graduating class. These senior branch instructors maintain liaison with the Officer Personnel Directorate, Headquarters, Department of the Army, on assignment policies, procedures, and service school requirements to insure that accurate and current career information is always available.

The Dean of the Academic Board is responsible for counseling cadets on concentration of electives, overload courses, and elective courses selection and changes; for course scheduling; and for coordination with the departments on



problems of scheduling, eligibility and course changes.

The academic departments are responsible for counseling cadets on eligibility for validation and enrollment in advanced courses and are available for counseling on concentration of electives, overload courses, and elective course selections and changes.

The Director of Admissions, assisted by his Admissions Officers, is responsible for advising and counseling departing cadets relative to enrollment at other colleges.

The Treasurer, USMA, will, upon request, provide assistance with regard to financial matters.

The Surgeon, USMA, will, upon request, provide counseling or advisory assistance with regard to psychological or psychiatric problems.

RESIGNATIONS AND SEPARATIONS

GENERAL POLICY

A cadet who is separated (separation refers to the voluntary or involuntary disenrollment of a cadet) and who entered the Academy from enlisted status in the Regular or Reserve Component of any service will revert to his former status under the appropriate statutory provisions. However, completion or partial completion of a prior service obligation in no way exempts a separated cadet from acquiring a new active duty obligation through the policy outlined below.

A cadet who is separated and who entered the Academy from a commissioned status may apply for the commission he relinquished upon entry to the Academy.

A cadet who is separated from the Academy because of physical disability or because of demonstrated unsuitability or unfitness for military service will be discharged in accordance with the current Army Regulations.

When a cadet who entered from a civilian status is separated from the Academy, his Selective Service Board will be notified of his change in status.



SPECIFIC POLICY

Fourth and Third Classmen (freshmen and sophomores): Any Fourth or Third Classman (or a Second Classman [junior] prior to the beginning of the Second Class academic year), except as outlined in the general policy section above, who is separated or whose resignation is accepted will be discharged from the service in accordance with current Army Regulations. The resignation will be accepted when found to be in the best interests of the service.

Second and First Classmen (juniors and seniors): Any Second Classman (with the commencement of the Second Class academic year) or First Classman who is separated prior to commissioning, except for physical disability, unfitness, or unsuitability, will normally be transferred to the Reserve Component in an enlisted status and will be ordered to active duty for not less than two years nor more than four years. A cadet who is separated prior to completion of his third academic year will be recommended for two years of enlisted active duty. A cadet who completes his third academic year will be recommended for three years of enlisted active duty. A cadet who completes his fourth academic year and declines acceptance of commission will be recommended for four years of enlisted active duty. When separation occurs as a result of deficiencies which are not considered willful, the enlisted active duty provisions may be waived.



Service Life

The mission of the United States Military Academy is to develop within each cadet those qualities and attributes essential to his progressive and continued development as a commissioned officer in the Regular Army of the United States, a profession endowed with rich tradition and heritage. Graduation from the United States Military Academy is but the first step in the mental, moral, physical, and professional preparation of this officer.

An officer's military career will include assignments which provide increasingly challenging leadership responsibilities. These assignments will be augmented with postgraduate military and civilian schooling. The assignment pattern is designed to prepare him for his role as a senior officer at a level which will make maximum use of the training and experience received throughout his career.

An officer leads, teaches, guides, counsels. He works with men and ideas. He is in a demanding and responsible field which involves advanced technology, sophisticated weapons, and the

international implications of many of his decisions. As a result, the officer today must have a higher intellectual capacity and educational level than ever before.

An officer is given major responsibility at a much earlier age than his contemporaries in most comparable civilian careers. A general career plan consists of four major periods covering thirty years of service.

Basic Military Development

This period includes the first eight years of commissioned service. It is during this period that the officer becomes well experienced in the tactics, techniques, and technical requirements of his basic branch. He will receive basic schooling, specialist schooling such as Airborne, ranger, or aviation training, serve as a combat arms troop leader, and serve as an instructor. More importantly, he will gain practical leadership experience in the techniques of commanding troops. The early years are considered critical in an officer's

career for it is at this time that he develops the lasting traits, attitudes, standards of performance, and sense of duty which will influence his contribution throughout his entire military career. In addition, there is an opportunity for the officer to seek an advanced degree. Approximately 75-80 per cent of the officers in the recently graduated classes can expect to attend advanced civil schooling, depending on service requirements for specialized skills and education.

Intermediate Professional Development

This period normally includes the ninth through the fifteenth year of service. Troop command, staff assignments, schooling, and a variety of assignments of all levels of command typify this period. Eligible officers may attend the Command and General Staff College, the Armed Forces Staff College, and, if not already attended, graduate civil school. This period is designed to broaden the officer's understanding of the overall role of the United States Army and to further his professional development.

Advanced Development

This period usually includes the sixteenth through the twenty-third year of service. The officer will be performing in high level staff and command positions during these rewarding years. Out-

standing officers will be offered the opportunity to attend senior service schools such as the Army War College, the National War College, the Industrial College of the Armed Forces, or one of the three foreign War Colleges. During this period truly outstanding officers are identified and selected for promotion to the grade of General Officer.

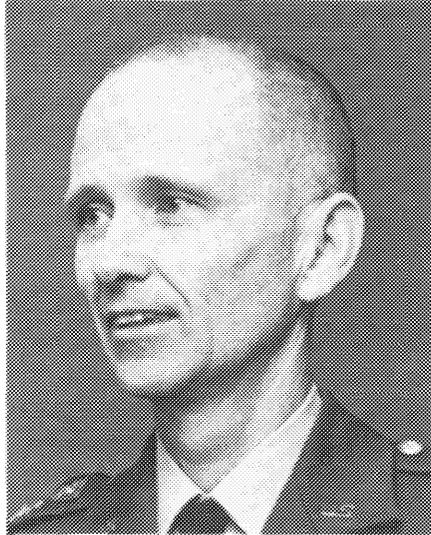
Major Professional Contribution

This period normally includes the twenty-fourth through the thirtieth year of service. It is during this period, when the officer is at the peak of his military career, that he makes his major professional contribution. His command and staff positions at this time normally will be of the highest responsibility determined by the officer's experience and ability.

The entire military career is one of challenge, satisfaction, and service to country and fellow man. During periods of national emergency the professional officer provides the leadership for which he has been educated and trained, while in time of peace he is the steward of the nation's preparedness. A life of service extends the Officer to the limit of his abilities, provides the opportunity to assume positions of important leadership, and instills a sense of pride in the role the officer plays in the Army's portion of our national defense.



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Director Institutional Research

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 B.S., United States Military Academy

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 M.A., Xavier University
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MR. CLAUDE F. BRIDGES
 B.S., M.A., University of Florida

