The Mission of the United States Merchant Marine Academy

To educate and graduate licensed merchant mariners and leaders of exemplary character who will serve America's marine transportation and defense needs in peace and war.

The United States Merchant Marine Academy is operated by the Maritime Administration of the U.S. Department of Transportation.

Course content and regulations at the Academy are under constant review and revision. Therefore, the Academy reserves the right, whenever it deems advisable, to withdraw, cancel, reschedule or modify any course, program of study or requirement in connection with any of the foregoing within the limits established by law and Maritime Administration, U.S. Department of Transportation Orders.

The United States Merchant Marine Academy welcomes students of any race, color, creed, sex and national or ethnic origin. Because of the specialized nature of the Academy's program, and the obligation of students after graduation, requirements regarding age, physical condition and U.S. citizenship do apply. These requirements are listed in this catalog.

The Academy is an equal opportunity employer.

On the cover:
Commencement marks the culmination of four years of hard work by the members of the graduating class, who leave the U.S. Merchant Marine Academy to serve in America's maritime industry and Armed Forces.

United States Merchant Marine Academy

2017-2018 Catalog

A Message from the Superintendent

The United States Merchant Marine Academy educates and graduates licensed Merchant Marine officers and leaders of exemplary character who serve America's marine transportation and defense needs in peace and war. One of the nation's five federal service academies, Kings Point offers a comprehensive leadership development opportunity. Those young men and women who choose Kings Point receive a first class college education and the best professional maritime training in the world. The Regimental system teaches hands-on leadership, discipline, and a commitment to service before self.

Our unique Sea Year Program uses the globe as a campus. The Sea Year connects the classroom experiences with the realities of service after graduation. Midshipmen learn in a real-world setting the skills they will need as Merchant Marine officers. They experience the cultural diversity of our increasingly connected world with visits to every continent. Self-discipline and time management skills are reinforced through Sea Year academic projects. Midshipmen return to campus with increased professional knowledge and self-confidence and a clear sense of the future adventures their Kings Point education makes possible.

We are looking for talented young women and men who are ready to be challenged and pushed to reach their fullest potential. They must be committed to serving our nation in the Merchant Marine and the Armed Forces. If you want your college experience to extend far beyond the classroom, if you want to be a leader and live an honorable life of service, Kings Point is for you.

James A. Helis
Rear Admiral, USMS
Superintendent

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Policy

Policy Regarding Discrimination and Harassment, including Sexual Harassment and, Sexual Assault

It is the policy of the U. S. Merchant Marine Academy to encourage the development and growth of all Midshipmen, faculty and staff in an environment that is free from discrimination and harassment, including sexual harassment and sexual assault. Discriminatory and harassing behavior creates a demeaning, intimidating, and hostile educational environment that undermines the basic principles of the Academy and, therefore, is not accepted or tolerated at our institution. It is the responsibility of all Midshipmen, faculty and staff to refrain from such behavior, to discourage it wherever found and to promptly report any such behavior, as required in Superintendent Instruction 2016-02 (Sexual Assault, Dating Violence, Domestic Violence, Stalking, Prevention Education and Response Policy) and Superintendent's Instruction 2013-02 (Policy Against Discrimination and Harassment, Including Sexual Harassment, of Midshipman).

The Academy is dedicated to training men and women as future officers in the merchant marine and Armed Forces who must uphold and perpetuate the traditions of an honorable profession. Inappropriate conduct is corrosive to the cohesiveness, morale and esprit de corps of a military organization or a ship's company.

All incidents of discrimination, including sexual harassment and sexual assault will be investigated by the Academy or the appropriate investigative agency having jurisdiction of the incident. All involved will be treated with dignity, fairness and respect. Sexual assault victims will be provided with victim advocacy services. If a violation is found, prompt and effective corrective action will be taken.

The Academy provides training, education and awareness to minimize discrimination and harassment.

The United States Merchant Marine Academy: Serving the Nation

A glimpse at a map of the United States shows us that we are a maritime nation. To the east is the Atlantic Ocean; to the west, the Pacific; off our southern border, the Gulf of Mexico; in the north, the Great Lakes; and crisscrossing our states, great rivers like the Mississippi and other inland waterways.

Every hour of every day, ships of all types ply the waters in and around our nation. They leave our ports laden with U.S. goods bound for foreign markets, or arrive in our harbors with merchandise and materials for American consumers.

There are tankers traveling along the west coast with raw petroleum for our refineries; Great Lakes vessels loaded with iron ore, coal or other minerals for America's industry; huge containerships in Eastern ports, their box-like containers filled with manufactured goods; general cargo ships in the Gulf unloading pallets of coffee and crates of fruit; tugboats pushing and pulling barges carrying the Midwest's grain.

These kinds of vessels, owned by U.S. companies, registered and operated under the American flag, comprise the U.S. Merchant Marine. This fleet of highly productive ships is a major part of our system of commerce, helping guarantee our access to foreign markets for sale of our manufactured goods.

Moreover, in time of war or national emergency, the U.S. merchant marine becomes vital to national security as a "fourth arm of defense." Our merchant ships bear the brunt of delivering military supplies overseas to our forces and allies. The stark lessons of national conflict prove that a strong merchant marine is an essential part of American sea power.

The nation's economic and security needs met by the U.S. merchant marine are compelling. Today, the United States imports approximately 85 percent of some 77 strategic commodities critical to America's industry and defense. Although we, as a nation, account for only six percent of the world population, we purchase nearly a third of the world's output of raw materials. Ninety-nine percent of these materials are transported by merchant vessels.

A ship at sea does not operate in a vacuum. It depends on a framework of shoreside activities for its operations. This industry includes companies which own and

manage the vessels; ports and terminals where cargo is handled; yards for ship repair; services like marine insurance underwriters, ship chartering firms, admiralty lawyers, engineering and research companies; and increasingly today, intermodal systems of trucks and railroads to distribute goods around the country.

But the most important element in a productive merchant fleet and a strong transportation industry is people—men and women who are intelligent, dedicated, well- educated and competent.

The purpose of the U.S. Merchant Marine Academy is to ensure that such people are available to the nation as shipboard officers and as leaders in the transportation field who will meet the challenges of the present and the future.

The Program

The Academy is located in Kings Point, New York. Its 82-acre waterside campus lies on Long Island's north shore, about 20 miles east of New York City.

The Academy is a national institution, operated by the Federal Government's Maritime Administration, an agency of the U.S. Department of Transportation. The Academy's four-year program centers on a regimental system that instills its students - called Midshipmen (a term used for both men and women) - with the traits of leadership, discipline and dedication required for a career that typically may include service at sea, maritime employment ashore, and serving as a commissioned officer in a reserve component of the U.S. Armed Forces.

The Academy's Regiment of Midshipmen numbers approximately 950 young men and women who represent every state of the Union as well as U.S. Trust Territories and Possessions. The size of the student body contributes to a true sense of camaraderie among the members of the Regiment and permits the Academy to maintain an excellent student-teacher ratio.

A sound college education is the foundation for every profession in our society and the mariner's profession is no exception. Elements of the academic program provide all Midshipmen with the specialized training and education for success as U.S. Coast Guard-licensed merchant marine officers, in compliance with the requirements set forth in the International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) 1978, as well as the STCW Code in subsequent related amendments. The curriculum at the Academy provides each Midshipman with the broad college education required for a Bachelor of Science degree. The military knowledge necessary for commissioning in a reserve component of the Armed Forces rounds out the academic program. Few colleges can offer such a full range of credentials at graduation.

The Academy challenges its Midshipmen intellectually and physically. The academic program is demanding, the regimental system rigorous. Freshman (fourth class or plebe) year is particularly strenuous as students make the transition from high school graduate to Academy Midshipman. In their first few months, they learn many new terms, the quality of endurance, how to perform under pressure, and most importantly, how to successfully manage time.

During sophomore (third class) year, and again during junior (second class) year, Midshipmen are sent to sea for practical shipboard training. Aboard ship, sailing the trade routes of the world, they learn the value of self-reliance and initiative as they gain first hand experience in the mariner's environment. In their senior (first class) year, they fine tune the skills learned in the classroom and at sea as they prepare to enter the professional world.

Enrollment at the Academy requires many personal sacrifices, but the goal is worthwhile. Students must be prepared for numerous demands on their time, a degree of stress, and some limitations on their personal freedom. In return, the Academy develops leaders and prepares its graduates for careers that are bounded only by their talents and desire.

Accreditation

The Academy is accredited by the Middle States Commission on Higher Education (MSCHE), 3624 Market Street,

Philadelphia, PA 19104, (267) 284-5000, http://www.msche.org.

History

Federal involvement in maritime training is more than a century old. Since the administration of President Ulysses S. Grant, the U.S. Government has initiated various programs to train its citizens for service in the merchant marine. The Academy, dedicated in 1943, represents the realization of these efforts.

Between 1874 and 1936, diverse federal legislation supported maritime training through scholarships, internships at sea and other methods. A disastrous fire in 1934 aboard the passenger ship MORRO CASTLE, in which 134 lives were lost, convinced the U.S. Congress that direct federal involvement in efficient and standardized training was needed.

Congress passed the landmark Merchant Marine Act in 1936, and two years later, the U.S. Merchant Marine Cadet Corps was established. The first training was given at temporary facilities until the Academy's permanent site in Kings Point, N.Y. was acquired in early 1942. Construction of the Academy began immediately, and 15 months later the task was virtually completed. The Academy was dedicated on September 30, 1943. President Franklin D. Roosevelt, noted at that time that "the Academy serves the Merchant Marine as West Point serves the Army and Annapolis the Navy."

World War II required the Academy to forego normal operation and devote all of its resources toward meeting the emergency need for merchant marine officers. Enrollment rose to 2,700, and the planned course of instruction was reduced in length from four years to 18 months. Notwithstanding the war, shipboard training continued to be an integral part of the Academy curriculum, and Midshipmen served at sea in combat zones the world over. One hundred and forty-two Midshipmen gave their lives in service to their country, and many others survived torpedo and aerial attacks. By war's end, the Academy had graduated 6,634 officers.

World War II proved that the Academy could successfully meet the needs of a nation in conflict. As the war drew to a close, plans were made to convert the Academy's wartime curriculum to a four-year, college level program to meet the peacetime requirements of the merchant marine. In August 1945, such a course was instituted.

The Academy has since grown in stature and has become one of the world's foremost institutions in the field of maritime education. In 1949, Congress granted the Academy authorization for awarding the degree of Bachelor of Science to graduates; the Academy was fully accredited as a degree-granting institution that same year. It was made a permanent institution by an Act of Congress, signed by President Dwight D. Eisenhower, in 1956.

The Academy's national value was again recognized as it accelerated graduating classes during the Korean and Vietnam conflicts, and for its involvement in such programs as training officers of the first U.S. nuclear-powered merchant ship, the SAVANNAH.

Admission requirements were amended in 1974 and the Academy became the first federal service school to enroll women students.

During the first Persian Gulf conflict in early 1991, and for many months prior to the war, both Academy graduates and Midshipmen played key roles in the massive sealift of military supplies to the Middle East. Midshipmen training at sea

have since participated in the sealifts to

Somalia, Kosovo, Afghanistan and Iraq.

While the Academy's curriculum has changed dramatically since 1943 to reflect the technological advances of America's merchant marine, the institution has maintained its unswerving commitment to quality education and excellence among its Midshipmen.

Student Information

Campus

The Academy campus and facilities comfortably accommodate the Regiment of Midshipmen. The design of the buildings is simple yet functional, and the campus has been laid out to take full advantage of the picturesque waterfront of Long Island's north shore. The Academy's buildings and walkways are named after individuals whose deeds have brought fame to America's merchant marine.

On the slope looking toward Long Island Sound stands a monument to the Academy's World War II casualties. Around this monument are grouped an outdoor swimming pool; a boat basin and the Yocum Waterfront Center; Gibbs Hall, with modern science and engineering laboratories; and Samuels Hall, which will be renovated in 2017-2018 as a state of the art simulator center. A beautiful interfaith chapel, which serves the religious needs of the Regiment, stands on a grassy knoll to the south of the War Memorial.

Wiley Hall, facing Long Island Sound, is the chief administration center of the Academy. Formerly the home of automobile magnate Walter P. Chrysler,

This historic building contains the offices of the Superintendent, Deputy Superintendent, Academic Dean, Civil Rights Director, Public Affairs and other senior staff. East of Wiley Hall lies the center of the Academy campus, marked by a striking, 176-foot flagpole. Surrounding this landmark are Fulton Hall, the marine engineering and science building; Bowditch Hall, housing the Department of Marine Transportation and the 900-seat Ackerman Auditorium; and the Schuyler Otis Bland Memorial Library.

Delano Hall, the Midshipman dining room, and six dormitory buildings - Barry, Jones, Rogers, Cleveland, Murphy, and Palmer Halls - complete the circle of buildings enclosing the main campus. The dormitories and dining room are connected by an underground promenade, which contains the Midshipman Recreation Center and canteen, -Navy Exchange, post office, laundry facilities, club spaces, sea year storage, fitness room, yoga room, bank, and barber shop.

On the perimeter of the Academy are athletic fields for football, baseball, lacrosse and soccer, as well as tennis and handball courts and a quarter-mile surfaced track; Furuseth Hall, containing the Department of Naval Science, the Department of Professional Development and Career services, the Public Safety and Security Office, and the Administrative Services Department; Vickery Gate, home of the Admissions Office; O'Hara Hall, which has a spacious gymnasium, an indoor, Olympic size swimming pool, and athletic facilities; Patten health clinic; and Land Hall, the Midshipmen Activities Center.

Although the majority of Academy buildings were constructed during World War II, ongoing modernization programs have rendered the classroom, laboratory and dormitory facilities virtually brand new.

On the northern border of the Academy lies the McNulty Campus, named after the "father" of the Academy, Rear Admiral Richard R. McNulty, who was instrumental in calling public attention to the need for a federal maritime officer training school. Located in this area is the American Merchant Marine Museum, a popular stop for campus visitors.

Library

The Schuyler Otis Bland Memorial Library is the Academy's major information resource center. The library supplies Midshipmen, faculty and staff with a wide range of materials and services, which can also benefit visiting researchers. There is seating for

300 users, including special conference rooms and study areas.

Designed to support the curriculum, the library book collection of over 190,000 volumes provides a broad range of information on the subjects studied at the Academy, with an extensive concentration of information and special collections on maritime subjects, both modern and historical.

Available at the library is a great deal of information in other formats: periodicals, sea charts, magazines and newspapers, research reports, computers, files of engineering data, compact discs, DVDs, CD-ROMs, computerized data bases, and an online public access catalog.

The library has online access to databases in many disciplines, including science, technology, the social sciences, and humanities. The library is part of a state-wide consortium with 19 other New York State academic libraries for resource sharing. As part of its broad role as a resource center, the library also serves as a conference site for Academy programs. The library's premier conference facility, the Crabtree Conference Room, provides a comfortable setting for a wide variety of maritime and scholarly activities attended by Midshipmen, faculty and staff.

Midshipman Activities Center

Land Hall is the site of the Joseph B. Williams Midshipmen Activities Center and serves as the focal point of many extracurricular and recreational activities. The building contains club and meeting rooms, and is used for informal dinners and parties. The office of the Director of Student Activities is located here, as well as the Midshipman Pub, with its regulated hours of operation.

Food Services

The commissary in Delano Hall provides Midshipmen with daily meals. Monday through Friday, breakfast and dinner are served buffet style, while lunch is served family style. On weekends, all meals are served buffet style. Breakfast, lunch and dinner are offered on Saturday. On Sunday, brunch and dinner are offered. In addition to regular menu selections, breakfast features a fruit bar. At lunch and dinner, there is a salad bar and soup bar.

The Seafarer Restaurant, open to the public as well as to Midshipmen, is a cafeteria-style facility. It offers a full breakfast and lunch menu, Monday through Friday. The Seafarer is also open for evening meals, Monday through Thursday. It is closed on Saturday and reopens Sunday evening for pizza and snacks.

Healthcare

The Office of Health Services (OHS) has a unique mandate to provide Midshipmen with the medical, dental, and mental health services that are prerequisites for assignment to sea duty; application for a Strategic Sealift Officer, U.S. Navy Reserve (SSO, USNR) commission; and application for a U.S. Coast Guard (USCG) license.

The OHS, located in Patten Hall Building, is comprised of three health care services: a Medical Clinic, a Dental Clinic, and a Midshipman Counseling and Personal Development (MCPD) office. All healthcare services are located in one building, which facilitates staff intercommunication and expedites many health-related processes for Midshipmen. Healthcare providers available to Midshipmen include: a New York State (NYS) fully licensed and credentialed Physician who acts as Chief Medical Officer (CMO); NYS Licensed Physician's Assistants; a NYS Registered Nurse; a NYS Licensed and Credentialed Dentist; a Certified Dental Assistant; a NYS Registered Dental Hygienist; a NYS Licensed Mental Health Counselor and a NYS Licensed Clinical Psychologist. OHS also manages and operates the Midshipmen Emergency Medical Services Squad which

is comprised of Midshipmen who have trained for and passed the NYS Emergency Medical Technician (EMT) certification requirements. OHS follows the standards of the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and is compliant with the Health Insurance Portability and Privacy Act (HIPAA) as well as the Family Education Rights & Privacy Act (FERPA).

OHS services are generally available by appointment Monday – Friday, 0730 – 1630. Midshipmen may report with no prior appointment required during Sick Call, Monday – Friday, 0700 – 0900. Midshipmen in duty status who require emergency care or urgent care when OHS is closed are transported via the USMMA Ambulance System by NY State Certified Midshipmen EMTs. For emergencies and/or urgent care needs, Midshipmen are transported to the Emergency Department at the North Shore University Hospital in Manhasset, NY, located 5 miles from the USMMA campus.

Health and Insurance Coverage

Midshipmen actively enrolled in academic classes are provided basic medical, dental and mental health care onsite at USMMA OHS. Healthcare provided onsite in support of the USMMA academic program are provided at no cost to Midshipmen.

OHS assists Midshipmen in maintaining all medical standards for USC G licensing and United States Navy commissioning requirements. OHS provides care to meet all the standards as set forth in The Code of Federal Regulations, 46 C.F.R. §310.56 which dictates the continuing requirement for Midshipmen to meet standards as set forth in Department of Defense Instruction 6130.03, Medical Standards for Appointment, Enlistment, or Induction in the Military Services.

If medical care needs rise above the scope of services that OHS provides onsite, offsite higher level of care needs are provided by a multitude of various healthcare providers located in the surrounding community who specialize in many common specialty care needs should such a need for these services arise. The Midshipmen are responsible for costs related to care that go beyond the services available onsite at USMMA through OHS. However, if the offsite healthcare need is a direct result of in the line of duty activity, those injuries or healthcare needs are covered under the Federal Employee Compensation Act (FECA) or Federal Workers Compensation.

There are exceptions which would make all healthcare expenses solely the responsibility of the Midshipmen on a personal out of pocket basis. Generally, these exceptions are associated with injury, illness or diagnosis resulting from a pre-existing condition, a non-disclosed condition, or any medical condition resulting from activity which is incongruent with Academy regulations and policies. Examples of conditions and/or treatments not covered include, but are not limited to:

- on-going treatment of pre-existing health conditions; elective medical examination and immunizations (e.g., pre-employment physicals and immunizations)
- elective surgery;
- cosmetic surgery (except reconstructive surgery incidental to or following surgery resulting from trauma, infection or other covered diseases or injury);
- contact lens or eyeglasses examinations, for the prescription or fitting thereof;
- hearing aids and examinations for the prescription or fitting thereof;
- prescriptions and associated medical laboratory tests for treatment of dermatological conditions (e.g., acne);
- consultation for or extraction of third molars (wisdom teeth);
- dental care or treatment, other than injury to natural teeth, as provided by the Academy Dental Clinic or as authorized by the senior dental officer;

- dental implants;
- orthodontic care;
- substance use disorders; expensed incurred for treatment subsequent to or resulting from substance use (including alcohol);
- conditions incurred as a result of participation in an act in violation of Midshipmen Regulations, or Academy Policy;
- prenatal care maternity benefits or any condition arising from or out of pregnancy.

Uncovered medical expenses do occur and can be very costly if there is no medical insurance in place. For this reason, all incoming candidates and Midshipmen must be covered by a primary health care insurance policy that meets USMMA coverage requirements. Information explaining the USMMA insurance coverage requirements is provided during the annual open enrollment period. Notification of the beginning of the open enrollment period is communicated to all Midshipmen at the appropriate time. Midshipmen are required to obtain health insurance coverage through any of the following means:

1. Through the use of an existing private insurance plan or the purchase of same if none exists (e.g. a family plan, a "self and spouse plan" or self-only plan) that covers the candidate or Midshipman; provided that the policy meets the minimum coverage requirements established by USMMA or
2. By obtaining a qualifying Student Health Insurance Plan (SHIP) through the Academy-sponsored Health Insurance Administrator that meets the Academy's minimum requirements. Additional information regarding the USMMA Health Insurance can be located by visiting our website at http://www.usmma.edu

Career Services

The Department of Career Services and Professional Development is located on the second deck of Furuseth Hall. The department provides a range of Career Counseling services ranging from information regarding the Midshipman's obligation, to resume assistance, to internship opportunities to graduate employment options. The department has resources to assist Midshipmen in communicating with organizations, learning about opportunities available with them, and in applying for positions. The department works with the alumni association to maintain a database of organizations participating in the internship program and employment of graduates.

For a full description of the functions of the department, see page 105.

Midshipman Counseling and Personal Development

Midshipman Counseling and Personal Development (MCPD), a component of the Department of Health Services, is located in Patten Clinic. MCPD, through a variety of ongoing programs, presentations and services, strives to provide Midshipmen with the practical information, interpersonal skills and decision-making proficiency necessary for them to achieve their personal goals and career objectives. Particular attention is given to the plebes, who typically find the Academy environment challenging during their first year.

MCPD staff includes a Director, a Midshipman Counselor, and support personnel. Using established assessment and counseling methods, MCPD can help Midshipmen address any issue which might affect their performance at the Academy. Issues related to stress, interpersonal relationships, adjustment to Sea Year, and alcohol misuse, for example, can be addressed productively in accordance with established confidentiality guidelines (Health Insurance Portability and Accountability Act of 1996 and Academy policies).

MCPD works closely with the Department of Health Services; the Office of the Superintendent; the Office of the Commandant; the Office of the Chaplain;

and other Academy departments to instruct Midshipmen about significant health-related issues and policies and to provide crisis-management support.

Varsity and Intramural Sports

The Academy seeks to promote Midshipman growth as a "whole person" and is concerned with physical development and with nurturing character, leadership and intellect. Physical fitness and athletics are therefore an important part of Midshipman life.

The varsity athletic program is comprehensive, but emphasis on intercollegiate competition is balanced with a Midshipman's academic obligations. The Academy strives to develop a healthy interest in athletics and to field teams that are competitive. This program offers physical development, recreation and a healthy focus for Midshipman pride and loyalty.

The Academy is a National Collegiate Athletic Association Division III school and fields 16 varsity athletic teams. Male Midshipmen may compete in baseball, basketball, cross-country, football, lacrosse, soccer, swimming and diving, tennis, track and field, , and wrestling.

Female Midshipmen can compete in basketball, cross-country, swimming and diving, track and field, and volleyball.

The Academy also offers competitive club sports for both males and females, including crew, pistol and intercollegiate sailing.

Physical Fitness Program

The Academy places great emphasis on the physical condition of its Midshipmen and runs a complete physical conditioning program that develops and maintains flexibility, aerobic endurance and muscular strength. A good exercise regimen is proven to counter the mental stress associated with maritime, naval and military service. Midshipmen must meet and maintain the physical standards described below from entrance to the Academy through graduation.

Physical Fitness Assessment (PFA): This consists of a series of strength and endurance events to measure an individual's physical fitness in relation to their age and gender. The three events are curl-ups, push-ups, a 1.5 mile run/walk or 500 yard swim. During the academic year, there are three or more scheduled PFAs administered to the Regiment.

Physical Excellence Program (PEP): A Midshipman or plebe ~~candidate~~ who fails the PFA and/or body fat requirement will be required to participate in PEP, which is a remedial physical training and dietary/nutritional guidance program designed to assist Midshipmen in passing the PFA and bringing body fat percentage to within Academy standards.

Intramurals: Over a four-year period, Midshipmen are expected to participate in varsity athletics, club sports or intramurals. The Academy encourages this participation to help Midshipmen remain physically fit, learn from the challenges of athletic competition, and develop a lifetime commitment to healthy physical activity. For Midshipmen who choose not to participate at the varsity or club level, there are ample opportunities to join intramural activities. Company Officers are responsible for monitoring Midshipmen to ensure that all students are taking advantage of the diverse athletic opportunities that the Academy offers.

Waterfront Activities

The Academy boasts one of the finest waterfront training programs in the country. With varsity, instructional and recreational programs available, there is something to offer every Midshipman, either competitively or professionally. As a result, nearly 40 percent of the student body participates in the curricular elective or extra-curricular programs, making the Yocum Sailing Center home to one of the most popular activities on campus.

To support the curricular educational program, there are several modern, specially-equipped vessels that are used for professional training in both core and

elective programs. The flagship of the fleet is the 176-foot training ship, *KINGS POINTER*. The vessel gets underway for routine training throughout the week, and takes part in weekend and weeklong training cruises along the East Coast.

In addition to the *KINGS POINTER*, the waterfront operates the *LIBERATOR*, a 108 –foot former naval training vessel and the *ELIZABETH ANN*, a 65-foot tugboat. The waterfront also has a fleet of Rigid Inflatable Boats (RIBs) for a Fast Rescue Boat course, offered as an elective to upperclassmen with such interest.

In the extracurricular arena, the Varsity Intercollegiate Sailing Team is the most decorated team at the Academy. With 15 North American Collegiate Championship titles won, 42 sailors named to the All-America Sailing Team and the only school to have 6 team members named as Collegiate Sailor of Year, Kings Point sailors are successful competitors, including alumni who have gone on to win National and World Championships and one Olympic Silver medal. The Academy fields teams in seven sailing disciplines: coed, single-handed men and women and double-handed women and coed, coed sloops and coed team racing. The USMMA competes against nearly 300 college varsity and club teams throughout the United States, in seven regions, and is perennially ranked in the top 20 teams in the nation as published in Sailing World Magazine.

Our larger sailing vessels are raced by the Varsity Offshore Sailing Team. Midshipmen regularly compete in intercollegiate offshore events, including day and overnight open races from Annapolis, MD to Newport, RI. During summer break, the team also competes in such high-profile events as Block Island Race Week, the Newport to Bermuda Race, the Halifax Race and New York Yacht Club Race Week.

The Academy also offers Junior Varsity, recreational and instructional sailing programs during the fall, spring and summer months. The Kings Point fleet is comprised of keelboats ranging from 20 to 25-feet in length. The fleet is primarily used for the U.S. Sailing Basic Keelboat instructional course. Once certified, midshipmen can sign out a boat for recreational sailing on local waters.

For Midshipmen interested in competitive rowing, the Kings Point Varsity Rowing Team (Crew) offers a challenging program of headstyle races as well as sprint competition. The team has a state-of-the-art indoor rowing tank, weight room and erg machines and four new carbon fiber four- and eight-person shells. Competing in novice, lightweight and women's regional events, the team annually travels to regattas such as the Head of the Charles and the Dad Vail National Championship.

The USMMA Power Squadron provides a direct supplement to the professional training in the educational programs. Ship handling, navigation and engineering skills are honed as the Power Squadron gets underway for training daily. The flagship of the fleet is the 88-foot MARINER. Several smaller vessels serve as recreational and fishing vessels for the pro gram. Each vessel is manned, maintained and commanded by Midshipmen who get underway each weekend for training, goodwill and VIP cruises, fishing and program support throughout the region.

Extracurricular Clubs and Activities

Midshipmen clubs and activities number over 30 and provide students the opportunity to expand their interests in Regimental, professional, spiritual and personal areas of development. Among the many choices for membership are the Drill Team; the Fencing Club; the National Eagle Scouts; Bowling Club and the Climbing Club. Other choices abound.

Land Hall, the student center, is the heart of the activities program and provides space for Midshipmen to gather and pursue their interests. A Midshipmen Student Activities Council, composed of elected students, Midshipman officers and volunteers, helps plan activities both on and off the campus for the Regiment. There is a full program of social events, dances, dinners and current movies. Midshipmen may enjoy recreation on campus in a game room with electronic

games, billiards, table tennis and televisions.

Students with a literary bent participate in Academy publications, which include **Hear This**, the student newspaper; and **Midships,** the award-winning yearbook.

Musical Activities

The Regimental Band, nicknamed "George M. Cohan's Own," along with the 15 member fanfare trumpet detachment and 20 member Corps of Drums, has been acclaimed nationally and internationally for their distinctive marching and concert performances. They have played three times for the Macy's Thanksgiving Day

Parade before a TV audience of an estimated 40 million. They have performed at numerous other prestigious events including the National Horse Show at Madison Square Garden, the Cotton Bowl Classic in Dallas, Texas, and the opening of both the Atlantic and Pacific wings at the WWII Museum in New Orleans. They also play in numerous New York City events including the Centennial Parade over the Brooklyn Bridge and New York ticker tape parades which salute Championship sports teams, world leaders and American military patriots up Broadway's "Canyon of Heroes." In 2009 they led the "Hudson-Fulton-Champlain" Celebration touring upstate New York and played before the Crown Prince and Princess of the Netherlands. They have won the "Best Foreign Band" award three times for the "Warriors Day Parade" in Toronto, Canada and were featured at the Canadian National Exhibition. They also "stole the show" to quote the U.S. Consul General at the World Festival of Military Bands held in Quebec City, Canada;this was a unique compliment considering that all 20 foreign bands were made up of professional musicians. The band sailed to Europe on Cunard's *QUEEN ELIZABETH 2* for the anniversary of "D" Day where they were hailed by the famous news commentator Walter Cronkite.

The fanfare trumpets play at numerous events including the "Salute to Congress" Dinner held each year in Washington, D.C. and numerous prestigious events in Manhattan's finest hotels. The fanfares have played for several U.S. Presidents at these events and are sought after by many important organizations.

Band members typically form smaller ensembles including the Pep Band and Jazz group. The members of Band Company reside together for continuity of purpose and enjoy a long-standing reputation for academic excellence and regimental pride. The members work hard musically, academically and regimentally.

The Academy's Chapel Ecumenical Choir performs for Chapel Services and important events such as the holiday season "Festival of Lights" as well as the Graduation "Baccalaureate" Services. They are led by the Chapel Organist/Choirmaster who sets high standards for excellence.

The band represents both the Academy and the maritime industry as "Musical Ambassadors to America." Every four years they represent our brave and accomplished American seafarers at the Presidential Inauguration Parade in Washington D.C.

Cultural Activities

The Academy is connected to New York City—about 20 miles away—by excellent train and bus service. Most Midshipmen have mastered navigation of Manhattan by the time they graduate. New York City offers unparalleled cultural amenities to students who are curious and willing to explore, and many of these resources can be enjoyed at very little expense. Popular music, theater, symphonies, operas, dance, ethnic neighborhoods, and museums—the list of things to do and see goes on and on.

The Academy, through its Arts and World Affairs Program, funds student-organized excursions to cultural events in New York City and other nearby locations. Every year, blocks of tickets to leading Broadway shows are made available so that Midshipmen may attend such events in groups. Other types of trips to Manhattan, as well as other cultural initiatives, are also supported.

The Museum

The American Merchant Marine Museum at the Academy allows Midshipmen to see firsthand our nation's rich maritime heritage. The museum's focus is the merchant marine from the beginning of steam propulsion to present day operations. Located in Barstow House on the Academy's McNulty Campus, the museum welcomes thousands of visitors each year.

Spiritual Life

Participation in religious activities and attendance at chapel services is voluntary, left to the needs and desires of the individual Midshipman. The U.S. Merchant Marine Memorial Chapel, built by public subscription as a tribute to the officers and men of the merchant marine who lost their lives in the service of the nation, serves all faiths.

Chaplains are available to assist Mid-shipmen with their spiritual and personal needs. The Protestant and Catholic programs include weekly Sunday services, a daily Catholic mass, Bible studies and social events. Other opportunities for spiritual growth include retreats, service projects, religious study programs, and sacramental preparation classes.

Jewish and Latter-Day Saint Midshipmen can participate in worship with local area congregations, and are offered opportunities to attend special holiday observances. Incoming freshmen (fourth classmen or plebes) may attend these services once the indoctrination period is completed.

Midshipmen of other faiths requiring special arrangements to attend a house of worship of their choice may obtain assistance from one of the chaplains.

Drug and Alcohol Policy

The Academy will not tolerate the use of illegal drugs or the abuse of alcohol by its Midshipmen. Students who are found in violation of the Academy's drug and alcohol policy face serious disciplinary action.

Each appointee to the Academy receives a urine toxicology screen during indoctrination. The Department of Health Services conducts a number of mandatory toxicology screenings including tests prior toSea Year assignment, prior to graduation as a prerequisite for licensing in the USCG, and before commissioning in the U.S. Armed Forces. Health Services will also test whenever there is a reasonable suspicion that a student has used illegal substances. Additionally, the Office of Commandant conducts random urine toxicology screens of the Regiment during each school year.

The Office of the Commandant will impose disciplinary action for Midshipmen who violate the Academy's alcoholregulations. Consumption and possession of alcohol on Academy grounds, for example, will result in severe disciplinary action. In addition, under Superintendent's Instruction 2006-26 (Alcohol Awareness Education and Treatment Policy), Midshipmen who commit alcohol-related violations are referred for assessment to the Alcohol Clinical Treatment Team of Midshipman Counseling and Personal Development.

Detailed instruction and information about the potential personal and professional consequences of substance abuse begins for each plebe candidate class upon entrance to the Academy. The relevant policies of the Academy, the USCG, the armed forces and the maritime industry are also reviewed. Since a current working knowledge of these policies is crucial to a Midshipman's success at the Academy and thereafter, additional training sessions are held regularly throughout the Midshipman's four years at the Academy. Midshipman Counseling and Personal Development offers an ongoing variety of educational, treatment and counseling services to assist Midshipmen in making decisions that maximize their opportunity to succeed.

As a prerequisite for appointment as a Midshipman in the Strategic Sealift Officer Program (SSOP), U.S. Navy Reserve (USNR), all students who are U.S. citizens are required to read and initial a statement

of understanding which outlines U.S. Navy policy regarding drug and alcohol use and misuse, and the consequences for violating the policy.

Tattoo and Body Piercing Policy

In our current culture, tattoos, brands and body piercings are becoming more prevalent. The Academy has established a policy to address this issue, outlining what is acceptable and unacceptable. The purpose of the policy is to ensure that Midshipmen uphold a professional image when in uniform and avoid the serious health risks and long term consequences associated with a tattoo, brand or body piercing.

