

Academic and Professional Education

To prepare midshipmen as Naval officers, the Naval Academy's curriculum blends professional subjects with required and elective courses similar to those offered at leading civilian colleges. Our curriculum has three basic elements:

- core requirements in engineering, natural sciences, the humanities and social sciences, to assure that graduates are able to think, solve problems and express conclusions clearly;
- core academic courses and practical training to teach the professional and leadership skills required of Navy and Marine Corps officers; and
- an academic major that permits a midshipman to explore a discipline in some depth and prepare for graduate level work.

The relationship between officers and men should in no sense be that of superior and inferior nor that of master and servant, but rather that of teacher and scholar.

— General John A. LeJeune, USMC,
Class of 1888

Accreditation

The Naval Academy is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market St., Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Post-secondary Education. In addition, six of the Naval Academy's engineering majors are professionally accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). The computer science major is accredited by the Computing Accreditation Commission of ABET, and the chemistry major is accredited by the American Chemical Society.

Degree Awarded

Upon graduation, a bachelor of science degree is awarded regardless of major, by law, due to the technical content of the core curriculum. Those in the top 10 percent of their class graduate with distinction. Those who have completed special honors programs in one of six selected majors graduate with honors.

ACADEMIC DEAN AND PROVOST

Dean William Miller returned to his alma mater as the sixth Academic Dean and Provost in October 1997; he is the chief academic officer at the Naval Academy. Dean Miller graduated from the Naval Academy in 1962 and, during his 31-year Navy career, served as a Surface Warfare Officer and a leader in the Navy's research and development programs. As a surface warfare officer, Dean Miller commanded a frigate and a destroyer. As a researcher, Dean Miller served as the Chief of Naval Research, Commanding Officer of the Naval Research Laboratory, and founding director of the Navy's Low Observables (stealth) Technology office. After retiring from the Navy, Dean Miller served from 1993 to 1997 as the Associate Provost for Research and Economic Development at West Virginia University where he co-founded the Benedum Center for Education Reform and the Institute for Software Research. He holds masters and doctor of philosophy degrees in Electrical Engineering from Stanford University.



“The Naval Academy has a long, proud tradition of educating and training leaders for the greatest challenges of national service. We prepare our graduates to lead the nation's sailors and Marines immediately upon graduation. We also provide a firm foundation of knowledge at the baccalaureate level on which our graduates can later build the specific expertise they will need for their career progression. The careers on which Naval Academy graduates embark demand individuals who can think critically, analyze complex problems, speak and write articulately, and faithfully support the values of their service and their nation.

The foundation of the academic program at the Naval Academy is our core curriculum. Taught by one of our nation's finest undergraduate faculties in first class facilities, the core curriculum ensures all graduates receive a comprehensive, intellectually challenging education which prepares them to tackle a diverse array of complex problems. It is in our core curriculum that midshipmen develop the professional competence necessary for any of our graduates to succeed in any available career field in the Navy or Marine Corps.

The Naval Academy also offers each midshipman a selection of 21 majors in disciplines as diverse as engineering, math, the physical sciences, the humanities and the social sciences. Each of these majors contributes to the development of a strong educational foundation necessary for our graduates to excel in their immediate responsibilities and in future studies. Some majors have been rated by independent national authorities as among the best of their discipline in the country.

Most importantly, in the Naval Academy's academic program, we seek not only to educate our midshipmen, but to substantially contribute to the development of their character. Through consistently high standards of performance, a demanding curriculum and a stimulating learning environment, we develop leaders characterized by self-discipline, initiative, determination and a commitment to life-long learning. The academic program complements the professional training, character development and the physical education components of the Academy program to produce these critical leadership qualities. With its comprehensive core curriculum, outstanding majors program, and emphasis on character development, I believe the Naval Academy is producing outstanding leaders for tomorrow and the next millennium.”

Educational Philosophy

The Naval Academy's philosophy of education stresses attention to individual students by highly qualified faculty members who are strongly committed to teaching. It's hard to get lost in the classroom at the Naval Academy. Classes are small, with an average size of fewer than 18 students. Even the core courses required of all midshipmen are divided into small sections, so that midshipmen receive individualized attention from instructors. In science and engineering courses, the same professor who lectures in the classroom supervises experiments in the lab. This contrasts sharply with most universities, where scholars may address their students in huge lecture halls, but direct contact with undergraduates in labs or discussion sections is delegated to graduate assistants. All courses at the Naval Academy are taught and graded by faculty members, not by graduate assistants.

Faculty

Our 550-member faculty is an integrated group of officers and civilians in nearly equal numbers. This composition is unique among service academies. It dates from the earliest days of the Naval School when three civilian teachers joined four Navy officers in the first faculty in 1845. Officers rotate to the Academy for two-to-three-year assignments, bringing fresh ideas and experiences from operational units and staffs of the Navy and Marine Corps. They can also explain how studies at the Academy are applied in the fleet and the field. A small cadre of officer faculty who have doctorates add another dimension to the teaching staff as Permanent Military Professors. The Academy's civilian faculty members give continuity to the educational program and form a core of professional scholarship and teaching experience. Nearly all of these civilians have doctoral degrees, and many of them are recognized as leading scholars in their fields. Working together closely, these military and civilian faculty members form one of the strongest and most dedicated teaching faculties of any college or university in the United States. Although many faculty members are involved in scholarly research and writing, their first priority always is teaching.

Faculty Senate

Founded in 1993 as a consolidation of two earlier faculty organizations, the United States Naval Academy Faculty Senate's primary purpose is to advise the administration on faculty and curriculum matters. With a membership of approximately 30, the Senate is composed of representatives, both military and civilian, from the various academic departments and divisions. Typically, the Senate meets twice a month during the academic year, conducting most of its business based on reports from the various committees and subcommittees.