MR. JOHN W. HOUSTON
 B.S., St. Lawrence University

Data Support Branch

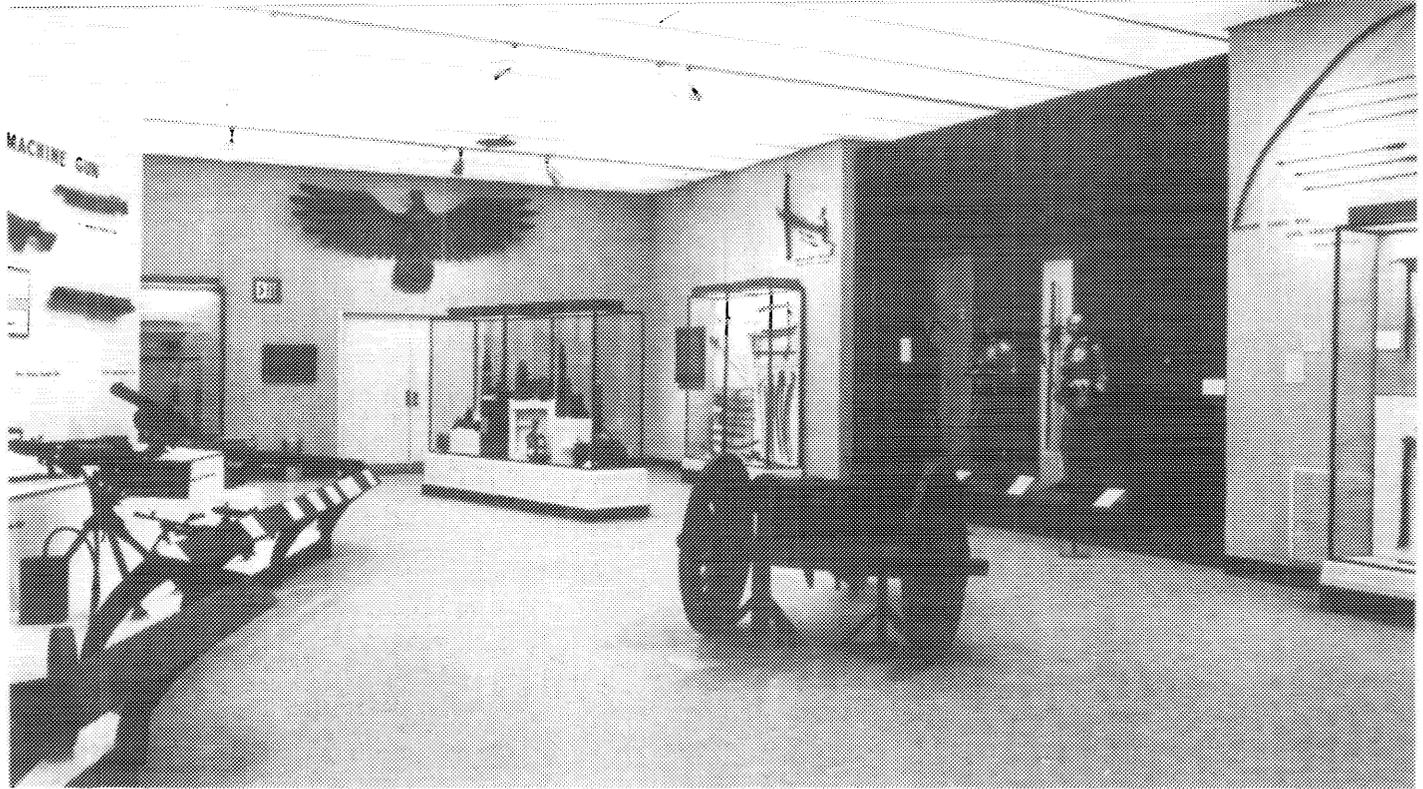
MAJ ALEXANDER H. EVANS
 B.S., United States Military Academy
 M.B.A., George Washington University

MR. DONALD LEECH
 B.S., Geneva College

MS. BETSY L. SMITH
 B.S., Mary Washington College

The Office of The Director of Institutional Research, a part of the USMA Special Staff, conducts institutional research projects for the Superintendent and supports institutional research conducted by other activities of the United States Military Academy. The primary research program concerns cadet recruitment and selection, evaluating cadet performance, and doing follow-up studies of graduate performance. Specifically, the program includes a continual evaluation of admissions criteria as they are related to cadet performance, studies of changes in cadet interests, values and motivation of cadets while at the Academy, analysis of environmental forces at the Academy, and studies of the impact of the Academy on the success of the graduates. The Office also conducts smaller applied research studies into other appropriate areas of inquiry to answer specific questions.

The Office of The Director of Institutional Research maintains a central library of institutional research completed at the United States Military Academy and acts as a clearing house for this information. The Office maintains a central file of information regarding candidates, cadets, and graduates and provides technical assistance and services to officers, cadets, and other researchers at the Academy. Cadets with curricular or other requirements involving research are authorized to seek assistance from the Office in accordance with guidelines established by the department concerned.



The Museum

Director

MR. RICHARD E. KUEHNE
B.A., Amherst College

Curator of Design

MR. RAY W. MONIZ
B.F.A., Syracuse University

Museum Curators

MR. ROBERT W. FISCH
MR. MICHAEL J. McAFEE
B.A., M.A., Ohio University

Museum Specialist

MR. WALTER J. NOCK
B.A., Fairleigh Dickinson University

Administrative Assistant

MRS. LEONA P. PATTON

The West Point Museum occupies the first and second floors of the southwest portion of Thayer Hall, one of the main academic buildings. Its galleries and special displays are open without charge to the public daily, from 10:30 a.m. to

4:20 p.m. throughout the year. The Museum is closed only on Christmas and New Year's Day.

Adjacent to the public galleries are storage and research rooms maintained by the Museum to carry out its primary duty of supporting academic and military education of the cadets. To this end it maintains a continuous series of changing exhibits in cadet areas, arranges lectures and demonstrations, and opens its collections for loans to instructors and cadets. It maintains a considerable display of portraits and paintings, battle flags and other exhibits in various buildings on the post. Some of these paintings and flags can be seen by the public in the Library, the Cadet Chapel, and in Grant Hall.

The West Point Museum was established in 1854; its collections date back to 1777. After the Battle of Saratoga in October 1777, much of the ordnance captured from the British was sent to West Point. Part of the famous Great Chain which stretched across the Hudson at West Point to bar navigation of the river to British men-of-war was also stored here.

Throughout the first half of the 19th century, the custom of sending trophies of war and objects of national historic interest to the Military Academy was maintained. In 1843, for example, the Secretary of the Treasury presented West Point with a brass culverin six pounder that had been given to the Continental Congress by Lafayette. After the close of the Mexican War in 1847, Gen. Winfield Scott sent large numbers of captured flags, cannon, and other war trophies to the Military Academy. In 1848, the Secretary of War formally directed, in the name of the President, that West Point be the "depository of the trophies of the successful victory of our arms in Mexico."

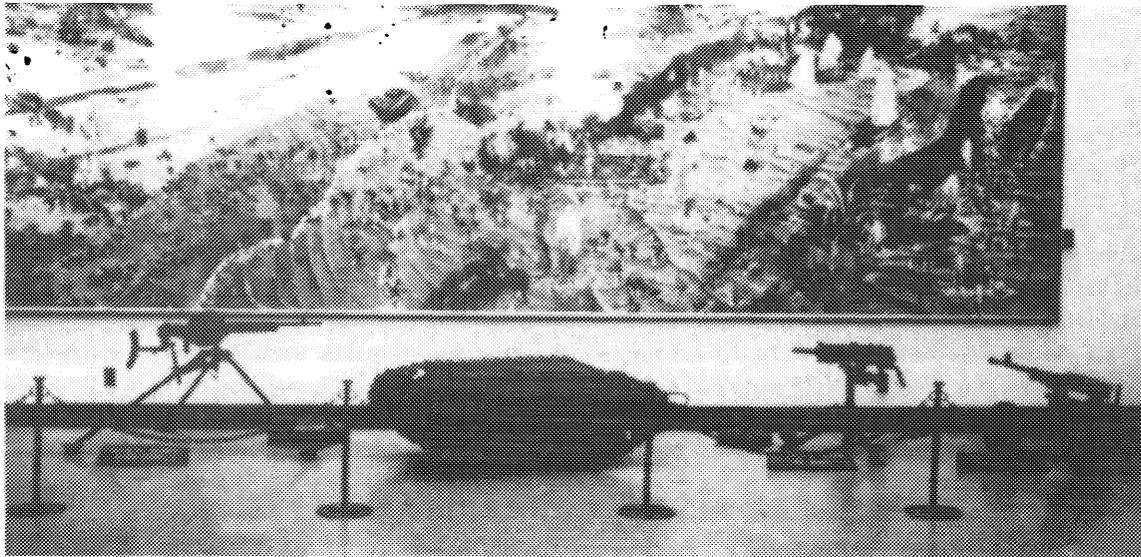
West Point authorities realized that permanent provision was needed for the growing collections, and, in 1854, officially created the Ordnance and Artillery Museum, establishing it on the third floor of the Academy, a building erected in 1883 on the site of the present East Cadet Barracks. Custodianship of relics; however, was not the new museum's only mission; for most of the next century it served as the laboratory for cadet instruction under the Department of Ordnance.