The following tattoos and brands are prohibited: any that are on the face, neck or head; any that are prejudicial to good order or discipline, including those with offensive language, patently racist or extremist symbols, or sexually explicit depictions; and any that are partly or fully visible when wearing the Summer White uniform. Tattoos or brands falling into one of the above categories must be removed within six months of identification at the expense of the individual student. Entering plebe candidates identified with a prohibited tattoo or brand will have until December 1 of plebe year to have the tattoo or brand removed, or face disenrollment.

The Academy's policy regarding body piercing prohibits the following: body piercing and jewelry on the tongue, or in areas that interfere with a student's duties, or that could lead to medical complications.

While in uniform, female midshipmen are permitted to wear single post earrings, one per ear on the earlobe. The earring must be gold, a 6mm (approximately 1/4") ball, plain with brushed matte finish. Small single pearl earrings are authorized for wear with Dinner and Formal Dress uniforms.

With the exception of earrings authorized for female Midshipmen, neither male nor female students are permitted to have body piercings with associated jewelry that are visible when wearing the Summer White uniform or an athletic uniform when engaged in athletic competition.

Motor Vehicles

All upperclass Midshipmen may own and use automobiles while in residence at the Academy. However, because of limited parking facilities on campus, only a small number of first classmen may keep their automobiles in a designated area of the Academy at their own risk. This is considered a privilege and is granted subject to compliance with Academy regulations. Upperclass students who are not authorized to use Academy parking facilities must make private garage arrangements since a local town ordinance prohibits overnight street parking.

Admissions

Each year, the Academy selects approximately 275 to 300 young men and women for entry into the Plebe Class. They come from every State of the Union, as well as from backgrounds reflecting every facet of American life. The Academy encourages diversity and recognizes the value of a Regiment of Midshipmen representing all races, colors, creeds and ethnic backgrounds found in this nation. Students from minority groups are strongly encouraged to apply for admission.

Certain general eligibility requirements for admission to the Academy do exist. Candidates must be of good moral character. They must be at least 17 years of age and must not have passed their 25th birthday before July 1 in the year of entrance. They must be citizens of the United States either by birth or naturalization, except for a limited number of international midshipmen specially authorized by Congress. Candidates must also meet the physical, security and character requirements necessary for appointment as U.S. Navy Reserve, Strategic Sealift Officer Program midshipmen. Candidates must obtain a Congressional nomination to the Academy; submit a completed application; and qualify scholastically. The Admissions Office evaluates each candidate's high school record and class rank, SAT or ACT standardized scores, recommendations from school officials, history of extracurricular activities, ability to pass a Candidate Fitness Assessment (CFA), and other evidence of character, leadership and potential for academic achievement. Admission to the Academy is based on all the above factors. The application deadline is March 1 (February 1 for international students).

Definition of Terms

The terminology listed below will be used frequently in this section on admission to the Academy. Candidates should familiarize them- selves with these definitions:

Nominating Authority: A member of the U.S. Congress (House of Representatives or Senate). Each Representative and Senator may nominate 10 candidates to the Academy each year. The President and Vice President are **not** nominating authorities for the Academy. In addition, the U.S. Delegate for Guam, the Virgin Islands, the District of Columbia, and the Northern Mariana Islands, as well as the Resident Commissioner from the Commonwealth of Puerto Rico, may nominate 10 candidates annually.

Applicant: A man or woman applying to a member of Congress for a nomination to the Academy.

Nomination: A nominating authority's submission of an applicant's name as a nominee for consideration for appointment to the Academy. The applicant must be a resident of the same state or territory as the nominating authority. Students should apply to the Academy at the same time that their nomination request is being evaluated.

Candidate: A man or woman who has applied to the Academy and has been designated as under consideration for admission.

Qualified Candidate: A candidate who meets the minimum requirements on the standardized entrance examinations and has fulfilled the other minimum criteria for admission consideration.

Principal Candidate: A candidate who has been found scholastically qualified and who will be admitted to the Academy contingent upon the completion of prescribed medical, security and SSOP requirements.

Alternate Candidate: A scholastically

qualified candidate who would replace principal candidates who decline or fail to qualify for a final appointment, or who do not meet the requirements of the SSOP program.

Remedial: Term used to define the physical conditions requiring correction and/or compliance determined necessary by the U.S. Department of Defense Medical Examination Review Board (DoDMERB) in order to be medically qualified. (Example: removal of impacted wisdom teeth.)

Scholastic Requirements

Candidates should pursue studies in high school that will prepare them for the Academy's rigorous program. The quality of work is important. Ninety-two percent of the Class of 2021 ranked in the top 40 percent of their high school class.

To be appointed to the Academy, candidates must have satisfactorily completed their high school education at an accredited secondary school or its equivalent. They must have earned at least 18 units of credit. Four of these credit units must be in English, three units in mathematics (from algebra, geometry and trigonometry), and one unit in physics or chemistry with a laboratory. These requirements are minimal. The Academy strongly recommends that candidates take four years of mathematics and both physics and chemistry. Courses in mechanical drawing and machine shop are also desirable. Successful completion of pre-calculus or calculus satisfies the trigonometry requirement.

By March 1 of the year in which they are seeking admission, candidates must submit evidence with their official application showing the completion of all academic requirements. All required courses must be completed by June 15 or by the date of graduation from high school. Time extensions will not be granted.

Testing

All candidates are required to take either the standardized College Board's Scholastic Assessment Test (SAT I) or the standardized American College Testing Program's test (ACT) on scheduled dates at convenient testing centers throughout the country. Required testing must be completed by the first test date of the year in which admission is sought, unless permission is requested and received, in writing, from the Academy's Director of Admissions. All tests should be taken within 16 months prior to the month of enrollment. The minimum standardized SAT I or standardized ACT qualifying scores for admission will be determined by the Academy for each entering class. The Academy does not accept the non-standard, or un-timed, administration of the SAT or ACT.

It is the candidate's responsibility to register for the examinations. Registration instructions are contained in information bulletins available at no cost to most secondary schools. Members of the U.S. Armed Forces should find copies available in their units' education offices.

Testing and registration information is also available at http://www.collegeboard.org (for the College Board's SAT) or http://www.act.org (for the American College Testing Program).

In the event that you have any questions concerning test requirements, or if you are unable to meet the established examination deadline date, contact the Academy's Admissions Office.

Candidates must request the testing agency to submit their test scores to the U.S. Merchant Marine Academy, Kings Point, New York 11024-1699. The cost of the examination must be borne by the individual candidate. The Academy's SAT code number is 2923; its ACT code number is 2974.

Nominations

Candidates must be nominated to the Academy by a U.S. representative or senator (see previous definition). Candidates may only be nominated by qualified authorities from their state or territory.

Nominating authorities select their nominees by any methods they wish,

which may include a screening interview. This screening may be administered as early as July of the year before appointment is sought. Nominees must reside in the state or territory that the nominating official represents, or have a "home of residence" in the state or territory represented by the nominating official.

A candidate should apply for a nomination early. Some nominating authorities establish deadline dates for the receipt of nomination requests in order to allow adequate time for processing and evaluating requests. The ideal time for a candidate to apply for a nomination is in May of the junior year in high school.

Nominating authorities must submit the names of their nominees to the Academy by January 31 of the school year in which admission to the Academy is sought.

Candidates should visit their nominating authorities' websites for additional information and instructions on requesting a nomination.

Visiting the Academy

Students who are considering attending the Academy are strongly encouraged to visit the campus. There are two types of visits available while Academy classes are in session.

Day Visit - *For high school juniors and seniors only.* Includes an admissions briefing and an escorted campus tour. Students must arrive at the Admissions Office no later than 10:15 a.m., when they will meet with an admissions officer who will provide information and answer questions. At noon, visiting students will be paired with Midshipman escorts for lunch with the Regiment of Midshipmen in Delano Hall. They then attend afternoon classes and activities with their escorts and finish at approximately 4:00 p.m.

Overnight Visit - *For high school seniors and graduates only who have submitted at least Part I and Part II of their application to the USMMA.* This consists of an admissions briefing and accompanied overnight stay. Students must arrive at the Admissions Office by 10:15 a.m., when they will meet with an admissions officer who will provide information and answer questions. At noon, visiting students will be paired with Midshipman escorts for lunch with the Regiment of Midshipmen in Delano Hall. They then attend regular afternoon classes and early evening activities, such as sports practices and club meetings. Visiting students will have dinner in Delano Hall and will stay overnight in the Midshipman escort's room. The following morning, they will have breakfast in Delano Hall, and attend morning classes with their escort. Their visit will conclude around noon (they do not have lunch again with the Regiment).

Parents and family members (maximum of two) who arrive with the student are invited to participate in the admissions briefing. However, only the visiting student may eat meals and attend classes. Parents and family members may continue to tour the Academy on their own. Meals are available in the Seafarer Canteen. Overnight accommodations can be arranged at local hotels.

There are several periods during the year when escorted visits to the Academy are not available (although a briefing with an admissions officer is possible):

- The weeks immediately before and after trimester final exams;
- The week of trimester break and the first week after Midshipmen return from trimester break;
- The weeks of the winter holiday break;
- The weeks of the winter holiday break;
- The period from the Friday before Memorial Day weekend until the middle of August; and
- Several "blackout" dates during the course of the academic year due to special campus events.

During the periods when escorted visits are not available, students may still arrange a "Briefing Only" with an admissions officer. Note that this option is not available during the period in July when Indoctrination of incoming freshmen (plebes) is underway. The Academy campus is closed to visitors during Indoctrination.

Students who are high school sophomores, or younger, may visit the academy for a "Briefing Only" session, but may not participate in the Day or Overnight Visit programs until they have reached the higher grades detailed earlier. Students interested in visiting the Academy should call, toll free, **1-866-546-4778**, or **516-726-5643** to schedule an appointment. All visits must be scheduled at least one week in advance.

International Students

The Code of Federal Regulations (CFR) permits the appointment of Midshipmen from nations other than the United States. By law, no more than 30 international students may attend the Academy at any one time.

International students interested in applying to the Academy must contact the Admissions Office to obtain an International Application Package. They may **not** use the on-line application found on the Academy's website.

To obtain an International Application Package, send an e-mail to: **admissions@usmma.edu**, or download the application from

https://www.usmma.edu/admissions/application/international-application-package download directly the application from https://www.usmma.edu/admissions/application/international-application-package

All international applicants must take either the standardized SAT or the ACT. Applicants for whom English is not a native language must also take the Test of English as a Foreign Language (TOEFL) examination.

All completed international applications must be received no later than February 1 of the year of enrolling at the Academy. In order for an application to be complete, the Academy must receive Parts I, II and III of the application, a biographical essay, all high school/secondary school (pre-university) and college/university transcripts (in English), letters of recommendation, your passing (at or above minimum) SAT and/or ACT scores, and your passing (at or above minimum) TOEFL scores (if required). If your original transcript is not in English, you must also provide a certified translation of your transcript in English, with your other application paperwork.

If the Academy does not receive all of the above information by February 1, the application for admission will be denied.

All international applicants must also supply the Admissions Office with the results of a full medical examination, in English, or accompanied by a certified English translation. All Academy Midshipmen, as required by regulation, must be physically qualified to sit for the USCG-administered merchant marine officer license examinations before completing their studies and graduating from the Academy. Medical disqualification is a cause for rejection of admission to the Academy.

The United States does not offer any scholarships, grants or other financial assistance or aid to international students for attending the Academy. All expenses are the student's responsibility. An international student must demonstrate an ability to pay for an Academy education before receiving an appointment to the Academy.

The Academy does provide enrolled international students with the same required uniforms, textbooks and transportation allowances that U.S. citizen Midshipmen receive.

Security Clearance

Upon enrollment at the Academy, you will be required to complete an electronic form for a security clearance. A security clearance is necessary for commissioning into the armed forces. All questions must be answered accurately and truthfully so that your clearance is not delayed. To verify your place of birth, you will be asked to submit a certified copy of your birth certificate. Please address any inquiries about the security clearance to the Admissions Office. (Note: Students must comply with security clearance requirements necessary to obtain Transportation Worker Identity Cards.)

Dual Citizenship

Applicants who indicate that they are in possession of a foreign passport will be instructed to return that document to the appropriate country's embassy or consulate, requesting a return endorsement, which must be presented to the authority making the security clearance determination. This is because possession and use of a foreign passport instead of a U.S. passport may raise doubts about your allegiance to the United States. A security clearance will be denied or revoked unless the foreign passport is surrendered.

Anyone having dual U.S./foreign citizenship, without possessing a foreign passport of another country, must abrogate that country's citizenship.

Failure to comply with these instructions will result in a denial of a security clearance, denial of a commission into the U.S. Navy Reserve or other armed forces reserve component, and disenrollment from the Academy.

Applications

You should request an application and complete it prior to the March 1 application deadline. You are strongly encouraged to complete this application early even before receiving a nomination from your nominating authority. Early filing of an application will expedite processing your admission file.

Apply On-Line

U.S. candidates for admission to the Academy may apply on-line via the Internet by going to https://www.usmma.edu/admissions.

Medical Requirements

A candidate for admission to the Academy must meet the medical requirements for appointment as a U.S. Navy Reserve Midshipman. Medical examinations are conducted by a service academy examining facility designated by DoDMERB, DoDMERB is the Academy's screening authority and it makes the final decision on a candidate's medical qualifications. All candidates must be medically qualified for appointment by DoDMERB by April 16 of the year of entrance.

The Admissions Office will submit candidate names to DoDMERB for medical exam scheduling. It is the candidate's responsibility to pursue medical processing to its conclusion in a timely manner. Candidates can check on their medical status by referring to the DoDMERB website at https://dodmerb.tricare.osd.mil/. Candidates are encouraged to take their medical exam as soon as possible.

Non-Swimmers

It is recommended applicants learn to swim before entering the Academy. Fourth classmen must demonstrate the ability to swim 100 yards using two basic strokes and 15 minutes of flotation. This requirement must be fulfilled prior to a Midshipman's first shipboard training period.

Appointments

Candidates are appointed competitively by the Academy for the vacancies allocated to their state or territory. Each state has an assigned number of appointees proportional to its representation in Congress. After the Academy has selected its principal appointees, the remaining qualified candidates will be designated as alternates, to be appointed in order of merit should openings occur within their respective states.

In the event that a state fails to satisfy its allotment, appointments to fill the unfilled vacancies are determined from the national list of alternates, ranked in order of merit as described in the previous paragraph.

A candidate's competitive standing is established by test scores on the standardized SAT or ACT examination, high school class rank, academic record, evidence of leadership potential, interest in a maritime career, and other factors that are considered effective indicators of motivation and probable completion of a degree program. Bonus points are awarded to candidates with at least six months of sea service aboard merchant or naval vessels.

Rolling Admission

Highly qualified candidates with a completed application (Parts I, II, III, essay, high school transcript, letters of recommendation, school profile, and senior courses in progress) will receive early notification of their appointment after a thorough evaluation of their qualifications. All other candidates will be notified of their status no later than April of the year in which they seek admission. Late appointments may be offered after 1 May in order to fulfill the incoming class size requirement.

Orientation/Briefing Day for Principal Candidates

All principal candidates may be invited to visit the Academy on a selected date in mid-April for a briefing program (if one is able to be scheduled). Candidates have an opportunity to meet and discuss the Academy's program with Midshipmen, faculty and administrative personnel. Attendance is strictly voluntary. Travel arrangements and expenses must be borne by the candidates.

Armed Forces Enlisted Personnel

An individual who enters the Academy in an enlisted status in a component of the U.S. armed forces or USCG will not have their existing military service obligation (MSO) terminated. However, attendance at the Academy may or may not be credited towards fulfillment of an MSO, depending on the circumstances of each case and the military department involved. Disposition of enlisted members of the U.S. armed forces who are admitted to the Academy and accept appointment into the Navy Reserve SSOP is addressed in Title 10 United States Code, Section 516, as well as in applicable service regulations. An enlisted member of the U.S. Armed Forces seeking admission to the Academy should obtain additional details and guidance from their command personnel office or career counselor.

Summary

Here, in summary, are the steps necessary for admission to the U.S. Merchant Marine Academy:

1. Request a nomination by contacting a U.S. Representative or Senator, preferably in May of your high school junior year.
2. Request, complete and return your application to the Academy as soon as possible, along with your high school transcript and required letters of recommendation. This material must reach the Academy no later than March 1 of your high school senior year. Applications completed early receive early attention.
3. You must pass a physical and medical examination administered by a central medical review board once the Academy receives your completed application.
4. You must take either the College Board's standardized SAT or the American College Testing Program's standardized ACT examination no later than the first test date of the year you are seeking admission. The Academy does not accept the non-standard or untimed administration of the SAT or ACT.
5. You must successfully complete the Candidate Fitness Assessment (CFA)by March 1. Candidates are permitted two (2) attempts at passing the CFA, as long as the results of both are received at the Academy by March 1. Submitting CFA results from your first attempt right at/around the March 1 deadline will likely prevent you from re-taking the CFA if you do not pass all items on the first attempt.
6. On or before April 10, if your application was complete and received by March 1, you will be notified either of your selection as a principal, conditional or alternate candidate, or of your failure to meet the requirements.
7. Alternate candidates are subsequently notified if and when

they are designated as principal candidates.

8. For a full explanation of Academy admissions requirements and candidate terminology, please refer to the previous pages in this section.

9. The plebe class enters the Academy in late June or early July.

Additional information may be obtained from:

Admissions Office
U.S. Merchant Marine Academy
300 Steamboat Road
Kings Point, New York 11024-1699
Telephone: (516) 726-5643
Toll Free Number: 1-866-546-4778
E-mail: **admissions@usmma.edu**
FAX: (516) 773-5390
Website: https://www.usmma.edu

Expenses and Financial Aid

The major cost of attending the Academy is borne by the Federal Government. There is no tuition charged. Midshipmen are provided with comfortable quarters and well-balanced meals. Basic medical and dental care are provided through the Academy's Office of Health Services .

Prescribed initial issue of uniforms and textbooks is provided without charge to Midshipmen. In order to assure uniformity of appearance, quality and cost, all required items are purchased by the Academy with specifications approved by the Commandant of Midshipmen or the Academic Dean. In individual cases where additional textbooks are considered desirable, it is the responsibility of the Midshipman to bear those costs. In addition, each student (plebe candidate) entering the Academy is required to purchase or possess an electronic scientific hand-held calculator with graphics display and to purchase a personal computer based on specifications provided by the Academy. Computers meeting Academy specifications are sold through the Navy Exchange. Alternatively, student candidates can purchase a computer on the economy, as long as it meets Academy-specific requirements. Details on specifications and ordering will be furnished when applicants are notified of acceptance.

Midshipman Fees

All Midshipmen are required to pay for mandatory educational equipment, personal services and supplies not provided by the Federal Government. All students are responsible for the payment of Midshipman fees. Entering students who fail to pay the required fees before the start of Indoctrination will be denied enrollment. Midshipmen who fail to pay fees thereafter will face disciplinary action including suspension and/or disenrollment from the Academy.

Personal Services

The services fee includes: **barber** services (male and female); **tailor** services; and access to **laundry** full and self-service facilities**.** The charges for a member of the Class of 2020 were $1,167.00

Total Midshipman Fees- All Classes/Splits/Majors

On the basis of current Midshipman fee rates for the most recent (July 1, 2016-June 30, 2017) academic year, the total student charges for the four-year program (depending on major) are:

Plebe Class (Freshman) $1,167.00
Third Class (Sophomore).....$738.00
Second Class (Junior).....$738.00
First Class (Senior).....$1,167.00

Note: Actual Midshipman fee rates generally increase in future academic years.

Refunds: Indoctrination Period

A full refund is authorized if a plebe candidate declines appointment and does not report to the Academy as ordered. A plebe candidate who is separated during the Indoctrination period will receive a partial refund of the personal services fee based upon the date of separation from the Academy. For candidates who expect to receive federal financial assistance, please take notice that the Academy follows the federal refund procedures.

Refunds: Regular Academic Year

Midshipman separated during a trimester will receive a partial refund of the personal services fee based upon the date of separation.

Midshipmen on hold who are waiting for academic or other Board review decisions will not be eligible for a personal services

refund until their case is adjudicated and attendance status is determined. Midshipmen who are dis-enrolled or set back to a later term will receive a partial refund based upon date of separation.

Issue items for which the U.S. Government has paid can never be exchanged for cash or credit. Refund checks, when applicable, will be mailed to the Midshipman's home address on record (unless the Midshipman specifies another address in writing) within 30 days after separation from the Academy.

Payment Deadlines

Incoming plebes are responsible for payment of the entire year's personal services fee prior to reporting to the Academy for Indoctrination. Payment can be made via credit card online or by sending a check to:

Office of Academy Financial Management
U.S. Merchant Marine Academy
300 Steamboat Road
Kings Point, New York 11024-1699

Checks should be made out to the United States Merchant Marine Academy or USMMA.

Entering students who fail to pay the required fee before the start of Indoctrination will be denied enrollment.

For returning members of the Regiment, the entire year's personal services fee is due on or before the first day of regular classes for the first trimester. Failure to pay the required fee may result in suspension and/or disenrollment.

Pay

Midshipmen, while assigned to sea for the shipboard training portion of the curriculum, are provided with quarters, meals and medical care. While on sea duty, they are employees of the shipping company owning the vessel to which they are assigned, and are paid wages of $1062.30 per month (as of June 15, 2017), less certain minor expenses varying with each company. Midshipmen do **not** receive wages while in residence at the Academy.

Spending money and transportation costs during liberty and leave periods are considered a Midshipman's own personal expense. Losses incurred by the Academy due to such acts as willful damage, breakage or mischief may be charged directly to the Midshipman responsible for the damage.

Official Travel

Midshipmen are reimbursed for official travel at the Federal Government-authorized mileage rate, or at the cost of traveling by common carrier at the government rate, whichever is less.

Student Loans, Grants, Scholarships

Student loans, grants and scholarships are available to students who require financial assistance. Candidates are urged to act early and take the necessary steps to obtain financial assistance through the Federal Student Aid program by filling out the Free Application for Federal Student Aid (FAFSA) starting October 1. The Academy participates in the Direct Loan program.

Based on the results of the FAFSA evaluation by the U.S. Department of Education, certain very needy midshipmen may be deemed eligible to receive Federal Pell Grant funds. In order to be considered for a Pell Grant, students must request financial assistance and submit a FAFSA.

Candidates are strongly encouraged to research the availability of these loans during the fall of their senior year in high school and to seek advice from high school guidance counselors. Moreover, the candidate or the candidate's parents should communicate with the Academy's Financial Aid Office in order to receive proper instructions and forms for completing a financial aid application package.

It is Academy Financial Aid Office policy to report to the U.S. Department of Education the name, address and social security number of each Midshipman receiving financial aid. This reporting is

done through the National Student Loan Database System (NSLDS).

Outside scholarships and grants (from such organizations as the Lions Club, National Association for the Advancement of Colored People and other community service and educational organizations) may be used to offset a Midshipman's fees and expenses. Students, therefore, are encouraged to apply for any scholarships and grants for which they may be eligible. Scholarship award checks should be sent to the Office of Academy Financial Management made payable to United States Merchant Marine Academy (USMMA).

Banking Facilities

While there are many banking institutions in the town of Great Neck, most Midshipmen find it more convenient to use the Navy Federal Credit Union which is a banking facility located on the Academy campus. The Credit Union accommodates Midshipmen by permitting them to open checking or savings accounts which do not require a minimum balance. There is a Credit Union ATM on campus so that Midshipman will have ready access to funds. Midshipmen should avoiding the risk of carrying cash in any quantity.

Service Obligation After Graduation

When you graduate from the U.S Merchant Marine Academy, you will have achieved a milestone in your academic career. Since the Federal government has a substantial investment in your education, you will be required to fulfill the terms of a service obligation after graduation. This obligation is set forth in this section of the catalog.

The merchant marine is a component of the Nation's defense. It is the Federal Government's intention to have a sufficient number of highly trained licensed officers available to operate American flag merchant vessels in both peace and war. Your service in the merchant marine is the vehicle through which this goal is achieved.

The Law

With the passage of the Maritime Education and Training Act of 1980 (P.L. 96-453), Congress imposed mandatory service obligations, outlined in this section, for USMMA graduates. The obligations relate to a graduate's employment, maintenance of a U.S. Coast Guard license, commissioning in the reserve forces of the United States, and reporting compliance to the U.S. Maritime Administration (MARAD).

Graduate Service Obligation

Employment

A graduate may fulfill the employment obligation portion of his/her service obligation in five ways as follows:

Serve in the foreign and domestic commerce and the national defense of the U.S. for at least five (5) years following graduation as:

1. A merchant marine officer in the U.S. flag fleet;
2. A commissioned officer on active duty in the U.S. Armed Forces or the National Oceanic and Atmospheric Administration (NOAA) Corps;
3. With the federal Government in a maritime-related position that serves the national security interest; or
4. If a determination has been made that no afloat positions are available for you, you may serve ashore in a U.S. maritime-related industry, profession or marine science.

By combination of the services specified above.

Maintenance of Coast Guard License

Maintain (or upgrade) the license as an officer in the U.S. merchant marine, including all endorsements held at graduation, for six (6) years following graduation.

Service as a Commissioned Officer in the Reserves of the U.S. Armed Forces of the United States:

Apply for and accept, if tendered, an appointment as a commissioned officer in the reserves of the U.S. armed forces for at least eight (8) years following graduation.

Report Compliance to MARAD

Report to MARAD annually concerning your compliance with the foregoing maritime service obligations, as set forth in the next paragraph.

You are required to complete a service obligation report in each year following your year of graduation to inform MARAD about your compliance with your service obligations. Regardless of the date of your graduation, each graduate must submit a service obligation report from between January 1 and March 1, starting the first January 1 after graduation and for at least an additional six (6) consecutive years thereafter. Graduates are required to file

reports through to the last report to demonstrate that all obligations have been satisfied. If a graduate completes the service obligations within the six years following graduation, each graduate should only have to file a total of seven (7) reports in order to give information on all six (6) years of service obligations.

Service as a Merchant Marine Officer

Unless a graduate serves as an active duty commissioned officer in the U.S. armed forces or in the NOAA Corps or in a maritime-related position with the Federal government serving the national security interests of the United States, he/she must first seek employment in the maritime industry as a licensed officer aboard vessels operating under the U.S. flag. Employment aboard such ships supports the government's objective of providing fully trained merchant marine officers to operate U.S. flag merchant vessels in peace and war.

For service obligation purposes, a year of employment aboard merchant vessels is defined as the median number of days of seafaring employment under Articles achieved by deck or engine officers in the most recent calendar year for which statistics are available. The median number of days required for each year will be posted on MARAD's web-based internet system at:

https://mscs.marad.dot.gov

Maritime-Related Ashore Employment Option

Graduates who are unable to obtain employment as a licensed officer aboard a U.S.-flag vessel may work in a U.S. maritime-related industry, profession, or marine science. Prior to accepting a position, the graduate must seek a determination from the Maritime Administrator that such U.S.-flag vessel employment is not available. Additionally, the graduate must obtain approval of the position as meeting the maritime-related requirement. Among the areas of employment the Administrator may consider acceptable as U.S. maritime-related employment are positions of operational, management and administrative responsibility with organizations or maritime-related fields, such as:

- Steamship companies
- Stevedoring companies
- Vessel chartering and brokerage operations
- Cargo terminal operations
- Naval architecture
- Shipbuilding and repair
- Municipal and state port authorities
- Port development
- Marine engineering

- Tug and barge companies
- Oil and mineral operations
- State agencies involved in maritime affairs.

The foregoing list does not set forth all types of positions, organizations, or fields that may be acceptable to satisfy the service obligation.

Waiver of the Service Obligation

The Federal Government realizes that there may be situations that prevent graduates from fulfilling the requirements of the service obligation contract. Waivers may be granted in cases where there would be undue hardship in the performance of satisfactory maritime service or when it is impossible to perform satisfactory maritime service due to an accident, illness or other justifiable reason as determined by the Maritime Administrator.

Deferment of the Service Obligation

The Maritime Administration may grant, upon request, a deferment for a period not to exceed two years of all or part of the service obligation contract. This deferment privilege exists only for graduates considered to have superior academic and conduct records while at the USMMA. Deferments are available only to individuals desiring to enter a marine or maritime-related course of study at an accredited graduate school or to accept a scholarship of national significance, as determined by the Maritime Administrator, in a non-maritime related field.

Active Military Duty

Active duty as a commissioned officer with the Navy or any other branch of the U.S. armed forces or the NOAA Corps is a way of satisfying the employment portion of the service obligation contract. Graduates of the Academy have an understanding of naval procedures and operations that contribute to our national defense requirement for an adequate merchant marine, and can make a valuable contribution to the U.S. armed forces.

Federal Government Service

A graduate may fulfill the employment portion of the commitment by serving in a full time position with a Federal agency, if that position serves the national security of the United States in a maritime-related area. Positions with the Department of Homeland Security in the maritime sector are one example of acceptable Federal positions.

Navy Reserve Appointment

Any U.S. citizen who applies to the Academy also applies for an appointment as Midshipman, Strategic Sealift Officer Program, U.S. Navy Reserve. Your application will be reviewed by the Office-In-Charge of the Department of Naval Science. To qualify for a Midshipman appointment you must have satisfactorily completed the Department of Defense Medical Examination Review Board (DoDMERB) entrance physical. You must also complete an Electronic Personnel Security Questionnaire (EPSQ) prior to reporting to the Academy.

The ESPQ is an honesty and loyalty check required prior to receiving a security clearance. This questionnaire must be honestly and thoroughly completed. Issues that will cause a problem include failure to report an arrest by civil or federal authorities, and possessing a non-U.S. passport, or dual country citizenship. If any of these issues apply, you should contact the Academy's Department of Naval Science for clarification of Navy policy and for guidance on resolving the issue.

In the event that a Midshipman fails to display the qualities of leadership, character, and aptitude expected of a prospective commissioned officer in the U.S. Armed Forces, the Naval Service Training Command (NSTC) may terminate the Midshipman's appointment. The Midshipman is also separated from the Academy is such a case.

Reserve Military Duty

In order to comply with your service obligation you must apply for and accept an appointment as a commissioned officer in the U.S. Navy Reserve, U.S. Coast Guard Reserve, or any other Reserve or National Guard unit of an armed force of the United States. With the recommendation of the Officer-In-Charge, Department of Naval Science, and the Academy superintendent, you will receive your commission at graduation. Although officer appointment applications may be made to any armed force, the majority of graduates will be appointed as ensigns in the Strategic Sealift Officer Program, U.S. Navy Reserve. After appointment as

Ensign, USNR, you must perform satisfactorily in the Navy Reserve for eight years. An individual's requirements and options under this program will vary depending on whether the graduate is working at sea or ashore. Details will be provided by the Naval Science Department either through their course of instruction or upon request.

Breach of Service Obligation

Graduates who breach their service obligation contract may be ordered to active duty in the U.S. armed forces. In lieu of being ordered to active duty, graduates may be required to repay the cost of the education provided by the Federal Government. The Maritime Administration's Office of the Associate Administrator for Policy and International Trade will make a determination of whether a graduate has breached the service obligation. Such decisions may be appealed to the Maritime Administrator.

The Regimental Program

The Regimental Program at the U.S. Merchant Marine Academy will be a vital part of your educational experience as a Midshipman. This program has one aim—to develop superior junior leaders for the merchant marine fleet, the Armed Forces of the United States, and the shoreside maritime and transportation industries.

Regimental activities and policies are designed to provide Midshipmen with opportunities to experience "hands-on" leadership from the small unit level up to the Midshipmen Officer billets at the Battalion and Regimental level.

Although you will devote the greatest portion of your daily schedule to academic pursuits, you will find that the regimental system also makes demands on your time. These two elements of Midshipman life are highly integrated, and produce graduates who are educated and trained for inclusion in the next generation of America's leaders.

The four classes of Midshipmen bear the same designation used at the other U.S. service academies. Freshmen are called fourth classmen or plebes; sophomores, third classmen; juniors, second classmen; and seniors, first classmen.

The Class System

Fundamental to regimental life is the "class system," a program which assigns responsibilities, duties and privileges to Midshipmen based on their seniority. First classmen exercise command of the regiment under the supervision of the Academy's Commandant of Midshipmen and staff. First classmen have opportunities to serve in Midshipman officer and squad leader billets. Underclassmen may serve as Midshipman petty officers and team leaders, while plebes learn "follower-ship."

The regiment, under the Midshipman regimental commander and staff, is divided into two battalions, each under a Midshipman battalion commander. The battalions include two companies, each led by a Midshipmen company commander.

Top-ranking Midshipman officers work closely with the Commandant in creating and carrying out policies relating to all facets of Midshipman life. They receive practical leadership experience that helps develop self-confidence, improves their understanding of human relations, and instills in them a sense of responsibility. First classmen are granted privileges commensurate with their seniority and responsibility.

Second and third classmen are primarily responsible for assisting the first class in the training of the fourth class. The upperclassmen ensure that plebes display proper military bearing and practice correct military etiquette. The privileges granted the second and third classes are less than those enjoyed by the first class, but more liberal than those given to plebes.

The fourth class year is a period of conditioning for both life at sea and many other undertakings that face Midshipmen during their training and, afterward, as graduates. Regimental training is a primary reason why graduates of the Academy are highly valued by all segments of the maritime industry and the U.S. Armed Forces for their bearing, maturity and

ability to get the job done.

Plebe Indoctrination Program

Your experience at the Academy will begin in early July when you report aboard as a "plebe candidate" for a rigorous two-week indoctrination program. During indoctrination, you will undergo an intensive program of regimental training. One of the most important abilities you will learn is time management. Your daily indoctrination schedule is demanding and time-consuming, requiring you to perform and accomplish tasks in specified periods.

Plebe year is very challenging. Under the class system, plebes have the greatest number of obligations and the fewest privileges. However, during your first year at the Academy, you will become well versed in the institution's traditions, develop a keen sense of pride and esprit de corps, and adjust to the requirements of the regimental program.

A Midshipman's Daily Schedule

During the academic year, the Monday through Friday daily routine is as follows:

6:00 …….....Reveille
6:05 Morning Mess Formation (4/C only)
6:15-7:00 ……..…….....Breakfast
7:15 …….....Room inspection
7:25 …….....Colors formation
7:45-11:50 …….....Classes
12:10 ……....Noon meal formation
12:20-12:50 ……..……Lunch
1:00-4:00 …….…….....Classes
5:00-7:00 .....Athletics, extracurricular activities
5:30-7:45 …….....Dinner buffet
8:00-11:30 …….…….....Study period

Friday afternoons and Saturday mornings are used for regimental parades and inspections, but the remainder of each weekend includes liberty and recreation.

Leave and Liberty

Midshipmen are granted a week of leave (vacation) at the end of the first trimester, usually in early November. They also receive four days of leave for Thanksgiving, and about two weeks of leave during the Christmas/New Year period. There is one week of spring leave at the end of the second trimester. This **may** coincide with the Easter and Passover holidays. In addition, upperclass Midshipmen receive annual leave during the month of July.