An important goal of the Senate is to improve Yard-wide communication. As a result, senior Academy administrators are ex-officio members of the Senate, addressing the membership on issues of major concern.

Academic Advising

Midshipmen receive as much help as they need in planning their academic programs. The academic advising system has two stages. During Plebe Summer each company of plebes is assigned two faculty members, either military or civilian, to act as academic advisers. Each plebe receives academic counseling including basic study skills information prior to the commencement of the academic year. Advising continues throughout the year as often as necessary. When a major is selected in the spring of plebe year, a midshipman is assigned a permanent faculty adviser from the academic department of that major. Professors and company officers are extremely helpful in providing academic counseling and advice to midshipmen.

Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream, which, fulfilled, can be translated into benefits for everyone, and greater strength for our nation.

—John F. Kennedy

Core Curriculum

In four years at the Naval Academy, you are required to take certain core courses to make sure you are well prepared for the major career-path options available to Navy and Marine Corps officers. Majors courses also prepare you for advanced professional training and postgraduate education, which are expected of nearly all naval officers. Through required courses in engineering, natural sciences, social sciences, the humanities, professional military subjects and physical education, the Naval Academy gives midshipmen a balanced education to open practically any door of opportunity in the future.

During plebe or freshman year, all courses are required. The required courses form the foundation for the more advanced courses chosen by upperclass midshipmen. Some core requirements in the upperclass years have alternative courses from which to choose, depending on your academic background, abilities and major.

The typical academic schedule for plebes includes five courses in each of two semesters:

Plebe year, first semester — 16 credit hours

- Calculus I — Most begin here, some validate and are placed into later calculus courses and a few plebes not adequately prepared for calculus take a pre-calculus course that does not count as part of the minimum mathematics requirement.
- Chemistry I — Including laboratories.
- U.S. Government and Constitutional Development — The foundation of American democracy.
- Leadership and Human Behavior – An examination of the fundamentals of leadership within the context of individual and group behavior.

- Rhetoric and Introduction to Literature I — Some plebes take a practical writing course to prepare for this class.
- Fundamentals of Naval Science — The basic elements of shipboard operation, organization and propulsion.

Plebe year, second semester — 18 credit hours

- In addition to these courses taken for credit, a few hundred plebes who have had little exposure to computers are provided with six weeks of training.
- Calculus II — Continuation of the first-semester course.
- Chemistry II — Continuation of the first-semester course.
- American Naval Heritage — A history of this country's Navy.
- Introduction to Navigation
- Rhetoric and Introduction to Literature II.

Advanced Placement

More than half of those entering the Naval Academy validate one or more courses. Each of the academy's academic departments sets its own validation standards and considers one or more of the following:

- transcripts;
- department validation tests, administered at the Naval Academy; and
- College Entrance Examination Board Achievement and Advanced Placement tests.

During Plebe Summer, all entering midshipmen take placement exams in English, mathematics and science. Individual midshipmen may elect to take placement exams in other discipline areas such as chemistry, economics, history, physics, political science and foreign languages. Excellent performance on the placement exams may result in a midshipman validating courses and thus accelerating portions of their academic program. Over four years, this may permit the student to reduce the number of courses taken in a particular semester, or become eligible for special academic programs, for honors programs or for graduate programs. It may allow a student to complete a minor, or take courses that might not otherwise fit into the standard academic schedule.

Most placement exams are scheduled during the first two weeks of Plebe Summer. Midshipmen should arrive at the Naval Academy prepared to take these very important examinations. Following the evaluation of the exam results, each plebe will receive academic counseling from a faculty adviser to help the student understand his or her performance on the examination and subsequent placement in a particular level or section of a course.

In any case, midshipmen must take a minimum of 15 credit hours each semester and spend a total of four years in residence at the Naval Academy, excepting Service Academy Exchange and Study Abroad programs, to complete professional courses and training.

*Whenever it gets tough, I
just remember the thousands
that have gone before me
that managed to get through
the very same challenges.
There is stress built into life
here, not to crush us, but to
make us that much stronger.
—Ensign Chris
McCook, USN,
Class of 2007*

Being a midshipman has enlightened me to a new height of global, cultural, technological, social, and political awareness through its many study abroad programs and its emphasis on whole-picture leadership.
—Midshipman Genevieve Studer, Class of 2008

Majors Program

The Naval Academy is strongly oriented toward science and engineering; and the majority of graduates are engineers or technical majors. For those students with backgrounds or overriding interests in other fields of study, a broad majors program in those social sciences and humanities that can be reasonably related to the naval profession is offered.

While it is expected that the vast majority of midshipmen will be assigned to the majors of their first choice, the needs of the Naval Service and resource constraints at the Naval Academy may result in an assignment to a second major chosen from among disciplines in mathematics, science or engineering.

Near the end of plebe year, you choose a major course of study with the aid and support of academic and military advisers. Twenty-one majors are offered:

Aerospace Engineering	Information Technology
Arabic	Mathematics
Chemistry	Mechanical Engineering
Chinese	Naval Architecture
Computer Science	Ocean Engineering
Economics	Oceanography
Electrical Engineering	Physics
English	Political Science
General Engineering	Quantitative Economics
General Science	Systems Engineering
History	

Some of these areas offer additional specialization within the major. For example, recognizing that the Navy is an important user of space vehicles and satellites, the Naval Academy created an astronautics track within the aerospace engineering major to help prepare midshipmen for assignments involving space technology systems. Minors in French, German, Spanish, Russian and Japanese are offered to those who complete four advanced courses in one of these languages while at the academy.