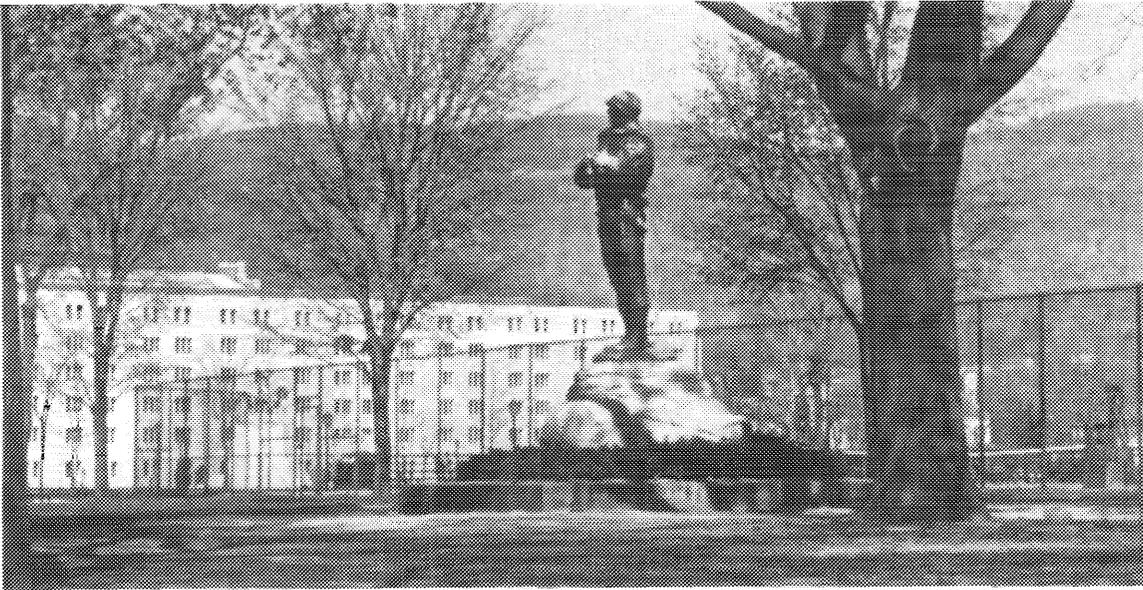
In 1909, the Museum was moved to the Administration Building where it remained until 1958. It was removed from the Department of

Ordnance in 1948 and was given independent status. A fulltime director was appointed in 1949 and was assigned a professional staff.

The West Point Museum has, perhaps, the largest collection of military items in the Western Hemisphere. Unlike most military museums, the story it tells is not confined to a national one. One gallery is devoted to the development of military instruction and the art of war from the days of the Romans to the present; others deal with ordnance, logistics, medals and decorations and kindred aspects of the military history of the Western World. The visitor is introduced to the important developments in tactics, to the Great Captains of History, and to the everyday life of the soldier.

The Museum exhibits a number of dioramas and full-scale replicas. Visitors may view part of an early 19th century frontier stockade, a portion of a World War I trench, or a World War I staff car placed in a typical French rural scene. Dioramas show important episodes in battles ranging from Cynoscephalae (197 B.C.) to Gettysburg (1863). The West Point Museum also makes use of its collections to interpret social and revolutionary changes in both European and American History.





Alumni Organizations

ASSOCIATION OF GRADUATES

The Association of Graduates, USMA, is a voluntary membership organization open to all graduates of the Military Academy and to former cadets who served not less than one academic term at the Academy. Over 97 per cent of the 22,905 living graduates, and many former cadets who did not graduate, are members.

The Association was founded at New York City in 1869 under the personal leadership of Brig. Gen. Sylvanus Thayer, USMA 1808, and Maj. Gen. Robert Anderson, USMA 1825, hero of Fort Sumter. Annual meetings have been held at West Point during June Week since 1870. Its purpose is "To acquire and disseminate information on the history, activities, objectives, and methods of the Military Academy; to acquire and preserve historical materials relating to that institution; and to encourage and foster the study of military science there by worthy young men."

The Bureau of Internal Revenue has ruled that the Association is tax-exempt and all gifts, contributions, donations and bequests thereto are likewise exempt from taxation. The Association of Graduates is the only organization through which alumni as a body can contribute their time, effort, and money toward the enhancement of their Alma Mater. Gifts to the Association either support operating expenses or they are earmarked for the Endowment Fund. Funds invested by the Endowment Fund work for the Military Academy and the Association in perpetuity.

A major program of the Association is its support and administration of the West Point Fund. Established in 1961, the objective of the West Point Fund is to obtain from private donations, gifts, and bequests, the sums needed to undertake projects benefiting the Corps of Cadets and the Military Academy for which appropriated fund support is not available. Since its inception the Fund has made possible a number of additions to programs, equipment and facilities, and other improvements at the Academy, ranging from

minor items of equipment and cadet program support to major facilities and activities.

Contributions to the fund, whether cash or securities, go directly to the Association of Graduates, Inc., and receive the favorable tax deductibility provided for in Section 170 of the Internal Revenue Code. The Fund does not normally hold or invest in securities; hence, all such gifts are usually, as a matter of policy, converted to cash assets immediately upon receipt.

Conditional gifts or bequests are accepted only if their provisions are acceptable to the Military Academy. Unrestricted gifts are preferred. Their use is governed by action of an Advisory Committee and the Superintendent. The Advisory Committee is composed of: the Dean of the Academic Board, the Commandant of Cadets, the Chief of Staff, USMA, the President of the Post Planning Board, the Chairman of the Museum and Memorialization Committee, a representative of the Chief of Staff, U.S. Army, the Director of Development of the Association of Graduates, and the Chief, Alumni Affairs and Gifts Program, USMA.

With the support of the Association four annual events have grown to become important traditions. At the Alumni Parade in June Week the Long Gray Line, led by the Superintendent, the President of the Association of Graduates, and the Oldest Graduate Present, marches from Cullum Memorial Hall to Thayer Monument. There, in the presence of the cadets and visitors, homage is paid to the "Father of the Military Academy" and to the memory of those graduates who died during the preceding year. It has been said that this gathering of alumni represents, in the persons of those attending, more United States history than any other group of similar size.

Homecoming Day is celebrated annually in the fall at one of the home football games. This occasion, which was first established in 1958, is the scheduled reunion period for the more junior classes, and it affords alumni a second annual opportunity to visit their Alma Mater and renew old acquaintances. In addition to the football game, there is a Thayer Monument ceremony and a review in honor of alumni by the Corps of Cadets.



Founders Day, 16 March, is celebrated at West Point and at over 100 other locations throughout the world. These annual celebrations, supported by the Association of Graduates, traditionally include a dinner, attended by all alumni within commuting distance, and speeches by the oldest and youngest graduates present.

Each year since 1958 the Association of Graduates has presented the Sylvanus Thayer Award, a gold medal, to the United States citizen whose record of service to his country exemplifies devotion to the principles expressed in the motto of West Point -- "Duty, Honor, Country." Recipients of the award have been Dr. E. O. Lawrence in 1958, John Foster Dulles in 1959, Henry Cabot Lodge in 1960, Dwight D. Eisenhower in 1961, Douglas MacArthur in 1962, John J. McCloy in 1963, Robert A. Lovett in 1964, Dr. James B. Conant in 1965, Carl Vinson in 1966, Francis Cardinal Spellman in 1967, Bob Hope in 1968, Dean Rusk in 1969, Ellsworth Bunker in 1970, Neil A. Armstrong in 1971, William Franklin Graham in 1972, Omar N. Bradley in 1973, and the Honorable Robert D. Murphy in 1974.