It is important that travel arrangements for leave periods do not extend beyond the beginning or end of those periods.

Weekend liberty is available for all four classes, with some restrictions for the Plebe class, and for upperclass watch standers. The extent of this liberty is dependent on class, academic and regimental performance, and Academy obligations. Plebes are the only class not normally granted overnight liberty on weekends.

In addition to weekend liberty, upperclass midshipmen are provided the opportunity to leave the Academy grounds for dinner a number of times each term, again depending on class, academic and regimental performance, and academy obligations.

The Honor Code

The Academy's Honor Code is taught, administered, and led by members of the Regiment of Midshipmen. It applies to every segment of a Midshipmen's life, in and out of the classroom.

The Honor Code is so simple that it is contained in one sentence: "A Midshipman will not lie, cheat or steal." This statement must be completely accepted and supported by every member of the regiment.

All Midshipmen quickly learn that the honor code is designed to guide them in their daily living, as they develop a greater understanding personal and professional honesty, integrity, and discipline. We believe the Honor Code gives greater value to academic degrees, and instills in Midshipmen the principles of honesty and integrity.

Every junior leader in the maritime industry or the Armed Forces is expected to set standards of honesty and integrity. Every leader's character will be tested at least once during their career. The Academy's Honor Code prepares officer candidates for that test. Honor Code training and education begins during your first day in the Regiment of Midshipmen, and continues during your tenure at the Academy.

Information Technology

The maritime industry could not function without the use of information technology. The same holds true for educating future mariners and marine industry professionals. The U.S. Merchant Marine Academy has a proud history of pioneering the use of simulators and simulation software in the engineering, transportation and logistics fields. Simulators and simulation software provide Midshipmen the opportunity to acquire skills and knowledge critical to success in the maritime industry.

Many courses throughout the curriculum involve computer applications. Access to computer applications is provided by state-of-the-art laptop computers, computer equipped laboratories and electronic classrooms.

The Department of Information Technology serves as the focal point for planning, funding and operating the information technology infrastructure at the Academy.

Personal Computers

Each incoming plebe must arrive on campus with a laptop that meets campus hardware requirements. This laptop is the *only* personal computer a Midshipman may have on campus. All Midshipman laptops are connected to the Academy's network and network resources. The Academy network complies with all federal rules and regulations regarding personal computer and network use. Midshipmen are required to honor these rules and regulations without exception.

Midshipmen are authorized to purchase personal desktop printers at their own expense with printer driver software compatible with the Microsoft Windows 7 Enterprise operating system.

Network

The Academy is a "wired" campus, providing access throughout the dormitories, classrooms, library and public spaces, employing a combination of wired and wireless services. The local area network is based on a fiber-optic backbone and the latest high speed switching fabric available.

The network employs a state-of-the-art blade server and storage area network technologies, and provides access to e-mail, e- learning, file storage, web services, course management systems, public instant messaging networks, Voice Over IP (VoIP) telephony, video-conferencing, and under restricted circumstances, access to public e-mail networks. The Academy maintains a 200 megabit-per-second connection to the Internet.

The Academy is deploying a comprehensive wireless access system to complement access already available in electronic classrooms, the Bland Library, and selected public areas. Approximately 350 new wireless access points will be located in the barracks buildings and throughout the outdoor areas of the Academy's 82 acre campus.

Simulation

In 1975, the U.S. Maritime Administration installed a complex Visual Bridge Shiphandling Simulator at the USMMA for purposes of maritime training and controlled research into seafarer/ship issues. Designated as the Computer Aided Operations Research Facility (CAORF), this simulator was the first marine simulator to use Computer-Generated Imagery and set the standard for all simulators of this kind that followed.

CAORF also hosts part-task and full mission simulators for ship propulsion systems. The Department of Marine Transportation maintains separate, state-of-the-art navigation laboratories in Bowditch Hall.

The Curriculum

The U.S. Merchant Marine Academy provides a four-year academic program leading to a bachelor of science degree, a license as a merchant marine officer (issued by the U.S. Coast Guard), and an appointment as a commissioned officer in a reserve component of the U.S. Armed Forces (including the Strategic Sealift Officer Program of the U.S. Navy). The curriculum is demanding, comprehensive and stimulating. It has been carefully designed to ensure that graduates are professionally competent, trained for leadership and responsibility, and well-rounded intellectually.

Midshipmen complete a series of required courses in the core curriculum. These courses provide a nucleus of knowledge in key academic and professional subjects. In the second trimester of the fourth class year, Midshipmen begin preparing for a deck or engine license. They spend approximately one year at sea during their course of study at the Academy.

The academic year at the Academy is divided into three trimesters spanning eleven months, from late July to late June. Credit for courses is awarded in semester credit hours.

Core Curriculum

The core curriculum has several components:

A. Mathematics
B. Science
C. English
D. History
E. Comparative Literature and Writing
F. Naval Science
G. Physical Education and Ship's Medicine
H. Internship
I. Sea Year

Specific courses meeting these requirements are identified later in the course description section.

Components A-E provide a basis for Midshipmen's general education, further supplemented in their major courses.

Major Programs

Midshipmen select their major course of study from among six programs:

A. **Marine Transportation** - A program combining nautical science and maritime business management.

B. **Maritime Logistics and Security** - A program combining nautical science, business, logistics, and maritime security topics.

C. **Marine Engineering** - An engineering program focused on shipboard engineering operations.

D. **Marine Engineering and Shipyard Management** - A program based on a marine engineering core and emphasizing the management of shipyards and other large engineering endeavors. Accredited by the Engineering Accreditation Commission (EAC) of ABET.

E. **Marine Engineering Systems** - An engineering program emphasizing marine engineering design. Accredited by the Engineering Accreditation Commission (EAC) of ABET.

License Programs

Midshipmen who have selected the Marine Transportation major or the Maritime Logistics and Security major prepare for the third mate (deck officer) license examination. Marine Engineering, Marine Engineering Systems, and Marine Engineering and Shipyard Management majors prepare for the third assistant engineer (engineering officer) license examination.

Sea-Year Training

After completing the fourth class year in late June, half of the students (designated the B-Split) will go to sea for one trimester, return to campus for the second trimester of their third class year, then return to sea for the third trimester plus the first trimester of their second class year. They will return to campus for the second trimester of the second class year and remain on campus through graduation.

The other half of the class (designated the A-Split) will remain in residence for the first trimester of the third class year, will go to sea for the second trimester and return to campus for the third trimester. Then they will go to sea for the second and third trimesters of their second class year, return for the first trimester of their first class year and remain on campus until graduation.

The choice of Split, A or B, is made in the first trimester of fourth class year. Preference is granted to those Midshipmen participating in varsity athletics or in other programs like the regimental Band.

Elective Courses

Elective courses enhance the Midshipman's professional training and their intellectual curiosity. The number of elective courses varies by major.

Graduation Requirements

The minimum requirements for graduation are:

- Pass the required resident and sea project courses. (A four-year course of study is required by 46USC310.52.) A maximum of 5-1/2 years in attendance is permitted to complete degree requirements.
- Earn the number of semester credit hours required by the curriculum in which you are enrolled. Exemptions from courses completed at other accredited institutions or waived due to physical disability may lower the number of credits required for some students.
- Earn a Cumulative Quality Point Average (CQPA) of at least 2.000 for all courses taken.
- Earn a Cumulative Grade Point Average of at least 2.000 for all courses specifically required in your major.
- Pass all required license competencies.
- Pass the examination and receive a USCG third mate or third assistant engineer license. Those ineligible to receive the license (e.g., foreign national, medical disqualification for a duty-related injury) must nevertheless, pass the examination.
- Satisfy all necessary certifications as required by the USCG as specified for your program.
- Pass all required Naval Science courses prescribed by the Department of the Navy.
- Apply for and accept, if offered, an appointment as a commissioned officer in a Reserve Component of the U.S. Armed Forces (including the Strategic Sealift Officer Program of the U.S. Navy).
- Pass the Academy Physical Fitness Test.

Academic Division Goals

Upon successful completion of a rigorous curriculum that includes general education and professional areas of study, graduates of the Academy will have the knowledge, skills and abilities to:

1. Serve immediately as merchant marine officers with the foundation to advance to master or chief engineer.
2. Work in approved maritime related shore positions with the capability to rise to senior levels.
3. Lead with integrity, competence and high ethical standards.
4. Work in teams constructively toward common goals.
5. Think critically and creatively and solve complex problems.
6. Communicate proficiently both orally and in writing.
7. Demonstrate information literacy and proficiency in the use of information technology.
8. Understand and function effectively in the socially, economically, politically and culturally diverse global environment.
9. Pursue continued intellectual and professional development.

Programs of Study

Prior to entering the academy, applicants are asked to list a tentative major. Near the end of the first trimester, plebes are asked to affirm their initial selection or to choose another major. An extensive orientation program and introductory professional course- work in the first trimester will assist them in making that decision. All major programs are described in this section.

The courses taken at the Academy following fourth class year will vary greatly depending on the major. The following is a detailed description of the major curricula and the course of study each entails. The exact sequence of the course offerings in some cases may be modified due to staffing needs.

Department of Marine Transportation

The Department of Marine Transportation offers two majors: Marine Transportation and Maritime Logistics & Security. These majors share a common nautical science and business core.

In addition to satisfying traditional higher education accreditation requirements, these programs must also comply with both federal guidelines and international standards related to maritime education. The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended, (to which the United States is a signatory) sets qualification standards for masters, officers and watch-keeping personnel on seagoing merchant ships. STCW was adopted in 1978 by conference at the International Maritime Organization (IMO) in London, and entered into force in 1984. The Convention was significantly amended in 1995 and again in 2010. The STCW Code and the U.S. Code of Federal Regulations establish the standards that the U.S. Coast Guard uses to license U.S. Merchant Mariners.

Nautical science courses prepare Midshipmen specifically for their shipboard responsibilities and the USCG third mate's license examination. The Nautical Science core also provides broad marine-oriented education to produce a well-trained and informed ship's officer. This program of study includes general as

well as specific maritime subjects which familiarize Midshipmen with a ship as a system, its equipment and its operation. Specifically, Midshipmen will study terrestrial and celestial navigation; the rules for collision avoidance; vessel stability and trim; marine materials handling aboard ship and in port; safety of life at sea; pollution control and prevention; marlinspike seamanship; meteorology; maritime communications; integrated electronic navigation systems such as radar, ARPA, and ECDIS; bridge resource management; and the various domestic and international rules and regulations that govern these activities.

Maritime business courses give Midshipmen a broad understanding of management issues and specific skills required for critical thinking and decision making in business. These skills complement the professional education of Midshipmen and strengthen their performance as shipboard officers. Midshipmen also gain a basic foundation in business administration allowing them to pursue shore-side opportunities in the maritime field. The curriculum recognizes that marine transportation is part of the total transportation system, which is crucial to both domestic and international commerce and the nation's defense. The specific courses in this area include The Business of Transportation, Principles of Economics, Principles of Management, Marketing, Fundamentals of Business Law, Admiralty and International Law, Accounting and Finance, Maritime Economics, Vessel Personnel with Designated Security Duties, International Business, Principles of Leadership and Maritime Leadership and Management.

Both Marine Transportation majors have been designed to give the students a greater understanding of the business aspects of the maritime industry. But the courses offered are not general business courses such as might be offered in a typical business school. Kings Point is in a unique position to offer a program that teaches business skills as they relate to and within the context of the maritime industry. It therefore represents a program that is both academically sound and related to the career goals of our students.

Department of Marine Transportation Midshipmen Learning Goals

The Department of Marine Transportation has for its mission the development of *Deck Merchant Marine Officers* with personal and professional maturity, honor, ethics and integrity that will ensure growth and advancement in their chosen careers, and who are able to:

1. Demonstrate competency needed to serve as a third mate by passing all STCW competencies and the USCG license prior to commencement.
2. Understand and safely demonstrate traditional and modern seamanship and cargo handling skills.
3. Understand and correctly demonstrate the use of Terrestrial, Celestial and Electronic Navigation skills, and Navigation Law.
4. Understand the application of Information Technology needed as a ship's deck officer or as a maritime related shore side professional.
5. Understand and demonstrate effective and appropriate problem solving and critical thinking required by a ship's deck officer or as a maritime related shore side professional.
6. Understand the application of business, transportation or logistics concepts needed to serve as a ship's deck officer or to work as a maritime related shore side professional with the foundation to rise to senior levels.
7. Understand and demonstrate effective leadership and teamwork skills needed to serve as a ship's deck officer or as a maritime related shore side professional.
8. Understand and demonstrate effective oral or written communication skills needed to serve as a ship's deck officer or as a maritime related shore side professional.

Marine Transportation Program

The primary goal of the core Marine Transportation program is to provide Midshipmen with the knowledge and skills required to prepare students to serve as a deck officer aboard a merchant ship. Courses in the core curriculum provide Midshipmen with nautical science and management skills, as well as knowledge of the transportation processes necessary for successful careers in the maritime industry. The core includes courses in navigation, seamanship, marine safety, dry and liquid cargo operations, integrated navigation systems, meteorology, management, law, economics, and transportation.

Graduates of the Marine Transportation program, with their broad educational background, complemented by specific management and business skills, have a wide variety of career opportunities. Job opportunities include serving aboard merchant ships as a deck officer, in terminal operations management, ship operations, ship and cargo surveying, port administration, stevedoring, and related positions. All branches of the Armed Forces offer possibilities for active duty. The U.S. Coast Guard commissions graduates to serve in marine inspection, maritime security, and environmental regulation. Graduates can also serve in state and federal government agencies that regulate transport and commerce; in the Foreign Service; and in research and policy analysis positions. The sample curriculum for both A and B splits follows.

Class of 2019 & 2018 A -Split				**Major: Marine Transportation**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 160 LEC Ship Constructions and Stability	3.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	BUSN 110 LEC The Business of Transportation	3.00	BUSN 210 Principles of Economics	3.00
HIST 100 LEC History of Sea Power	3.00	LITR 101 LEC Composition & Literature	3.00	MATH 210 LEC Probability & Statistics	3.00
MATH 101 LEC Calculus I	3.00	MATH 120 LEC Calculus II	3.00	PHYS 120 LEC Physics 2	3.00
PHYS 110 LEC Physics 1	3.00	NASC 100 LEC Introduction to Naval Science	2.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Swimming	1.00	MLOG 120 VPDSD	0.00
PE&A 125 LAB Self Defense Tactics	0.50				
CMDT100 Social Responsibility	0.00				
	18.50		**16.00**		**16.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NAUT 140 LEC Maritime Communications	4.00	NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00
NAUT 210 LEC Integrated Navigation 1	4.00	NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 230 LEC Navigation Law	2.00
NAUT 220 LEC Liquid Cargo Operations	3.00	NPRJ 220 PRJ Seamanship 1	1.00	BUSN 230 LEC Principles of Management	3.00
BUSN 310 LEC Accounting & Finance	3.00	NPRJ 225 PRJ Ship Structure and Stability 1	1.00	CHEM 100 LEC General Chemistry	4.00
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 230 PRJ Navigation I	1.00	LITR 201 LEC Literature	3.00
		NPRJ 235 PRJ Navigation Law 1	1.00	PE&A 200 LAB Medical Care Provider	1.00
		EPRJ 245 PRJ Marine Engine for Deck Project	1.00		
	16.00		**7.00**		**17.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00	NPRJ 335 PRJ Navigation Law 2	2.00
NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00	NPRJ 340 PRJ Maritime Business	1.00
NAUT 240 LEC Meteorology	3.00	NPRJ 320 PRJ Seamanship 2	1.50	NPRJ 345 PRJ Maritime Communications Sea Project	1.00
BUSN 300 LEC Fundamentals of Business Law	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50	HPRJ 300 PRJ Humanities Sea Project	1.00
NASC 200 LEC Strategic Sealift	2.00	NPRJ 330 PRJ Navigation II	2.00	INSP100 PRJ Internship	1.00
	15.00		**8.00**		**6.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 310 LEC Integrated Navigation 3	4.00	NAUT 440 LAB Flashing Light and Radar Observer Cert	0.00	NAUT 400 LEC License Seminar	0.00
NAUT 420 LEC Advanced Firefighting	1.50	NAUT 460 LEC Bridge Resource Management	2.00	BUSN 440 LEC International Business	3.00
NAUT 330 LEC The Maritime Regulatory Environment	2.00	BUSN 420 LEC Maritime Economics	3.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
BUSN 410 LEC Marketing	2.50	BUSN 430 LEC Admiralty and International Law of the S	2.00	**Humanities Elective**	3.00
HIST 410 LEC Modern World History	3.00	NASC 400 LEC Naval Leadership & Ethics	2.00	NASC 410 LEC Naval Science Senior Seminar	2.00
Elective	3.00	**Elective**	3.00	**Elective**	3.00
		Elective	3.00		
	16.00		**15.00**		**13.50**
				Total In-Resident Credits	143.00
				Total Credits	**164.00**

Class of 2019 & 2018 B -Split				**Major: Marine Transportation**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 210 LEC Integrated Navigation 1	4.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	NAUT 140 LEC Maritime Communications	4.00	NAUT 220 LEC Liquid Cargo Operations	3.00
HIST 100 LEC History of Sea Power	3.00	NAUT 160 LEC Ship Constructions and Stability	3.00	MATH 120 LEC Calculus II	3.00
MATH 101 LEC Calculus I	3.00	PHYS 120 LEC Physics 2	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PHYS 110 LEC Physics 1	3.00	LITR 101 LEC Composition & Literature	3.00	NASC 100 LEC Introduction to Naval Science	2.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Swimming	1.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00		
CMDT100 Social Responsibility	0.00				
	18.50		**18.00**		**18.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00
NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00
NPRJ 220 PRJ Seamanship 1	1.00	NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 320 PRJ Seamanship 2	1.50
NPRJ 225 PRJ Ship Structure and Stability 1	1.00	NAUT 240 LEC Meteorology	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50
NPRJ 230 PRJ Navigation I	1.00	BUSN 110 LEC The Business of Transportation	3.00	NPRJ 330 PRJ Navigation II	2.00
NPRJ 235 PRJ Navigation Law 1	1.00				
EPRJ 245 PRJ Marine Engine for Deck Project	**1.00**				
	7.00		**17.00**		**8.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NPRJ 335 PRJ Navigation Law 2	2.00	NAUT 230 LEC Navigation Law	2.00	NAUT 310 LEC Integrated Navigation 3	4.00
NPRJ 340 PRJ Maritime Business	1.00	NAUT 420 LEC Advanced Firefighting	1.50	NAUT 330 LEC The Maritime Regulatory Environment	2.00
NPRJ 345 PRJ Maritime Communications Sea Project	1.00	BUSN 210 Principles of Economics	3.00	BUSN 230 LEC Principles of Management	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	BUSN 310 LEC Accounting & Finance	3.00	BUSN 300 LEC Fundamentals of Business Law	3.00
INSP100 PRJ Internship	1.00	CHEM 100 LEC General Chemistry	4.00	LITR 201 LEC Literature	3.00
		NASC 200 LEC Strategic Sealift	2.00		
	6.00		**15.50**		**15.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 440 LAB Flashing Light and Radar Observer Certific	0.00	BUSN 420 LEC Maritime Economics	3.00	NAUT 400 LEC License Seminar	0.00
NAUT 460 LEC Bridge Resource Management	2.00	BUSN 430 LEC Admiralty and International Law of the	2.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
BUSN 410 LEC Marketing	2.50	PE&A 200 LAB Medical Care Provider	1.00	BUSN 440 LEC International Business	3.00
MATH 210 LEC Probability & Statistics	3.00	**Elective**	3.00	**Humanities Elective**	3.00
HIST 410 LEC Modern World History	3.00	**Elective**	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
NASC 400 LEC Naval Leadership & Ethics	2.00			**Elective**	3.00
Elective	3.00				
	15.50		**12.00**		**13.50**
				Total In-Resident Credits	143.00
				Total Credits	**164.00**

Class of 2020A- Split and Beyond				**Major: Marine Transportation**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 160 LEC Ship Constructions and Stability	3.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	BUSN101 LEC Principles of Leadership	1.00	BUSN 210 Principles of Economics	3.00
HIST 100 LEC History of Sea Power	3.00	BUSN 110 LEC The Business of Transportation	3.00	MATH 210 LEC Probability & Statistics	3.00
MATH 101 LEC Calculus I	3.00	LITR 101 LEC Composition & Literature	3.00	PHYS 120 LEC Physics 2	3.00
PHYS 110 LEC Physics 1	3.00	MATH 120 LEC Calculus II	3.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 120 LAB First Aid	0.50	NASC 100 LEC Introduction to Naval Science	2.00	MLOG 120 VPDSD	0.00
PE&A 125 LAB Self Defense Tactics	0.50	PE&A 110 LAB Basic Swimming	1.00		
CMDT100 Social Responsibility	0.00				
	18.50		**17.00**		**16.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NAUT 140 LEC Maritime Communications	4.00	NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00
NAUT 210 LEC Integrated Navigation 1	4.00	NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 230 LEC Navigation Law	2.00
NAUT 220 LEC Liquid Cargo Operations	3.00	NPRJ 220 PRJ Seamanship 1	1.00	BUSN 230 LEC Principles of Management	3.00
BUSN 310 LEC Accounting & Finance	3.00	NPRJ 225 PRJ Ship Structure and Stability 1	1.00	BUSN201 Maritime Leadership and Management	2.00
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 230 PRJ Navigation I	1.00	CHEM 100 LEC General Chemistry	4.00
		NPRJ 235 PRJ Navigation Law 1	1.00	LITR 201 LEC Literature	3.00
		EPRJ 245 PRJ Marine Engine for Deck Project	1.00		
	16.00		**7.00**		**18.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00	NPRJ 335 PRJ Navigation Law 2	2.00
NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00	NPRJ 340 PRJ Maritime Business	1.00
NAUT 240 LEC Meteorology	3.00	NPRJ 320 PRJ Seamanship 2	1.50	NPRJ 345 PRJ Maritime Communications Sea Project	1.00
BUSN 300 LEC Fundamentals of Business Law	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50	HPRJ 300 PRJ Humanities Sea Project	1.00
NASC 200 LEC Strategic Sealift	2.00	NPRJ 330 PRJ Navigation II	2.00	INSP100 PRJ Internship	1.00
PE&A 200 LAB Medical Care Provider	1.00				
	16.00		**8.00**		**6.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 310 LEC Integrated Navigation 3	4.00	NAUT 440 LAB Flashing Light and Radar Observer Cert	0.00	NAUT 400 LEC License Seminar	0.00
NAUT 420 LEC Advanced Firefighting	1.50	NAUT 460 LEC Bridge Resource Management	2.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
NAUT 330 LEC The Maritime Regulatory Environment	2.00	BUSN 420 LEC Maritime Economics	3.00	BUSN 430 LEC Admiralty and International Law of the Se	2.00
BUSN 410 LEC Marketing	2.50	NASC 400 LEC Naval Leadership & Ethics	2.00	NASC 410 LEC Naval Science Senior Seminar	2.00
HIST 410 LEC Modern World History	3.00	**Elective**	3.00	**Humanities Elective**	3.00
Elective	3.00	**Elective**	3.00	**Elective**	3.00
	16.00		**13.00**		**12.50**
				Total In-Resident Credits	143.00
				Total Credits	**164.00**

Class of 2019 & 2018 B -Split				**Major: Marine Transportation**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 210 LEC Integrated Navigation 1	4.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	NAUT 140 LEC Maritime Communications	4.00	NAUT 220 LEC Liquid Cargo Operations	3.00
HIST 100 LEC History of Sea Power	3.00	NAUT 160 LEC Ship Constructions and Stability	3.00	MATH 120 LEC Calculus II	3.00
MATH 101 LEC Calculus I	3.00	PHYS 120 LEC Physics 2	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PHYS 110 LEC Physics 1	3.00	LITR 101 LEC Composition & Literature	3.00	NASC 100 LEC Introduction to Naval Science	2.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Swimming	1.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00	BUSN101 Principles of Leadership	1.00
CMDT100 Social Responsibility	0.00				
	18.50		**18.00**		**19.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00
NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00
NPRJ 220 PRJ Seamanship 1	1.00	NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 320 PRJ Seamanship 2	1.50
NPRJ 225 PRJ Ship Structure and Stability 1	1.00	NAUT 240 LEC Meteorology	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50
NPRJ 230 PRJ Navigation I	1.00	BUSN 110 LEC The Business of Transportation	3.00	NPRJ 330 PRJ Navigation II	2.00
NPRJ 235 PRJ Navigation Law 1	1.00	BUSN201 Maritime Leadership and Management	2.00		
EPRJ 245 PRJ Marine Engine for Deck Project	**1.00**				
	7.00		**19.00**		**8.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NPRJ 335 PRJ Navigation Law 2	2.00	NAUT 230 LEC Navigation Law	2.00	NAUT 310 LEC Integrated Navigation 3	4.00
NPRJ 340 PRJ Maritime Business	1.00	NAUT 420 LEC Advanced Firefighting	1.50	NAUT 330 LEC The Maritime Regulatory Environment	2.00
NPRJ 345 PRJ Maritime Communications Sea Project	1.00	BUSN 210 Principles of Economics	3.00	BUSN 230 LEC Principles of Management	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	BUSN 310 LEC Accounting & Finance	3.00	BUSN 300 LEC Fundamentals of Business Law	3.00
INSP100 PRJ Internship	1.00	CHEM 100 LEC General Chemistry	4.00	LITR 201 LEC Literature	3.00
		NASC 200 LEC Strategic Sealift	2.00		
	6.00		**15.50**		**15.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 440 LAB Flashing Light and Radar Observer Certific	0.00	BUSN 420 LEC Maritime Economics	3.00	NAUT 400 LEC License Seminar	0.00
NAUT 460 LEC Bridge Resource Management	2.00	BUSN 410 LEC Marketing	2.50	ECME480 LEC Marine Engineering for Deck Officers	2.50
MATH 210 LEC Probability & Statistics	3.00	PE&A 200 LAB Medical Care Provider	1.00	BUSN 430 LEC Admiralty and International Law of the	2.00
HIST 410 LEC Modern World History	3.00	**Elective**	3.00	**Humanities Elective**	3.00
NASC 400 LEC Naval Leadership & Ethics	2.00	**Elective**	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
Elective	3.00			**Elective**	3.00
	13.00		**12.50**		**12.50**
				Total In-Resident Credits	143.00
				Total Credits	**164.00**

Maritime Logistics & Security Program

The Maritime Logistics and Security Program is offered effective with the class of 2017 and beyond. The principal objective of the Maritime Logistics and Security Program is to provide Midshipmen with the knowledge and skills required to manage complex maritime and intermodal supply chains and to assist in addressing the security challenges facing the marine transportation system. This goal is achieved through an integrated program of study and experiential learning, the cornerstone of which is an academic major that builds on the Academy's traditional maritime core competencies.

Key themes of the major are the role of ports and marine transportation in logistics and transportation systems, the development of a systematic view of vessel and facility security, inculcation of a risk-based decision-making perspective, and the effective application of information technology.

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Midshipmen who elect this major take the same core courses in Nautical Science, Maritime Business, and general education (math, science, and humanities) as do Midshipmen in the Marine Transportation major. They must also fulfill the requirements for a U.S. Coast Guard license as Third Mate.

Required courses specific to the Maritime Logistics and Security major include Integrated Logistics Management, Port and Terminal Operations, Vessel Security Officer/Company Security Officer (VSO/CSO), Maritime Security Research Seminar, Chartering and Brokerage, and the Capstone Project Seminar.

The major emphasizes the development of oral and written communications capabilities through written reports and formal presentations. Problem-solving and teamwork skills are enhanced through case studies and applied research projects for outside organizations that focus on real-world tasks identified through the program's extensive industry outreach efforts. Independent certification of professional competency through the American Society of Transportation and Logistics is an attractive optional component of the program. A guest lecture series brings prominent industry figures to the Academy to discuss current issues and challenges in the maritime logistics and security fields.

Career opportunities for graduates of the Maritime Logistics and Security Program following fulfillment of the seagoing obligation are diverse and rewarding. Service is possible in a wide variety of logistics and security-related occupations in commercial, government, and military domains. Examples of entry-level positions include logistics system coordinator, transportation analyst, Facility Security Officer, terminal supervisor, Special Agent, logistics/transportation consultant, and intelligence analyst, to name a few. The sample curriculum for both A and B splits follows

Class of 2019 & 2018 A -Split				**Major: Maritime Logistics & Security**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 160 LEC Ship Constructions and Stability	3.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	BUSN 110 LEC The Business of Transportation	3.00	BUSN 210 Principles of Economics	3.00
HIST 100 LEC History of Sea Pow er	3.00	LITR 101 LEC Composition & Literature	3.00	MATH 210 LEC Probability & Statistics	3.00
MATH 101 LEC Calculus I	3.00	MATH 120 LEC Calculus II	3.00	PHYS 120 LEC Physics 2	3.00
PHYS 110 LEC Physics 1	3.00	NASC 100 LEC Introduction to Naval Science	2.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Sw imming	1.00	MLOG 120 VPDSD	0.00
PE&A 125 LAB Self Defense Tactics	0.50				
CMDT100 Social Responsibility	0.00				
	18.50		**16.00**		**16.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NAUT 140 LEC Maritime Communications	4.00	NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00
NAUT 210 LEC Integrated Navigation 1	4.00	NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 230 LEC Navigation Law	2.00
NAUT 220 LEC Liquid Cargo Operations	3.00	NPRJ 220 PRJ Seamanship 1	1.00	BUSN 230 LEC Principles of Management	3.00
BUSN 310 LEC Accounting & Finance	3.00	NPRJ 225 PRJ Ship Structure and Stability 1	1.00	CHEM 100 LEC General Chemistry	4.00
MLOG 200 LEC Integrated Logistics Management	3.00	NPRJ 230 PRJ Navigation I	1.00	LITR 201 LEC Literature	3.00
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 235 PRJ Navigation Law 1	1.00	PE&A 200 LAB Medical Care Provider	1.00
		EPRJ 245 PRJ Marine Engine for Deck Project	1.00		
	19.00		**7.00**		**17.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00	NPRJ 335 PRJ Navigation Law 2	2.00
NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00	NPRJ 340 PRJ Maritime Business	1.00
NAUT 240 LEC Meteorology	3.00	NPRJ 320 PRJ Seamanship 2	1.50	NPRJ 345 PRJ Maritime Communications	1.00
BUSN 300 LEC Fundamentals of Business Law	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50	HPRJ 300 PRJ Humanities Sea Project	1.00
MLOG310 LEC Vessel Security Officer/Company Security Of	3.00	NPRJ 330 PRJ Navigation II	2.00	INSP100 PRJ Internship	1.00
NASC 200 LEC Strategic Sealift	2.00				
	18.00		**8.00**		**6.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 310 LEC Integrated Navigation 3	4.00	NAUT 440 LAB Flashing Light and Radar Observer Cert	0.00	NAUT 400 LEC License Seminar	0.00
NAUT 420 LEC Advanced Firefighting	1.50	NAUT 460 LEC Bridge Resource Management	2.00	BUSN 440 LEC International Business	3.00
NAUT 330 LEC The Maritime Regulatory Environment	2.00	BUSN 430 LEC Admiralty and International Law of the S	2.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
BUSN 410 LEC Marketing	2.50	BUSN 210 LEC Maritime Economics	3.00	MLOG 450 LEC Capstone Project Seminar	3.00
MLOG 400 LEC Port and Terminal Operations	3.00	MLOG 425 LEC Maritime Security Research Seminar	3.00	**Humanities Elective**	3.00
NASC 400 LEC Naval Leadership & Ethics	2.00	MLOG 430 Chartering and Brokerage	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
		HIST 410 LEC Modern World History	3.00		
	15.00		**16.00**		**13.50**
				Total In-Resident Credits	149.00
				Total Credits	**170.00**

Class of 2019 & 2018 B -Split				**Major: Maritime Logistics & Security**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 210 LEC Integrated Navigation 1	4.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	NAUT 140 LEC Maritime Communications	4.00	NAUT 220 LEC Liquid Cargo Operations	3.00
HIST 100 LEC History of Sea Pow er	3.00	NAUT 160 LEC Ship Constructions and Stability	3.00	MATH 120 LEC Calculus II	3.00
MATH 101 LEC Calculus I	3.00	PHYS 120 LEC Physics 2	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PHYS 110 LEC Physics 1	3.00	LITR 101 LEC Composition & Literature	3.00	NASC 100 LEC Introduction to Naval Science	2.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Sw imming	1.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00		
CMDT100 Social Responsibility	0.00				
	18.50		**18.00**		**18.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00
NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00
NPRJ 220 PRJ Seamanship 1	1.00	NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 320 PRJ Seamanship 2	1.50
NPRJ 225 PRJ Ship Structure and Stability 1	1.00	NAUT 240 LEC Meteorology	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50
NPRJ 230 PRJ Navigation I	1.00	BUSN 110 LEC The Business of Transportation	3.00	NPRJ 330 PRJ Navigation II	2.00
NPRJ 235 PRJ Navigation Law 1	1.00	NASC 200 LEC Strategic Sealift	2.00		
EPRJ 245 PRJ Marine Engine for Deck Project	1.00				
	7.00		**19.00**		**8.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NPRJ 335 PRJ Navigation Law 2	2.00	NAUT 230 LEC Navigation Law	2.00	NAUT 310 LEC Integrated Navigation 3	4.00
NPRJ 340 PRJ Maritime Business	1.00	NAUT 420 LEC Advanced Firefighting	1.50	NAUT 330 LEC The Maritime Regulatory Environment	2.00
NPRJ 345 PRJ Maritime Communications Sea Project	1.00	BUSN 210 Principles of Economics	3.00	LITR 201 LEC Literature	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	BUSN 310 LEC Accounting & Finance	3.00	BUSN 230 LEC Principles of Management	3.00
INSP100 PRJ Internship	1.00	MLOG 200 LEC Integrated Logistics Management	3.00	BUSN 300 LEC Fundamentals of Business Law	3.00
		MLOG310 LEC Vessel Security Officer/Company Secu	3.00		
		CHEM 100 LEC General Chemistry	4.00		
	6.00		**19.50**		**15.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 440 LAB Flashing Light and Radar Observer Certific	0.00	BUSN 420 LEC Maritime Economics	3.00	NAUT 400 LEC License Seminar	0.00
NAUT 460 LEC Bridge Resource Management	2.00	BUSN 430 LEC Admiralty and International Law of the	2.00	BUSN 440 LEC International Business	3.00
BUSN 410 LEC Marketing	2.50	MLOG 425 LEC Maritime Security Research Seminar	3.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
MLOG 400 LEC Port and Terminal Operations	3.00	MLOG 430 Chartering and Brokerage	3.00	MLOG 450 LEC Capstone Project Seminar	3.00
MATH 210 LEC Probability & Statistics	3.00	HIST 410 LEC Modern World History	3.00	**Humanities Elective**	3.00
PE&A 200 LAB Medical Care Provider	1.00			NASC 410 LEC Naval Science Senior Seminar	2.00
NASC 400 LEC Naval Leadership & Ethics	2.00				
	13.50		**14.00**		**13.50**
				Total In-Resident Credits	149.00
				Total Credits	**170.00**