Special Academic Opportunities

Students who excel at the Naval Academy have many opportunities to challenge and advance themselves through several special programs.

Trident Scholars

The Trident Scholar Program provides an opportunity for exceptionally capable midshipmen to engage in independent study and research during their senior year. Following their selection to the program during their junior year, the first class scholars conduct independent research in an area of interest, working with a faculty advisor who is an expert in the field. Trident Scholars carry a reduced formal course load to give them time for in-depth research of the project and for preparation of a thesis. Recent Trident Scholar projects have included research on “A Study of Magnetically-coupled 2-D Reconfigurable Modular Robots,” “The Aeroelastic Effects of Transverse Shear Deformation on Composite Wings in Various Flow Regimes,” “Ship Performance Prediction Methods with Respect to Tank Testing and Computational Fluid Dynamics,” and “A Capillary Assisted Thermosiphon for Shipboard Electronics Cooling.”

Bowman Scholar Program

The Bowman Scholar Program provides an opportunity for a small group of Naval Academy midshipmen, who are seeking initial service assignments in the nuclear Navy, to compete for appointments as Admiral Frank Bowman Scholars. Prior to their selection, candidates are screened for the Navy’s nuclear power training pipeline by the Director, Naval Reactors. If selected for nuclear power training and subsequently appointed as a Bowman Scholar, the Scholar participates in a tailored research internship during one of the summer training blocks preceding first class year and participates in a special research-based learning opportunity during his or her last year as a midshipman. During the first year of commissioned service after graduation, Bowman Scholars will likely be offered immediate, one-year graduate education experiences resulting in a master’s degree in a technical discipline. Class of 2004 research projects included research on: “High Energy Laser Modeling and Simulation Framework Evaluation,” “Electrical Properties of Polymer-coated Aerogels,” and “Development and Communications Protocol Software for Use with Nuclear Instrumentation.”

Honors Program

Midshipmen with excellent academic and leadership performance can apply for honors programs offered in history, English, political science, mathematics, oceanography, systems engineering, and economics. Honors students complete a thesis or research project and orally defend it before a panel of faculty members. Successful participants graduate with honors.

Voluntary Graduate Education Program (VGEP)

Midshipmen who have completed Academy course requirements early through any combination of validation and overloading can compete for selection and begin work toward master’s degrees at nearby civilian universities, such as Johns Hopkins and the University of Maryland. Up to 20 midshipmen can participate annually, starting graduate work during first-class (senior) year and completing their master’s degree programs within seven months after graduation from the Naval Academy. Fields of study are selected from Navy-approved graduate education programs leading to Navy subspecialty qualification.

Naval Academy International Program Office

The Naval Academy is committed to developing foreign language and regional knowledge as a third institutional core competency, along with ethical leadership and a strong technical foundation in science, math, and engineering. To provide a more coherent approach to developing midshipman international awareness, the Naval Academy established an

*Some call this place a fraternity.
It is, and the best kind. We live
by the mantra “Ship, Shipmate,
Self,” and when the going gets
tough, there’s always someone
who will drop whatever he or
she is doing to help you out.
—Midshipman Genevieve
Studer, Class of 2008*

International Program Office (IPO). The IPO serves as the principal point of contact, central coordinating office, and source of expert assistance for all international engagement (foreign travel, visitor coordination, student and faculty exchanges, etc.) conducted at the U.S. Naval Academy or by USNA personnel. The majority of the IPO effort is focused on developing and maturing opportunities to reinforce midshipman capabilities in foreign languages and regional knowledge associated with Navy and Marine Corps theater security cooperation activities and priorities. Examples include semester study abroad at foreign military academies and civilian universities, summer education and cultural immersion opportunities, professional training aboard foreign navy gray hull or training sail ships or short duration orientation visits. At least 25 percent of each class of midshipmen will have a significant language or cultural awareness experience during their four years along the Severn.

Facilities

From wind tunnels to a state-of-the-art chemistry labs, we have outstanding facilities and equipment in every phase of our program. Classrooms, labs and athletic facilities provide modern and comfortable areas for learning and recreation.

The following are only some of the special academic facilities available:

- propulsion lab
- wind tunnels, both subsonic and supersonic
- 120-foot and 380-foot towing tanks
- coastal engineering basin
- environmental chamber facilities
- oceanographic research vessel, field laboratory and weather station
- 16-inch Cassegrain reflector telescope
- fully-equipped laboratories for chemistry, physics, engineering, oceanography and foreign language courses
- 12-meter satellite earth station

Computers

The United States Naval Academy has been an educational leader in the use of computer technology since the 1960s. Today it is considered one of the most wired, advanced, and forward-looking information technology campuses in the nation, highlighted by a system of multimedia (voice, video, and data) networks. A fiber optic, scalable, high-speed enterprise backbone, with a system of tailored virtual local area networks (vlans), is dedicated to every building, office, conference room, classroom, and laboratory. This network also supports Bancroft Hall, the midshipmen's dormitory. Literally hundreds of miles of fiber, copper, and coax wiring posture our networking with unlimited expansion capability. The network provides Intranet and Internet access, multi-media capabilities, thin client applications, intelligent tools, and reliable integrated desktop technologies, on demand, to support teaching and learning, research, and social use. All 1,950 midshipmen rooms are fully networked supporting 24/7 video and data communications to each midshipman desk. Midshipmen are well equipped to profit from this environment. Prior to the beginning of their first academic year, all plebes receive an advanced fully multimedia desktop microcomputer with a suite of communications, administrative, and academic software. The Naval Academy considers information technology to be a mission critical resource, a strategic initiative, and a core competency. Consequently information is embedded in every USNA function in all user-driven products and resources. All midshipmen must purchase a Naval Academy-specified personal desktop microcomputer and software during Plebe Summer. After introductory training, midshipmen use their personal computer in most academic courses and professional development.