Other major programs of the Association include maintenance of biographical files on all graduates; publication of necrologies and class reports in *Assembly*; receipt and disposition of historical items; assistance in establishment and support of West Point Societies; maintenance of an up-to-date list of addresses; correspondence concerning graduates; presentation of awards to cadets; selection of the person to receive the Sylvanus Thayer Award; sale of USMA memorabilia; and organization of alumni activities at West Point.

Information is disseminated through two publications published by the Association. The annual *Register of Graduates and Former Cadets* includes a summary of each graduate, where he is and what he is doing. The quarterly magazine *Assembly* gives current information about the Academy and its graduates.

The Association's administrative organization consists of a President; an Executive Vice-Presi-



dent, who is also Secretary-Treasurer, a Director of Publications, a Director of Development, and 36 Trustees, 12 of whom are elected annually for terms of 3 years. The Association's office is located in Cullum Memorial Hall. Additional information on the Association of Graduates, its programs and activities may be obtained by writing the Executive Vice-President, Association of Graduates, West Point, N.Y. 10996.

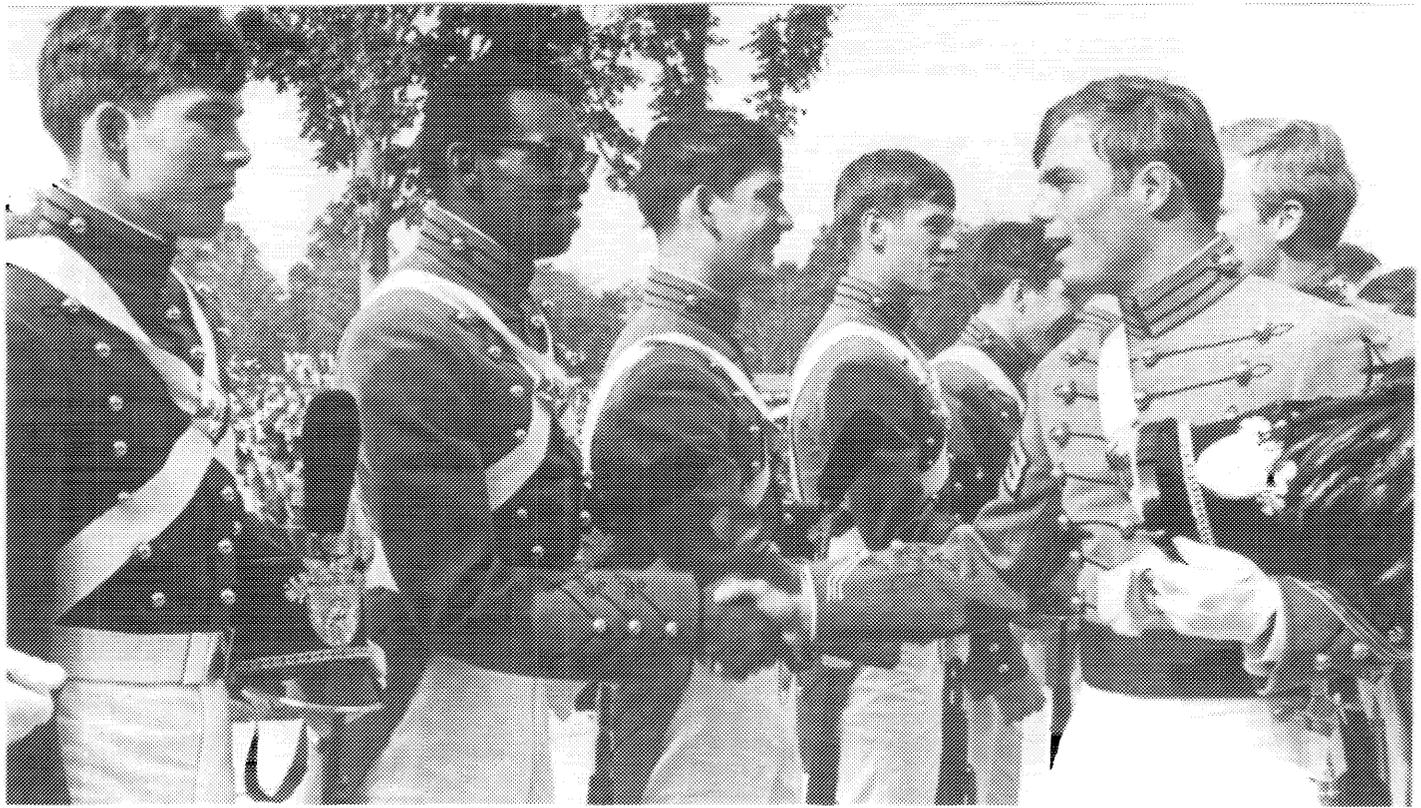
Cooperating with the Association are the following autonomous West Point Societies:

Alabama	Georgia
Alabama	Atlanta
(Birmingham)	Columbus
Fort McClellan	(Fort Benning)
Mobile	Savannah
Tennessee Valley	Great Britain and Ireland
(Huntsville)	Hawaii
Arizona	Hawaii (Honolulu)
Phoenix	Illinois
Southern Arizona	Chicago
(Tucson)	Indiana
California	Indianapolis
Los Angeles	Kentucky
Monterey Peninsula	Bluegrass
(Monterey)	Kentucky (Louisville)
San Diego	Louisiana
San Francisco Bay	Mid-Gulf (New Orleans)
Area	Maryland
Colorado	Maryland (Baltimore)
Denver	Massachusetts
Pikes Peak Region	New England
(Colorado Springs)	(Boston)
Connecticut	Michigan
Connecticut	Michigan (Detroit)
(Hartford)	Minnesota
District of Columbia	Minnesota
District of Columbia	(Minneapolis)
Florida	Missouri
Canaveral	Kansas City
Central Florida	St. Louis
(Orlando)	Nebraska
Florida West Coast	Omaha
(Tampa)	New Jersey
North Florida	Central New Jersey
(Jacksonville)	(Fort Monmouth)
South Florida (Miami)	New Mexico
	Albuquerque

New York	(Harrisburg)
Capital District	Philadelphia
(Albany)	Western
Ithaca	Pennsylvania
New York	(Pittsburgh)
(New York City)	Philippine Islands
Rochester	Philippines (Manila)
Western New York	Puerto Rico
(Buffalo)	South Carolina
North Carolina	Charleston
Western North	Columbia
Carolina	Tennessee
(Asheville)	East Tennessee
Piedmont	Middle Tennessee
North Dakota	West Tennessee
North Dakota	Texas
(Bismarck)	Central Texas (Austin)
Ohio	El Paso Area
Central Ohio	Houston
(Columbus)	North Texas (Dallas)
Cincinnati	South Texas
Cleveland	(Fort Sam Houston)
Northwestern	West Texas (Midland)
Ohio (Van Wert)	Thailand
Dayton	Venezuela
Oklahoma	Venezuela (Caracas)
Central Oklahoma	Virginia
(Oklahoma City)	Hampton Roads
Eastern Oklahoma	(Hampton)
(Tulsa)	Washington
Oregon	Puget Sound (Seattle)
Portland	Wisconsin
Pennsylvania	Wisconsin
Central Pennsylvania	(Milwaukee)

THE WEST POINT ALUMNI FOUNDATION

The West Point Alumni Foundation, Inc., is a nonprofit, tax-exempt educational institution-support organization whose objectives are designed to contribute to the welfare and enrichment of the United States Military Academy and the Corps of Cadets. The Foundation was chartered in the State of Maryland in 1945 and maintains an office at West Point. Its operations are directed by a Board of Managers composed of distinguished alumni.