Class of 2020 and beyond A -Split				**Major: Maritime Logistics & Security**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 160 LEC Ship Constructions and Stability	3.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	BUSN 110 LEC The Business of Transportation	3.00	BUSN 210 Principles of Economics	3.00
HIST 100 LEC History of Sea Pow er	3.00	LITR 101 LEC Composition & Literature	3.00	MATH 210 LEC Probability & Statistics	3.00
MATH 101 LEC Calculus I	3.00	MATH 120 LEC Calculus II	3.00	PHYS 120 LEC Physics 2	3.00
PHYS 110 LEC Physics 1	3.00	NASC 100 LEC Introduction to Naval Science	2.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Sw imming	1.00	MLOG 120 VPDSD	0.00
PE&A 125 LAB Self Defense Tactics	0.50	BUSN101 LEC Principles of Leadership	1.00		
CMDT100 Social Responsibility	0.00				
	18.50		**17.00**		**16.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NAUT 140 LEC Maritime Communications	4.00	NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00
NAUT 210 LEC Integrated Navigation 1	4.00	NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 230 LEC Navigation Law	2.00
NAUT 220 LEC Liquid Cargo Operations	3.00	NPRJ 220 PRJ Seamanship 1	1.00	CHEM 100 LEC General Chemistry	4.00
BUSN 310 LEC Accounting & Finance	3.00	NPRJ 225 PRJ Ship Structure and Stability 1	1.00	LITR 201 LEC Literature	3.00
MLOG 200 LEC Integrated Logistics Management	3.00	NPRJ 230 PRJ Navigation I	1.00	NASC 200 LEC Strategic Sealift	2.00
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 235 PRJ Navigation Law 1	1.00	BUSN201 Maritime Leadership and Mangagment	2.00
		EPRJ 245 PRJ Marine Engine for Deck Project	1.00		
	19.00		**7.00**		**17.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00	NPRJ 335 PRJ Navigation Law 2	2.00
NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00	NPRJ 340 PRJ Maritime Business	1.00
NAUT 240 LEC Meteorology	3.00	NPRJ 320 PRJ Seamanship 2	1.50	NPRJ 345 PRJ Maritime Communications	1.00
BUSN 230 LEC Principles of Management	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50	HPRJ 300 PRJ Humanities Sea Project	1.00
MLOG310 LEC Vessel Security Officer/Company Security Of	3.00	NPRJ 330 PRJ Navigation II	2.00	INSP100 PRJ Internship	1.00
PE&A 200 LAB Medical Care Provider	1.00				
	17.00		**8.00**		**6.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 310 LEC Integrated Navigation 3	4.00	NAUT 440 LAB Flashing Light and Radar Observer Cert	0.00	NAUT 400 LEC License Seminar	0.00
NAUT 330 LEC The Maritime Regulatory Environment	2.00	NAUT 460 LEC Bridge Resource Management	2.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
NAUT 420 LEC Advanced Firefighting	1.50	BUSN 430 LEC Admiralty and International Law of the S	2.00	BUSN 410 LEC Marketing	2.50
BUSN 300 LEC Fundamentals of Business Law	3.00	BUSN 210 LEC Maritime Economics	3.00	MLOG 450 LEC Capstone Project Seminar	3.00
MLOG 400 LEC Port and Terminal Operations	3.00	MLOG 425 LEC Maritime Security Research Seminar	3.00	**Humanities Elective**	3.00
NASC 400 LEC Naval Leadership & Ethics	2.00	MLOG 430 Chartering and Brokerage	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
		HIST 410 LEC Modern World History	3.00		
	15.50		**16.00**		**13.00**
				Total In-Resident Credits	149.00
				Total Credits	**170.00**

Class of 2020 and beyond B -Split				**Major: Maritime Logistics & Security**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
NAUT 101 LEC Introduction to Nautical Science	3.00	NAUT 120 LEC Terrestrial Navigation 1	3.00	NAUT 125 LEC Terrestrial Navigation 2	3.00
ECME 101 LEC Introduction to Marine Engineering I	3.50	NAUT 130 LEC Introduction to Navigation Law	1.00	NAUT 210 LEC Integrated Navigation 1	4.00
NAUT 110 LEC Basic Firefighting and Safety	2.00	NAUT 140 LEC Maritime Communications	4.00	NAUT 220 LEC Liquid Cargo Operations	3.00
HIST 100 LEC History of Sea Pow er	3.00	NAUT 160 LEC Ship Constructions and Stability	3.00	MATH 120 LEC Calculus II	3.00
MATH 101 LEC Calculus I	3.00	PHYS 120 LEC Physics 2	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PHYS 110 LEC Physics 1	3.00	LITR 101 LEC Composition & Literature	3.00	NASC 100 LEC Introduction to Naval Science	2.00
PE&A 120 LAB First Aid	0.50	PE&A 110 LAB Basic Sw imming	1.00	PE&A 130 LAB Aquatic Survival	1.00
PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00	BUSN101 Principles of Leadership	1.00
CMDT100 Social Responsibility	0.00				
	18.50		**18.00**		**19.00**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
NPRJ 210 PRJ Cargo Operations 1	1.00	NAUT 225 LEC Celestial Navigation	4.00	NPRJ 310 PRJ Cargo Operations 2	2.00
NPRJ 215 PRJ Integrated Navigation Systems 1	1.00	NAUT 215 LEC Integrated Navigation 2	4.00	NPRJ 315 PRJ Integrated Navigation Systems 2	1.00
NPRJ 220 PRJ Seamanship 1	1.00	NAUT 250 LEC Dry Cargo Operations	3.00	NPRJ 320 PRJ Seamanship 2	1.50
NPRJ 225 PRJ Ship Structure and Stability 1	1.00	NAUT 240 LEC Meteorology	3.00	NPRJ 325 PRJ Ship Structure and Stability 2	1.50
NPRJ 230 PRJ Navigation I	1.00	BUSN 110 LEC The Business of Transportation	3.00	NPRJ 330 PRJ Navigation II	2.00
NPRJ 235 PRJ Navigation Law 1	1.00	BUSN201 Maritime Leadership and Management	2.00		
EPRJ 245 PRJ Marine Engine for Deck Project	1.00				
	7.00		**19.00**		**8.00**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
NPRJ 335 PRJ Navigation Law 2	2.00	NAUT 230 LEC Navigation Law	2.00	NAUT 310 LEC Integrated Navigation 3	4.00
NPRJ 340 PRJ Maritime Business	1.00	NAUT 420 LEC Advanced Firefighting	1.50	NAUT 330 LEC The Maritime Regulatory Environment	2.00
NPRJ 345 PRJ Maritime Communications Sea Project	1.00	BUSN 210 Principles of Economics	3.00	LITR 201 LEC Literature	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	MLOG 200 LEC Integrated Logistics Management	3.00	BUSN 230 LEC Principles of Management	3.00
INSP100 PRJ Internship	1.00	MLOG310 LEC Vessel Security Officer/Company Secu	3.00	BUSN 300 LEC Fundamentals of Business Law	3.00
		CHEM 100 LEC General Chemistry	4.00	NASC 200 LEC Strategic Sealift	2.00
	6.00		**16.50**		**17.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
NAUT 440 LAB Flashing Light and Radar Observer Certific	0.00	BUSN 310 LEC Accounting & Finance	3.00	NAUT 400 LEC License Seminar	0.00
NAUT 460 LEC Bridge Resource Management	2.00	BUSN 420 LEC Maritime Economics	3.00	ECME480 LEC Marine Engineering for Deck Officers	2.50
BUSN 410 LEC Marketing	2.50	MLOG 425 LEC Maritime Security Research Seminar	3.00	BUSN 430 LEC Admiralty and International Law of the	2.00
MLOG 400 LEC Port and Terminal Operations	3.00	MLOG 430 Chartering and Brokerage	3.00	MLOG 450 LEC Capstone Project Seminar	3.00
MATH 210 LEC Probability & Statistics	3.00	HIST 410 LEC Modern World History	3.00	**Humanities Elective**	3.00
PE&A 200 LAB Medical Care Provider	1.00			NASC 410 LEC Naval Science Senior Seminar	2.00
NASC 400 LEC Naval Leadership & Ethics	2.00				
	13.50		**15.00**		**12.50**
				Total In-Resident Credits	149.00
				Total Credits	**170.00**

Department of Marine Engineering

The Department of Marine Engineering provides Midshipmen with the education and training to design, build, operate, maintain and repair the engineering systems and machinery used on modern marine vessels and to prepare them for positions of increasing responsibility in the maritime and intermodal transportation industries.

The Engineering Majors also provide Midshipmen with a sound, broad-based engineering education while simultaneously preparing them to serve as a third assistant engineer of steam, motor or gas turbine vessels. The Academy offers three engineering majors: Marine Engineering; Marine Engineering Systems; and Marine Engineering and Shipyard Management.

The synergistic combination of classical engineering studies and operations-oriented training and experience offers graduates an unbeatable amalgamation of skills that prepare them for a broad range of professional occupations. The special nature of the Academy makes the engineering graduates well suited for professions in the maritime industry as well as in related fields such as power generation and intermodal transportation.

The Program Educational Objectives of three Engineering majors have three common objectives and one particular objective unique to the major. The three common objectives are as follows:

1. To prepare the graduates serve as licensed engineering officers in the U.S. Merchant Marine with the ability to advance to Chief Engineer.
2. To prepare the graduates to serve in a wide variety of professional positions in the maritime industry.
3. To prepare the graduates to pursue graduate study in engineering and/or become licensed as a Professional Engineer if they so choose.

The particular objective for each program is described under the following program headings.

Marine Engineering Program

The Marine Engineering program prepares Midshipmen to serve as officers in the U.S. Merchant Marine and to provide them with an engineering education that prepares them for a wide variety of professional positions including the career fields of ship construction, operation, marketing, maintenance, repair and survey.

The program focuses on the operational and applied aspects of the marine engineering profession. It allows Midshipmen the opportunity to choose elective courses in order to tailor the program of study to meet their individual professional goals.

Graduates of the Marine Engineering program are exceptionally well suited for employment at sea as engineering officers, as well as ashore in the applied phases of the engineering spectrum such as power generation and technical marketing.

The sample curriculum for both A and B splits follows.

Class of 2019 & 2018 A -Split				**Major: Marine Engineering**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECEE 100 LEC Introduction to Electrical Engineering	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 112 LAB Engineering Shop II	1.00
MATH 101 LEC Calculus 1	3.00	ECMT100 LAB Engineering Graphics	1.00	ECES 100 LEC Statics	3.00
CHEM 100 LEC General Chemistry	4.00	NAUT 110 LEC Basic Firefighting and Safety	2.00	PHYS 120 LEC Physics 2	3.00
LITR 101 LEC Composition & Literature	3.00	MATH 120 LEC Calculus 2	3.00	HIST 100 LEC History of Sea Power	3.00
PE&A 110 LAB Basic Swimming	1.00	PHYS 110 LEC Physics 1	3.00	LITR 220 LEC Technical & Professional Communications	2.00
CMDT100 Social Responsibility	0.00	PE&A 120 LAB First Aid	0.50	PE&A 130 LAB Aquatic Survival	1.00
		PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00
		NASC 100 LEC Introduction to Naval Science	2.00		
	17.50		**16.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
ECES 200 LEC Thermodynamics	3.50	EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECEE 200 LEC Electric Circuits	2.50
ECES 210 LEC Dynamics	2.00	EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 220 LEC Introduction to Materials Engineering	2.00
WTRF 100 LEC Safety of Life at Sea	2.00	EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50
MATH 220 LEC Differential Equations 1	3.00	NPRJ 245 PRJ Deck Operations	1.00	ECES 230 LEC Fluid Mechanics	3.50
LITR 201 LEC Literature	3.00			MATH 210 LEC Probability & Statistics	3.00
NASC 200 LEC Strategic Sealift	2.00			CHEM 200 LEC Chemistry for Marine Engineers	3.00
				PE&A 200 LAB Medical Care Provider	1.00
	15.50		**6.00**		**15.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
ECES 300 LEC Strength of Materials	3.50	EPRJ 310 PRJ Maintenance Management	1.00	EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50
ECES 310 LEC Heat Transfer	3.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00	NPRJ 340 PRJ Maritime Business	1.00
ECEE 300 LEC Electric Machines	3.50	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50	HPRJ 300 PRJ Humanities Sea Project	1.00
ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00	INSP100 PRJ Internship	1.00
BUSN 210 Principles of Economics	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00		
NASC 400 LEC Naval Leadership & Ethics	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00		
	17.00		**8.50**		**5.50**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECME 400 LEC Marine Steam Plants and Components	3.50	ECEE 400 LEC Electronics	2.50	ECES 400 LEC Machine Elements	3.00
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECEM 400 LEC Marine Engineering Management	2.00	ECME 460 LAB Marine Engineering License Seminar	0.50
ECME 420 LEC Internal Combustion Engines	3.50	ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	NAUT 420 LEC Advanced Firefighting	1.50
ECME 430 LEC Marine Refrigeration	3.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NASC 410 LEC Naval Science Senior Seminar	2.00
ECME 440 LAB Engine Room Resource Management	1.00	ECNA 400 LEC Naval Architecture for Marine Engineers	3.00	HIST 410 LEC Modern World History	3.00
Free Elective	3.00	**Free Elective**	3.00	**Free Elective**	3.00
	15.00		**16.50**		**13.00**
				Total In-Resident Credits	143.00
				Total Credits	**163.00**

Class of 2019 & 2018 B -Split				**Major: Marine Engineering**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50	ECEE 100 LEC Introduction to Electrical Engineer	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 100 LAB Engineering Graphics	1.00
MATH 101 LEC Calculus 1	3.00	MATH 120 LEC Calculus 2	3.00	ECMT 112 LAB Engineering Shop II	1.00
CHEM 100 LEC General Chemistry	4.00	PHYS 110 LEC Physics 1	3.00	ECES 100 LEC Statics	3.00
LITR 101 LEC Composition & Literature	3.00	HIST 100 LEC History of Sea Power	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PE&A 110 LAB Basic Swimming	1.00	NASC 100 LEC Introduction to Naval Science	2.00	NAUT 110 LEC Basic Firefighting and Safety	2.00
CMDT100 Social Responsibility	0.00	PE&A 130 LAB Aquatic Survival	1.00	PHYS 120 LEC Physics 2	3.00
		MLOG 120 VPDSD	0.00	PE&A 120 LAB First Aid	0.50
				PE&A 125 LAB Self Defense Tactics	0.50
	17.50		**16.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECES 210 LEC Dynamics	2.00	EPRJ 310 PRJ Maintenance Management	1.00
EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 200 LEC Thermodynamics	3.50	EPRJ 320 PRJ Naval Arch Sea Project	1.00
EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50
NPRJ 245 PRJ Deck Operations	1.00	MATH 220 LEC Differential Equations 1	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00
		CHEM 200 LEC Chemistry for Marine Engineers	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00
		NASC 200 LEC Strategic Sealift	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00
	6.00		**15.50**		**8.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50	ECEE 200 LEC Electric Circuits	2.50	ECES 300 LEC Strength of Materials	3.50
NPRJ 340 PRJ Maritime Business	1.00	ECES 220 LEC Introduction to Materials Engineering	2.00	ECES 310 LEC Heat Transfer	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50	ECEE 300 LEC Electric Machines	3.50
INSP100 PRJ Internship	1.00	ECES 230 LEC Fluid Mechanics	3.50	LITR 201 LEC Literature	3.00
		BUSN 210 Principles of Economics	3.00	NASC 400 LEC Naval Leadership & Ethics	2.00
		MATH 210 LEC Probability & Statistics	3.00		
		LITR 220 LEC Technical & Professional Communications	2.00		
	5.50		**16.50**		**15.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEM 400 LEC Marine Engineering Management	2.00	ECME 420 LEC Internal Combustion Engines	3.50	ECEE 400 LEC Electronics	2.50
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 430 LEC Marine Refrigeration	3.50	ECES 400 LEC Machine Elements	3.00
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 440 LAB Engine Room Resource Management	1.00	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NAUT 420 LEC Advanced Firefighting	1.50
ECNA 400 LEC Naval Architecture for Marine Engineers	3.00	PE&A 200 LAB Medical Care Provider	1.00	NASC 410 LEC Naval Science Senior Seminar	2.00
Free Elective	**3.00**	**Free Elective**	3.00	HIST 410 LEC Modern World History	3.00
				Free Elective	3.00
	15.50		**14.50**		**15.50**
				Total In-Resident Credits	143.00
				Total Credits	**163.00**

Class of 2020 and beyond A -Split				**Major: Marine Engineering**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECEE 100 LEC Introduction to Electrical Engineering	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 112 LAB Engineering Shop II	1.00
MATH 101 LEC Calculus 1	3.00	ECMT100 LAB Engineering Graphics	1.00	ECES 100 LEC Statics	3.00
CHEM 100 LEC General Chemistry	4.00	NAUT 110 LEC Basic Firefighting and Safety	2.00	PHYS 120 LEC Physics 2	3.00
LITR 101 LEC Composition & Literature	3.00	MATH 120 LEC Calculus 2	3.00	HIST 100 LEC History of Sea Power	3.00
PE&A 110 LAB Basic Swimming	1.00	PHYS 110 LEC Physics 1	3.00	LITR 220 LEC Technical & Professional Communications	2.00
CMDT100 Social Responsibility	0.00	PE&A 120 LAB First Aid	0.50	PE&A 130 LAB Aquatic Survival	1.00
		PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00
		NASC 100 LEC Introduction to Naval Science	2.00	BUSN101 Principles of Leadership	1.00
	17.50		**16.50**		**17.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
ECES 201 LEC Thermodynamics	3.00	EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECEE 200 LEC Electric Circuits	2.50
ECES 210 LEC Dynamics	2.00	EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 220 LEC Introduction to Materials Engineering	2.00
WTRF 100 LEC Safety of Life at Sea	2.00	EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50
MATH 220 LEC Differential Equations 1	3.00	NPRJ 245 PRJ Deck Operations	1.00	ECES 230 LEC Fluid Mechanics	3.50
LITR 201 LEC Literature	3.00			MATH 210 LEC Probability & Statistics	3.00
NASC 200 LEC Strategic Sealift	2.00			CHEM 200 LEC Chemistry for Marine Engineers	3.00
				PE&A 200 LAB Medical Care Provider	1.00
				BUSN201 Maritime Leadership and Management	2.00
	15.00		**6.00**		**17.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
ECES 300 LEC Strength of Materials	3.50	EPRJ 310 PRJ Maintenance Management	1.00	EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50
ECES 310 LEC Heat Transfer	3.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00	NPRJ 340 PRJ Maritime Business	1.00
ECEE 300 LEC Electric Machines	3.50	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50	HPRJ 300 PRJ Humanities Sea Project	1.00
ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00	INSP100 PRJ Internship	1.00
BUSN 210 Principles of Economics	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00		
NASC 400 LEC Naval Leadership & Ethics	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00		
	17.00		**8.50**		**5.50**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECME 400 LEC Marine Steam Plants and Components	3.50	ECEE 400 LEC Electronics	2.50	ECES 401 LEC Machine Elements	2.00
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECEM 400 LEC Marine Engineering Management	2.00	ECME 460 LAB Marine Engineering License Seminar	0.50
ECME 420 LEC Internal Combustion Engines	3.50	ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	NAUT 420 LEC Advanced Firefighting	1.50
ECME 431 LEC Marine Refrigeration	2.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NASC 410 LEC Naval Science Senior Seminar	2.00
ECME 440 LAB Engine Room Resource Management	1.00	ECNA 401 LEC Naval Architecture for Marine Engineers	2.50	HIST 410 LEC Modern World History	3.00
Free Elective	3.00	**Free Elective**	3.00	**Free Elective**	3.00
	14.00		**16.00**		**12.00**
				Total In-Resident Credits	143.00

Class of 2020 and beyond B -Split				**Major: Marine Engineering**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50	ECEE 100 LEC Introduction to Electrical Engineer	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 100 LAB Engineering Graphics	1.00
MATH 101 LEC Calculus 1	3.00	MATH 120 LEC Calculus 2	3.00	ECMT 112 LAB Engineering Shop II	1.00
CHEM 100 LEC General Chemistry	4.00	PHYS 110 LEC Physics 1	3.00	ECES 100 LEC Statics	3.00
LITR 101 LEC Composition & Literature	3.00	HIST 100 LEC History of Sea Power	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PE&A 110 LAB Basic Swimming	1.00	NASC 100 LEC Introduction to Naval Science	2.00	NAUT 110 LEC Basic Firefighting and Safety	2.00
CMDT100 Social Responsibility	0.00	PE&A 130 LAB Aquatic Survival	1.00	PHYS 120 LEC Physics 2	3.00
		MLOG 120 VPDSD	0.00	PE&A 120 LAB First Aid	0.50
		BUSN101 Principles of Leadership	1.00	PE&A 125 LAB Self Defense Tactics	0.50
	17.50		**17.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECES 210 LEC Dynamics	2.00	EPRJ 310 PRJ Maintenance Management	1.00
EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 201 LEC Thermodynamics	3.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00
EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50
NPRJ 245 PRJ Deck Operations	1.00	MATH 220 LEC Differential Equations 1	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00
		CHEM 200 LEC Chemistry for Marine Engineers	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00
		NASC 200 LEC Strategic Sealift	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00
		BUSN201 Maritime Leadership and Management	2.00		
	6.00		**17.00**		**8.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50	ECEE 200 LEC Electric Circuits	2.50	ECES 300 LEC Strength of Materials	3.50
NPRJ 340 PRJ Maritime Business	1.00	ECES 220 LEC Introduction to Materials Engineering	2.00	ECES 310 LEC Heat Transfer	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50	ECEE 300 LEC Electric Machines	3.50
INSP100 PRJ Internship	1.00	ECES 230 LEC Fluid Mechanics	3.50	LITR 201 LEC Literature	3.00
		BUSN 210 Principles of Economics	3.00	NASC 400 LEC Naval Leadership & Ethics	2.00
		MATH 210 LEC Probability & Statistics	3.00		
		LITR 220 LEC Technical & Professional Communications	2.00		
	5.50		**16.50**		**15.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEM 400 LEC Marine Engineering Management	2.00	ECEE 400 LEC Electronics	2.50	ECES 401 LEC Machine Elements	2.00
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 420 LEC Internal Combustion Engines	3.50	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 431 LEC Marine Refrigeration	2.50	NAUT420 LEC Advanced Firefighting	1.50
ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ECME 440 LAB Engine Room Resource Management	1.00	NASC 410 LEC Naval Science Senior Seminar	2.00
ECNA 401 LEC Naval Architecture for Marine Engineers	2.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	HIST 410 LEC Modern World History	3.00
Free Elective	**3.00**	PE&A 200 LAB Medical Care Provider	1.00	**Free Elective**	3.00
		Free Elective	3.00		
	15.00		**16.00**		**12.00**
				Total In-Resident Credits	143.00

Marine Engineering and Shipyard Management Program

The Marine Engineering and Shipyard Management program prepares Midshipmen as officers in the U.S. Merchant Marine; provides an engineering education that prepares them for a wide variety of professional positions in ship construction and repair, operations, marketing, maintenance and survey; and imparts to them a solid engineering education that permits them to pursue graduate study and/or become licensed as a Professional Engineer, should they so choose. This curriculum puts particular focus on the management of ship construction and repair.

An important element of the Marine Engineering and Shipyard management program is the design experience interwoven throughout a student's four years, culminating in the capstone design project in senior year. The student participates as part of a team tasked with developing a ship construction or ship repair project. The project is spread over two terms and finishes with a presentation of the final design to a panel of faculty and invited industry professionals. The Marine Engineering and Shipyard Management program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

To enroll in this program a Midshipman must have a CQPA of at least 2.67 at the end of the 4th class (plebe) year.

The sample curriculum for both A and B splits follows

Class of 2019 & 2018 A -Split				**Major: Marine Engineering Shipyard Management**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECEE 100 LEC Introduction to Electrical Engineering	3.50	ECME 105 LEC Introduction to Marine Engineerin	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 112 LAB Engineering Shop II	1.00
MATH 101 LEC Calculus I	3.00	ECMT100 LAB Engineering Graphics	1.00	ECES 100 LEC Statics	3.00
CHEM 100 LEC General Chemistry	4.00	NAUT 110 LEC Basic Firefighting and Safety	2.00	PHYS 120 LEC Physics 2	3.00
LITR 101 LEC Composition & Literature	3.00	MATH 120 LEC Calculus II	3.00	HIST 100 LEC History of Sea Power	3.00
PE&A 110 LAB Basic Swimming	1.00	PHYS 110 LEC Physics 1	3.00	LITR 220 LEC Technical & Professional Commun	2.00
CMDT100 Social Responsibility	0.00	PE&A 120 LAB First Aid	0.50	PE&A 130 LAB Aquatic Survival	1.00
		PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00
		NASC 100 LEC Introduction to Naval Science	2.00		
	17.50		**16.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECEE 200 LEC Electric Circuits	2.50
ECES 200 LEC Thermodynamics	3.50	EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 220 LEC Introduction to Materials Engineer	2.00
ECES 210 LEC Dynamics	2.00	EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 221 LAB Introduction to Materials Enginee	0.50
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 245 PRJ Deck Operations	1.00	ECES 230 LEC Fluid Mechanics	3.50
MATH 210 LEC Probability & Statistics	3.00			MATH 300 LEC Calculus III	3.00
MATH 220 LEC Differential Equations 1	3.00			MATH310 LEC Operations Research 1	3.00
NASC 200 LEC Strategic Sealift	2.00			CHEM 200 LEC Chemistry for Marine Engineers	3.00
				PE&A 200 LAB Medical Care Provider	1.00
	17.50		**6.00**		**18.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
ECEE 300 LEC Electric Machines	3.50	EPRJ 310 PRJ Maintenance Management	1.00	EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50
EREM 300 LEC Engineering Economics	3.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00	EPRJ 400 PRJ MESM Shipyard Internship	2.00
ECES 300 LEC Strength of Materials	3.50	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50	NPRJ 340 PRJ Maritime Business	1.00
ECES 310 LEC Heat Transfer	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00	HPRJ 300 PRJ Humanities Sea Project	1.00
BUSN 210 Principles of Economics	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00	INSP100 PRJ Internship	1.00
MATH 330 LEC Operations Research 2	3.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00		
	19.00		**8.50**		**7.50**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEE 400 LEC Electronics	2.50	ECEM 400 LEC Marine Engineering Management	2.00	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 400 LEC Marine Steam Plants and Components	3.50	ECES 400 LEC Machine Elements	3.00	EMEM 425 Engineering Project Management 3	2.00
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 450 LEC Gas Turbines and marine Auxiliary Equipm	3.50	NAUT 420 LEC Advanced Firefighting	1.50
ECME 420 LEC Internal Combustion Engines	3.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NASC 410 LEC Naval Science Senior Seminar	2.00
ECME 430 LEC Marine Refrigeration	3.50	ECNA 400 LEC Naval Architecture for Marine Engineers	3.00	HIST 410 LEC Modern World History	3.00
ECME 440 LAB Engine Room Resource Management	1.00	EMEM 415 LEC Engineering Project Management 2	3.50	LITR 201 LEC Literature	3.00
EMEM 400 LEC Engineering Project Management 1	3.50	NASC 400 LEC Naval Leadership & Ethics	2.00		
	18.00		**19.50**		**12.00**
				Total In-Resident Credits	155.00
				Total Credits	**177.00**

Class of 2019 & 2018 B -Split				**Major: Marine Engineering Shipyard Management**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50	ECEE 100 LEC Introduction to Electrical Engineer	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 100 LAB Engineering Graphics	1.00
MATH 101 LEC Calculus I	3.00	MATH 120 LEC Calculus II	3.00	ECMT 112 LAB Engineering Shop II	1.00
CHEM 100 LEC General Chemistry	4.00	PHYS 110 LEC Physics 1	3.00	ECES 100 LEC Statics	3.00
LITR 101 LEC Composition & Literature	3.00	HIST 100 LEC History of Sea Pow er	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PE&A 110 LAB Basic Sw imming	1.00	NASC 100 LEC Introduction to Naval Science	2.00	NAUT 110 LEC Basic Firefighting and Safety	2.00
CMDT100 Social Responsibility	0.00	PE&A 130 LAB Aquatic Survival	1.00	PHYS 120 LEC Physics 2	3.00
		MLOG 120 VPDSD	0.00	PE&A 120 LAB First Aid	0.50
				PE&A 125 LAB Self Defense Tactics	0.50
	17.50		**16.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECES 210 LEC Dynamics	2.00	EPRJ 310 PRJ Maintenance Management	1.00
EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 200 LEC Thermodynamics	3.50	EPRJ 320 PRJ Naval Arch Sea Project	1.00
EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50
NPRJ 245 PRJ Deck Operations	1.00	MATH 210 LEC Probability & Statistics	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00
		MATH 220 LEC Differential Equations 1	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00
		CHEM 200 LEC Chemistry for Marine Engineers	3.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00
		NASC 200 LEC Strategic Sealift	2.00		
	6.00		**18.50**		**8.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50	ECEE 200 LEC Electric Circuits	2.50	ECEE 300 LEC Electric Machines	3.50
EPRJ 400 PRJ MESM Shipyard Internship	2.00	ECES 220 LEC Introduction to Materials Engineering	2.00	ECES 300 LEC Strength of Materials	3.50
NPRJ 340 PRJ Maritime Business	1.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50	ECES 310 LEC Heat Transfer	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	ECES 230 LEC Fluid Mechanics	3.50	EREM 300 LEC Engineering Economics	3.00
INSP100 PRJ Internship	1.00	BUSN 210 Principles of Economics	3.00	LITR 220 LEC Technical & Professional Commun	2.00
		MATH 300 LEC Calculus III	3.00	MATH 330 LEC Operations Research 2	3.00
		MATH310 LEC Operations Research 1	3.00		
		PE&A 200 LAB Medical Care Provider	1.00		
	7.50		**18.50**		**18.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEE 400 LEC Electronics	2.50	ECES 400 LEC Machine Elements	3.00	ECME 460 LAB Marine Engineering License Sem	0.50
ECEM 400 LEC Marine Engineering Management	2.00	ECME 420 LEC Internal Combustion Engines	3.50	EMEM 425 Engineering Project Management 3	2.00
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 430 LEC Marine Refrigeration	3.50	NAUT 420 LEC Advanced Firefighting	1.50
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 440 LAB Engine Room Resource Management	1.00	NASC 410 LEC Naval Science Senior Seminar	2.00
ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	HIST 410 LEC Modern World History	3.00
ECNA 400 LEC Naval Architecture for Marine Engineers	3.00	EMEM 415 LEC Engineering Project Management 2	3.50	LITR 201 LEC Literature	3.00
EMEM 405 LEC Engineering Project Management 1	3.50	NASC 400 LEC Naval Leadership & Ethics	2.00		
	18.50		**19.00**		**12.00**
				Total In-Resident Credits	155.00
				Total Credits	**177.00**

Class of 2020 and beyond A -Split				**Major: Marine Engineering Shipyard Management**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECEE 100 LEC Introduction to Electrical Engineering	3.50	ECME 105 LEC Introduction to Marine Engineerin	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 112 LAB Engineering Shop II	1.00
MATH 101 LEC Calculus I	3.00	ECMT100 LAB Engineering Graphics	1.00	ECES 100 LEC Statics	3.00
CHEM 100 LEC General Chemistry	4.00	NAUT 110 LEC Basic Firefighting and Safety	2.00	PHYS 120 LEC Physics 2	3.00
LITR 101 LEC Composition & Literature	3.00	MATH 120 LEC Calculus II	3.00	HIST 100 LEC History of Sea Pow er	3.00
PE&A 110 LAB Basic Sw imming	1.00	PHYS 110 LEC Physics 1	3.00	LITR 220 LEC Technical & Professional Commun	2.00
CMDT100 Social Responsibility	0.00	PE&A 120 LAB First Aid	0.50	PE&A 130 LAB Aquatic Survival	1.00
		PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00
		NASC 100 LEC Introduction to Naval Science	2.00	BUSN101 Principles of Leadership	1.00
	17.50		**16.50**		**17.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECEE 200 LEC Electric Circuits	2.50
ECES 201 LEC Thermodynamics	3.00	EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 220 LEC Introduction to Materials Engineer	2.00
ECES 210 LEC Dynamics	2.00	EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 221 LAB Introduction to Materials Enginee	0.50
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 245 PRJ Deck Operations	1.00	ECES 230 LEC Fluid Mechanics	3.50
MATH 210 LEC Probability & Statistics	3.00			MATH 300 LEC Calculus III	3.00
MATH 220 LEC Differential Equations 1	3.00			MATH310 LEC Operations Research 1	3.00
NASC 200 LEC Strategic Sealift	2.00			CHEM 200 LEC Chemistry for Marine Engineers	3.00
				PE&A 200 LAB Medical Care Provider	1.00
	17.00		**6.00**		**18.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
ECEE 300 LEC Electric Machines	3.50	EPRJ 310 PRJ Maintenance Management	1.00	EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50
EREM 300 LEC Engineering Economics	3.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00	EPRJ 400 PRJ MESM Shipyard Internship	2.00
ECES 300 LEC Strength of Materials	3.50	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50	NPRJ 340 PRJ Maritime Business	1.00
ECES 310 LEC Heat Transfer	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00	HPRJ 300 PRJ Humanities Sea Project	1.00
MATH 330 LEC Operations Research 2	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00	INSP100 PRJ Internship	1.00
BUSN201 Maritime Leadership and Mangagment	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00		
	18.00		**8.50**		**7.50**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECME 400 LEC Marine Steam Plants and Components	3.50	ECEM 400 LEC Marine Engineering Management	2.00	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECES 401 LEC Machine Elements	2.00	EMEM 425 Engineering Project Management 3	2.00
ECME 420 LEC Internal Combustion Engines	3.50	ECME 440 LAB Engine Room Resource Management	1.00	NAUT 420 LEC Advanced Firefighting	1.50
ECME 431 LEC Marine Refrigeration	2.50	ECME 450 LEC Gas Turbines and marine Auxiliary Equipm	3.50	NASC 410 LEC Naval Science Senior Seminar	2.00
ECEE 400 LEC Electronics	2.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	HIST 410 LEC Modern World History	3.00
EMEM 405 LEC Engineering Project Management 1	3.50	ECNA 401 LEC Naval Architecture for Marine Engineers	2.50	LITR 201 LEC Literature	3.00
BUSN 210 Principles of Economics	3.00	EMEM 415 LEC Engineering Project Management 2	3.50		
		NASC 400 LEC Naval Leadership & Ethics	2.00		
	19.00		**19.00**		**12.00**
				Total In-Resident Credits	155.00
				Total Credits	**177.00**

Class of 2020 and beyond B -Split				**Major: Marine Engineering Shipyard Management**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50	ECEE 100 LEC Introduction to Electrical Engineer	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 100 LAB Engineering Graphics	1.00
MATH 101 LEC Calculus I	3.00	MATH 120 LEC Calculus II	3.00	ECMT 112 LAB Engineering Shop II	1.00
CHEM 100 LEC General Chemistry	4.00	PHYS 110 LEC Physics 1	3.00	ECES 100 LEC Statics	3.00
LITR 101 LEC Composition & Literature	3.00	HIST 100 LEC History of Sea Pow er	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PE&A 110 LAB Basic Sw imming	1.00	NASC 100 LEC Introduction to Naval Science	2.00	NAUT 110 LEC Basic Firefighting and Safety	2.00
CMDT100 Social Responsibility	0.00	PE&A 130 LAB Aquatic Survival	1.00	PHYS 120 LEC Physics 2	3.00
		MLOG 120 VPDSD	0.00	PE&A 120 LAB First Aid	0.50
		BUSN101 Principles of Leadership	1.00	PE&A 125 LAB Self Defense Tactics	0.50
	17.50		**17.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECES 210 LEC Dynamics	2.00	EPRJ 310 PRJ Maintenance Management	1.00
EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 201 LEC Thermodynamics	3.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00
EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50
NPRJ 245 PRJ Deck Operations	1.00	MATH 220 LEC Differential Equations 1	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00
		CHEM 200 LEC Chemistry for Marine Engineers	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00
		NASC 200 LEC Strategic Sealift	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00
		BUSN201 Martitme Leadership and Management	2.00		
	6.00		**17.00**		**8.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50	ECEE 200 LEC Electric Circuits	2.50	ECEE 300 LEC Electric Machines	3.50
EPRJ 400 PRJ MESM Shipyard Internship	2.00	ECES 220 LEC Introduction to Materials Engineering	2.00	ECES 300 LEC Strength of Materials	3.50
NPRJ 340 PRJ Maritime Business	1.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50	ECES 310 LEC Heat Transfer	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	ECES 230 LEC Fluid Mechanics	3.50	EREM 300 LEC Engineering Economics	3.00
INSP100 PRJ Internship	1.00	BUSN 210 Principles of Economics	3.00	MATH310 LEC Operations Research 1	3.00
		MATH 210 LEC Probability & Statistics	3.00	LITR 220 LEC Technical & Professional Commun	2.00
		MATH 300 LEC Calculus III	3.00		
		PE&A 200 LAB Medical Care Provider	1.00		
	7.50		**18.50**		**18.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEM 400 LEC Marine Engineering Management	2.00	ECME 420 LEC Internal Combustion Engines	3.50	ECME 460 LAB Marine Engineering License Sem	0.50
ECEE 400 LEC Electronics	2.50	ECME 431 LEC Marine Refrigeration	2.50	ECES 401 LEC Machine Elements	2.00
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 440 LAB Engine Room Resource Management	1.00	EMEM 425 Engineering Project Management 3	2.00
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NAUT 420 LEC Advanced Firefighting	1.50
ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ECNA 401 LEC Naval Architecture for Marine Engineers	2.50	NASC 410 LEC Naval Science Senior Seminar	2.00
EMEM 405 LEC Engineering Project Management 1	3.50	EMEM 415 LEC Engineering Project Management 2	3.50	HIST 410 LEC Modern World History	3.00
MATH 330 LEC Operations Research 2	3.00	NASC 400 LEC Naval Leadership & Ethics	2.00	LITR 201 LEC Literature	3.00
	18.50		**17.50**		**14.00**
				Total In-Resident Credits	155.00
				Total Credits	**177.00**

Marine Engineering Systems Program

The Marine Engineering Systems program prepares Midshipmen to serve as licensed officers in the U.S. Merchant Marine; provides an engineering education that prepares them for a wide variety of professional positions in such career fields as ship systems and marine equipment design, research, construction, operations, marketing, maintenance, repair and survey; and imparts to them an engineering education that permits them to pursue graduate study and/or to become licensed as a Professional Engineer, should they so choose. This program focuses on the design of marine power plants and their associated systems.