Writing Center

Open to all midshipmen, the Writing Center exists to help those needing extra writing instruction. The Writing Center is staffed by English department faculty members, both civilian and military, who are experts in composition and in working with students to improve their writing skills.

Math Lab

The Math Lab is available to midshipmen to supplement meetings with their own instructors. Staffed with faculty members of the Mathematics Department, the Math Lab provides assistance in all core mathematics courses to midshipmen without prior appointments throughout the academic day.

Academic Center

All midshipmen have access to the Academic Center, which offers academic advising services and learning skills classes. Students who encounter academic difficulty during plebe year are referred to the Academic Center where they receive special academic advising, academic effectiveness classes and tutoring. A series of learning skills classes, including topics such as time management, note taking, effective reading, test taking and how to cope with challenges, is offered several times a year for interested midshipmen. The Academic Center coordinates the Plebe Advising Program where faculty members serve as the advisors for a company of plebes during both plebe summer and academic year.

*A page of history is worth
a book of logic.*
—Admiral Hyman
Rickover, Class of 1922

As part of the Academic Center, the Midshipmen Group Study Program (MGSP) provides an opportunity for midshipmen to study with others taking the same course, to compare notes, to discuss important concepts, and to develop strategies for studying. Groups are directed by midshipmen who have done well in the course and are trained in leading others. The program provides assistance in chemistry, calculus, physics, statics/dynamics and several other courses.

Nimitz Library

Built in 1973, the library includes a collection of some 636,500 volumes of book and bound periodicals, plus government documents, microforms, multimedia, extensive holdings in Special Collections and Archives, and a growing array of electronic resources. Special emphasis is on naval science and history. The Library's website, including its web catalog and an extensive number of electronic journals and databases, is accessible via the academy's network from the midshipmen's dorm rooms and faculty offices. Comfortable reading and study areas can accommodate more than 800 students. The library also contains seminar and group-study rooms, as well as two electronic classrooms.

Multimedia Support Center

The Multimedia Support Center (MSC) is the Naval Academy's audiovisual service. Midshipmen and faculty use the services of MSC to enhance teaching and learning at the academy. MSC's facilities include a graphics studio; equipment loan; a classroom design and installation service; a production studio; and a closed-circuit television distribution system.

Resources Afloat

The fundamentals of seamanship, navigation and naval operations are taught in laboratories afloat on our many sail and power craft. The Robert Crown Center on the Severn River supports many of these activities, as well as recreational, intercollegiate and offshore sailing. The Naval Academy's large and varied fleet includes:

- 20 108-foot yard patrol craft;
- 24 44-foot sloops;
- 9 30- to 66-foot ocean racing yachts;
- 1 J/22; 1 Sonar;
- 22 420 dinghies, 2 Interclub dinghies, 6 Tech dinghies;
- 22 FJ dinghies;
- 30 Navy 26s; and
- 87 Lasers

The Naval Academy's sailing program is truly comprehensive. It ranges from basic instruction to advanced intercollegiate dinghy and international-level, open-ocean racing. All midshipmen participate in sailing during Plebe Summer receiving sailing instruction in Lasers and sloop-rigged keelboats. Most will qualify to "skipper" the Naval Academy's fleet of Navy 26s.

After Plebe Summer, midshipmen may try out for either the Intercollegiate Dinghy Team or the Varsity Offshore Sailing Team. Both racing programs are highly competitive and are consistently top-ranked nationally. Midshipmen may also participate in the academy's Command, Seamanship, and Navigation Training Squadron (CSNTS). This program prepares them to sail one of the Academy's 44-foot sloops offshore during summer cruise, and those who master the skills required will qualify as a Senior Offshore Skipper. (The Navy "D" Qual.)

*Ours is a maritime nation,
requiring the most powerful
navies to protect our free
rights to the farthest reaches
of the seas.*

—Lyndon B. Johnson

Professional Courses and Training

Professional courses and training are an important part of the Naval Academy's integrated program. Required courses in such areas as naval science, engineering, navigation and weapons systems give you a working knowledge of modern naval operations and technology. Courses in leadership, ethics and military law help prepare you for leadership responsibilities as an upperclass midshipman and a commissioned officer. Physical education teaches you the value of physical fitness and staying fit for life. Eight weeks of annual summer training introduces you to operational units of the Navy and Marine Corps, life at sea and the responsibilities of a junior officer.

Courses available as electives include leadership and psychology. Also available are extracurricular programs such as the Yard Patrol Craft Squadron.

Academic Year Courses and Training

Fourth Class (Plebe) Year

Professional courses — three required introductory classes in naval science and leadership. Courses include classroom studies and lab sessions in operational trainers and afloat in yard patrol craft.

Infantry drill — about 13 hours of infantry drill in the fall and spring, including four hours in the Brigade of Midshipmen dress parades.

Physical education — the Physical Education Department is tasked with accomplishing one third of the mission of the Naval Academy, to prepare midshipmen physically to become professional Navy and Marine Corps officers. This mission is accomplished through a thorough and rigorous course of instruction in the fundamentals of swimming, personal defense, lifetime fitness and recreational sports, and through the regular administration of the Physical Readiness Test. Midshipmen must meet physical education requirements during their four years at the Naval Academy in order to graduate. The following is required for plebes:

- Swimming — 100-meter crawl stroke; 50 meters using the breaststroke and elementary backstroke (seven to 11 strokes per 25 meters); 5-meter tower jump; 40-foot underwater swim; 200-meter swim (five minutes, 12 seconds maximum).
- Boxing — midshipmen are awarded grades based on proper form, offensive and defensive techniques, fortitude and ring craft during a competitive bout against an opponent of the same size, experience and gender.
- Wrestling — midshipmen are awarded grades based on takedowns, rides, pins, escapes, reversals and aggressiveness during a competitive wrestling bout against an opponent of the same size, experience and gender.