Board of Visitors

The Board of Visitors to the United States Military Academy came into being not long after the founding of the institution itself. On 1 July 1815, the Secretary of War, William H. Crawford, approved "A Regulation for the Government of the Military Academy providing for the appointment of a Board to consist of five "competent gentlemen," under the presidency of the Superintendent. The Board was instructed to attend each of the annual and semi-annual examinations at West Point and report thereon to the Secretary.

At present the Boards are appointed under the provisions of an Act of Congress approved 29 June 1948. This act specifies that a Board of Visitors shall visit the Military Academy each year and inquire into the state of morale and discipline, curriculum, instruction, physical equipment, fiscal

affairs, academic methods, and other matters relating to the institution which the Board may decide to consider, and submit a written report to the President of the United States giving its views and recommendations pertaining to the United States Military Academy. The personnel of the Board, the Act provides, shall be as follows:

- a. The Chairman of the Committee on Armed Services of the Senate, or his designee.
- b. Three other Members of the Senate designated by the Vice President or the President pro tempore of the Senate, two of whom are members of the Committee on Appropriations of the Senate
- c. The Chairman of the Committee on Armed Services of the House of Representatives, or his designee
- d. Four other Members of the House of Representatives designated by the Speaker of the House of Representatives, two of whom are members of the Committee on Appropriations of the House of Representatives
- e. Six persons designated by the President.

BOARD OF VISITORS 1973

From the United States Senate

Honorable BARRY GOLDWATER, Arizona
(representing Honorable JOHN C.
STENNIS, Chairman of the Committee
on Armed Services)
Honorable JOSEPH R. BIDEN, Jr. Delaware
Honorable GALE W. McGEE, Wyoming
Honorable THEODORE F. STEVENS, Alaska

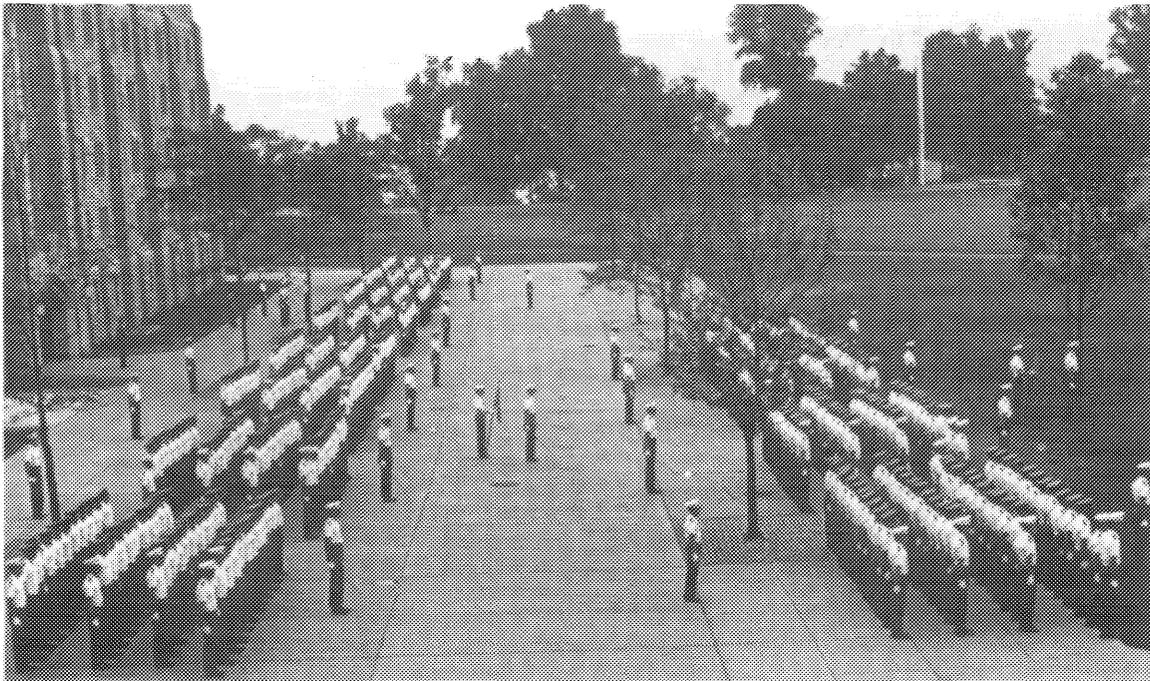
*From the United States House of
Representatives*

Honorable BENJAMIN GILMAN, New York
Honorable CLARENCE D. LONG, Maryland
Honorable WILLIAM E. MINSHALL, Ohio
Honorable JOHN M. MURPHY, New York

*Appointed by the President of the United
States*

Dr. D. WHITNEY HALLADAY, PRESIDENT,
Texas A&I, Corpus Christi, Texas
(appointed in 1971 to serve through
1973)

General A.C. WEDEMEYER, USA (Ret),
Friends Advice, Boyds, Maryland
(appointed in 1971 to serve through
1973)
Mr. LEONARD D. HENRY, AVCO Corporation,
New York City
(appointed in 1972 to serve through
1974)
Mr. LAWRENCE F. LEE, JR.,
Chairman of the Board
Peninsular Life Insurance Company,
Jacksonville, Florida
(appointed in 1972 to serve through 1974)
Major General GEORGE H. OLMSTED, USAR (Ret),
President and Chairman of the Board,
International Bank of Washington
(appointed in 1973 to serve through
1975)
Major General LEIF J. SVERDRUP, USAR (Ret),
Chairman of the Board, Sverdrup and
Parcel and Associates, Inc., St. Louis,
Missouri
(appointed in 1973 to serve through 1975)





Appendixes

OATH OF ALLEGIANCE

Candidates admitted to West Point will join the Corps of Cadets in July 1975. They will be required to sign the Oath of Allegiance, a copy of which follows.

I. Oath of Allegiance

I,

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

II. Engagement of Service

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

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

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

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

III. Marital Status

I am not married and never have been married. Furthermore, I understand that a Cadet who marries prior to graduation will be separated from the Academy.

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

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

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

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

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

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

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

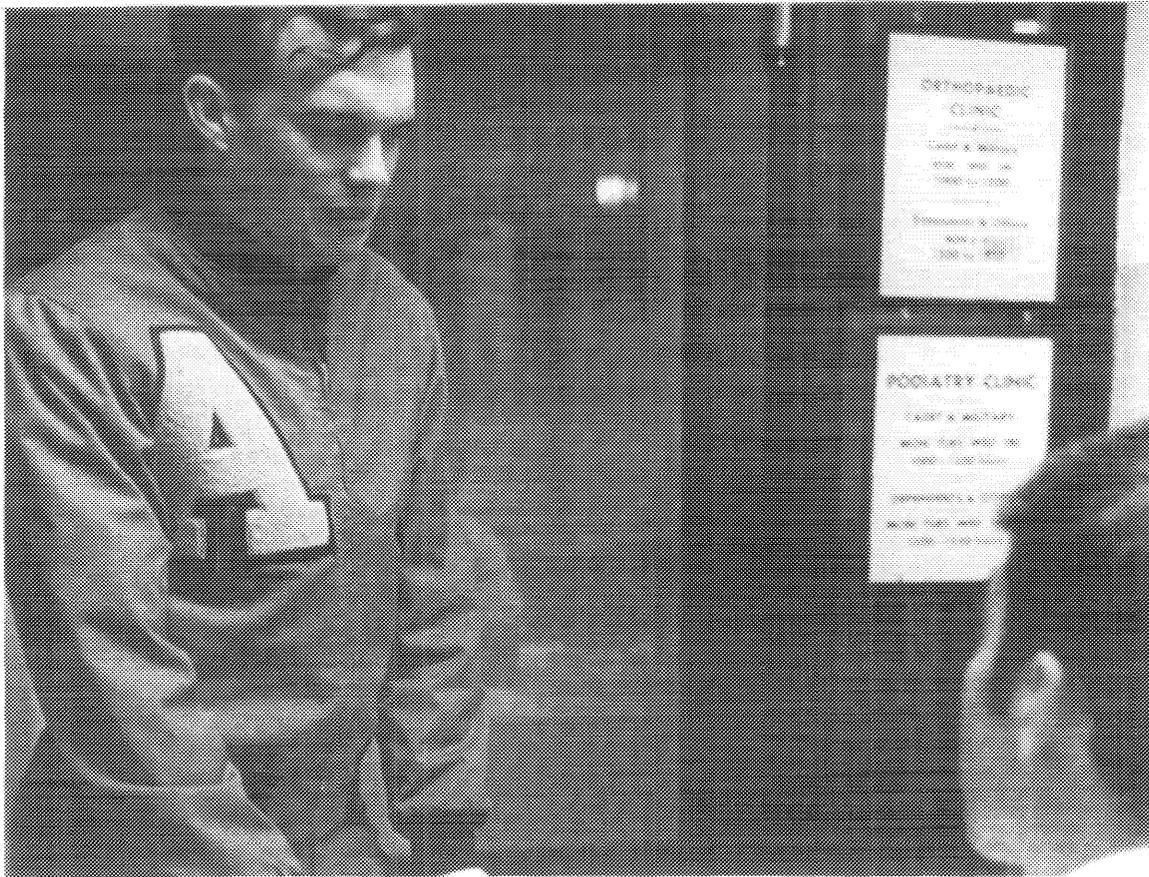
(2) When separation occurs as a result of deficiencies which are not considered willful, the active duty provision may be waived by the Department of the Army, upon recommendation of the Superintendent.