An important element in the Marine Engineering Systems program is the design experience that is interwoven throughout four years, culminating in a major capstone design project in senior year. The student participates as part of a team tasked with the design of a ship power plant. The project is spread over three terms and concludes with the presentation of the final design to a panel of faculty and invited industry professionals.

The Marine Engineering Systems program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. To enroll in this program, a Midshipman must have a CQPA of at least 2.67 at the end of the 4th class (plebe) year. The sample curriculum for both A and B splits follows.

Class of 2019 & 2018 A -Split				**Major: Marine Engineering Systems**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECEE 100 LEC Introduction to Electrical Engineering	3.50	ECME 105 LEC Introduction to Marine Engineering	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 112 LAB Engineering Shop II	1.00
MATH 101 LEC Calculus 1	3.00	ECMT100 LAB Engineering Graphics	1.00	ECES 100 LEC Statics	3.00
CHEM 100 LEC General Chemistry	4.00	NAUT 110 LEC Basic Firefighting and Safety	2.00	PHYS 120 LEC Physics 2	3.00
LITR 101 LEC Composition & Literature	3.00	MATH 120 LEC Calculus 2	3.00	HIST 100 LEC History of Sea Power	3.00
PE&A 110 LAB Basic Swimming	1.00	PHYS 110 LEC Physics 1	3.00	LITR 220 LEC Technical & Professional Commun	2.00
CMDT100 Social Responsibility	0.00	PE&A 120 LAB First Aid	0.50	PE&A 130 LAB Aquatic Survival	1.00
		PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00
		NASC 100 LEC Introduction to Naval Science	2.00		
	17.50		**16.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECEE 200 LEC Electric Circuits	2.50
ECES 200 LEC Thermodynamics	3.50	EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 220 LEC Introduction to Materials Engineer	2.00
ECES 210 LEC Dynamics	2.00	EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 221 LAB Introduction to Materials Enginee	0.50
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 245 PRJ Deck Operations	1.00	ECES 230 LEC Fluid Mechanics	3.50
PHYS 230 LEC Physics 3	3.00			MATH 210 LEC Probability & Statistics	3.00
MATH 220 LEC Differential Equations 1	3.00			MATH 300 LEC Calculus III	3.00
NASC 200 LEC Strategic Sealift	2.00			CHEM 200 LEC Chemistry for Marine Engineers	3.00
				PE&A 200 LAB Medical Care Provider	1.00
	17.50		**6.00**		**18.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
ECEE 300 LEC Electric Machines	3.50	EPRJ 310 PRJ Maintenance Management	1.00	EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50
ECES 300 LEC Strength of Materials	3.50	EPRJ 320 PRJ Naval Arch Sea Project	1.00	NPRJ 340 PRJ Maritime Business	1.00
ECES 310 LEC Heat Transfer	3.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50	HPRJ 300 PRJ Humanities Sea Project	1.00
EREM 300 LEC Engineering Economics	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00	INSP100 PRJ Internship	1.00
MATH 320 LEC Differential Equations 2	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00		
BUSN 210 Principles of Economics	3.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00		
	19.00		**8.50**		**5.50**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECES 400 LEC Machine Elements	3.00	ECEE 400 LEC Electronics	2.50	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 400 LEC Marine Steam Plants and Components	3.50	ECEM 400 LEC Marine Engineering Management	2.00	ESME 420 Capstone 3	1.50
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 450 LEC Gas Turbines and marine Auxiliary Equipm	3.50	**Engineering Elective**	3.00
ECME 420 LEC Internal Combustion Engines	3.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NAUT 420 LEC Advanced Firefighting	1.50
ECME 430 LEC Marine Refrigeration	3.50	ECNA 400 LEC Naval Architecture for Marine Engineers	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
ECME 440 LAB Engine Room Resource Management	1.00	ESME 410 Capstone 2	2.00	HIST 410 LEC Modern World History	3.00
ESME 400 Capstone 1	2.00	NASC 400 LEC Naval Leadership & Ethics	2.00	LITR 201 LEC Literature	3.00
	17.00		**17.50**		**14.50**
				Total In-Resident Credits	154.50
				Total Credits	**174.50**

Class of 2019 & 2018 B -Split		United States Merchant Marine Academy		**Major: Marine Engineering Systems**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50	ECEE 100 LEC Introduction to Electrical Engineer	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 100 LAB Engineering Graphics	1.00
MATH 101 LEC Calculus 1	3.00	MATH 120 LEC Calculus 2	3.00	ECMT 112 LAB Engineering Shop II	1.00
CHEM 100 LEC General Chemistry	4.00	PHYS 110 LEC Physics 1	3.00	ECES 100 LEC Statics	3.00
LITR 101 LEC Composition & Literature	3.00	HIST 100 LEC History of Sea Pow er	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PE&A 110 LAB Basic Sw imming	1.00	NASC 100 LEC Introduction to Naval Science	2.00	NAUT 110 LEC Basic Firefighting and Safety	2.00
CMDT100 Social Responsibility	0.00	PE&A 130 LAB Aquatic Survival	1.00	PHYS 120 LEC Physics 2	3.00
		MLOG 120 VPDSD	0.00	PE&A 120 LAB First Aid	0.50
				PE&A 125 LAB Self Defense Tactics	0.50
	17.50		**16.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 310 PRJ Maintenance Management	1.00
EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 210 LEC Dynamics	2.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00
EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 200 LEC Thermodynamics	3.50	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50
NPRJ 245 PRJ Deck Operations	1.00	MATH 210 LEC Probability & Statistics	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00
		MATH 220 LEC Differential Equations 1	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00
		LITR 220 LEC Technical & Professional Communications	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00
		NASC 200 LEC Strategic Sealift	2.00		
	6.00		**17.50**		**8.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50	ECEE 200 LEC Electric Circuits	2.50	ECES 300 LEC Strength of Materials	3.50
NPRJ 340 PRJ Maritime Business	1.00	ECES 220 LEC Introduction to Materials Engineering	2.00	ECES 310 LEC Heat Transfer	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50	ECEE 300 LEC Electric Machines	3.50
INSP100 PRJ Internship	1.00	ECES 230 LEC Fluid Mechanics	3.50	EREM 300 LEC Engineering Economics	3.00
		PHYS 230 LEC Physics 3	3.00	CHEM 200 LEC Chemistry for Marine Engineers	3.00
		MATH 300 LEC Calculus III	3.00	MATH 320 LEC Differential Equations 2	3.00
		BUSN 210 Principles of Economics	3.00		
		PE&A 200 LAB Medical Care Provider	1.00		
	5.50		**18.50**		**19.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEM 400 LEC Marine Engineering Management	2.00	ECEE 400 LEC Electronics	2.50	ECME 460 LAB Marine Engineering License Sem	0.50
ECES 400 LEC Machine Elements	3.00	ECME 420 LEC Internal Combustion Engines	3.50	ESME 420 Capstone 3	1.50
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 430 LEC Marine Refrigeration	3.50	**Engineering Elective**	3.00
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 440 LAB Engine Room Resource Management	1.00	NAUT 420 LEC Advanced Firefighting	1.50
ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	NASC 410 LEC Naval Science Senior Seminar	2.00
ECNA 400 LEC Naval Architecture for Marine Engineers	3.00	ESME 410 Capstone 2	2.00	LITR 201 LEC Literature	3.00
ESME 400 Capstone 1	2.00	NASC 400 LEC Naval Leadership & Ethics	2.00	HIST 410 LEC Modern World History	3.00
	17.50		**17.00**		**14.50**
				Total In-Resident Credits	154.50
				Total Credits	**174.50**

Class of 2020 and beyond A -Split				**Major: Marine Engineering Systems**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECEE 100 LEC Introduction to Electrical Engineering	3.50	ECME 105 LEC Introduction to Marine Engineering	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 112 LAB Engineering Shop II	1.00
MATH 101 LEC Calculus 1	3.00	ECMT100 LAB Engineering Graphics	1.00	ECES 100 LEC Statics	3.00
CHEM 100 LEC General Chemistry	4.00	NAUT 110 LEC Basic Firefighting and Safety	2.00	PHYS 120 LEC Physics 2	3.00
LITR 101 LEC Composition & Literature	3.00	MATH 120 LEC Calculus 2	3.00	HIST 100 LEC History of Sea Power	3.00
PE&A 110 LAB Basic Swimming	1.00	PHYS 110 LEC Physics 1	3.00	LITR 220 LEC Technical & Professional Commun	2.00
CMDT100 Social Responsibility	0.00	PE&A 120 LAB First Aid	0.50	PE&A 130 LAB Aquatic Survival	1.00
		PE&A 125 LAB Self Defense Tactics	0.50	MLOG 120 VPDSD	0.00
		NASC 100 LEC Introduction to Naval Science	2.00	BUSN101 Principles of Leadership	1.00
	17.50		**16.50**		**17.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECEE 200 LEC Electric Circuits	2.50
ECES 201 LEC Thermodynamics	3.00	EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 220 LEC Introduction to Materials Engineer	2.00
ECES 210 LEC Dynamics	2.00	EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 221 LAB Introduction to Materials Enginee	0.50
WTRF 100 LEC Safety of Life at Sea	2.00	NPRJ 245 PRJ Deck Operations	1.00	ECES 230 LEC Fluid Mechanics	3.50
PHYS 230 LEC Physics 3	3.00			MATH 210 LEC Probability & Statistics	3.00
MATH 220 LEC Differential Equations 1	3.00			MATH 300 LEC Calculus III	3.00
NASC 200 LEC Strategic Sealift	2.00			CHEM 200 LEC Chemistry for Marine Engineers	3.00
				PE&A 200 LAB Medical Care Provider	1.00
	17.00		**6.00**		**18.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
ECEE 300 LEC Electric Machines	3.50	EPRJ 310 PRJ Maintenance Management	1.00	EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50
ECES 300 LEC Strength of Materials	3.50	EPRJ 320 PRJ Naval Arch Sea Project	1.00	NPRJ 340 PRJ Maritime Business	1.00
ECES 310 LEC Heat Transfer	3.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50	HPRJ 300 PRJ Humanities Sea Project	1.00
MATH 320 LEC Differential Equations 2	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00	INSP100 PRJ Internship	1.00
BUSN 210 Principles of Economics	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00		
BUSN201 Maritime Leadership and Management	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00		
	18.00		**8.50**		**5.50**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECES 401 LEC Machine Elements	2.00	ECEM 400 LEC Marine Engineering Management	2.00	ECEE 400 LEC Electronics	2.50
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	ESME 420 Capstone 3	1.50
ECME 420 LEC Internal Combustion Engines	3.50	ECNA 401 LEC Naval Architecture for Marine Engineers	2.50	**Engineering Elective**	3.00
ECME 431 LEC Marine Refrigeration	3.00	ESME 410 Capstone 2	2.00	NAUT 420 LEC Advanced Firefighting	1.50
ECME 440 LAB Engine Room Resource Management	1.00	LITR 201 LEC Literature	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
EREM 300 LEC Engineering Economics	3.00	NASC 400 LEC Naval Leadership & Ethics	2.00	HIST 410 LEC Modern World History	3.00
ESME 400 Capstone 1	2.00				
	18.50		**17.50**		**14.00**
				Total In-Resident Credits	155.00
				Total Credits	**175.00**

Class of 2020 and beyond B -Split		United States Merchant Marine Academy		**Major: Marine Engineering Systems**	
Term 1	**CR**	**Term 2**	**CR**	**Term 3**	**CR**
ECME 101 LEC Introduction to Marine Engineering I	3.50	ECME 105 LEC Introduction to Marine Engineering II	3.50	ECEE 100 LEC Introduction to Electrical Engineer	3.50
NAUT 101 LEC Introduction to Nautical Science	3.00	ECMT 111 LAB Engineering Shop I	1.00	ECMT 100 LAB Engineering Graphics	1.00
MATH 101 LEC Calculus 1	3.00	MATH 120 LEC Calculus 2	3.00	ECMT 112 LAB Engineering Shop II	1.00
CHEM 100 LEC General Chemistry	4.00	PHYS 110 LEC Physics 1	3.00	ECES 100 LEC Statics	3.00
LITR 101 LEC Composition & Literature	3.00	HIST 100 LEC History of Sea Pow er	3.00	WTRF 100 LEC Safety of Life at Sea	2.00
PE&A 110 LAB Basic Sw imming	1.00	NASC 100 LEC Introduction to Naval Science	2.00	NAUT 110 LEC Basic Firefighting and Safety	2.00
CMDT100 Social Responsibility	0.00	PE&A 130 LAB Aquatic Survival	1.00	PHYS 120 LEC Physics 2	3.00
		MLOG 120 VPDSD	0.00	PE&A 120 LAB First Aid	0.50
		BUSN101 Principles of Leadership	1.00	PE&A 125 LAB Self Defense Tactics	0.50
	17.50		**17.50**		**16.50**
Term 4	**CR**	**Term 5**	**CR**	**Term 6**	**CR**
EPRJ 210 PRJ Machine Shop Sea Project	1.00	ECDL 400 LEC Basic Tanker Operations-Dangerous Liqui	2.00	EPRJ 310 PRJ Maintenance Management	1.00
EPRJ 230 PRJ Main Propulsion 1 Sea Project	2.00	ECES 210 LEC Dynamics	2.00	EPRJ 320 PRJ Naval Arch Sea Project	1.00
EPRJ 240 PRJ Shipboard Systems 1 Sea Project	2.00	ECES 201 LEC Thermodynamics	3.00	EPRJ 330 PRJ Marine Propulson 2 Sea Project	2.50
NPRJ 245 PRJ Deck Operations	1.00	MATH 210 LEC Probability & Statistics	3.00	EPRJ 335 PRJ Refrigeration Sea Project	1.00
		MATH 220 LEC Differential Equations 1	3.00	EPRJ 340 PRJ Shipboard Systems II Sea Project	2.00
		NASC 200 LEC Strategic Sealift	2.00	EPRJ 345 PRJ Electrical Engineering Sea Project	1.00
		BUSN201 Maritime Leadership and Management	2.00		
		LITR 220 LEC Technical & Professional Communications	2.00		
	6.00		**19.00**		**8.50**
Term 7	**CR**	**Term 8**	**CR**	**Term 9**	**CR**
EPRJ350 PRJ Marine Propulsion 3 Sea Project	2.50	ECEE 200 LEC Electric Circuits	2.50	ECES 300 LEC Strength of Materials	3.50
NPRJ 340 PRJ Maritime Business	1.00	ECES 220 LEC Introduction to Materials Engineering	2.00	ECES 310 LEC Heat Transfer	3.00
HPRJ 300 PRJ Humanities Sea Project	1.00	ECES 221 LAB Introduction to Materials Engineering Labo	0.50	ECEE 300 LEC Electric Machines	3.50
INSP100 PRJ Internship	1.00	ECES 230 LEC Fluid Mechanics	3.50	EREM 300 LEC Engineering Economics	3.00
		PHYS 230 LEC Physics 3	3.00	CHEM 200 LEC Chemistry for Marine Engineers	3.00
		MATH 300 LEC Calculus III	3.00	MATH 320 LEC Differential Equations 2	3.00
		BUSN 210 Principles of Economics	3.00		
		PE&A 200 LAB Medical Care Provider	1.00		
	5.50		**18.50**		**19.00**
Term 10	**CR**	**Term 11**	**CR**	**Term 12**	**CR**
ECEM 400 LEC Marine Engineering Management	2.00	ECME 420 LEC Internal Combustion Engines	3.50	ECEE 400 LEC Electronics	2.50
ECES 401 LEC Machine Elements	2.00	ECME 431 LEC Marine Refrigeration	2.50	ECME 460 LAB Marine Engineering License Sem	0.50
ECME 400 LEC Marine Steam Plants and Components	3.50	ECME 440 LAB Engine Room Resource Management	1.00	ESME 420 Capstone 3	1.50
ECME 410 LAB Marine Steam Plant Simulation	0.50	ECME 470 LEC Marine Plant Automation and Controls	2.50	**Engineering Elective**	3.00
ECME 450 LEC Gas Turbines and marine Auxiliary Equipn	3.50	ESME 410 Capstone 2	2.00	NAUT 420 LEC Advanced Firefighting	1.50
ECNA 401 LEC Naval Architecture for Marine Engineers	2.50	LITR 201 LEC Literature	3.00	NASC 410 LEC Naval Science Senior Seminar	2.00
ESME 400 Capstone 1	2.00	NASC 400 LEC Naval Leadership & Ethics	2.00	HIST 410 LEC Modern World History	3.00
	16.00		**16.50**		**14.00**
				Total In-Resident Credits	154.50
				Total Credits	**174.50**

Academic Policies and Procedures

The U.S. Merchant Marine Academy's academic regulations and procedures are stated in the Academic Policies Handbook. Each Midshipman receives a copy of this guide upon entry to the Academy and is responsible for understanding its contents.

The following is a summary of the Handbook's most important provisions.

Grading

The Academy uses a letter-grade system with each letter grade assigned a numerical quality-point equivalent. The scholastic significance of the grades and related quality point equivalents are reflected in the following table:

Letter Scale	Quality-Point Value
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
P	0.00
F	0.00
I	Incomplete
E	Exempt
W	Withdrawal

Academic Status

A Midshipman is considered to be proficient for a grading period if no F grade is received, and the trimester quality point average is 2.000 or greater. A Midshipman achieves overall proficiency if these requirements are met and the cumulative quality point average is 2.000 or greater with no unresolved F grades. If these criteria are not satisfied, a Midshipman is considered deficient.

A fourth class Midshipman is permitted to adjust to the academic and regimental requisites through a special scale of academic requirements that increase in each succeeding trimester grading period of plebe year.

Midshipmen who do not fully satisfy the proficiency requirements may be placed, by the Dean, on academic warning, academic probation or in some other more significant deficiency status. Normally, a Midshipman who is academically deficient has one grading period to regain proficiency.

A Midshipman failing to meet the academic standards of the Academy may be recommended by the Dean to the Superintendent for disenrollment. The Academic Dean prepares his recommendation in conjunction with the Academic Review Board.

Scholastic Recognition

Midshipmen may earn Scholastic Quarterly Honor Stars on the following basis:

1. Gold Stars are awarded to all Midshipmen who achieve a quality point average of 3.500 or above for one trimester with no course failures during that term.
2. Silver Stars are awarded to Midshipmen who achieve a quality point average of 3.250 to 3.494 for one trimester with no course failures during that term.

Scholastic Honor Ribbons for Outstanding Sea Year Performance are given as follows:

An Honor Ribbon with Bronze Star is awarded to Midshipmen with a quality point average of at least 3.500 for the sea year, no failing grades and above average Sea Year performance reports.

1. An Honor Ribbon is awarded to mid- shipmen with a quality-point

average of 3.250 up to and including 3.494 for the Sea Year, no failing grades and above average Sea Year performance reports.

2. Midshipmen who have earned Sea Year ribbons for the first sea period and become eligible for such ribbons after the second sea period wear a silver star with the ribbon in lieu of a second bronze star; or wear a bronze star if only a ribbon was previously awarded.

Graduation Honors

Scholastic Honors at graduation are awarded on the following basis:

1. *Summa Cum Laude* - A Midshipman must have a cumulative average of at least 3.750 and finish in the top three percent of the graduating class.
2. *Magna Cum Laude* - A Midshipman must have a cumulative average of at least 3.500 and be in the upper ten percent of the graduating class.
3. *Cum Laude* - A Midshipman must have a cumulative average of at least 3.000 and be in the top 20 percent of the graduating class. Honors designations on the diploma will be based on the cumulative quality-point average at the completion of senior year.

Academic Loads

Midshipmen must carry the trimester credit hour load required by their academic curriculum for each resident trimester and Sea Year period. Special circumstances may require that a Midshipman take less than the normal load, but not less than 12 trimester credit hours. A Midshipman may "overload" and take additional credit hours in a trimester, but this will not reduce the need to take the normal load in all future trimesters. Consent of the Dean is required to overload.

Failed Courses

A Midshipman who fails a course must either repeat the course in its entirety—the preferred method of resolving a failure—or undertake a remedial program.

Exclusion from Extracurricular Activities

The Academic Dean may restrict any Midshipman not academically proficient from participation in any sports or extracurricular activities.

Setbacks

A Midshipman may be set back to a succeeding year group by the Superintendent upon the recommendation of the Academic Dean. Setbacks are granted only when there is a compelling medical, compassionate or academic circumstance.

Advanced Standing

Federal law requires that a Midshipman complete a four-year course of study at the Academy. Under exceptional circumstances, a Midshipman who has finished at least one full year of the program is proficient under the academic standards prescribed in the *Academic Policies Handbook*, and who resigns and later reapplies for admission, may be granted advanced standing. In such cases, the coursework done at the Academy prior to resignation and subsequently at other colleges and universities will be considered in assigning a returning Midshipman to an appropriate year group. Upon reentry, the Midshipman is bound by the curriculum, catalog, and regulation in effect at the time of return.

Class Attendance and Excused Absences

Attendance at all classes at the Academy is required unless a Midshipman is ill, in a special duty status or otherwise granted leave or liberty by the Commandant.

Coursework Taken at Another Institution

The Academy does not award transfer credits for courses taken elsewhere. However, a student who has completed equivalent coursework may apply for exemption from courses at the Academy. No student may exempt from more than 12 credits.

Courses *may* be evaluated and *may* be

deemed as an appropriate substitute for an existing course. The Midshipman *may* be required to substitute an appropriate course to complete the number of credits required for a term. All decisions made by the appropriate academic department are final.

Midshipmen should apply for exemption at the start of an academic year, or after a leave of absence. All petitions for course exemption require an official transcript and a course description provided to the Registrar and appropriate department heads for evaluation.

Quality points, or grade for work accomplished elsewhere, are not included in the Midshipman's Academy academic record. A maximum of twelve credits, including Advanced Placement (AP) credits, may be posted to a Midshipman's record.

The Academy has a four-year residency requirement that cannot be shortened. There are no exceptions to this policy and its requirements.

Kings Point Scholar Program

The Kings Point Scholar Program affords Midshipmen an opportunity to explore a topic in depth beyond the degree to which it is represented in the curriculum.

Midshipmen who wish to undertake a major research project through the Kings Point Scholar Program should obtain the sponsor- ship of a faculty member for their project. The Office of the Dean will explain the program in detail to interested students.

The research paper completed through the Kings Point Scholar Program should make an important contribution to the chosen field of study. The research papers are maintained by the Academy in its Library. Past topics have included oil pollution, deep ocean mining, sub-marine tankers and the German intermodal transportation system, and the cruise industry.

Completion of the Kings Point Scholar Program can satisfy a Midshipman's credit hour elective requirement for Marine Engineering and Marine Transportation majors, while Maritime Logistics and Security majors may apply the project as the Humanities elective.

Academic Advising

Each plebe is assigned a mentor, who is available through appointment to discuss a broad range of academic issues with a Midshipman.

There is a Midshipman academic officer in each company who is specifically responsible to work with students who are experiencing academic difficulty and to apply the various support systems to specific cases. The academic officers work closely with the Director of the Academic Center for Excellence (ACE).

The ACE provides Midshipmen with the support they may need to achieve their goals and be successful in their educational pursuit. At the Center, Midshipmen can develop effective learning habits that will prove to be beneficial, not only during their time at the Academy, but during their sea year and beyond graduation as well. Faculty members and mentors can refer a Midshipman to the Center when they have concerns about their academic performance. Midshipmen are also encouraged to seek help for self-identified problems and concerns that they feel might hinder their academic success.

Each Midshipman who comes to the ACE is given individual attention to create a personal success program based on his or her needs. In addition, through the Center, tutorial sessions may be set up for both group and individual sessions. The Center promotes effective, independent learning to achieve high academic goals at a school where good time management skills are essential to achieve educational success.

The Academic Board

The Dean, Assistant Deans, heads of the academic departments, Commandant, Registrar, President of the Faculty Forum, Chief Librarian, Director of the Waterfront and the Head, Department of Professional Development, Director of Institutional Assessment, and Director of Information Technology comprise the Academic Board.

The Board advises the Superintendent on all academic matters, making recommendations concerning academic policy, standards, honors and curriculum.

Privacy Acts

The Privacy Act of 1974 and the Family Educational Rights and Privacy Act of 1974 prohibit the disclosure of educational records to other persons or organizations without written consent. Grade reports, transcripts and other information cannot be released to anyone, including parents, other academic institutions and employers without such written consent. Notice of consent must be filed with the Office of the Registrar for each release of information.

Access to Academic Records

Midshipmen have access to their own academic records, and may request copies. These transcripts are "unofficial" copies and do not bear the impressed seal of the Academy. Official, sealed copies are not released to Midshipmen under any circumstances. An individual review of an official record maintained by the Office of the Registrar may be made by appointment. The Office of the Dean makes final decisions on questions arising from such reviews.

Graduation Rates

The following statistics indicate the rate of graduation at the Academy for classes of 2002 to 2017:

2002	2003	2004	2005
80%	76%	79%	77%
2006	**2007**	**2008**	**2009**
79%	77%	79%	76%
2010	**2011**	**2012**	**2013**
75%	77%	71%	72%
2014	**2015**	**2016**	**2017**
69%	83%	86%	78%

Academic Departments, Faculty, and Course Descriptions

Note: For all faculty listings in this section of the catalog, the year when a faculty member joined the Academy staff follows each name. Other information includes the individual's faculty rank, degrees earned, where obtained, professional licenses held, and military affiliation. In a department that includes more than one discipline, the faculty member's area of specialization is indicated.

Superscripts used in this listing are:

[1]faculty member has received the Academy's Vice Admiral Gordon McLintock Award for Exemplary Leadership

[2]faculty member has received the Academy's Sue Alice McNulty Award for Distinguished Teaching.

[3]faculty member has received the Captain C.A. Prosser Award for Student Service.

[4]faculty member has held command at sea of an unlimited tonnage vessel.

This list is current as of October 15, 2015. The courses and descriptions in this section are subject to change.

Index to This Section

Department of Engineering

This department supports the Academy mission by providing the education and training necessary to prepare young men and women to become credentialed engineering officers in the merchant marine, as well as competent engineers who have the ability serve in various shore-side sectors of the marine engineering industry. Midshipmen enrolled in any of the Academy's engineering programs graduate with a Merchant Mariner's Credential as a Third Assistant Engineer, a Bachelor of Science degree and a commission in one of the U.S. Armed Services.

Three engineering programs are offered at the Academy: Marine Engineering, which focuses on shipboard engineering operations; Marine Engineering Systems, which focuses on the design of shipboard systems and machinery; and Marine Engineering and Shipyard Management, which focuses on the management of shipyards and the production and repair of marine vehicles. All three programs include a combination of fundamental engineering science courses and courses that cover the theory and practice of marine engineering. In addition, to nine semesters in residence at the Academy, all Midshipmen spend a portion of the second and third years at sea on merchant vessels. They also complete a shore-side internship. The Academy's engineering programs are approved by the U.S. Coast Guard and satisfy the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), as amended. In addition, the Marine Engineering Systems program and the Marine Engineering and Shipyard Management program are both accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

The Engineering Department faculty offices are in Fulton Hall, with classrooms and laboratories in both Fulton and Gibbs Halls. There are laboratories for marine engineering (include diesel engines, steam and gas turbines, pumps, valves, and auxiliary equipment), refrigeration, thermodynamics and heat transfer, fluid mechanics, materials testing, metallurgy, machine shop, welding and pipe fitting, electrical machinery, electric circuits, electronics, controls, engine-room simulation and graphics. The use of the Academy's extensive laboratories is integrated throughout the academic programs to give Midshipmen numerous opportunities to experience the connection between theory and practice, and to enable them to receive hands-on training in the operation and maintenance of marine machinery.

In addition to required courses, various elective courses are offered in relevant engineering topics. Some of these courses can be grouped to enable Midshipmen to concentrate on a particular area of interest. The department also administers the Academy's Alternative Power Program through which Midshipmen may complete independent studies related to contemporary issues, such as energy conservation, environmental protection, and the use of alternative fuels.