Third Class Year

Professional courses — two required in navigation, ethics and moral reasoning

Infantry drill — about 13 hours in the fall and spring, including dress parades.

Physical Education

- Swimming — 400-meter swim (11 minutes maximum); 50-meter sidestroke (seven to 11 strokes per 25 meters); 10-meter tower jump; clothing (trouser) inflation in three minutes; 50-foot underwater swim fully clothed.

It cannot be too often repeated that in modern war, and especially in modern naval war, the chief factor in achieving triumph is what has been done in the way of thorough preparation and training before the beginning of war.

—Theodore Roosevelt

- Martial Arts I — midshipmen are awarded grades based on execution of the martial arts skills; breakfalls, upper and lower body strikes, counters to strikes, counters to front and rear assaults, sweeps, throws, offensive and defensive ground fighting, weapons fighting and a physically challenging culminating event.

Second Class Year

Professional courses — five are required, including courses in naval warfare, naval engineering and weapons. Also required are naval electricity and electronics and a leadership course that focuses on the dynamic interactions of leader, followers, and situation.

Infantry drill — about 13 hours in the fall and spring, including dress parades.

Physical education

- Swimming — graded 1000-meter to 1800-meter swim in 40 minutes, fully clothed. Clothing (trousers only) inflation in two minutes.
- Personal conditioning/wellness-fundamental knowledge for a lifetime of health and physical fitness.
- Martial Arts II — midshipmen are awarded grades based on execution of advanced martial arts skills; advanced breakfalls, counters to strikes, counters to front and rear assaults, chokes and joint locks and counters, edged weapons, unarmed vs armed pistol, sweeps, throws, offensive and defensive ground fighting, weapons fighting and a physically challenging culminating event.

First Class Year

Professional courses — the three required courses are a control systems lab relevant to warfare systems, a law course covering military justice and the law of war, and a junior officer practicum aligned with service assignment plus an engineering course.

Infantry drill — leading the brigade in about 13 hours of drill, including dress parades.

Physical education

- Electives — opportunity to acquire skills in a lifetime carry-over activity (18 electives). Electives are offered in the first semester of the first class year in 18 lifetime carryover sports/activities: badminton, first aid, fitness, golf, water polo, racquetball, squash, tennis, volleyball, kayaking, gymnastics, basketball, weight training, hand-to-hand combat, soccer, swim conditioning, and an introduction to climbing. All physical education subjects are graded, and midshipmen must pass all subjects in order to graduate. Second semester all first class midshipmen are required to do service selection on specific training to prepare them for the physical requirements of their service community.

In addition to the above requirements, all midshipmen are regularly required to pass the ***Physical Readiness Test***. The PRT consists of push-ups, curl-ups, and a 1.5 mile run. The PRT is administered each semester all four years.

- 1.5 mile run — maximum time for men: 10:30. Maximum time for women: 12:40.
- Push-ups and curl-ups — Men: minimum to pass in two minutes; 45 push-ups, 65 curl-ups. Women: minimum to pass in two minutes; 20 push-ups, 65 curl-ups (sit-ups).
- Sit and reach, touch toes in sitting position.

Summer courses and training

Plebe summer

This starts on Induction Day in late June. Areas of emphasis include military indoctrination, physical education, basic seamanship and sailing, small arms training, first aid and introduction to personal computers. See page 42 for more on Plebe Summer.

Third class summer

In the summer between your plebe and third class years, you will report to Navy ships and submarines around the world. You become part of the crew for three weeks, taking part in drills, gunnery exercises and standing watches underway. This experience gives you first-hand knowledge of the daily routine of the Navy at sea. You also learn to appreciate the talents, responsibilities and perspectives of enlisted men and women you will later lead as officers. Additionally, you will spend three weeks as part of the crew on a 44-foot Naval Academy sailboat open ocean sailing in the challenging environment on the Eastern seaboard.

Second class summer

During the summer before your second class year, you are introduced to every major branch of the Navy and Marine Corps. In one action-packed summer, you fly Naval training and operational aircraft, dive in a nuclear-powered submarine and patrol, infiltrate and attack mock enemy positions with the Marine Corps. Additionally, you will go to sea for three weeks onboard USNA Yard Patrol craft to various New England ports honing your seamanship and navigation skills.

First class summer

In the final summer, you get the chance to put your leadership skills to the test, both in the fleet and at the Academy. For three to four weeks, you join an operational unit, and this time your duties are those of a junior officer. Depending on your career interests and qualifications, you can choose a surface warship, submarine, aircraft carrier, aviation squadron, or an EOD mobile unit. You may also spend time training with the SEALs in Coronado. Those midshipmen interested in choosing the Marine Corps after graduation may attend a four-week training course in Quantico, Va. Selected midshipmen may also participate in a four-week internship in a wide variety of disciplines. You will also be part of the Plebe Summer Detail, Weapons Detail, NAPS Detail or hold a leadership position on a YP or sailing cruise.

Other summer training opportunities

The Academy also offers summer school. Midshipmen may enroll in concentrated versions of regular classes to make up for previous unsatisfactory performance or to get ahead in curricular requirements. These classes are taken in lieu of summer leave.