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

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

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





MEDICAL STANDARDS

Medical Examination and Disqualifications

The Qualifying Medical Examination is the means whereby an individual's medical qualification for appointment to the service academies is determined. Medical examinations are conducted at designated examining centers (Army, Navy, Air Force) located throughout the United States and at designated overseas bases. One general standardized examination is used by all service academies. Examinations to be considered as final qualifying examinations must be taken on or after 1 June of the year preceding the year of admission. Examinations taken prior to 1 June of the year preceding the year of admission are acceptable only as preliminary examinations. Therefore, individuals who are not selected for admission in a given year must

retake the Qualifying Medical Examination should they become candidates in succeeding years.

Review Procedures

The examining facility will send the Qualifying Medical Examination results to the Department of Defense Medical Review Board (DODMRB) which will evaluate the results and furnish the Military Academy with a determination of the candidate's medical status. The Military Academy will then notify the candidate and his nominating authority.

Medical qualification decisions made by the reviewing authority are final. In this respect, where the disqualifying defect is subject to medical or dental correction, the candidate may be temporarily rejected subject to later certification by a physician or dentist that the defect has been corrected with complete restoration of function. Such certification must be in the hands of the reviewing authority as soon as possible, but in any case, no later than 15 March.

Applicant Actions

It is strongly recommended that applicants arrange for another person to drive them to the testing center. Certain tests may preclude driving for several hours after the examination is completed and result in unnecessary delays. *Applicants who wear contact lenses must remove them a minimum of 21 days prior to the examination.*

Candidates are encouraged to undergo a thorough medical and dental examination by their private physician and dentist before pursuing nomination and before taking a Qualifying Medical Examination. This will serve to identify obviously disqualified applicants or those who may have remediable defects which must be corrected, at the candidate's expense, prior to taking the Qualifying Medical Examination.

It must be clearly understood that a medical and dental examination by the applicant's civilian physician and dentist is a preliminary and exploratory one *only* and cannot be considered a qualifying examination. Only examinations given at Army, Navy or Air Force medical facilities are acceptable as a qualifying examination.

Special Medical Examination**Considerations and Disqualifications**

Disqualifying medical conditions as set forth below are for use as a guide by the physician and dentist in determining medical disqualifications or remediable medical and dental conditions. Reference should be made to the regulations of the applicable service for specific details as to standards of medical fitness as pertain to the Army, Navy, or Air Force.

Medical History

The medical history will be compiled with particular care with elaboration where indicated. Full and complete documentation of all illnesses, injuries and operations which the applicant may have incurred is absolutely necessary since failure to do so may result in disappointment when medical disqualification is determined later. A history of familial diseases will be thoroughly investigated.

Medical care which has significantly affected the applicant's medical status must be documented and supported by statements from the attending physician or from hospital records concerning the medical care.

Height and Weight Standards

The weight standards as noted are necessarily arbitrary and as a general rule will not be waived. However, when a generally large bony structure and large well-distributed and proportioned muscle masses with little evidence of thick layers of subcutaneous fat account for the apparent excessive weight, exception to the standards may be granted. Underweight conditions will not be waived. Gross obesity is a disqualifying factor until such time as excess weight is lost. In any event, each case will be judged on its own merits. Heights should be measured to the nearest half inch. U.S. Military Academy standards of weight according to height are as follows:

Height	Weight	
64	105	183
65	106	187
66	107	191
67	111	196
68	115	202
69	119	208
70	123	214
71	127	219
72	131	225
73	135	231
74	139	237
75	143	243
76	147	248
77	151	254
78	153	260
79	159	266
80	166	273

A range in height from 66" to 80" inclusive is required. Candidates who are below the minimum height of 66" will automatically be considered for an administrative waiver by West Point, during the processing of their cases provided they have exceptional educational qualification, outstanding military record, or demonstrated outstanding abilities.

Eyes and Vision Disqualifications

Vision

Distant visual acuity which does not correct to at least 20/20 in each eye with *spectacle lenses*.

Muscle Balance

1. *Esophoria* over 15 prism diopters.
2. *Exophoria* over 10 prism diopters.
3. *Hyperphoria* over 2 prism diopters.
4. *Strabismus* (Tropia disqualifying for all candidates).

Color Vision

Must be able to distinguish vivid red and vivid green.

Refractive Error

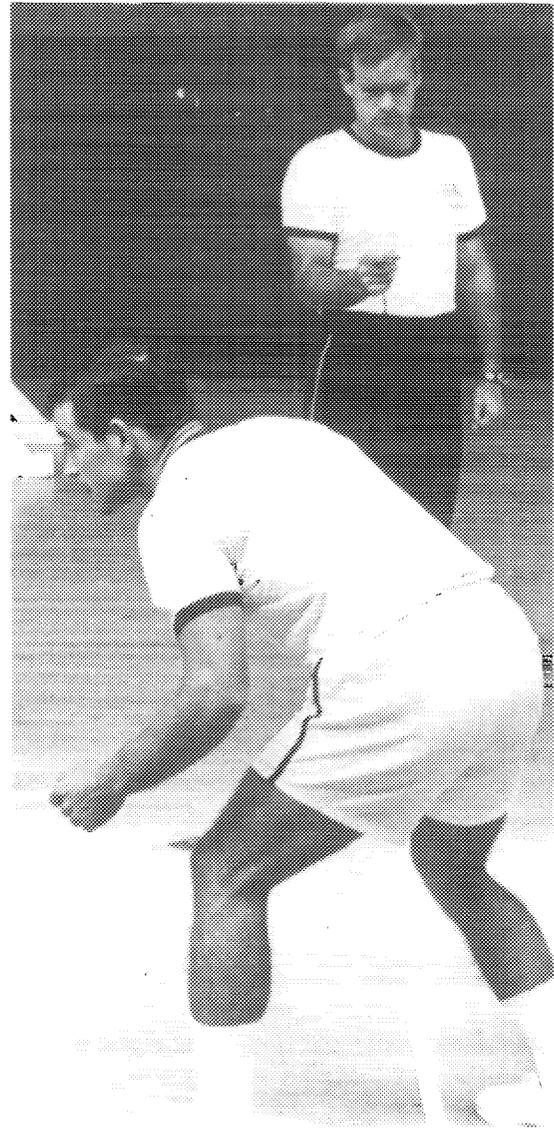
1. *Myopia* over 5.50 diopters in any meridian.
2. *Hyperopia* over 5.50 diopters in any meridian.
3. *Astigmatism* all types over 3 diopters.
4. *Anisometropia* over 3.50 diopters.