DEPARTMENT HEAD

CAPT Joseph Poliseno, USMS (1990)
Associate Professor
B.S., U.S. Merchant Marine Academy
M.S., (M.E), Polytechnic Institute of New York University

ASSISTANT DEPARTMENT HEAD

Nagy Hussein (2007)
B.S., Suez Canal University
M.S., Howard University
Ph.D., Catholic University of America
Licenses: FAA Commercial Pilot Multi-Engine Fourth Assistant Engineer; FAA Ground Instructor

PROFESSORS

LCDR William Caliendo, USMS (2005)
B.E., SUNY Maritime College
M.E., Stevens Institute of Technology
Ph.D., Stevens Institute of Technology
MMC: Third Assistant Engineer of Steam, Motor or Gas Turbine Vessels of Any

Horsepower
Registered Professional Engineer - State of New York

Gabriel-Dumitru Colef (1991)
B.E., CCNY
M.E.E.E., CCNY
Ph.D., CCNY
Registered Professional Engineer - State of New York

CDR Raymond F. Gardner, USMS (1998)
B.S., U.S. Merchant Marine Academy
M.S., (M.E.), Polytechnic University
MMC: Chief Engineer of Steam or Gas Turbine Vessels of Any Horsepower; Third Assistant Engineer of Motor Vessels of Any Horsepower
Registered Professional Engineer - States of New York and Connecticut

CAPT David J. Palmer, USMS (1995)
B.S., U.S. Merchant Marine Academy
M.S., (M.E.), Polytechnic Institute of New York University
Ph.D., (M.E.), Polytechnic Institute of New York University
MMC: Third Assistant Engineer of Steam, Motor or Gas Turbine Vessels of Any Horsepower
Nuclear Engineering Officer of the Watch, Engineering Duty Officer, Navy Nuclear Program
Military: CDR, USNR

Mukund R. Patel (1997)
B.E.E., Sardar University
M.E., Gujarat University
M.S., University of Pittsburgh
Ph.D., Rensselaer Polytechnic Institute
Registered Professional Engineer - State of Pennsylvania
Chartered Engineer, United Kingdom

Sergio E. Perez (1993)
B.S., Villanova
M.S., SUNY Stony Brook
Ph.D., SUNY Stony Brook

Paul Santamauro (2001)
B.S., U.S. Merchant Marine Academy
J.D., New England School of Law
MMC: First Engineer Motor and Gas Turbine Vessels of Any Horsepower; Third Mate, Steam and Motor Vessels of Any Gross Tons Upon Oceans

Hesham Shaalan, (2005)
B.S.E.E., University of Houston
M.E.E., University of Houston
Ph.D., Virginia Tech
Registered Professional Engineer - State of Texas

Yvonne Traynham (2000)
B.S., University of Florida
M.S., University of New Orleans
Ph.D., University of New Orleans
Registered Professional Engineer - States of Louisiana and Mississippi

ASSOCIATE PROFESSORS

CAPT Brian Ackerman, USMS (2011)
B.S., U.S. Merchant Marine Academy
M.S., University of New Haven
MMC: Chief Engineer of Steam, Motor or Gas Turbine Vessels of Any Horsepower;
Military: Captain, USNR

Michael R. Ales (2002)
B.S., U.S. Naval Academy
M.S., Virginia Polytechnic Institute & State University
M.B.A., University of Southern Mississippi
License: Chief Engineer, Stationery Power Plants, NIULPE (Illinois)
Registered Professional Engineer - State of Wisconsin
Military: LT, USN (Ret)

CAPT Peter Kahl, USMS (2010)
B.S., U.S. Merchant Marine Academy
MBA, Hofstra University
MMC: Chief Engineer of Motor or Gas Turbine Vessels of Any Horsepower; Second Assistant Engineer of Steam Vessels of Any Horsepower

Raymond L. Mathewson (2006)
B.E., SUNY Maritime College
M.S., Naval Architecture and Marine Engineering, MIT
O.E., Ocean Engineering, Massachusetts Institute of Technology

CDR David Pulis, USMS (2010)
B.S. U. S. Merchant Marine Academy
M.S., U.S. Merchant Marine Academy
MMC: Second Assistant Engineer of Steam Third Assistant of Motor Vessels of Any Horsepower
Military: CDR, USNR

ASSISTANT PROFESSORS

Salvatore Carillo (2016)
B.S. U. S. Merchant Marine Academy
M.S., SUNY Stony Brook
Document of Continuity: First Assistant Engineer of Steam or Motor Vessels of Any Horsepower, Third Assistant Engineer of Gas Turbine Vessels of Any Horsepower
Master Electrician License for Suffolk County

Yongjian Gu (2014)
B.S., Power Engineering, Huazhong University of Science and Technology
M.S., Power Engineering, University of Shanghai for Science and Technology
M.S., (M E.), SUNY Stony brook
Ph.D., (M E.), SUNY Stony brook
Registered:
Professional Engineer - State of New York
Professional Database Administrator - Oracle

Erica L. Hansen (2015)
B.S., Webb Institute of Naval Architecture
M.S., Long Island University

CDR Lance Klein, USMS (2012)
B.E., SUNY Maritime College
M.S., SUNY Maritime College
MMC: Chief Engineer of Steam, Motor, or Gas Turbine Vessels of Any Horsepower

Brian Leonard (1990)
B.S., Southern Illinois University
M.S., New York Institute of Technology
M.S., Southern New Hampshire University
Senior Reactor Operator, Certified SRO, General Electric Co.
Military: MM1 (SS), USN

CAPT Anthony D. Nigro, USMS (2012)
B.E. SUNY Maritime College
M.S., U.S. Merchant Marine Academy
MMC: Chief Engineer of Steam, Motor or Gas Turbine Vessels of Any Horsepower

LT Nicholas Palumbo, USMS (2011)
B.S., U.S. Merchant Marine Academy
MMC: Third Assistant Engineer of Steam, Motor or Gas Turbine Vessels of Any Horsepower
Military: LCDR, USNR

ENGINEERING LABORATORIES SUPERVISORY ENGINEER

Mr. Richard C. Crook (2008)
B.S., U.S. Merchant Marine Academy

TECHNICIANS

Raymond Granville (2009)
Relevant Coursework, Licensures and Certifications: HTA School (U.S. Navy)
Master Training Specialist, USN
Certified Welder Plumbers Union
Certified to Operate Generators, USN

Joseph Kass (1977)
A.S., CUNY
MMC: Second Class Power Engineer - State of New York; Certified Welder; Certified Welding Instructor; Certified Welding Inspector.

Maxim Semyonov
B.S., CUNY City College
M.S., Columbia University

PROFESSORS EMERITI

Boris Butman
(Engineering: 1987-2011)
M.S. Shipbuilding College, Leningrad
Ph.D. (ME), Maritime Technical University, Leningrad

Jose Femenia
(Engineering: 1995-2011)
B.E. (M.E.), SUNY Maritime College
M.S.M.E., CUNY City College
MMC: Third Assistant Engineer of Steam or Motor Vessels of Any Horsepower.
Registered: Professional Engineer State of New York

CDR James A. Harbach, USMS (Ret)

(Engineering: 1978-2007)
B.S., U.S. Merchant Marine Academy
M.E., Cornell Engineer
Engineer, Polytechnic Institute of New York University
MMC: First Assistant Engineer of Steam Vessels of Any Horsepower; Third Assistant Engineer of Motor Vessels of Any Horsepower.
Registered Professional Engineer - State of New Jersey

CAPT Moses W. Hirschkowitz, USMS (Ret)
(Engineering: 1949-1995)
B.M.E., Clarkson
M.E.E., New York University
MMC: Chief Engineer of Steam or Motor Vessels of Any Horsepower
Nuclear Reactor Operator - N/S SAVANNAH.
Registered Professional Engineer - State of New York

Walter M. Maclean
(Engineering: 1987-1995)
Diploma, U.S. Merchant Marine Academy
B.S.M.E., M.E., D.E., California Berkeley)
MMC: Chief Engineer of Steam Vessels, of Any Horsepower
Registered Professional Engineer - State of California

CAPT Robert T. Madden, USMS (Ret)[2]
(Engineering: 1970-2001)
B.S., U.S. Merchant Marine Academy
M.S., Stevens Institute of Technology
MMC: Chief Engineer of Steam or Motor Vessels of Any Horsepower
Military: CDR, USNR (Ret)

CAPT William J. Sembler, USMS (Ret)
(Engineering: 1991-2014)
B.S., U.S. Merchant Marine Academy
M.E., Steven Institute of Technology
Engineer, Steven Institute of Technology
Ph.D.Polytechnic Institute of NYU
MMC: Chief Engineer of Steam, Motor or Gas Turbine Vessels of Any Horsepower; Third Mate of Steam and Motor Vessels of Any Gross Tons Upon Oceans.
Registered Professional Engineer - State of New Jersey and New York

ECDL 400 Basic Tanker Operations-Dangerous Liquids
Credits: 2.0

This course is designed to cover the material required by 46 CFR 13.121(e) in order to meet the U.S. Coast Guard course requirements for the endorsement of Tankerman-Assistant (DL). The course topics include: oil & chemical properties and characteristics, international & domestic pollution conventions and regulations, petroleum hazards, enclosed space entry, tanker cargo systems, cargo operations, cargo tank inerting, cargo tank gas freeing, crude oil washing systems and vapor control systems.
Prerequisites: **CHEM 100, NAUT 110, ECME101, ECME105, ECES230, and ECNA400**
2 class hours a week

ECEE 100 Introduction to Electrical Engineering
Credits: 3.5

This course covers the electrical principles necessary for understanding the electrical power system operation, testing, maintenance and trouble-shooting procedures practiced aboard ships. It develops the basic understanding of electrical machines, batteries, controls, protection and safety.
3 class hours a week
2 laboratory hours every other week

ECEE 200 Electric Circuits
Credits 2.5

Electric circuits; Kirchhoff's Law; series and parallel circuits; nodal and mesh analysis; linearity and network theorems; capacitance and inductance; alternating current voltage; phasor representation of sine waves; impedance and AC nodal and mesh analysis; real, reactive and apparent power.
2 class hours a week
2 laboratory hours every other week

ECEE 300 Electric Machines
Credits: 3.5

Theory, analysis and applications of motor and generator actions, transformers and their operation AC motors (three-phase and single-phase), stepper motors, synchronous motors and generators, DC motors and generators, control systems, discrete process control, PLC's, power electronic converts, and AC and DC motor drives. Correct procedures for the operation of marine electric plant and electric machinery design considerations are stressed.
Prerequisite: **ECEE 200**
3 class hours per week
2 laboratory hours every other week

ECEE 400 Electronics
Credits: 2.5

Theory, analysis, design and applications of electric circuits. Diodes and diodes circuits, BJT and FET transistors, DC Biasing and AC analysis. Logic gates, Boolean algebra, Karnaugh maps, Flip-flops, counters, registers. Computer construction and operation. Elements of feedback, operational amplifiers, active filters. Design of electronic devices and systems.
Prerequisites: **ECEE200**
2 class hours a week
2 laboratory hours every other week

ECEM 400 Marine Engineering Management
Credits: 2.0

This course introduces the basic management and economic principles and regulatory requirements in the operation of a ship which are carried out on board and from the shore office. Topics include functions and responsibilities of the crew and shore staff; regulatory requirements for ship operations, the economics of ship operation and maintenance: planning, budgeting, planning and execution of shipyard periods; coordination of activities to complete maintenance projects.
Prerequisites: **ECME 105**
1 class hour a week
2 laboratory hours a week

ECES 100 Statics
Credits: 3.0

This course is an analysis of the subject of statics. The objective is to impart the understanding of statics with the understanding of force (including friction), moments, components of forces, centroids, theorem of Pappus, plane and space truss analysis, moments of inertia and radius gyration. The calculation of loads on beams, wedges, screws, journal bearings, thrust bearings, flexible cables and flexible belts is also covered. A full mathematical understanding is expected.
Prerequisites: **PHYS 110 and MATH 120**
Co-Requisite: **MATH 120 and PHYS 120 can be a co-requisite**
3 class hours a week

ECES 200 Thermodynamics
Credits: 3.5

The development of thermodynamic principles and concepts, systems of units, first law for open and closed systems, properties of pure substances, ideal and real gases, second law of thermodynamics, power cycles, reactive systems analysis.
Prerequisites: **MATH 120**
3 class hours a week
2 laboratory hours every other week

ECES 201 Thermodynamics
Credits: 3.0

The development of thermodynamic principles and concepts. Systems of units. First law for open and closed systems. Properties of pure substances. Ideal and real gases. Second law of thermodynamic. Basis reactive systems analysis.
Prerequisites: **MATH 120**
3 class hours a week

ECES 210 Dynamics
Credits: 2.0

This course is an analysis of the subject of dynamics. The objective is to impart the understanding of dynamics with the understanding of forces, moments, components of forces, radius of gyration, kinematics and kinetics of systems of particles and kinematics and kinetics of rigid bodies. A full mathematical understanding is expected.
Prerequisites: **ECES 100**
2 class hours a week

ECES 220 Introduction to Materials Engineering
Credits: 2.0

An introduction to the structure and properties of solids commonly used in engineering applications. The emphasis of the course is metallurgy; however polymers, composites and advanced materials applicants are also incorporated. Consideration of the effects of composition (alloying), mechanical and thermal treatments are addressed. Failures of materials including fatigue, creep, thermal shock and corrosion, as well as methods of protection are detailed in the context of marine engineering applications.
Prerequisites: **PHYS 110 and CHEM 100**
Co-Requisite: **ECES 221**
2 ***class hours per week***

ECES 221 Introduction to Materials Engineering Laboratory Credits: 0.5

This laboratory is for characterizing materials engineering properties and behavior as a co-requisite to the ECES220 course. Various materials test methods are performed with statistical analysis used in the reporting and evaluation of data. Heat treatment of steel is performed with analysis of metallurgical transformation verified by hardness test results. Charpy Impact Test and tension tests are performed as destructive tests to determine material properties. Non-destructive testing evaluation methods including visual, ultrasonic, dye penetrant and radiographic methods are performed, as well as hardness testing. The course relates materials engineering testing to industry standards.
Prerequisites: None
Co-requisite: **ECES 220**
2 laboratory hours every other week

ECES 230 Fluid Mechanics
Credits: 3.5

Principles of fluid statics including manometry, forces on submerged surfaces, buoyancy. Dimensional analysis. Bernoulli equation with and without friction. Linear and angular momentum. Drag and lift. Compressible flows. Introduction to open channel flows. Introduction to computational fluid dynamics.
Prerequisites: **MATH 101 and ECES 200**
Co-requisites: **MATH 220**
3 class hours a week
2 laboratory hours every other week

ECES 300 Strength of Materials
Credits: 3.5

This course details stress and strain to include analysis of axial, torsional, bending, shear, thermal, pressurized cylinders, and combined loadings. An introduction to gears and power transmission shafting is provided. Mohr's Circle for combined stress for 2-D and 3-D problems is considered, as well as Failure Theories. Shear and bending moment for beams to analyze stress and deflection is included, as well as consideration of instability by buckling of columns.
Prerequisites: **ECES 100 and ECES 220**
3 class hours a week
2 laboratory hours every other week

ECES 310 Heat Transfer
Credits: 3.0

The course discusses quantitatively the three main modes of heat transfer, which are conduction, convection and

radiation. A combined approach will be followed that will stress both the fundamentals of the rigorous differential description of the involved phenomena and the empirical correlations used for engineering design. Review of heat exchanger design and analysis will be covered. There will also be brief references to fundamental features of transport phenomena and a brief discussion of mass transport. A full mathematical understanding is expected.
Prerequisites: **ECES 200 and ECES 230**
Co-requisites: **MATH 220**
3 class hours a week

ECES 400 Machine Elements
Credits: 3.0

The application of mathematics, engineering sciences and general design techniques to the analysis and design of components used in machinery. Includes basic design practices for shaft and keys, gears, journal and antifriction bearings, bolted joints and welded joints. Required for all engineering majors.
Prerequisites: **ECES 100, ECES 210, ECES 220 and ECES 300**
3 class hours a week

ECES 401 Machine Elements
Credits: 2.0

The application of mathematics, engineering sciences, and general design techniques to the analysis and design of components used in machinery. Includes basic design practices for shafts and keys, gears, journal and antifriction bearings, bolted joints, and welded joints.
Prerequisites: **ECES 100, ECES 210, ECES 220 and ECES 300**
2 class hours a week

ECME 101 Introduction to Marine Engineering I
Credits: 3.5

A survey of merchant propulsions plants, i.e., fossil fuel steam turbine, diesel engine and gas turbine. Basic engine construction, operating principles and support systems of each propulsion type covered. Basic principles of pumps, steering gears and refrigeration systems are also presented. The course is offered in preparation for the first sailing period and prepares Midshipman for their future concentration in the Marine Engineering curriculum.
3 class hours a week
3 laboratory hours every other week

ECME 105 Introduction to Marine Engineering II
Credits: 3.5

This course will cover various topics related to Marine Engineering, to include learning objectives required to be met prior to the first sailing of a Midshipman, in accordance with USCG and IMO requirements. An emphasis will be placed on the classification and construction of main and auxiliary boilers; centrifugal, rotary and reciprocating pumps; air compressors and diesel engines. Additionally, operation of this equipment will be covered, including hands-on equipment operations in a laboratory, where possible, and simulation and discussion in situations where the equipment is not available in Academy laboratories.
Prerequisite: **ECME 101**
3 Class hours a week
3 laboratory hours every other week

ECME 400 Marine Steam Plants and Components
Credits: 3.5

This course covers details on design and construction of marine propulsion boilers and steam turbines, their components and associated support systems.
Prerequisite: **ECME 105**
3 class hours a week
3 laboratory hours every other week

ECME 410 Marine Steam Plant Simulation
Credits: 0.5

This course is to cover the engineering operations and systems of a modern LNG vessel steam plant. The course topics will include: Lighting off the steam plant from dead ship, raising steam and placing main boilers on line, starting ship's turbo generators, starting auxiliary systems, preparing the main engine for operation, maneuvering the ship in and out of port, at sea operations, securing main engine in port and operation of boilers combustion control systems.
Prerequisite: **ECME 101 and ECME 105**
Co-requisite: **ECME 400**

3 laboratory hours every other week

ECME 420 Internal Combustion Engines

Credits: 3.5

The study of the theoretical and operational cycles of diesel engines; engine performance and selection criteria; fuel systems, lubrication system; cooling systems; starting and reversing systems; governor systems; diesel engine fuels, fuel injection systems; lubricants; manufacture and design of engine components; crankcase explosions; dynamic balancing of engine running gear.
Prerequisite: **ECME 105 and ECES 200**
3 class hours a week
3 laboratory hours every other week

ECME 430 Marine Refrigeration

Credits: 3.5

This course will cover various topics related to marine refrigeration and air conditioning including cycle analysis, compressor construction and performance, heat exchanger construction and performance, system controls, psychrometrics, refrigerant characteristics and recovery, and the calculation of heating and cooling loads.
Prerequisite: **ECES 200**
Co-requisite: **ECES 230**
3 class hours a week
3 laboratory hours every other week

ECME 431 Marine Refrigeration

Credits: 2.5

This course will cover various topics related to refrigeration and air conditioning including refrigeration cycle analysis, compressor construction, vapor compression refrigeration cycle system controls, refrigerant properties, service practices, psychometric properties of air and HVAC systems.
Prerequisite: **ECES 200**
Co-requisite: **ECES 230**
2 class hours a week
3 laboratory hours every other week

ECME 440 Engine Room Resource Management

Credits: 1.0

Engine Room Simulation-based training is designed to enhance the potential third engineer's skills to operate and make proper decisions in the operation a large horsepower engine room in safe and effective manner. The student will be part of a watch team in which he/she will be placed in numerous operational scenarios. During the course of the operational scenarios various plant conditions may change and machinery casualties may be introduced. The watch team will be required to troubleshoot the situation, decide on the proper course of action and take corrective measures in order to insure safe operation of the propulsion plant.
Prerequisites: **ECME 101 and ECME 105**
4 laboratory hours per week

ECME 450 Gas Turbines and Marine Auxiliary Equipment

Credits: 3.5

The gas turbine portion of this course covers the application of the Brayton cycle to various gas turbine power cycles; compressor, turbine and combustor design and construction; and gas turbine applications for marine installations. Auxiliary equipment topics include control valves, piping systems, pumps and distilling plants.
Prerequisite: **CHEM 200, PHYS 120, ECES 200, ECES 230 and ECES 310**
3 class hours a week
3 laborator3 hours every other week

ECME 460 Marine Engineering License Seminar

Credits: 0.5

This course focuses on the final preparation of marine engineering license candidates. It stresses the importance of environmental protection and the various international and U.S. laws mandating the minimizing of pollution by ship and, in particular, those aspects under the direct control of marine engineers. It also focuses on enhancing the third assistant engineer candidate's examination-taking skills and reinforcing the knowledge necessary to successfully pass the final comprehensive assessment examination in the program of study, the U.S. Coast Guard Second Assistant Engineer examination.

Prerequisites: Senior in good standing as determined by Dean's Office
1 class hour a week
2 laboratory hours a week

ECME 470 Marine Plant Automation and Controls
Credits: 2.5

This course covers the fundamental control theory and the application of Programmable Logic Controllers (PLC's)to the automation of marine power plants and equipment, as well as connection to human-machine interface devices (HMI) with supervisory control and data acquisition systems(SCADA). The course includes a background in instrumentation, wiring, ladder-logic programming, and interfacing between personal computers and PLC's for downloading, executing, and troubleshooting programs, and integration into conventional shipboard systems
Prerequisite: ECME 400
2 class hours a week
3 laboratory hours every other week

ECMT 100 Engineering Graphics Credits: 1.0

This course will cover mechanical drawing, sketching and CAD as it relates to the maritime industry. The primary focuses will be on the use of a CAD program in order to prepare students for completing sea projects and upper level courses that require drafting. Coverage will include multi-view projections, pictorials, section views and auxiliary drawings; also flow diagrams, dimensioning, specifying tolerances and fasteners.
2 laboratory hours a week

ECMT 111 Engineering Shop I
Credits: 1.0

The Machine Shop phase provides an introduction to the principles of basic machine tool operations which includes shop safety, grinders, precision measuring tools, pipe fitting and lathes. Proper use of cutting tools is provided in preparation for using a lathe. Lathe operations include facing off, drilling, turning down, cutting grooves, tapering and threading. Pipefitting will include measuring, cutting, threading and making a pipe system to certain specifications.
The Welding phase will introduce the student to common shipboard welding, joining and cutting processes, equipment and techniques. Using a combination of hands on demonstrations and lectures, and skill practice, the student will gain knowledge of safety and efficiently set up, adjust and operate shipboard welding and cutting equipment to perform simple weld related repair and fabrication tasks.
Prerequisites: ECME 101
3 laboratory hours a week

ECMT 112 Engineering Shop II
Credits: 1.0

This course is a continuation of metal cutting and joining theory and practice employed in merchant ship fabrication and repair operations. Emphasis is on the theory and safe practice of plasma; gas metal; and tungsten arc welding, oxyacetylene welding, brazing, cutting and flame spray metal surfacing. U.S. Coast Guard and American Bureau of Shipping technical standards are treated. The course also incorporates lathe and tool room machine practices including plain and taper turning, chucks, knurling, internal and external threading and milling machine operations.
Prerequisites: ECMT 111
3 laboratory hours a week

ECNA 400 Naval Architecture for Marine Engineers
Credits: 3.0

This course will cover ship geometry and definitions; ship form; hydrostatic properties; initial and overall stability; trim; floodable length and damage stability; ship strength and structure; resistance and propulsion; ship control and fundamentals of ship design.
Prerequisites: ECES 300
Co-requisites: ECES 230
3 class hours a week

ECNA 401 Naval Architecture for Marine Engineers
Credits: 2.5

This course will cover ship geometry and definitions; ship form; hydrostatic properties; initial and overall stability; trim; floodable length and damage stability; ship strength and structure; resistance and propulsion; and ship control.

Prerequisites: ECES 300
Co-requisites: ECES 230
2.5 class hours a week

EMEM 405 Engineering Project Management 1
Credits: 3.5

Introduces the fundamentals of management of engineering projects related to ship operation, ship production, and repair. The subjects include classification of projects; organizational structure and contracts; project stages; basics of engineering design; shipyard project estimating; work breakdown, planning and scheduling; computerized network scheduling systems; project monitoring and updating; project cost control. Practical experience is gained in case studies, calculations, and justification of design ideas and in development of a computer based schedule of a project. For (MESM) Marine Engineering &Shipyard Management major only
Prerequisites: EPRJ 400 **and** MATH310
3 class hours a week
1 laboratory hour a week

EMEM 415 Engineering Project Management 2
Credits: 3.5

Builds on the fundamentals of management of engineering projects related to ship operation, ship production, and repair as covered in EMEM405 (Engineering Project Management 1). The subjects include: defining shipyard capabilities, creation of detailed production schedules, process, and testing schedules, work force management and leadership. Modern inventory and planning models will be developed as they relate to production and production controls at shipyards and industrial activities. Practical experience is gained in case studies, calculations, and justification of design ideas and in development of a computer based schedule of a project. For marine engineering and shipyard management major only***Prerequisites:*** EMEM 400 **and** MATH 330
3 class hours a week
1 laboratory hour a week

EMEM 425 Engineering Project Management 3
Credits: 2.0

Builds on the fundamentals of management of engineering projects related to ship operation, ship production, and repair as covered in EMEM415 (Engineering Project Management 2). The subjects include: defining shipyard capabilities, creation of detailed production schedules, process, and testing schedules, work force management and leadership. Modern manufacturing processes will be explored as they relate ship design and production. Practical experience is gained in case studies, calculations, and justification of design ideas and in development of a computer based schedule of a project. For (MESM) Marine Engineering & Shipyard Management major only
Prerequisites: EMEM 400 **and** EMEM 410
1 class hours a week
3 laboratory hours a week

EREM 300 Engineering Economics Credits: 3.0

This course provides an introduction of economic logic and quantitative methods to provide a basis for engineering decision making involving capital investment and cost effectiveness. Topics include equivalence, cash flow and prospective rates of return, capital recovery, depreciation, replacement policy, and tax considerations. Several tradeoff studies are conducted to provide exposure to the practical application of covered topics.
Co-requisites: BUSN 210
3 class hours a week

ESME 400 MES Capstone 1
Credits: 2.0

This course is the first phase of capstone design project required for all Marine Engineering Systems majors. Student design teams complete technical and economic trade off studies relative to various marine power plants for a designated project ship. Each team is assigned a Faculty Advisor.
Prerequisites: MATH 210, EREM 300
Co-requisites: ECME 400
1 class hour a week
1 laboratory hour a week

ESME 410 MES Capstone 2

Credits: 2.0

A continuation of the capstone design project required of all Marine Engineering Systems majors. Student design teams begin the design of the systems for a marine vehicle including design calculations, equipment selection and the preparation of specifications and drawings. Each team is assigned a Faculty Advisor.
Prerequisites: ESME 400
Co-requisites: ECME 450, ECEM 420
1 class hour a week
1 laboratory hour a week

ESME 420 MES Capstone 3
Credits: 1.5

A continuation of the capstone design project required for all Marine Engineering Systems majors. Student design teams complete the design of the systems for a marine vehicle including design calculations, equipment selection, and preparation of specifications and drawings. Included are the preparation of the final project report and presentation of the final project to an industry and faculty panel. Each team is assigned a Faculty Advisor.
Prerequisites: ESME 410
1 class hour a week
1 laboratory hour a week

ECME 480 Marine Engineering for Deck Officers
Credits: 2.5

This course will provide future Deck Officers with the engineering knowledge and skills to enable them to communicate effectively and efficiently with the engine crew. A greater understanding of how the engineering and deck department's actions and activities impact each other will be developed. The course will expand on basic marine engineering knowledge obtained during Introduction to Marine Engineering I taken in the first year.
2 class hours a week
1 laboratory hour a week

ELECTIVES

EEDL 400 Advanced Tanker Operations Dangerous Liquids
Credits: 3.0

This course is designed to cover the material required by 46 CFR 13.121(f) in order to meet the U.S. Coast Guard course requirements for the endorsement of Tankerman-Engineer. The course will include : oil & chemical properties and characteristics, international and domestic pollution conventions and regulations, petroleum hazards, enclosed space entry & assessment of risks and hazards, tanker cargo systems, cargo operations, ballasting and deballasting operations, cargo tank inerting, cargo tank gas freeing, crude oil washing systems, and vapor control systems ***Prerequisites:*** ECDL 400
3 class hours a week

EEAE 410 Alternative Marine Power Technologies
Credits: 3.5

This course discusses alternative power technologies and their application in the marine environment. Topics include; solar-electric theory and energy production, solar-thermal theory, fuel cell theory, spark gas and dual/tri fuel engines, gas systems for vessels, cold ironing, energy storage, energy efficiency and alternative power for shipboard use.
3 class hours a week
3 laboratory hours every other week

EEAE 411 Marine Environmental Technologies
Credits: 3

This course discusses energy and waste stream management initiatives to minimize vessel environmental impact. Current and future regulatory requirements, as well as industry trends, are covered during the course. Topics include; alternative power forms for shipboard use, energy efficiency measures, ballast water treatment, air emission management, bilge water management, and vessel waste stream management and minimization.
3 class hours a week

EEME 440 Diesel Engine Maintenance Credits: 3

Maintenance planning based on engine running hours and /or predictive maintenance.

Discussion of Maintenance to specific parts of the engine including fuel injectors, exhaust valves, piston rings, and main bearings & connecting rod bearings. Laboratory work including disassembly and assembly of exhaust valves, cylinder covers, pistons, cylinder liners, connecting rods and main bearings

1 class hours a week
4 laboratory hours every week

EEEE 410 Electric Power Systems Design and Analysis
Credits: 3

Application of the skills in mathematics, physics and engineering sciences to design and analysis of electric power systems, incorporating the generation, distribution and utilization of electrical energy. Particular emphasis is given to developing the principles of design and operation of electrical power systems on ships
Prerequisites: **ECEE 200 and ECEE300**
3class hours a week

EENE 410 Introduction to Nuclear Reactor Engineering
Credits: 3

This course covers basic nuclear reactor physics and Engineering including nuclear structure, radioactivity, ionization, nuclear reactions, radioactive decay, mass defect, binding energy and the fission process including conservation of energy. It also covers reactivity effects, reactor dynamics, neutron characteristics, neutron life cycle, delayed neutrons, macroscopic cross section, mean free path, thermal reactor power, diffusion lengths, and effective multiplication factor including thermal utilization factor related to criticality in reactors.
Prerequisites: **MATH 120** ***and*** **CHEM 100**
3 class hours for 9 weeks and 4 weeks with 2 class hours and 2 lab hours every week

EENE 411 Nuclear Propulsion Plant Engineering Credits: 3

This course includes the applications of the engineering sciences to the operation and design of nuclear power plants including associated support systems. The following are some of the topics included in the course: Pressurized Water Reactors, Gas Cooled Reactors, Boiling Water Reactors, and CANDU Reactors. There is further emphasis on design basis evaluation, advanced nuclear reactors including weight and space design considerations, nuclear trends, propulsion plant systems, and propulsion plant operations.
Prerequisites: **EENE410**
3 class hours a week

EEOE 410 Ocean Engineering
Credits: 3

An overview of ocean engineering; ocean environment- ocean floor, ocean currents, tides, waves, ice; offshore structures, types of structures, wave forces on structures, wind and current forces on structures. Offshore pipelines; coastal processes and structures- types of structures, wave refraction, diffraction and reflection, wave run up, wave forecasting, sediment transport, and scour, dredging. Underwater systems- diving and life support, pressure vessels, submarines, remotely operated vehicles, habitats, energy systems; instruments for ocean applications; environmental safety and ethics
Prerequisites: **ECES 230**
3 class hours a week

EEOE 411 Offshore Oil Drilling & Production
Credits: 3

The hydrocarbon production chain; hydrocarbon production history, offshore recovery systems, typical production and process systems, anatomy of an oil well, field development issues- geographical, economic, environmental, cultural/political; hazards and risk management.
Prerequisites: **EEOE 410**
3 class hours a week

EEEE 420 Offshore Power Systems Credits: 3

This course will cover the various means of energy extraction from the ocean, including wind, waves, tides, and thermal gradients. Fundamental approaches as well as variants in development or in operation will be examined for their limitations, economic viability and environmental impact
Prerequisites: **ESEC 230**
3 class hours a week

EEEM 410 Personnel Management for Marine Engineers Credits: 3

Fundamental aspects of personnel management concerning marine engineers as ships officers and in shore side capacities in the maritime industry. This course provides a solid background in personnel management for marine engineers. Review of fundamental management processes; familiarization with skills needed for hiring, interviewing, selection, accountability, discipline, compensation, contractors and general professional communication shall be covered
3 class hours a week

EEEE 411 Power Electronics Credits: 3

Fundamentals of modern power electronics switching devices and their uses for control of AC and DC systems. Rectifiers, phase-controlled rectifiers, inverters, converters, DC choppers, AC and DC Machine Controllers
Prerequisites: **ECEE 200**
3 class hours a week

EEEM 411 Shipyard Management for Shipboard Engineers Credits: 3

Review of current compliance and regulatory requirements placed on vessels and ship owners. This course will incorporate the basics of marine project management. Visits to local vessel repair shops possible as team movements. Shipboard engineers shall become proficient and knowledgeable of the planning process of taking a vessel through a shipyard period. The process will be studied from initial planning and preparations, throughout the vessel's duration on dock and to the vessel's departure and post yard requirements. Familiarization will be given to standard practices, procedures and specific hull and machinery concerns encountered during an overhaul or modification shipyard availability
3 class hours a week

EG 300 Steel Maintenance and Repair in the Marine Environment Credits: 3

An introduction to marine materials and maintenance and repair processes applied on board ship and in shipyards. Expands the student's knowledge of welding, industry practices, joining, measurement and inspection by emphasizing physical fundamentals and personal skills. Topics also include repair and maintenance processes and procedures.
Prerequisites: **ECMT 111, ECMT 112 and ECES 221**
2 class hours a week
3 laboratory hours a week

SEA YEAR

First Sailing Period

EPRJ 210 Machine Shop Sea Project Credits: 1.0

This course provides practice using the lathe skills learned during plebe year in a shipboard environment. This course consists of the fabrication of a metal project using the ship's tools. As an Alternative, Midshipmen may provide photographic and technical report documentation of actual projects fabricated for the ship.
Prerequisites: **ECMT 111**

EPRJ 230 Main Propulsion 1 Sea Project Credits: 2.0

This course is a study of the main propulsion machinery, the associated support systems and the operational procedures related to the ship's main propulsion system. The project focuses on either the main propulsion diesel, steam or gas turbine plants.
Prerequisites: **ECME 101 and ECMT 100**

EPRJ 240 Shipboard Systems 1 Sea Project Credits: 2.0

This course is a study of the ship's auxiliary machinery, the ship's support systems and the operational procedures related to the ship's main propulsion system. This project also includes environmental concerns, pollution control, safety equipment and practices used on the ship's auxiliary systems and provides the Midshipman with practical operating experiences.
Prerequisites: **ECME 101, ECEE 100 and NAUT 101**

EPRJ 245 Marine Engineering

for Deck Midshipmen Sea Project Credits: 1.0

This sea project is designed to provide deck Midshipmen with an overview of the ship's mechanical and electrical systems. The object is to provide them with enough knowledge on how the ship functions to make them better ship's officers. The study focuses on equipment or systems that tend to affect the operation of the ship.
Prerequisite: **ECME101**

Second Sailing Period

EPRJ 310 Maintenance Management Sea Project Credits: 1.0

This course will familiarize the Midshipmen with the organization and management of maintenance, repair and shipyard (drydock) periods as carried out by shipboard personnel.

EPRJ 320 Naval Architecture Sea Project Credits: 1.0

The course concerns the study of the ship's structure and construction. It is designed to develop the ability to identify the structural elements of a ship and provide an understanding of their function.
Prerequisites: **ECMT 100**

EPRJ 330 Marine Propulsion 2 Sea Project Credits: 2.5

This course is a study of the main propulsion machinery, the associated support systems and the operational procedures related to the ship's main propulsion steam systems, auxiliary steam systems or main propulsion gas turbines. The project focuses on either main propulsion steam or gas turbine plants; or auxiliary steam systems on main propulsion Diesel plants.
Prerequisites: **ECME 101 and ECMT 100**

EPRJ 335 Refrigeration Sea Project Credits: 1.0

This sea project is a study of the ship's refrigeration systems, in addition to the heating, ventilation and air conditioning systems (HVAC). The project will cover the operational procedures related to these systems.
Prerequisites: **ECME 101, EPRJ 240 and ECME 105**

EPRJ 340 Shipboard Systems II Sea Project Credits: 2.0

This sea project is a study of the ship's auxiliary systems and the operational procedures related to those ship's systems. This project also includes fire alarms and firefighting equipment and systems and provides the Midshipman with practical operating experiences.
Prerequisites: **ECME 101 and EPRJ 240**

EPRJ 345 Electrical Engineering Sea Project Credits: 1.0

This sea project covers the electrical principles necessary for understanding the electrical power system operation, testing, maintenance and troubleshooting procedures practiced aboard ships. It develops the basic understanding of electrical machines, batteries, controls and protection. In addition it outlines the necessary STCW/RFPEW requirements, competencies and sign-offs for the USCG Third Assistant Engineer License.
Prerequisites: **ECEE 100**

EPRJ 350 Marine Propulsion 3 Sea Project Credits: 2.5

This sea-project is a study of the main propulsion machinery, the associated support systems and the operational procedures related to the ship's main propulsion system. The project focuses on either main propulsion or auxiliary diesel plants. The objective is to develop the skills necessary to be a proficient shipboard engineering officer as well as provide practical, hands-on experience.