The Captain Marshall H. Cox/Captain A.H. Gaubart Fund supports summer travel and language study abroad by midshipmen and newly commissioned Naval Academy graduates. Programs are offered in Russian, Japanese, Spanish, French and German.

Being a Plebe Summer cadre was profoundly rewarding. Its nature of providing me the occasion as a squad leader to directly influence the perspective, attitude, and training of eleven individuals—to whom I will soon entrust the care of this institution, and more importantly the lives of enlisted Marines and Sailors—brought me to better understand the importance of attitude, accountability, integrity, teamwork, followership, and example.
—Midshipman Genevieve Studer, Class of 2008

Officer Development

The purpose of the United States Naval Academy is to provide the naval service with leaders of character who will serve the nation in peace and war. The Academy has a deep and abiding commitment to the moral development of its midshipmen and to instilling the naval service core values of honor, courage and commitment. The goal of the character development division is to integrate the moral, ethical and character development of midshipmen across every aspect of the Naval Academy experience. The integrated character development program is the single most important feature that distinguishes the Naval Academy from other educational institutions and officer commissioning sources. Elements of the character development program include:

- *Admission Candidate Statements and Recommendations.* Candidates for admission are required to write an essay on a significant character-developing experience that they have had, and teachers completing recommendations for candidates are specifically asked to comment on the character and integrity of candidates as compared to their peers.
- *Plebe Summer Training.* Many hours of training during Plebe Summer lay the foundation for character development as a midshipman. Honor lessons are presented on topics such as moral courage, integrity and loyalty, the meaning of honor, and the basic mechanics of the honor system. Additionally, professionalism classes address issues such as Navy core values, civility, dignity and respect, responsibility, selflessness and the warrior ethos.
- *4/C and 3/C Midshipmen Development Seminars.* During 4/C and 3/C years the Navy core values of honor and courage are respectively emphasized. The 4/C year honor discussion starts with a case study that addresses some aspect of honor. Midshipmen are reintroduced to the concept of honor and apply the concept as it relates to one's personal honor, the Academy honor concept and honor treatise in each of the cases. These 4/C Midshipmen Honor discussions are led by the company officer and senior enlisted leaders. The format for the 3/C Seminars is similar. During 3/C year, "youngster" character development is also scheduled and performed by company officers and senior enlisted leaders. Company officers meet with all of their 3/C midshipmen several times during the semester and review/discuss case studies that emphasize some aspect of moral or physical courage. All case studies for these seminars are provided by the Character Development Division.
- *2/C Commitment Enrichment Seminars.* Beginning with the Class of 2004, a new approach to character development for 2/C midshipmen was initiated. Now that the midshipmen have made the decision to accept the obligation of continued service, this forum will allow them the opportunity to assess their strengths and weaknesses and develop a set of personal and professional goals in an interactive format. The seminar is entitled, "the Second Class Commitment Enrichment Seminar." The goal is to support the mission of the Academy by specifically directing and expanding the midshipmen's focus on the Navy core value of *commitment*, and the application of this value in the midshipmen's lives today and as future leaders in the Navy and Marine Corps. Each 2/C midshipman attends a seminar, in the

evening from 1600 to 1930 with one or two faculty/staff facilitators per seminar. The seminars are scheduled throughout the year and each midshipman is free to choose which day he or she attends. Upon completion of this seminar, midshipmen will have completed what amounts to a life mission statement. This will allow them to better align and prioritize their personal and professional commitments, creating greater focus in achievement of their goals. Furthermore it will benefit them as future officers as they are challenged with counseling and mentoring their young sailors and Marines.

- *1/C Capstone Character Excellence Seminars.* Four years of Character Development programs culminates in a Capstone Character Excellence Seminar. This seminar is dovetailed with the academic courses in leadership and moral reasoning taught throughout the midshipman's four years at the academy. The goal of this seminar is to support the mission of the Naval Academy by providing first class midshipmen the opportunity to discuss some complex ethical and moral issues. Topics are discussed in small groups, which include a mix of midshipmen and staff/faculty members. The seminar gives each first class midshipman a valuable opportunity to test his or her thoughts, and challenges those of their peers. This experience is enhanced by input from staff members, who have experiences similar situations either as commissioned officers in the fleet or civilian professionals who can provide valuable insight from a non-military view not otherwise considered, but important to understand when making a decision. The seminars provide a forum in which midshipmen ideas and solutions to fleet-related problems can be tested. In addition to topics appropriate to their future commissioned service, a guest speaker, usually of flag rank, is invited to add an experienced perspective. Each first class midshipman is required to attend one of these day-long seminars that are offered numerous times throughout the academic year. These seminars are funded by private donations from the Elliott family in memory of their son, Ensign John Elliott, Class of 2000.

- *Human Education Resource Officer (HERO) Program.* This peer-education and peer-resource human relations network places specially trained midshipmen trainers and advisors for each class in each company. The program is designed to provide support to the chain of command in all human relations areas, resolve peer issues within the companies, and provide education and information to midshipmen that will help them make responsible decisions in their own lives, and to contribute to an environment of dignity and respect for others within the Brigade.

- *Honor Remediation Program.* The midshipmen who are found guilty of honor offenses but retained by the Commandant are put into a comprehensive honor remediation program. This program places the midshipman under the mentorship of a senior officer for a designated period, usually four months. This introspective period requires readings and personal reflection on honor, extensive discussions with the mentor, participation in community service, and completion of a written thesis.