Contact Lenses

Removed 21 days prior to examination.

Ears and Hearing Disqualifications

The auditory acuity of all candidates will be determined by the use of the audiometer. Maximum allowable loss in decibels and the frequencies noted is as follows:



Hearing Loss

Frequency	(International Standards Organization Calibration ISO)						
	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.*

Both ears must be free from any disfiguring or incapacitating abnormalities. Other causes for rejection are: Existing perforations of the tympanic membrane regardless of etiology. Exostosis or other form of canal blockage resulting in examiner's inability to effectively view the tympanic membrane, may be cause for rejection.

The following table should be used to convert the International Standards Organization (ISO) Calibration given above to the American Standard (ASA) Calibration still used on many audiometers. To convert ISO to ASA, subtract the decibels loss indicated for the frequencies listed below:

<i>Frequency</i>	<i>Subtract for ASA</i>
500	15 decibels
1000	10 decibels
2000	10 decibels
3000	10 decibels
4000	5 decibels
6000	10 decibels
8000	10 decibels

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 airway or obstruction to drainage of any sinus. Allergic rhinitis not controllable by antihistamines or by desensitization or both is disqualifying for the U.S. Military Academy. History of acute or chronic sinusitis will be evaluated thoroughly and completely.

Lung and Chest Disqualifications

Tuberculosis active at any time during the past two years in any form or location. 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. Pneumothorax or history thereof within 1 year of date of examination if due to simple trauma or surgery; within 3 years of

date of examination if of spontaneous origin. Surgical correction is acceptable if no significant residual disease of deformity remains and pulmonary function tests are within normal limits.

Allergic Disqualifications

Asthma or a history of asthma, except a history of childhood asthma with a trustworthy history of freedom from symptoms since the 12th birthday, is a cause of rejection. A history of allergic rhinitis past the 12th year, including those cases in which desensitization therapy has been initiated, will be evaluated thoroughly. In many cases a specialty consultation in allergy will be required. Also see Nasal Disqualifications.

Skin Disqualifications

Psoriasis, even if moderate in degree. Acne, moderately severe or resultant scarring severe enough to interfere with wearing of personal military equipment or disfiguring scarring. Chronic skin disease such as eczema or unsightly congenital markings. Bromidrosis which is more than mild. Pilonidal cyst if evidenced by presence of mass or discharging sinus. Extensive deep or adherent scars that 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 to determine if an organic basis exists. A history of rheumatic fever will require a thorough investigation including detailed history, fluoroscopic examination of the heart and an X-ray film in addition to a careful general medical examination. All murmurs will be evaluated thoroughly and indicated as functional or organic in origin. Any evidence of organic heart disease is unequivocally disqualifying. All valvular disease of the heart, including that which has been improved by surgery. Blood pressure greater than 139 millimeters or diastolic pressure greater than 89 will be cause for extensive evaluation to determine if persistent hypertension exists. Hypertension evidenced by preponderant readings of 140-mm or

more systolic or preponderant diastolic pressure of over 90-mm. Heart rate greater than 100 on repeated examinations will be cause for further evaluation. Varicosities of any extremities if severe or symptomatic unless mild in degree or correctable by treatment.

Genitourinary System Disqualifications

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

Serologic Test

A serologic test for syphilis is required for all applicants.

Abdomen Disqualifications

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

Orthopedic Disqualifications

Ununited fractures, old joint fractures with evidence of arthritis. Pes planus more than mild, symptomatic, or with marked bulging of the inner border due to rotation or eversion of the astragalus and any callosities. Pes cavus with clawing of the toes and calluses beneath the metatarsal heads can be cause for rejection. Hammertoes of such degree as to interfere with function or wearing of suitable footwear. Other conditions of the feet which

would interfere with successful compliance with military routine. History of derangement of knee joint not corrected by surgery if symptomatic within one year preceding examination. Six months must elapse after knee surgery before final evaluation. Postoperative instability, stiffness, traumatic arthritis, muscle atrophy or weakness will be thoroughly evaluated, and may be cause for rejection.

Spine and Musculoskeletal Disqualifications

Defects and diseases of the spine, scapulae, ribs, or sacroiliac joints which interfere with the daily participation in a rigorous physical training or athletic program, with the wearing of military equipment, or which detract from a smart 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 or surgical correction of such a condition 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 in association 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 of such a

nature as to interfere with daily functions or requiring 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. Addiction to alcohol or drugs. Antisocial behavior. Sexual deviation. Immaturity reaction if marked; situational maladjustment. Multiple episodes of somnambulism after 10 years of age. Multiple episodes of enuresis (bedwetting) after 10 years of age unless proven to have an organic basis. Stammering or stuttering past the age of 10 years. 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 rejection.

Endocrine and Metabolic Disqualifications

Diabetes mellitus is disqualifying for the U.S. Military Academy. Persistent glycosuria including

renal glycosuria is disqualifying. 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 mastication and swallowing of ordinary food, speech or breathing.
 - 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.

THE PHYSICAL APTITUDE EXAMINATION (PAE)

A combination of the following items, which requires the candidate to use his physical ability, constitutes the Physical Aptitude Examination of the Military Academy:

1. Pullups. From the arm hang position on a horizontal bar, palms away from the face, elevate the body until the chin is above the bar.
2. Standing Broad Jump. Jump for distance.

3. Basketball Throw. Throw a basketball overhand from a kneeling position for distance.
4. 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.



Below are the West Point Physical Examination results for a recent testing cycle.