EPRJ 400 MESM Shipyard Internship Credits: 2.0

Each Midshipman enrolled into Marine Engineering and Shipyard Management (ME&SM) Program must satisfactory complete the internship assignment at a shipyard or at a related facility as a requirement for graduation. The total minimum duration as a requirement for graduation is six weeks. During the internship the Midshipman will be exposed to industrial procedures and obtain practical skills in specific areas

of shipyard operations and management. For Midshipmen enrolled in the Marine Engineering and Shipyard Management Major only.

Department of Marine Transportation

The department administers the Marine Transportation program which includes the nautical science and business components of the Deck License curriculum for Midshipmen. It is also responsible for the curriculum offered through the Maritime Logistics & Security Program. The department offers courses in the disciplines of Nautical Science, Maritime Business, Maritime Security, and Logistics and Intermodal Transportation.

Courses are given in the core curriculum to provide Midshipmen with nautical science and management skills, as well as knowledge of the transportation processes necessary for successful careers in the maritime industry. The core includes courses in navigation, seamanship, marine safety, dry and liquid cargo operations, integrated navigation systems, meteorology, management, law, economics, transportation, logistics, and intermodal and port operations.

In addition, the department offers advanced elective courses in relevant areas. These courses can be grouped to give Midshipmen a more in-depth exposure to a particular subject area. Students interested in concentrating their electives are advised to contact faculty advisors for specific information and advice.

The department's administrative and faculty offices, classrooms and most of its laboratories are located in Bowditch Hall. These include interactive integrated navigation and maritime communications simulators; tanker, container, and port loading simulators; and navigation laboratories. The simulators offer numerous ship models and geographic areas complete with visual presentations. Students interact with up to 50 contacts and maneuver through simulated land databases utilizing fully integrated bridge electronics and Electronic Chart Display Information Systems (ECDIS). All labs have the same fully integrated navigation simulation software package installed. Each lab is designed to run any combination of interacting ownships, depending on the exercise design. The system provides a realistic display of all weather conditions, various atmospheric phenomena, and time of day, visibility and illumination effects, reflection, and glare on the water. Tides and currents can also be adjusted, as needed, and programmed to change during the simulation with buoys generating current feathers. In addition to the overall condition parameters, environmental zones can also be set-up to create such conditions as fog banks, local wind, current effects, and local wave effects.

A seamanship laboratory in Samuels Hall is maintained and operated by departmental faculty for instruction in splicing rope and traditional marlinspike seamanship. The department also provides hands-on training in ship operations utilizing the vessels and dockside facilities of the Waterfront Training & Operations Department.

An important component of deck officer training is achieved through the use of a Full Mission Visual Bridge Ship-handling Simulator (VBSS), located in the Computer Aided Operations Research Facility (CAORF) in Samuels Hall. VBSS provides the bridge watch team with a visual representation of various harbors as seen from the bridge of a vessel, including landmasses, navigational aids, traffic ships and miscellaneous buildings and structures. Realistic radar images, fathometer readings, and audio cues (depicting ship sounds, buoy sounds, and environmental and weather-related sounds) aid in completing the scene. The system is capable of introducing malfunctions and or failures to any of the equipment including the engine and steering systems. The system realistically presents the total marine scene and is primarily used for the training of Bridge Resource principals. It is also used to support other ship handling and navigation courses offered at the Academy.

DEPARTMENT HEAD

CAPT William J. Lindman, USMS (2010)
(Marine Transportation)
B.S. Marine Transportation, SUNY Maritime College
M.S. Transportation Management, SUNY Maritime College
License: Master of Steam or Motor Vessels of not more than 1600 gross tons, Oceans (STCW95); Chief Mate of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95); Designated Duty Engineer (Motor) not more than 4000 horsepower (STCW95); GMDSS Operator

ASSISTANT DEPARTMENT HEADS

CAPT Emil A. Muccin, USMS (2010)
(Maritime Business)
B.S., U.S. Merchant Marine Academy
M.B.A. Pace University
Licenses: First Class Pilots License-Great Lakes; Master-1600 GT of Steam or Motor Vessels Oceans, Master of Towing; Second Mate of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW2010): Tankerman PIC-DL, Towing Endorsement, VPDSD, ECDIS-VSO, ASQ Certified Quality Engineer; ASQ Certified Quality Auditor ASQ Certified Six Sigma Green Belt

CDR John F. Ryan, USMS (2002)
(Marine Transportation)
B.S., SUNY Maritime College
M.S., SUNY Maritime College
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95); Master of Towing Vessels; First Class Pilot; USCG DE for TOAR

PROFESSORS

CAPT George Edenfield, USMS, (2003)[4]
(Marine Transportation, MT STCW Coordinator)
B.S., U.S. Merchant Marine Academy
M.A., American Military University
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW2010); Advanced STCW Endorsements in Oil, Chemical, and Liquefied Gas Tanker Cargo Operations; Tankerman PIC-DL; Tankerman PIC-LG; Medical PIC; Fast Rescue Boat; GMDSS Operator/Maintainer; VPDSD; ECDIS; QA; MLC (2006)

Changqian Guan (2002)
(Logistics and Transportation)
Diploma, Jimei Institute of Navigation, Fujian, P.R. China
B.S., SUNY Maritime College
M.S., SUNY Maritime College
Ph.D., New Jersey Institute of Technology
License: Third Mate, Unlimited (People's Republic of China)

CAPT Brian J. Hall, USMS (1997)
(Marine Transportation)
B.S., U.S. Merchant Marine Academy
M.S., SUNY Maritime College
License: Master Steam or Motor Vessels Any Gross Tons, Oceans (STCW95); Tankerman PIC; Medical PIC; Fast Rescue Boat.
Military: Captain U.S. Navy (Ret)

CAPT Jon S. Helmick, USMS (1995)[4]
Director, Maritime Logistics and Security Program
(Logistics and Security)
B.A., University of Miami
Ph.D., University of Miami
License: Master of Steam, Motor, Auxiliary Sail, and Sail Vessels of Any Gross Tons, Oceans

CAPT David B. Moskoff, USMS (2001)[4]
(Marine Transportation)
B.S., SUNY Maritime College
MIT Masters of Information Technology, American Intercontinental University
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW95); GMDSS Operator; First Aid Provider; ECDIS; VSO, CSO, FSO; ABS/QE ISM/ISO Lead Auditor (Ret.); ABS Surveyor (Ret.); AWO RCP Lead Auditor (Ret.);

Military: Lieutenant USNR (Ret.)

CAPT Cynthia L. Robson, USMS (1996)[4]
(Marine Transportation)
B.S., Texas A&M (Texas Maritime Academy)
M.A., University of Houston (Clear Lake)
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans; Limited Master Ocean, Sail or Auxiliary Sail Vessels

CAPT Timothy D. Tisch, USMS (2002)[4]
(Marine Transportation)
B.S., SUNY Maritime College
M.S., U.S. Naval Postgraduate School
Ph.D., U.S. Naval Postgraduate School
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95); GMDSS Operator

ASSOCIATE PROFESSORS

Paul Barchitta (2011)
(Maritime Business)
B.S., Finance, St. John's University
M.B.A., Marketing, St. John's University
Post-Graduate Advanced Certificate, Business Education, New York University

CAPT Preston C. De Jean, USMS (2011)
B.S., University of Louisiana at Lafayette
J.D., Southern University Law Center
LL.M. Tax, Golden Gate University – San Francisco
Member of the Bar: State of Louisiana

Military: Lieutenant Colonel, Logistician, USAR (Ret.)

David Gilmartin (2011)
(Maritime Business)
B.S., Marine Transportation, USMMA
M.B.A., Baruch College
J.D., Duquesne Law School

CAPT John H. Hagedorn (1996)[2,4]
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B.S., SUNY Maritime College
License: Master of Steam or Motor Vessels of any Gross Tons, Oceans (STCW95)

CAPT Kevin Hasson, USMS (2011)[4]
(Marine Transportation)
B.S., U.S. Merchant Marine Academy
License: Master Steam and Motor Vessels of Any Gross Tons, Oceans (STCW2010); GMDSS Operator, Fast Rescue Boat, ECDIS, Medical Care
PIC, VSO/CSO/FSO

CDR John L. Lutz, USMS (2005)
(Marine Transportation)
B.S., U.S. Merchant Marine Academy
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95); GMDSS Operator

CAPT Michael C. Murphy, USMS, (2011)[4]
(Marine Transportation)
B.S., U.S. Merchant Marine Academy
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW95); GMDSS Operator/Maintainer; Medical Care Provider; ECDIS

CAPT Scott Nicholas, USMS, (2012)[4]
(Marine Transportation)
B.S., Marine Transportation, SUNY Maritime College;
License: Master of Steam & Motor Vessels Unlimited, Any Gross Tons Upon Oceans; Vessel Security Officer; Ship Handling at Management Level; Tankerman DL-PIC; Medical Person in Charge; ECDIS

CAPT Ann Sanborn, USMS (1993)[2,4]
(Marine Transportation)
B.S., Texas A&M (Texas Maritime Academy)
J.D., University of Houston
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95)
Member of the Bar, State of Texas

CAPT Sean P. Tortora, USMS (2011)[4]
(Marine Transportation)
M.S., SUNY Maritime College
B.S., SUNY Maritime College
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW95); Master Towing Vessels, Upon Oceans; Master Underway Replenishment Vessels; Fast Rescue Boat; Medical Care PIC; GMDSS Operator; VSO; Tankerman PIC-DL; USCG TOAR; USCG DE for TOAR; DP Basic

ASSISTANT PROFESSORS

CDR William B. Brewer, USMS (2015)
(Marine Transportation)
B.S., U.S. Coast Guard Academy
License: Master of Steam or Motor Vessels of not more than 1600 gross tons, Oceans (STCW95); Chief Mate of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95); Fast Rescue Boat; GMDSS Operator
Military: Lieutenant Commander, USCG (Ret.)

CDR Sarah Daleo, USMS (2017)
(Marine Transportation)
B.S., Marine Transportation, SUNY Maritime College
M.S., International Transportation Management, SUNY Maritime College
License: Master of Self Propelled Vessels not including Auxiliary Sail, Unlimited Tonnage upon Oceans, Tankerman PIC – Dangerous Liquid (DL) Cargoes. GMDSS Operator, OICNW, RFPNW, PSC, FRB, Advanced Oil and Chemical Tanker Cargo Operations, Medical First-Aid Provider, Basic and Advanced Firefighting, Vessel Security Officer, Vessel Personnel with Designated Security Duties and Security Awareness

CAPT Adam Donohoe, USMS (2014)
Master of Training Vessel KINGS POINTER
B.S., Nautical Science, Maine Maritime Academy
M.B.A., University of Phoenix
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans. (STCW95); GMDSS Operator, VSO Medical Care Provider, Vessel Security Officer

CDR Carolyn Hunter, USMS (2015)
(Marine Transportation)
B.E. Naval Architecture, SUNY Maritime College
M.S., Maritime System, Stevens Institute of Technology;
License: Master of Steam & Motor Vessels Unlimited, Any Gross Tons Upon Oceans; Vessel Security Officer; Medical PIC; Tankerman DL-PIC

CAPT Charles McDermott, USMS (2014)
B.S., U.S. Merchant Marine Academy,
M.A., Master of Military Art and Science, Strategic Studies, U.S. Army School of Advanced Military Studies,
M.A., Master of Arts, National Security and Strategic Studies, U.S. Naval War College
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW95)
Military: Captain, U.S. Navy Reserve

Timothy McLellan (2016)
(Maritime Business)
B.S., Marine Transportation, U.S. Merchant Marine Academy
M.B.A., Transportation, The Wharton School, University of Pennsylvania
Certified Protection Professional (CPP), American Society for Industrial Security (ASIS) International
Project Management Professional (PMP), Project Management Institute (PMI)

CAPT Jamie J. Rock, USMS (2012)[4]
(Marine Transportation)
B.S., SUNY Maritime College
M.S., International Transportation Management, SUNY Maritime College
Certificate: Supply Chain Logistics
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW95) VSO; FSO, CSO Medical PIC; GMDSS Operator and Maintainer

CAPT Charles B. Rogan, USMS, (2012)[4]
(Marine Transportation)
B.S., U.S. Merchant Marine Academy
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans (STCW95); Master of Towing Vessels; First Class Pilots License-Delaware Bay and River and Puerto Yabucoa, Puerto Rico; VSO; GMDSS Operator; Ship Handling & Pilot Training; Hazwoper; Medical Care PIC

CDR Peter A. Schneider, USMS (2011)
(Maritime Business)
B.S., MIT
M.B.A., Baruch
Ph.D., Business, CUNY

Hsinrong P. Wei (2016)
(Maritime Business)
B.S., Chung-Hsing University
M.B.A., Finance & Investment,
Baruch College, City University of New York

Ph.D., Economics, Graduate Center, City University of New York

PROFESSORS EMERITI

CDR Dennis Compton, USMS (Ret.)
B.S., Marine Transportation, SUNY Maritime College
M.S., Transportation Management, SUNY Maritime College
License: Master, Inland Steam or Motor Vessels of Any Gross Tons; Chief Mate of Steam or Motor Vessels of Any Gross Tons, Oceans (STCW95)

CAPT Raymond Eisenberg, USMS (Ret.)
(Marine Transportation: 1941-1946)
Diploma, Pennsylvania Sate Nautical School
License: Master of Steam and Motor Vessels, any Gross Tons, Oceans

CAPT Douglas A. Hard, USMS (1966) [1,2,4]
(Marine Transportation)
B.S., U.S. Merchant Marine Academy
M.B.A., Pennsylvania (Wharton)
M.S., Polytechnic Institute of New York
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans,
Military: Captain, USNR (Ret.)
Naval Convoy Commodore

CAPT Robert J. Meurn, USMS (Ret.)[1,2,4]
(Marine Transportation: 1978-2003)
B.S., U.S. Merchant Marine Academy
M.A., George Washington University
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans.
Military: Captain, USNR (Ret.)

CAPT George Sandberg, USMS (Ret.)[4]
(Marine Transportation: 1990-2011)
M.S., Applied Science, SUNY Stony Brook
B.S., Meteorology and Oceanography, SUNY Maritime College
License: Master of Steam or Motor Vessels of Any Gross Tons, Oceans.

Note: Sea Year courses appear at the end of this course listing.

BUSN 101 Principles of Leadership Credits: 1

This course is designed to introduce Midshipman to the fundamental principles of leadership as it is applied in the maritime environment. It is intended to provide students with: (1) an understanding of the nature of leadership and the roles of a leader and a follower (2) an appreciation of the attributes, characteristics, actions and practices of exemplary leaders, and (3) comprehension of the distinctions between leadership and management. The objective is to provide Midshipmen with a foundation for further study of maritime leadership and management. This course, in combination with BUSN201, is designed to meet the Leadership and Managerial Skills requirements of 46 CFR Part 11 and the Use of Leadership and Managerial Skills competence of Table A-II/2 and A- III/2 of the STCW Code, as amended.

BUSN 110 The Business of Transportation Credits: 3

This is an introductory course that is intended to provide an overview of the transportation business, with emphasis on maritime shipping. Topics include the significance of marine transportation, government agencies, tramp shipping, liner service, the passenger cruise business, vessel management, cargo documentation, terminal operations, ship husbandry, bunkering procedures, the functioning of the various segments of a shipping company operation, and current issues facing the industry.
Prerequisite: NAUT 101
3 class hours a week

MLOG 120 Vessel Personnel with Designated Security Duties Credits: 0

This course provides the knowledge required for vessel personnel with designated security duties in connection with a Vessel Security Plan (VSP) to perform their duties in accordance with the requirements of the Maritime Transportation Security Act of 2002, Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, the U.S. Coast Guard regulations contained in 33 CFR Chapter 1 Subchapter H, and Section A-VI/6 of the STCW Code as amended. This course is offered on a pass/fail basis only.
10.5 class hours total

BUSN 201 Maritime Leadership and Management Credits: 2

This course is designed to enhance and further develop Midshipman leadership and management skills as they are applied in the maritime environment. It is intended to provide students with the knowledge and ability to implement: (1) the attributes, characteristics, actions, and practices of exemplary leaders; (2) effective shipboard personnel management and training; (3) relevant maritime conventions, national legislation, and recommendations; (4) applicable task and workload management principles; (5) effective resource management; (6) appropriate decision-making techniques; and (7) standard operating procedures. The objective is to enhance Midshipman knowledge, understanding, and proficiency concerning management level control of the operation of a vessel and the care for personnel on board. This course, in combination with BUSN101, is designed to meet the Leadership and Managerial Skills requirements of 46 CFR Part 11 and the Use of Leadership and Managerial Skills competence of Table A-II/2 and A-III/2 of the STCW Code, as amended.

Prerequisites: **BUSN 101**
2 class hours a week

BUSN 210 Principles of Economics Credits: 3

This course is intended to cover the scope and method of economics. Topics covered include: allocative mechanisms and economic systems; supply and demand analysis; pricing and resource allocation under various market conditions; cost curve analysis; national income accounting; theory of income determination; fiscal policy; money and banking; and monetary policy.
3 class hours a week

BUSN 230 Principles of Management Credits: 3

A comprehensive course designed to explore the world of a manager with emphasis on the principles and practices of management. This course focuses on the managerial functions of leading, planning, controlling, staffing, directing, and motivating individuals and workgroups. The objective is to enhance Midshipman knowledge and thinking about the workings of organizations and the relevance of management concepts in preparation for successful careers.
3 class hours a week

BUSN 300 Fundamentals of Business Law Credits: 3

This is a comprehensive course designed to provide a foundation in the theories and aspects of law and their application in the business and international community. It explores the origin and enactment of laws, business and social trends with focus on specific laws impacting the transportation and maritime industry, and roles of the various branches of government and agencies in regulating and enforcing laws in a business environment.
Prerequisites: **BUSN 110**
3 class hours a week

BUSN 310 Accounting and Finance Credits: 3

This course is designed to introduce significant financial accounting topics including financial reports (balance sheets, income statements and cash flow statements), inventory, depreciation, and ration analysis as well as corporate finance topics including time value of money, capital budgeting and financial planning.
Prerequisite: Third Class standing
3 class hours a week

BUSN 410 Marketing
Credits: 2.5

This course examines the role of marketing from the perspective of a marketing manager who needs knowledge of customer/consumer behavior in order to develop, evaluate, and implement effective strategies intended to influence those behaviors to achieve the firm's objectives. Among the topics covered are: market research and analysis, consumer behavior, marketing strategies, distribution, and pricing. Special emphasis will be given to marketing services of transportation companies. A weekly lab session provides practical exercises.
2 class hours a week
1 laboratory hours a week

BUSN 420 Maritime Economics Credits: 3

This is an introductory course in shipping market economics. Major topics include: principles of maritime trade, seaborne trade and transport systems, shipping market organizations, the shipping cycle, supply and demand, freight rate mechanisms, dry bulk shipping, tanker shipping, container shipping, risk management, shipping company economics, ship financing, ship building, scrapping, and the economic impact of regulations.
Prerequisites: **BUSN 110, BUSN 210 and BUSN 310**
3 class hours a week

BUSN 430 Admiralty and International Law of the Sea
Credits: 2

The course builds on the foundation of business law presented in course BUSN 300. The basic principles of maritime law, which are significant for mariners and future leaders in the shore side marine transportation industry, are studied in greater depth. Topics include: maritime torts and contracts, rights of harbor workers and seamen, wrongful death, carriage of goods by sea, services and products, and salvage. The second component of the course explores the field of International Law of the Sea.
Prerequisite: BUSN 300
2 class hours a week

BUSN 440 International Business Credits: 3

This course examines the fundamental concepts of international business. Topics include doing business in different national, economic, political, and cultural milieus, the role of inter-governmental organizations, and management issues associated with an international business enterprise.
Prerequisites:
First Class Standing, **BUSN 110, BUSN 210, BUSN 230, BUSN 310, and BUSN 410**
3 class hours a week

NAUT101 Introduction to Nautical Science Credits: 3

This course has two objectives: students successfully completing this course will be introduced to the basic knowledge and skills of nautical science that are required of all officers in the merchant marine; and to provide for formal instruction and assessment in many of the common and deck-specific competency requirements for IMK Able Seafarer (Deck) Knowledge, Understanding, and Proficiency requirements. Topics covered in nautical science include the economic role of the merchant marine, merchant ship types, shipboard terms, dimensions, personnel organization, nomenclature of ships, mooring with lines, mooring with ground tackle and practical labs in knots, splices, hitches for the bosun chair and stage, and crane operations.
2 class hours a week
2 laboratory hours a week

NAUT 110 Basic Firefighting and Safety Credits: 2

This course provides the student with the knowledge and experience to respond to shipboard fires and emergencies. The student will be instructed in the behavior of fire, fire prevention and suppression techniques, and associated extinguishment systems found aboard various types of vessels including container ships, break bulk, oil tanker, chemical tanker, LNG, R-RO and passenger vessels. Students will be shown how to use fire prevention and suppression equipment properly and effectively in dealing with fires and hostile environments. Students will also be instructed in the safe use of respirators, the subject of fit testing of respirators, and the use of the

SCBA in firefighting. This course is designed to five the student the necessary skills to minimize the risk of fir and maintain state of readiness for combating shipboard fires. This course also includes a one day training exercise at an US Coast Guard approved Shipboard Fire Training Facility. This course is required of the International convention on Standards of Training, Certification and Watchkeeping for Seafarers and includes the 2010 Amendments. All competencies must be successfully completed. Additionally, successful completion of this course is a requirement for graduation.

NAUT 120 Terrestrial Navigation 1 Credits: 3

This course is designed to teach the student the technical and practical concepts of Terrestrial Navigation. Areas covered include terrestrial coordinates, nautical charts, navigation publications, piloting, navigation aids, compass corrections, and the use of sailing to determine rhumb line course and distances. Practical chart work laboratories and a laboratory on an Academy training vessel provide extensive practice. This course is required of all Deck Midshipmen and is offered in the Second Term of Fourth Class Year.

2 class hours a week
2 laboratory hours a week

NAUT 125 Terrestrial Navigation 2 Credits: 3

This course builds upon the material covered in Terrestrial Navigation 1. Topics include a more in-depth analysis of the earth's magnetic field, the ship's magnetic field, magnetic compass adjustment and the sailings. Propeller slip, ocean voyage planning, tide current theory, current sailings and major ocean circulation are also introduced. This course contains a STCW Knowledge, Understanding and Proficiency (KUP) concerning the knowledge of the principles of magnetic compasses and is required of all Deck Midshipmen. It is offered in the Third Term of Fourth Class Year.

Prerequisites: **NAUT 120**
3 class hours a week

NAUT 140 Maritime Communications Credits: 4

This 4-credit course is designed to satisfy the requirements needed to qualify for an STCW endorsement as a Global Maritime Distress and Safety System Radio Operator. Current regulations allow a graduating Midshipman who passes the course to qualify for a waiver from having to pass a separate FCC GMDSS Radio Operator license exam. After successful course completion, a Midshipman will be able to competently operate the radio communications equipment required onboard GMDSS-compliant vessels. Non-GMDSS communications systems (signal flags and Morse code by flashing light) will also be addressed in this course.

Co-requisites: **NAUT 120**
3 class hours a week
2 laboratory hours a week

NAUT 160 Ship Construction and Stability Credits 3

This course will introduce the Midshipman to merchant ship construction, structure, and terminology. It will examine merchant ship stability and trim and the practical application of these principles. The Midshipman will learn the topics related to ship construction and stability while cultivating the accuracy and professional attitude necessary to successfully perform the duties of a licensed deck officer.

Prerequisites: **NAUT 101**
3 class hours a week

NAUT 210 Integrated Navigation 1 Credits: 4

This course integrates theoretical and practical applications of radar and ARPA within the context of safe visual underway navigation. In particular, Midshipmen will learn to adapt system displays to various conditions, understand and apply sensor inputs to radar, analyze digital and graphic information on radar & ARPA, perform radar transfer plotting, acquire and access contact information, and practice contact management using trail maneuver functions and AIS information. Midshipmen will also master the basics of electronic navigation

and vessel maneuvering, as well as steering and autopilot control, following helm orders, and responding to operational alarms. Radar & ARPA competencies from STCW, as amended, are satisfied by this course. Successful completion of IN1 and Radar Certification in the senior year permits a Radar Observer certificate and an ARPA certificate to be awarded upon graduation. Successful completion of this course is required for assignment to sea.
Prerequisites: **NAUT 120**
Co-requisites: **NAU 125 and NAUT 140**
3 class hours a week
2 laboratory hours a week

NAUT 215 Integrated Navigation 2 Credits: 4
This course integrates theoretical and practical applications of electronic chart display and information systems (ECDIS) within the contexts of safe visual underway navigation. Midshipmen will learn to adapt system displays to various conditions, analyze digital and graphic chart information, understand and apply sensor inputs, and access contact information using AIS and ARPA. Midshipmen will master additional aspects of electronic navigation, including radar navigation, echo sounder, compass and steering systems, and also vessel maneuvering, responses to MOB, watchkeeping principles and application of COLREGS. Ship positioning and autopilot control competencies from STCW are satisfied by this course. Successful completion of this course satisfies STCW training requirements for the operational use of ECDIS, as amended, and permits a USCG certificate to be awarded upon graduation. Successful completion is required for assignment to the sea second term.
Prerequisites: **NAUT 210**
3 class hours a week
2 laboratory hours a week

NAUT 220 Liquid Cargo Operations Credits: 3
This course is designed to satisfy the cargo familiarization training requirement set forth in Qualifications for Tankerman Assistant and for Persons in Charge of Transfer of Dangerous Liquids, 46 C.F.R. § 13.209 and to meet the requirements for specialized basic training of personnel serving on oil, chemical, and liquefied gas tankers as specified in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, (STCW) and the 2010 amendments of STCW. In addition, this course reflects the most current regulatory requirements affecting the tanker industry as well as safe industry practice found in various fleet manuals, trade publications and manufacturers' manuals. This course uses a combination of classroom lectures and practical demonstrations using laboratory equipment, such as the liquid cargo/ballast-handling simulator. Successful completion of this course is a prerequisite to assignment aboard an oil/chemical/liquefied gas tanker. At the conclusion of NAUT220 Liquid Cargo Operations, Midshipmen will be eligible for the United States Coast Guard national endorsement on the Merchant Mariners Credential (MMC) as a Tankerman-Assist (DL), with no further training or service. Completion of this course along with the required sea time and onboard cargo transfer operations during the sea year will satisfy the requirements of the federal regulations leading to the United States Coast Guard national endorsements on the Merchant Mariners Credential (MMC) as a Tankerman, Person-in-Charge PIC (DL).
2 class hours a week
2 laboratory hours a week

NAUT 225 Celestial Navigation Credits: 4
This required course offers an introduction to the study of celestial bodies, their locations and apparent motion relative to an observer on Earth, their ephemera elements of the celestial sphere, concepts and use of time including predications of celestial phenomena. The course will encompass celestial theory derived from qualitative and quantitative analysis of the combined coordinate systems for reductions to celestial lines of positions. Celestial observations will be used to determine compass error. Studies will also involve practical application through use of the sextant, azimuth ring, alidade and other

standard shipboard equipment and publications. This course is required of all Deck Midshipmen and is offered in the Second Term of Third Class Year for B-split sea training assignees and First Term of Second Class Year for A-split sea year training assignees.
3 class hours a week
2 laboratory hours a week

NAUT 230 Navigation Law Credits: 2

This required course is an in-depth study of the various statues governing the operation of watercraft subject to U.S. jurisdiction. Particular emphasis is placed on both the International Navigational Rules Act of 1977 (which implemented the 72COLREGS, the regulations resulting from the 1972 Convention on International Regulations for Preventing Collisions at Sea) and the Inland Navigational Rules Act of 1980 (which implemented the new unified Inland Rules of the Road presently applicable on the navigable water of the United States). Also discussed are the underlying legal concepts and constitutional issues associated with both international and domestic navigation law as pertains to the American mariner. This course is required of all Deck Midshipmen and is offered in the Third Term of Third Class Year for A-split sea year training assignees and the Second term of Second Class Year for B-split sea year training assignees.
2 class hours a week

NAUT 240 Meteorology Credits: 3

This required course will cover the principles of modern meteorology as is applicable to the marine environment and global transportation and logistics. The course encompasses the following: the earth-atmosphere system; weather elements; atmospheric thermodynamics; wind systems; cyclone and anticyclones, air masses, fronts, and middle-latitude cyclones; violent local storms; tropical storms; the synoptic weather map; weather service for merchant shipping; weather forecasting; ocean waves; sea ice and ice accretion; weather map construction and analysis; optimum ship routing utilizing the prevailing and projected weather conditions to advantage; weather routing to avoid adverse conditions; practice of practical shipboard reporting procedures. As transportation systems ashore and at sea are weather sensitive, this course will also provide a fundamental understanding of atmospheric phenomena having impact on the overall logistic process. This includes topics such as tornadoes, supercells, precipitation, humidity and temperature patterns that are important in the management of global transportation and logistical systems both ashore and at sea. This course is required of all Deck Midshipmen and is offered in the Second Term of Third Class Year for B-split sea year training assignees and the First term of Second Class for A-split sea year training assignees.
3 class hours a week

NAUT 250 Dry Cargo Operations Credits: 3

This required course will cover the principles of materials handling and their applications to the movement of marine cargoes. Topics will include safe cargo operations, certification of cargo gear, stresses on cargo gear, and mathematical calculations of safe and efficient cargo stowage and prevention of moisture damage due to cargo and ship sweat. In addition this course will examine ship stability and trim and practical applications of these principles in the loading of vessels carrying break-bulk, bulk and container cargoes. A container loading project will be required to be completed involving computing of stowage, trim, KG, GM and LCG. This course is required of all Deck Midshipmen and is offered in the Second Term of Third Class Year for B-split sea year training assignees and the First Term of Second Class Year for A-split sea year training assignees.
***Prerequisites*: NAUT 160**
3 class hours a week

NAUT 310 Integrated Navigation 3 Credits: 4

This required course applies skills formally developed and assessed in the first two levels of Integrated Navigation, and adds several more advanced skills, especially pertaining to ship

handling and thruster control. This course applies a high degree of problem solving, detection of ambiguous or conflicting information, risk assessment, decision making and determination of solo watchstanding limitations in a variety of demanding conditions and situations. Situational awareness now encompasses dynamics of watchstanding. Human factors and cognitive processes of solo watchstanding are applied to case studies and exercise analysis. Following in-depth simulation-based practice, the desired training outcome is for each student to satisfy the assessment criteria of a final underway scenario of interacting ownships in which the safety of navigation is maintained amidst subtle yet critical ambiguities between the visual scene and instrument data, where it is reasonable nonetheless to maintain a solo bridge watch, and where there is the possibility of an emergency response prior to augmentation of the bridge watch. This course is required of all Midshipmen and is offered during the First Term of the First Class year for A-split sea year training assignees and Third Term of Second Class year for B-split assignees.
Prerequisites: **NAUT 215**
3 class hours a week
2 laboratory hours a week

NAUT 330 The Maritime Regulatory Environment
Credits: 2

This required course will cover knowledge and practical understanding of the multitude of international and domestic conventions, laws, regulations, policies, and best practices affecting the transportation of persons and cargo by sea. As required by the STCW, 1978, as amended by the 2010 Manila Amendments, the OICNW must have a "working knowledge of and be able to monitor compliance" with various international and domestic conventions, codes, laws, and regulations. This knowledge is essential for the deck officer in a highly regulated environment. Topics will include safety of life at sea, the law of the sea, the marine environment, Watchkeeping, liability and compensation, and the Maritime Labor Convention. This course is required of all Deck Midshipmen and is offered in the Third Term of Second Class Year for B-split sea year training assignees and the First Term of First Class Year for A-split sea year training assignees.
2 class hours a week

NAUT 400 License Seminar
Credits: 0

This required course provides an intensive review in the topics and problems covered on the U.S. Coast Guard Second and Third Mate Exam, by means of review, problem solving and examination. Topics that will be reviewed and examined include seamanship, cargo handling and stowage, meteorology/oceanography, navigation theory, ship construction terminology and navigation law. Types of navigation problems that will be review include computing and plotting lines of position (visual bearings, radar, meridian transit, Polaris, sun lines and star lines), sailings (parallel, mid-latitude, Mercator, and great circle), computing time of meridian transit and sunrise/set, tide and tidal current calculations, and determination of compass error by terrestrial and celestial means (bearings, azimuth, amplitude, Polaris). This course is required of all First Class deck Midshipmen prior to the United States Coast Guard License Exam and is offered in the Second Term of First Class Year.
Prerequisites: **Nautical Science Curriculum**
3 mandatory laboratory hours a week

NAUT 420 Advanced firefighting **Credits: 1.5**

This course will cover the organizing and training of fire parties and controlling fire-fighting operations aboard ships including tank vessels. The course will address the fire detection and firefighting equipment aboard ships and the investigation of incidences concerning fires. The course is designed to prepare the student to serve as On Scene Leader at a shipboard fire. This is an STCW course required as part of USCG Licensing and includes the 2010 STCW Manila Amendments. All competencies must be successfully completed. This course also includes a 1 day training exercise at an approved

US Coast Guard Shipboard Fire Training Facility.

Prerequisite: **NAUT 110**
1 class hour a week
1 laboratory hour a week

NAUT 440 Flashing Light and Radar Observer Certification Credits: 0

This 0-credit course is designed to satisfy the STCW requirements to receive Morse Code by flashing light and to fulfill the STCW testing required for RADAR observer and ARPA certification. This course is required of all Midshipmen and is offered during the First Term of the First Class year for B-split sea year training assignees and Second Term of First Class year for A-split assignees.
Prerequisites: **NAUT 310**
2 laboratory hours a week

NAUT 460 Bridge Resource Management Credits: 2

This course is required for all deck Midshipmen and is taken after completion of all other courses in the curriculum related to watch keeping duties and the Midshipman has completed all of the required at-sea navigation training. The course will allow for the practice, demonstration and assessment of watch keeping skills and will challenge the student's decision making abilities, passage planning skills, and bridge team management techniques. The course is taught utilizing full mission bridge simulation technology and consists of lecture, pre-briefs, and simulated shipboard underway laboratory hours with comprehensive debriefs. It is in compliance with the 2010 Manila Amendments to the STCW Code. It is USCG-approved for Midshipmen to earn 30 days sea service. The course is taught in a 52-hour format consisting of 13 lecture hours and a total of 39 laboratory hours, incorporating laboratory passage planning time of 1 hour per week prior to each simulation scenario. This course is required of all Midshipmen and is offered during the First Term of the First Class year for B-split sea year training assignees and Second Term of First Class year for A-split assignees.