- *Character Development Speakers Program.* During Plebe Summer, prominent speakers from the Navy and Marine Corps are brought in to talk about the naval service core values of Honor, Courage, Commitment and what these values mean to them. The Naval Service Core Values Speakers program enables the new class to interact with such prominent leaders as the Chief of Naval Operations, the Commandant of the Marine Corps, former astronaut James Lovell, former Secretary of the Navy James Webb and others.

- *Officership Conference.* In the spirit of the Margaret Corbin Foundation, the U.S. Naval Academy Character Development Division hosts an annual Service Academy Officership Conference. Originally a forum to discuss gender issues, the conference has evolved to include the larger issues of cultural awareness and intelligence, diversity and the central officer traits of respect and civility.

- *Character Quarterly.* The Character Quarterly newsletter is the newsletter of character development efforts at the United States Naval Academy. Its purpose is to serve the Academy by communicating issues relating to the moral and ethical development of midshipmen.

The daily routine demands a blend of practical application to classroom techniques that is truly a work-study environment at its finest. I've never felt inhibited by the curriculum or deprived in any sense. Instead I'm given opportunity to regularly make decisions that amount to the best leadership training available.
—Midshipman Dave Parker, Class of 2008

Grading

Grades have an added dimension at the Naval Academy in that they affect your status and privileges as a midshipman. As the major determinant of class rank, they also influence ship selection or advanced training scheduling following service assignment and seniority upon graduation and commissioning.

We use a letter grading system with these values, called quality point equivalents, or QPE:

- A = 4.0 (Excellent)
- B = 3.0 (Good)
- C = 2.0 (Satisfactory)
- D = 1.0 (Marginally passing)
- F = 0.0 (Failing)

Grades are averaged using a weighted semester hour system called the quality point rating or QPR. Your QPR is figured by multiplying the QPE received in each course by the semester hours of credit for the course. That total is divided by the total number of hours completed in the semester. You earn semester QPRs and a cumulative QPR (CQPR) based on all of your grades.

Midshipmen must maintain a cumulative QPR of 2.0 or above or they risk academic probation or dismissal. As required by law, the Academic Board reviews the records of academically deficient midshipmen. Midshipmen subject to academic discharge are those who fail two or more courses; have a semester QPR below 1.5; fail to remove academic probation; are two or more courses behind in the matrix of the assigned major; do not fulfill a requirement previously assigned by the Academic Board; or do not complete all graduation requirements by the end of the first-class year.

Grades in military performance, conduct, physical education and summer professional training are not included in the QPR, but they are figured into class standing. Satisfactory performance in professional areas is required.

Recognition of Excellence

Three honor categories recognize midshipmen with outstanding academic and professional records:

Superintendent's List — midshipmen with semester QPR of at least 3.4 and no grade of D, F, I; grades of A in military performance, A in conduct and A or B in physical education.

Dean's List — midshipmen not on the Superintendent's List with semester QPR of 3.4 and no grade of D, F, I in any academic course; grades of at least a B in military performance, B in conduct and at A, B, or C in physical education.

Commandant's List — midshipmen with semester QPR of at least 2.9, grades of at least B in military performance, A in conduct and B in physical education.

Honor societies

A number of national scholastic honor societies are represented at the Naval Academy. Midshipmen who excel academically may be recommended for membership in these societies:

Omicron Delta Epsilon — international honor society for economics. Midshipmen candidates for election to the Naval Academy chapter need not be economics majors but must have an overall scholastic average of B and at least twelve credits in economics with a B average or better.

Phi Alpha Theta — international honor society for history. Membership includes both faculty and students who participate in forums and seminars, also hosting guest speakers and regional meetings of the society.

Phi Kappa Phi — for superior scholarship in all fields of study. Up to six percent of the midshipmen of each class may be chosen to join, half during their second-class year and half in first-class year.

Pi Sigma Alpha — national honor society for political science. To be eligible for membership, midshipmen must stand in the upper one-third of their class with a B or better average in at least 15 hours of political science courses.

Phi Sigma Iota — international honor society for foreign languages. To be eligible for membership, midshipmen must have an overall B average, a B average in foreign language courses and have completed advanced courses in foreign languages.

Pi Tau Sigma — national mechanical engineering honor society. Midshipmen majoring in mechanical engineering who stand in the upper third of their class as seniors or the upper fifth as juniors are eligible for membership.

Sigma Pi Sigma — physics honor society, affiliated with the American Institute of Physics and the American Association for the Advancement of Science. Midshipmen candidates for membership must have completed three semesters of physics with at least a B average and must be in the upper one-third of their class in general scholarship.

Sigma Tau Delta — national English honor society. To be eligible for membership, midshipmen must be in the upper third of their class with at least a B average in advanced English courses.

Sigma Xi — scientific research society that encourages original investigation in the fields of pure and applied science. The Naval Academy chapter includes members from the professional staffs of the academy and the Annapolis laboratory of the Naval Surface Warfare Center.

Tau Beta Pi — national engineering honor society. The top fifth of senior engineering majors and top eighth of junior engineering majors are eligible for membership.

Upsilon Pi Epsilon — international honor society for the computing sciences. To be eligible for membership, midshipmen must have a minimum of a 3.0 QPR overall and a 3.25 QPR in computer science courses.

Realizing how much I have grown as an individual has been the most rewarding experience. Though personal development certainly is not specific to the Naval Academy, it is the standard here. Ask a graduate if he or she has reflected on and been shaped by their Naval Academy experience and you will get a resounding, "yes."
—Midshipman Dave Parker, Class of 2008

Graduation Requirements

To be eligible to graduate, you must:

- complete at least 137 academic credit hours, including core requirements in engineering, natural sciences, humanities and social sciences;
- complete the courses required in your chosen major;
- achieve a final cumulative quality point rating (CQPR) of at least 2.0, a C average;
- meet required standards in professional studies and at-sea training;
- meet required standards of military performance, conduct, honor and physical education; and
- accept a commission in the Navy or Marine Corps, unless one is not offered.