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

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

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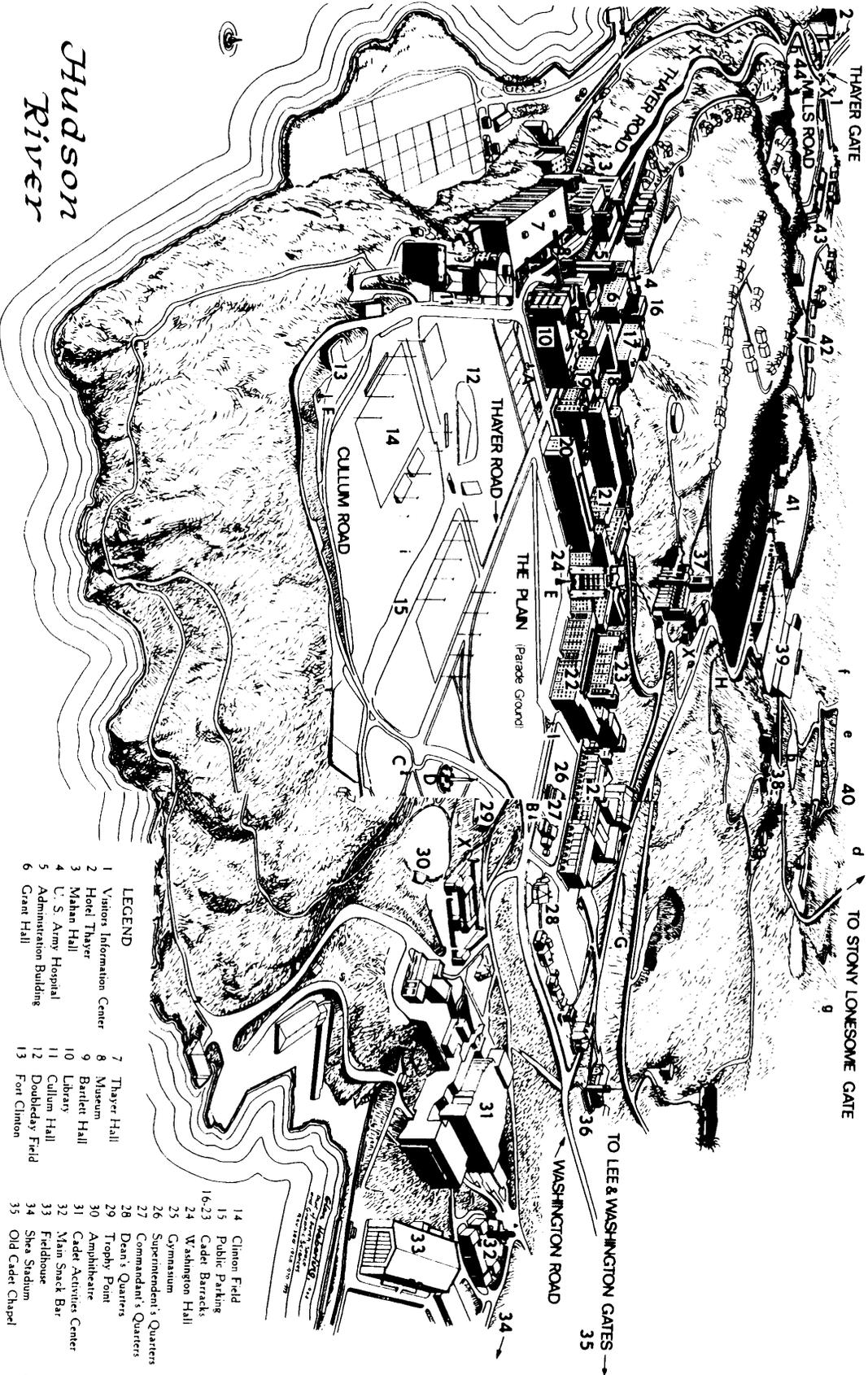
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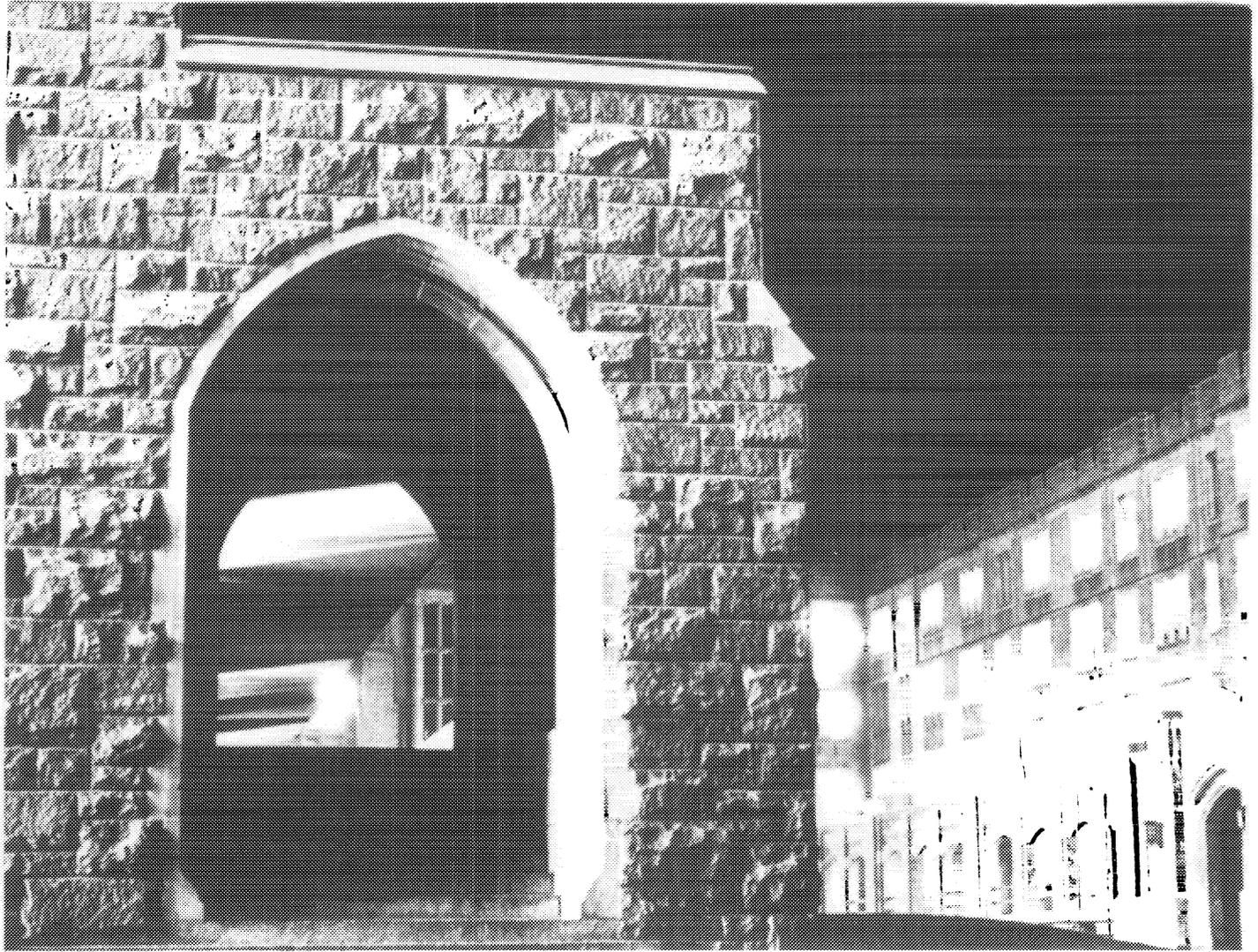
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 - 3 Mahan Hall
 - 4 U. S. Army Hospital
 - 5 Administration Building
 - 6 Grant Hall
 - 7 Thayer Hall
 - 8 Museum
 - 9 Bartlett Hall
 - 10 Library
 - 11 Cullum Hall
 - 12 Doubleday Field
 - 13 Fort Clinton

- 14 Clinton Field
- 15 Public Parking
- 16-23 Cadet Barracks
- 24 Washington Hall
- 25 Gymnasium
- 26 Superintendent's Quarters
- 27 Commandant's Quarters
- 28 Dean's Quarters
- 29 Trophy Point
- 30 Amphitheatre
- 31 Cadet Activities Center
- 32 Main Snack Bar
- 33 Fieldhouse
- 34 Shea Stadium
- 35 Old Cadet Chapel

- A Patton Monument
- B Thayer Monument
- C Sedwick Monument
- D Battle Monument
- E Washington Monument
- F Kosciuszko Monument
- G Wm. Robinson Monument
- H Air Cadet Memorial
- I MacArthur Monument

36 Catholic Chapel
 37 Cadet Chapel
 38 Fort Putnam
 39 Michie Stadium
 40 Stadium Parking
 41 Howe Field
 42 Smith Park
 43 Snack Bar
 44 Buffalo Soldier Field

Stadium Parking: a, b, c, d, e, f, g
 General Parking: h, i
 Rest Rooms: x



Cadet Prayer

O God, our Father, Thou Searcher of Men's hearts, help us to draw near to Thee in sincerity and truth. May our religion be filled with gladness and my our worship of Thee be natural.

Strengthen and increase our admiration for honest dealing and clean thinking, and suffer not our hatred of hypocrisy and pretence ever to diminish. Encourage us in our endeavor to live above the common level of life. Make us to choose the harder right instead of the easier wrong, and never to be content with a half truth when the whole can be won. Endow us with courage that is born of loyalty to all that is noble and worthy,

that scorns to compromise with vice and injustice and knows no fear when truth and right are in jeopardy. Guard us against flippancy and irreverence in the sacred things of life. Grant us new ties of friendship and new opportunities of service. Kindle our hearts in fellowship with those of a cheerful countenance, and soften our hearts with sympathy for those who sorrow and suffer. Help us to maintain the honor the the Corps untarnished and unsullied and to show forth in our lives the ideals of West Point in doing our duty to Thee and to our Country. All of Which we ask in the name of the Great Friend and Master of men.--Amen.

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