*Under all circumstances,
a decisive naval superiority
is to be considered a
fundamental principle,
and the basis upon which
all hope of success must
ultimately depend.*
—George Washington

Awards

Outstanding midshipmen are recognized publicly during Commissioning Week. A number of organizations and individuals sponsor more than 200 prizes and awards honoring midshipmen for excellence in academics, professional studies, leadership, athletics, sailing, debate and public speaking.

It is an experience unlike any other. I have yet to find anything else that truly forces you to step out of your comfort zone as much. I believe that if you are always comfortable, you are probably not improving. In which case, what is the point of education?
—Midshipman
Erica Reid-Dixon,
Class of 2008

Advanced Education

Postgraduate education is encouraged for all naval officers and is practically a requirement in today's Navy and Marine Corps, which operate very sophisticated systems in a changing, complex world. Nearly all graduates go to advanced professional training en route to their first duty assignments. New Marine Corps officers go to The Basic School at Quantico, Va. Navy ensigns go to nuclear power school, flight training or other schools, depending on their chosen specialty and the nature of their first assignment. Professional training continues throughout your career. There also are several ways for Naval Academy graduates to earn advanced academic degrees besides the Voluntary Graduate Education Program (VGEP) discussed on page 61. Most officers are automatically considered for graduate school as they complete their first duty assignment. If selected, they can enter master's degree programs at the Naval Postgraduate School in Monterey, Calif., or at an approved civilian university. Up to 50 Naval Academy graduates may go immediately to the Naval Postgraduate School or Air Force Institute of Technology in Dayton, Ohio.

Midshipmen with outstanding academic records can compete for a number of scholarships for postgraduate school right after graduation from the Naval Academy or after an initial operational assignment. There's also a program for up to 15 graduates a year who want to combine careers in medicine and the Navy. To prepare for this program, midshipmen usually major in chemistry and then enter civilian or armed forces medical schools soon after graduation and commissioning.

The following graduate education programs are currently available:

Navy Burke Program (Junior Line Officer Advanced Educational Program) — open to 15 qualified graduates in each class for study toward a master's degree in science or engineering. These studies, usually at the Naval Postgraduate School, begin after one operational tour of two to four years.

Marine Corps Burke Program — open to 15 graduates from each class who enter the Marine Corps. Graduate study begins approximately two years after commissioning. Selectees may choose their field of study from an extensive list of disciplines.

Oceanography Joint Master's Degree Program — one officer from all commissioning sources including the Naval Academy may be selected for a graduate program in ocean sciences at the Massachusetts Institute of Technology/Woods Hole Oceanographic Institution. This 27-month program leads to a master of science degree in ocean engineering and physical oceanography and a Navy warfare subspecialty designation in oceanography.

Olmsted Foundation Scholarships — established by the George and Carol Olmsted Foundation in cooperation with the Department of Defense. These scholarships support two years of graduate education at foreign universities, using foreign languages, for Navy and Marine Corps officers. Two Naval Academy graduates who have served between three and ten years of active duty are eligible each year.

William H.G. FitzGerald Scholarship — supports two years of graduate study at Oxford University in England for one or two Naval Academy graduates each year.

Thomas Pownall Scholarship — supports two years of graduate study at Cambridge University in England for one Naval Academy graduate each year.

Otto A. Zipf Scholarship — supports two years graduate study at the Ruprecht-Karl University of Heidelberg, Germany, for one Naval Academy graduate of each class.

Naval Academy graduates may qualify for a number of other scholarships and fellowships awarded for study at civilian colleges and universities. These graduate studies can be pursued in various fields while graduates receive pay as commissioned Navy and Marine Corps officers. Up to 25 members of each class can begin postgraduate studies under these scholarships immediately after graduating from the Naval Academy. Such scholarships include:

Rhodes and Marshall Scholarships for two or three years of graduate study in any field leading to a master of arts or master of philosophy degree — at Oxford for the Rhodes Scholarship or at any university in Great Britain for the Marshall Scholarship — with all expenses provided for study and travel. Thirty-eight midshipmen have won the Rhodes Scholarship since 1930, when Navy participation began. There have been thirteen Marshall scholars since 1981.

Truman Scholarship for graduate study in any major, with emphasis on public service. Up to four midshipmen are nominated during their junior year.

Guggenheim Fellowship (Daniel and Florence Guggenheim Foundation) for graduate study at one of three major centers for research and development in rocket propulsion, space flight and space flight structures.

Hertz Fellowship (Fannie and John Hertz Foundation) for graduate study in the applied physical sciences at a choice of 27 universities.

National Science Foundation (NSF) Fellowship leading to a master of science or a master of arts degree in the mathematical, physical, biological, engineering, and social sciences and in the history and philosophy of science.

Draper Laboratory Fellowships for graduate study in technical majors at the Massachusetts Institute of Technology, Boston University or Northeastern University.

Gates Cambridge Scholarships for two years of graduate study at Cambridge University in England.

Immediate Graduate Education Program (IGEP) — open to 15 aviation officers, 15 surface warfare officers, and 20 submarine officers each year, starting in June or July following graduation from the Naval Academy. Graduates selected for IGEP complete a one-year technical master's degree at the Naval Postgraduate School or Air Force Institute of Technology.

Other scholarships are available in aerospace engineering, computer science, electrical engineering, mathematics, mechanical engineering, naval architecture, nuclear engineering, ocean acoustics, and physics.