Prerequisites**: NAUT 125, NAUT 140, NAUT 230, NAUT 240, BUSN 230, NAUT 310**
1 class hour a week
2 laboratory hours a week

MHAZ 410 Incident Command System-Oil Spill Response Management Credits: 3

This thirty nine hour course is an introductory examination of the many issues surrounding marine oil spills and the response measures that can be implemented. Emphasis will be placed on practical guidance and management. An in-depth look at the National Incident Management System and how it applies to the marine industry will be followed by a scientific description of petroleum products and their behavior in the marine environment, the effects of oil on various organisms, ecosystems, and uses will be studied. Next, the containment, recovery, and cleanup of oil spills will be analyzed in details, as will pre and post-spill planning and management efforts. Finally, the important State, domestic, and international laws and regulations, and their effect on the oil industry will be examined. Field trips, guest lectures, and a training session on an oil simulator will be important components of the course.
3 class hours a week

MHAZ 411 Liquid Cargo Systems Credits: 3

This Course is designed to prepare the student to safely and efficiently operate an inert gas system and conduct a crude oil washing operation on a modern tanker. This is accomplished by covering the necessary theoretical and practical details of inert gas system operation, crude oil washing operations and related tanker safety issues. The Subject matter presented in the course reflects current regulatory requirements as well as industry best-practices involving the use of these systems. This course adheres to the IMO recommendations for training of personnel in the subject areas. The use and practice of liquid cargo loading software will also be instructed upon, and demonstrated. The topics are covered through a combination of classroom lectures, practical demonstrations, field trips and/or

simulated operations.
Prerequisites: **NAUT 220** ***and*** **First Sailing Aboard a Tanker**
3 class hours a week

MHAZ 412 Advanced Oil and Chemical Liquid Cargo Credits: 3

This course is designed to meet the advanced level training for oil and chemical tanker cargo operations. The included training is required of any and all persons with immediate responsibility for Loading, discharging, care in transit, handling of cargo, tank cleaning or other cargo-related operations aboard a liquid cargo carrier in international service. The course meets the requirements for specialized training as specified in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, (STCW) and the 2010 amendments of STCW, Regulation V/1-1, Section A-V/1-1, Table A-V/1-1-2, and Table A-V/1-1-3. Successful completion of this course and required sea service and operations, will lead to an international endorsement for advanced training of oil and chemical tanker cargo operations. **Prerequisites:** **NAUT 220,** ***or*** **Second Sailing Aboard a Tanker**
3 class hours a week

MHAZ413 Advanced Liquefied Gas Credits: 4

This course is designed to meet the advanced level training for liquefied gas tanker cargo operations. The included training is required of any and all persons with immediate responsibility for loading, discharging, care in transit, handling of cargo, tank cleaning or other cargo-related operations aboard a liquid gas cargo carrier. Along with satisfying the cargo training requirement set forth in qualifications for Tankerman Person-In-Charge of Transfers of Liquid Gas, 46 C.F.R. 13.209, the course will also meet the requirements for specialized training as specified in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, (STCW) and the 2010 amendments of STCW, Regulation V/1-2, Section A-V/1-2, Table A-V/1-2-2.
Prerequisites: **CHEM 100, NAUT 220, NAUT 110** ***or*** **Second Sailing Aboard a Tanker**
4 class hours a week

MLOG 200 Integrated Logistics Management Credits: 3

This course examines the theory and practice of logistics management in the modern business environment, with attention to parallels between business and military logistics. Key objectives of the course are to provide Midshipmen with an in-depth understanding of the operation of key elements in logistics systems, comprehension of the interrelationships among individual components of supply chains, awareness of the structure and purpose of logistic information systems, knowledge of how the logistics function interfaces with other business functions, and a grasp of the principal tools and techniques used in the analysis of logistic systems. Emphasis is on system optimization for the purpose of achieving competitive advantage, cost reduction, and customer satisfaction.
Prerequisite: **BUSN 110**
3 class hours a week

MLOG 310 Vessel Security Officer/Company Security Officer Credits: 3

This course is intended to provide the knowledge required for personnel who are assigned responsibilities as Vessel Security Officer (VSO) or Company Security Officer (CSO) to perform their duties in accordance with the requirements of the Maritime Transportation Security Act of 2002, Chapter XI-2 of SOLAS 74 as amended, the IMO ISPS Code, and U.S. Coast Guard regulations contained in 33 CFR Chapter I Subchapter H. The course aim is also to meet the mandatory minimum requirements for knowledge, understanding and proficiency in Table A-VI/5 of the STCW Code and the training requirements in 33 CFR Part 104.
Prerequisite: **BUSN 110**
3 class hours a week

MLOG 400 Port & Terminal Operations Credits: 3

The course provides in-depth analysis of marine port and

terminal operations. Subjects include functions of modern terminals, cargo handling equipment, vessel/yard/gate operations, terminal information systems, terminal documentation, port administration, port development, and labor-management relations. In addition, the course will address issues related to trends in liner shipping, impact of increasing vessel size, terminal productivity, infrastructure constraints, and information technology. Emphasis is on the goal of efficient and cost-effective freight movement.
Prerequisite: **BUSN 110**
3 class hours a week

MLOG 425 Maritime Security Research Seminar
Credits: 3

This course is designed to provide Midshipmen with an understanding of issues related to maritime, port, and intermodal transportation security and the opportunity to apply their acquired knowledge and experience to current security challenges. Emphasis is placed on counter terrorism in the maritime environment. The primary focus of the seminar is a research project that will engage Midshipmen in formulating strategies and approaches to address a current "real-world" security problem.
Prerequisite: **BUSN 110** & **MLOG 310**
3 class hours a week

MLOG 430 Chartering and Brokerage Credits: 3

This course will provide a basic understanding of how charter parties are constructed, how chartering decisions are made, how vessel characteristics and voyages are analyzed, the functions of brokers and agents, and vessel sales and purchases.
Prerequisite: **BUSN 110**
3 class hours a week

MLOG 450 Capstone Project Seminar Credits: 3

A capstone course structured to integrate the lessons learned in prior course work, internships, and the sea year experience. Through applied research projects dealing with current challenges provided by industry, government, and military organizations, the seminar provides Midshipmen with the opportunity to apply their knowledge and skills in solving "real-world" problems in logistics management, intermodal transportation, security, and port operations. Significant independent research will be required. Midshipmen may interact with officers of organizations providing research problems.
Prerequisite: **First Class Standing, BUSN 110, BUSN 210, BUSN 230, BUSN 310, BUSN 410, BUSN 440, MLOG 200, MLOG 310, MLOG 400, MLOG425, *and* MLOG 430.**
3 class hours a week

WTRF 100 Safety Of Life At Sea Credits: 2

Students successfully completing this course will be able to take charge of the preparation, embarking and launching of survival craft. They will be able to manage a boat under oars or motor, and take charge of an inflatable life raft. Students will know the correct use of all survival equipment and the action to take to preserve the lives of those in their charge. An official test to obtain U.S. Coast Guard certification will be given. Students will also learn about the impact of shipping on the environment, relevant pollution prevention legislation, and procedures and equipment to be used to mitigate pollution incidents.
1 class hour a week
2 laboratory hours a week

SEA YEAR

NPRJ 210 Cargo Operations 1
Credits: 1

Using the ship as a laboratory, the objective of this sea project is for the Midshipman to acquire the knowledge of safe and efficient stowage and handling of cargo necessary to successfully perform the duties of a ship's licensed deck officer. This sea project will be completed by deck-officer endorsement candidate Midshipmen.
***Prerequisites*:** **NAUT 160, NAUT 220**

NPRJ 215 Integrated Navigation Systems 1
Credits: 1

The Purpose of this first sailing

period sea project is to serve as a guide for acquiring an in-depth knowledge of the electronic navigation equipment and its integration with the navigational procedures encountered aboard the Midshipman's assigned vessels. The project emphasizes practical use of the equipment and reinforces the knowledge and skills acquired during the in-residence Integrated Navigation 1 course. The combination of the in-residence course and this sea project provides a strong foundation for the Midshipman to effectively assist vessel's watchstanding officers, and as preparation for further training at the Academy. This course is required of all Midshipmen and is offered during First Term of the First Class year for B-split sea year assignees and Second Term of First Class year for A-split assignees.
Prerequisites: **NAUT 120, NAUT 125 and NAUT 210**

NPRJ 220 Seamanship 1
Credits: 1

The objective of this sea project is for the Midshipman to acquire the knowledge and practices of seamanship necessary to successfully perform the duties of a ship's licensed deck officer. Using the ship as a laboratory, this portion of the Sea Project will build upon the Midshipman's knowledge of seamanship terminology, practices and procedures gained from in-residence course work. This sea project will be completed by all deck-officer endorsement Candidate Midshipmen. ***Prerequisites:*** **NAUT 101, NAUT 110 *and* WTRF 100**

NPRJ 225 Ship Structure and Stability 1 Credits: 1

Using the ship as a laboratory, this portion of the Sea Project curriculum will build upon the Midshipman's knowledge of ship structure, nomenclature, use of the ship's hydrostatic table and the determination of transverse stability gained from in-residence course work. This sea project will be completed by all deck-officer endorsement Candidate Midshipmen.
Prerequisites: **NAUT 160**

NPRJ 230 Navigation 1
Credits: 1

The objective of this sea project is for the Midshipman to acquire the navigational skills and techniques required to properly perform the duties of a licensed deck officer. This is to be achieved by the shipboard practice and computations learned from in-residence courses in terrestrial navigation and composing essays on STCW watchkeeping principles and commonly utilized navigation publications. These training activities will prepare the Midshipman for 2nd sailing and the capstone navigation classes in First Class Year and ultimately the USCG Third Mate's Exam.
Prerequisites: **NAUT 120 *and* NAUT 125**

NPRJ 235 Navigation Law 1
Credits: 1

The objective of this sea year project is for the Midshipman to acquire the knowledge and practices of seamanship necessary to successfully perform the duties of a ship's licensed deck officer. Using the ship as a laboratory, this portion of the Sea Project will build upon the Midshipman's knowledge of seamanship terminology, practices and procedures gained from in-residence course work.

NPRJ 240 Maritime Communication Sea Project
Credits: 1

The purpose of this first sailing period sea project is to serve as a guide for acquiring an in-depth knowledge of the electronic communications equipment found aboard modern commercial vessels. The project emphasizes practical use of the equipment and reinforces the knowledge and skills acquired during the in-residence maritime communications course. The combination of the in-residence course and this sea project provides a strong foundation for the Midshipman to work effectively as a GMDSS radio operator.
Prerequisites: **NAUT 140**

NPRJ 245 Deck Operations
Credits: 1

The objective of this sea project is for the engine Midshipman to acquire the knowledge and practices of deck seamanship, firefighting and SOLAS

operations necessary to successfully perform the duties of a ship's licensed engineer. Using the ship as a laboratory, this portion of the Sea Project will require the engine Midshipman to observe various deck operations, and thus enhance his understanding how the Deck and Engine departments cooperate in order to fulfill the mission of the ship.

NPRJ 310 Cargo Operations 2
Credits: 2

Using the ship as a laboratory, the objective of this sea project is for the Midshipman to acquire the knowledge of safe and efficient stowage and handling of cargo necessary to successfully perform the duties of a ship's licensed deck officer. This project will build upon the knowledge gained in NAUT160 Ship Construction and Stability, NAUT220 Liquid Cargo Operations, NAUT250 Dry Cargo Operations and First Sailing Period. This sea project will be completed by all deck-officer endorsement Candidate Midshipmen.
***Prerequisites*: NAUT 160, NAUT 220, NAUT 250 *and* NPRJ 210**

NPRJ 315 Integrated Navigation System 2
Credits: 1

The purpose of this second sailing period sea project is to serve as a guide for acquiring a in-depth knowledge of the electronic navigation equipment and its integration with the navigational procedures encountered aboard the Midshipman's assigned vessel. The project emphasizes practical use of the equipment and reinforces the knowledge and skills acquired during the in-residence Integrated Navigation 2 course. The combination of the in-residence course and this sea project provides a strong foundation for the Midshipman to effectively assist the vessel's watchstanding officers, and as preparation for further training at the Academy. This course is required of all Midshipmen and is offered during the First Term of the First Class year for B-split sea year training assignees and Second Term of First Class year for A-split assignees.
***Prerequisites:* NAUT 215 *and* NPRJ 215**

NPRJ 320 Seamanship 2
Credits: 1.5

The objective of this sea course is for the Midshipman to acquire the knowledge and practices of seamanship necessary to successfully perform the duties of ship's licensed deck officer. In addition to basic seamanship subjects, advanced topics such as ship handling and contingency management are incorporated into this project. The sea project part of this course will build upon knowledge gained from NAUT101 Introduction to Nautical Science as well as material from the first sailing period. All deck-officer endorsement Candidate Midshipmen will complete this sea project. The course culminates with an oral exam upon return from sea.
***Prerequisites:* NPRJ 220**

NPRJ 325 Ship Structure and Stability 2 Credits: 1.5

Using the ship as a laboratory, this portion of the Sea Project curriculum will build upon the Midshipman's knowledge of ship structure, nomenclature, use of the ship hydrostatic table and the determination of transverse and longitudinal stability gained from in-residence course work as well as during the first sailing. This sea project will be completed by all deck-officer endorsement Candidate Midshipmen. ***Prerequisites:* NPRJ 225**

NPRJ 330 Navigation II
Credits: 2

To acquire the navigational skills and techniques required to properly perform the duties of a licensed deck officer. This is to be achieved by the shipboard practice and computations learned from in-residence courses in celestial and terrestrial navigation and meteorology as well as creating voyage plans and composing essays on STCW watchkeeping principles and commonly utilized navigation publications. These exercises will help prepare the Midshipman for capstone navigation classes in First Class Year and the USCG Third Mate Exam taken at the end of First Class Year. ***Prerequisites:* NPRJ 230 *and* NAUT 225**

NPRJ 335 Navigation Law 2
Credits: 2

The objective of this sea project is for the Midshipman to acquire the knowledge and practices of Navigation Law necessary to successfully perform the duties of a ship's licensed deck officer. The project concentrates on examining the major differences between the International and Inland Navigation Rules. The project will build upon the knowledge gained from in-residence course work and the first sailing period. It will prepare the Midshipman for the Navigation Law Class offered in first class year. This sea project will be completed by all deck-officer endorsement Candidate Midshipmen.

NPRJ 340 Maritime Business
Credits: 1

This course is taken by Midshipmen of all majors during the Second Sailing. It is designed to both introduce the Midshipman to the business side of maritime operations and to provide an understanding of the total transportation network of which ocean shipping is a part. Midshipmen are required to research information and practices aboard their ship(s) to answer questions concerning this topic.

Department of Humanities

The Department of Humanities is composed of dedicated scholars who are passionate about encouraging student communication skills, life-long learning, and respectful reflection on the complexities of the human experience, crucial abilities for young people as they move through the increasingly complex and diverse twenty-first century. Our goals in so doing are laid out in the department's mission statement: "The Humanities Department, through directed reading, writing and discussion, develops Midshipmen's knowledge of history and literature, oral and written communication skills, capacity to think critically, and awareness of American and world culture. The Department cultivates graduates who are intellectually engaged with, knowledgeable about, and respectful of the diversity of ideas and values that shape both the nation they serve and the world at large." It works toward achieving that mission through a variety of required and elective courses, primarily in English and History, but with occasional interdisciplinary courses or ventures into journalism, film, leadership, and other topics.

The Department offers two required introductory English courses, writing intensive experiences with small class size, ideally less than fifteen students. The first is a 3-credit course taken in plebe year that primarily gives emphasis to composition to develop writing skills through close reading and critical analysis. For those with a weak writing background, the English Support Program provides an additional hour of remedial work in grammar and composition. A second 3-credit English course focuses on literature of various genres and ages, and provides additional work on composition. Starting with the class of 2017, Marine Engineering majors also take a 2-credit Technical Communications course that provides an introduction to the sort of writing engineers are expected to do.

The Department offers two required history courses. The first of these is the History of Sea Power, a 3-credit course taken in the Plebe year, which acquaints Midshipmen with maritime and naval history, including the role of sea power during the two 20th century world wars as well as reinforcing basic writing, critical reading and speaking skills. The 3-credit History of the Modern World course, offered in an upper-class year, examines the forces that have shaped global societies to better prepare Midshipmen to work in an industry that spans the world.

In addition to the traditional on-campus courses, all Midshipmen complete a 1-credit Humanities Sea Project during their second sailing period. This project encourages Midshipmen through a series of readings and writing exercises to "map" their individual voyages and personal journeys. The project serves the humanist goal of intellectual self-discovery as the students analyze and theorize their experiential learning while serving as cadets.

The Department also offers a number of electives, such as Spanish language, film, Latin American history, Shakespeare, East Asian history, ethics, leadership, Holocaust studies, military history, business English, and others on an occasional basis. The Department also oversees a number of one-on-one independent studies that are arranged directly between professors and Midshipmen, and has supported a number of Kings Point Scholar projects.

The Humanities Department prides itself on taking the lead in campus cultural issues. It oversees the O'Gara Academic Honor Society, which recognizes the most academically accomplished Midshipmen at Kings Point by offering exceptional array of distinguished speakers from the maritime industry, arts, and sciences as well as the opportunity for Midshipmen to participate in a cultural enrichment program. The department also oversees the Arts and World Affairs program, which encourages all Midshipmen to take advantage of the fantastic cultural opportunities available in New York City as well as occasionally bringing events on campus when funding permits

DEPARTMENT HEAD

Susan Comilang (2015)
(English)
B.A., Columbia Union College
M.A., Washington State University
Ph.D., George Washington University

ASSISTANT DEPARTMENT HEAD

Vacant

PROFESSORS

Jane Pacht Brickman (1981)
(History)
B.A., Queens College
M.A., Ph.D., CUNY

Laury Magnus (1981)
(English)
B.A., Brooklyn College
M.Phil., CUNY
Ph.D., CUNY

Joshua Smith (2003)
(History)
M.A. (Honours), University of St. Andrews
A.S., Maine Maritime Academy
M.A., East Carolina University
Ph.D., University of Maine

Jeffrey F. Taffet (2002)
(History)
B.A., Franklin and Marshall
M.A., Georgetown
Ph.D., Georgetown

Rosanne Wasserman (1991)
(English)
B.A., Indiana
M.F.A., Columbia
Ph.D., CUNY

ASSOCIATE PROFESSORS

Melanie Ross (2004)
(English)
A.B., Princeton
Ph.D., New York University

Jennifer L. Speelman (2011)
(History)
B.A., Pennsylvania State
M.A., Temple
Ph.D., Temple

Gregory F. Sullivan (2006)
(History)
B.A., University of California, Berkeley
M.A., Yale University
Ph.D., Yale University

ASSISTANT PROFESSOR

Patrick J. Speelman (2012)
(History)
B.A., The Ohio State University
M.A., Temple University
Ph.D., Temple University

PROFESSORS EMERITI

Arthur L. Donovan
(History, 1988-2003)
A.B., Harvard
M.S., Wisconsin
Ph.D., Princeton

Robert P. Gardella
(History, 1977- 2006)
B.A., Rice
M.S., Ph.D., Washington

Jacques Szaluta[2]
(History, 1965-2001)
B.S., New York University
M.A., Ph.D., Columbia

Note: Sea Year courses appear at the end of this course listing.

HIST 100 History of Sea Power **Credits: 3**
An introduction to the American naval and maritime experience from colonial times to the

present.
3 class hours a week

HIST 410 Modern World History Credits: 3

This course will examine key issues in the history of the modern world. The course will focus on exploring political, economic, and/or intellectual change and on the impact of interactions between a number of different parts of the world. There will be a focus on significant transnational events over an extended time period. Each instructor will choose a theme, or series of themes, to organize the material; the course is not intended to be comprehensive. Themes may also change by semester.
3 class hours a week

LITR 100 English Support Program

An extra hour weekly of instruction focused primarily on grammar and proofreading for selected students enrolled in Composition and Literature (the first of the two English courses). Students will be identified for the program based on a diagnostic essay given to all students on the first or second day of the Composition and Literature class, as determined in the first two weeks of class. The English Support Program instructor will assign tasks and drills from a grammar syllabus and work with Midshipmen to improve writing. The support class will be held for one hour a week. Attendance is required. This twelve-week program carries the grade of P or F. Should a Midshipman in a Composition and Literature class fail the English Support Program, s/he will not be permitted to progress and enroll in a Literature class (the second English course) without repeating the support Program successfully.

LITR 101 Composition and Literature Credits: 3

Composition and Literature, which students take during plebe year, focuses on composition, with assignments (including a research paper) designed to help students practice aspects of writing such as unity, organization and coherence, development, and precise, emphatic wording and usage. The course also emphasizes reading, discussion, and analysis of classic works of literature, and/or essays and film, fostering the skills of close reading and critical thinking that are springboards to good writing.
3 class hours a week

LITR 201 Literature Credits: 3

Literature, which students take after plebe year, focuses primarily on close reading and the study of literature in various genres, and provides additional work on composition, oral presentation, individually and/or in groups, and class discussion. Literary studies will allow students to analyze how and what words create; literary studies will also provide students with a rare opportunity to reflect on the complexity of human life and history, the psychology of human conflict and cooperation, and the impact of diverse cultures on the individual.
***Prerequisites*: LITR 101**
3 class hours a week

LITR 220 Technical & Professional Communications Credits: 2

This course focuses on technical and professional communications-the clear, accurate, accessible presentation of specialized information in written and spoken forms. Students will study and imitate models, writing technical reports, business plans, proposals, memoranda and e-mail messages. Students will work together, providing constructive criticism, proofreading others' work, and preparing for final projects. The class will also give students opportunities to deliver information orally through speeches and presentation. Emphasis here will be on the content, organization, and engaging delivery of information. This course will be taught with the support of the Department of Maine Engineering.
***Prerequisites*: ECME 105**
2 class hours a week

ELECTIVES

LANG 400 Introduction to Conversational Spanish
Credits: 3

The course will be an introduction to conversational Spanish, a basic Spanish course where basic verb tenses and vocabulary will be introduced and explored. Spanish and Hispanic culture and history will also be discussed on a regular basis. In addition, Spanish readings will be introduced and discussed throughout the course. Students will be able to convers, read, and write in Spanish on a basic level by the end of the term.

3 class hours a week

LANG 410 Intermediate Conversational Spanish
Credits: 3

The course will be an intermediate level of conversational Spanish; where intermediate verb tenses and vocabulary will be introduced and explored, as well as the review of basis language concepts. Spanish and Hispanic culture and history will also be discussed on a regular basis. Spanish readings will also be introduced and discussed throughout the course. Students will be able to converse, write, and read in Spanish at an intermediate level by the end of the term.

3 class hours a week
Prerequisites: **LANG 420**

LANG 420 Advanced Conversational Spanish
Credits: 3

This course will be an advanced level of conversational Spanish; where advanced verb tenses and vocabulary will be introduced and explored, as well as the review of basic and intermediate language concepts. Spanish and Hispanic culture and history will also be discussed on a regular basis. Spanish literature will also be introduced and discussed throughout the course. Students will be able to converse, write, and read in Spanish at an advanced level by the end of the term.

***Prerequisites*:** **LANG 410**
3 class hours a week

SEA YEAR

Second Sailing Period

HPRJ 300 Humanities Sea Project **Credits: 1**

The Humanities Sea Project is designed to serve as a companion during the second "Sea Year" and to challenge students to think about their place, on ship and on shore, in the larger maritime world and explore their relationship with and understanding of other cultures and societies. As such, it serves the humanist goal of intellectual self-discovery; and through a series of readings and writing exercises spaced out over the time at sea students will be able to "map" their individual voyages and personal journeys

Department of Mathematics and Science

The Department of Mathematics and Science (M&S) offers courses in physics, chemistry and mathematics. All Midshipmen take courses in these areas, many in the Fourth Class year when M&S courses comprise approximately 40 percent of the academic program. The courses are designed to teach the fundamental concepts that Midshipmen will use in later courses in the Engineering and the Marine Transportation curriculums. The department also provides a strong science background required of all educated people in our world of high technology.

All Midshipmen are required to take Physics 1, Physics 2 General Chemistry. These courses have a strong laboratory component so that Midshipmen can experience the experimental side of science. The M&S maintains general science laboratories that incorporate the recent technologies of microelectronics, lasers and computers. State of the art equipment using PC-based data acquisition is used in the Nuclear, Chemistry, and Physics Laboratories. The department is also responsible for the operation of the Class of '81 Astronomical Observatory. M&S laboratories, offices, and observatory are located in the Fulton/Gibbs building.

The physics and chemistry courses are rigorous. The physics courses are calculus-based. Calculus 1 is a co-requisite for Physics 1 and a prerequisite for Physics 2. Midshipmen majoring in Marine Engineering, Marine Engineering Systems and Marine Engineering and Shipyard Management take Chemistry for Marine Engineers in their Second or Third Class year.

All Midshipmen take Calculus 1, Calculus 2 and Probability of Statistics. In addition, Marine Engineering students take one term of Engineering Mathematics; Marine Engineering Systems students take two terms of Engineering Mathematics; and the Marine Engineering take Differential Equations 1; Marine Engineering Systems students take Differential Equations 1, Differential Equations 2 and Calculus 3; and Marine Engineering and Shipyard Management students take Differential Equations 1, Calculus 3, Operations Research 1 and Operations Research 2.

Because mathematics is so important to nearly every area of study at the Academy, all entering Midshipmen take an assessment examination administered by the department. Students are placed into Calculus 1, or extended Calculus 1. Extended Calculus provides Midshipmen with an extra hour of instruction per week.

The department also offers electives that, in addition to providing the opportunity to take courses in areas of study beyond the required curriculum, reflect some of the scholarly and research efforts of the faculty. Examples of recently offered electives are Introduction to Oceanography, Introduction to Astronomy and the Solar System, Observational Astronomy and Techniques, Introduction to Nuclear Physics and Engineering, and Introduction to JAVA Programming and Cryptography. Interested students can also complete a concentration in a particular area of study by taking a three-course sequence of related electives. M&S concentrations include Applied Mathematics, Astronomy, Marine Science, and Nuclear Science. Interdepartmental concentrations include Cyber Defense and Nuclear Engineering.

DEPARTMENT HEAD

Mark J. Hogan (1999)
(Physics)
Professor
B.S., Haverford College
M.S., Ph.D., National University of Singapore

ASSISTANT DEPARTMENT HEAD

Michael E. Melcer (1996)
(Chemistry)
Professor
B.S., SUNY Stony Brook
M.S., Ph.D., SUNY College of Environmental Science and Forestry

PROFESSORS

Jerry Doumas (1998)
(Physics)
B.S., Maryland
Ph.D., Texas A&M

Yuri Fedyunin (2005)
(Physics)
B.S., Moscow Electrical Engineering College
M.S., Ph.D., Moscow State University

Joshua S. Friedman (2005)
(Mathematics)
B.S., SUNY Binghamton
M.A., SUNY Stony Brook
Ph.D., SUNY Stony Brook

ASSOCIATE PROFESSORS

Ping Furlan (2011)
(Chemistry)
B.S., University of Science and Technology of China
M.S., Ph.D., University of Connecticut

Alexander Retakh (2010)
(Mathematics)
B.A., NYU
Ph.D., Yale University

David Shinn (2010)
(Chemistry)
B.S., Univ of South Carolina
M.S., Univ of Hawaii
Ph.D., Emory University

ASSISTANT PROFESSORS

Socrates Boussios (2016)
(Mathematics)
B.S., M.S., SUNY Stony Brook
Ph.D., Columbia

Daniel Fong (2014)
(Mathematics)
B.S., Ph.D., New Jersey Institute of Technology

Robert J. Ronkese (2013)
(Mathematics)
B.S., Union College
M.S., Northwestern University
Ph.D., University of Delaware

Paul Serafino (2004)
(Physics)
B.S., Trinity College
Ph.D., Yale University

Kimani Stancil (2015)
(Physics)
B.S./B.A., UMBC
Ph.D., MIT

PROFESSORS EMERITI

Laurence M. Cassar (1967-2002)
(Physics)
B.S., M.S., St. John's University
Ph.D., Adelphi

David Dellwo (1977-2014)
(Mathematics)
B.A., Carroll
B.S., M.S. D.E.S., Columbia

Albert Stwertka (1954-1995)
(Physics)
B.S., Bard College
M.A., Columbia
Ph.D., Adelphi

STAFF

Christine Zwillick (2001)
Secretary to the Head of Department

Vacant
Laboratory Technician

CHEM 100 General Chemistry
Credits: 4

This course provides a variety of approaches used in answering qualitative and quantitative problems in chemistry. Fundamental concepts presented in lecture and laboratory include: units of measurement; dimensional analysis; classification of matter; chemical nomenclature; the mole concept; reaction types with stoichiometry calculations; states of matter including gas properties, solution chemistry , and solids; thermochemistry; atomic/electronic structure/properties and periodicity; types of chemical bonding and molecular structures; states of matter and phase diagrams; intermolecular forces; physical properties of solutions; reaction kinetics and factors affecting reaction rates; chemical equilibrium; and LeChatelier's Principle. General Chemistry laboratory will involve activities relevant to the course content by incorporating modern laboratory techniques and measurements as well as computer data processing.
Corequisite: **MATH 101**
3 class hours a week
2 laboratory hours a week

CHEM 200 Chemistry for Marine Engineers
Credits: 3

The course is an extension of CHEM 100, General Chemistry, and covers the chemical principles relating to the sea, shipping, and marine/air pollution controls and policies. It is a joint course offered by the Math & Science Department and the Engineering Department. The course will cover the following topics: acid-based theories, ionization of acids and bases, pH concept and calculations, hydrolysis of salts, buffer solutions, titration curves, indicator dyes, solubility and complex-ion equilibria, free energy concept, spontaneity, electrochemistry, nuclear chemistry, organic chemistry, water chemistry, combustion chemistry, and marine/air pollution controls and policies.
Prerequisite: **CHEM 100, ECME 105, 1st Sailing Sea Year**
2.5 class hours a week
2 laboratory hours every other Week

MATH 101 Calculus I
Credits: 3

Functions, introduction to limits, derivatives, derivative rules, applications of the derivative, antiderivatives, definite integrals, method of substitutions, application of integrals to areas.
3 class hours a week

MATH 120 Calculus II
Credits: 3

Limits, continuity, implicit differentiation, related rates, Newton's method, volumes, average value, techniques of integration, approximate integration, improper integrals, introduction to differential equations, applications of integration. Use of computational programs.
Prerequisite: **MATH101**
3 class hours a week

MATH 210 Probability and Statistics **Credits: 3**

An introduction to probability and statistics. Descriptive statistics, use of statistical software; probability, counting, conditional probability, independence; random variables, expectation, variance; binomial distribution, Poisson processes; normal distribution, t-distribution, Central Limit Theorem; statistical inference, confidence intervals, tests of significance; regression; applications.
Prerequisite: **MATH101**
3 class hours a week

MATH 220 Differential Equations 1 **Credits: 3**

Integrating factors, numerical methods, linear equations with constant coefficients, harmonic motion, damping, forcing, resonance, Laplace transforms. Matrices, determinants, eigenvalues, systems of linear equations. Introduction to computer programming and applications to matrix operations and differential equations.
Prerequisite: **MATH 120**
3 class hours a week

MATH 300 Calculus III
Credits: 3

Sequences and series; tests for convergence, power series, Taylor series, multivariable

calculus: graphs, contour maps, vector products; partial and directional derivatives; gradient, extrema; multiple integrals; programming Taylor series approximations of functions and Riemann sums.
Prerequisite: **MATH 220**
3 class hours a week

MATH 310 Operations Research 1 Credits: 3

Basic linear algebra, linear programming, simplex method, sensitivity analysis and duality, transportation and assignment problems.
Prerequisites: **MATH 210, MATH 120**
Corequisite: **MATH 300**
3 class hours a week

MATH 320 Differentials Equations 2 Credits: 3

Orthogonal functions, Fourier and other series expansions, two point boundary value problems including the Sturm-Liouville problem. Boundary and initial value problems for partial differential equations including the heat equation, the wave equation, and the Laplace equation. Introduction to programming and computational methods for differential equations.
Prerequisites: **MATH 220, MATH 300**
3 class hours a week

MATH 330 Operations Research 2 Credits: 3

Integer programming, decision making under uncertainty, EQQ and related models, stochastic processes, simulation, forecasting models.
Prerequisites: **MATH 300**
3 class hours a week

PHYS 110 Physics 1 Credits: 3

Mechanics of translational motion: particle kinematics and dynamics; systems of forces; work and energy; linear momentum; fluid mechanics.
Corequisite: **MATH 101**
2.5 class hours (average) a week
0.8 lab hours (average) a week

PHYS 120 Physics 2 Credits: 3

Rotational mechanics, oscillations, waves, light, thermodynamics and electric currents: equilibrium and rotational motion; simple harmonic motion; waves and sound; geometric optics; heat and thermodynamics; DC circuits.
Prerequisites: **PHYS110, MATH 101**
2.5 class hours (average) a week
0.8 lab hours (average) a week

PHYS 230 Physics 3 Credits: 3

Wave optics, gravitation and electromagnetism: interference and diffraction of light; gravitation; electric field; electric potential; capacitance; magnetic force; magnetic field; electromagnetic induction; and AC circuits.
Prerequisites: **PHYS 120, MATH 120**
2.5 class hours (average) a week
0.8 lab hours (average) a week

ASTR 405 Introduction to Astronomy and the Solar System Credits: 3

Introduction to fundamental astronomy terminology, concepts and analytical problems related to Archeoastonomy, the Earth & Moon system, our Solar System, solar astronomy, stellar evolution, and an introduction to objects beyond our solar system including extra-solar planets and alien life. This course includes a laboratory component for observations of astronomical objects using the Academy's telescope at our observatory.
Prerequisites: **PHYS 110**
3 class hours a week

ASTR 415 Observational Astronomy and Techniques Credits: 3

Geometric optics; types of astronomical telescopes and detectors; astronomical observation techniques; analysis of selected astronomical examples of data and images. Lecture time will be spent primarily on learning about equipment & techniques for making astronomical observations and interpretation & analysis of the data collected. Day and evening lab time for photography and data collection will utilize the Academy's 16" telescope and/or remotely-accessed telescopes. This course can be taken as a stand-alone course or as one of the 3 courses for the Astronomy concentration.
Prerequisites: **MATH 101**
3 class hours a week

CYSC 435 Introduction to JAVA Programming and Cryptography Credits: 3

Basic programming: logical operators, control structures, loops, methods, recursion. Modular arithmetic; binary

numbers. Basics of cryptography; classical and modern ciphers and their implementation; private and public key cryptography.
Prerequisites: **MATH 101**
3 class hours a week

MASC 430 Introduction to Oceanography

Credits: 3

This course is designed to provide an introductory overview of the history of oceanography; earth structure and plate tectonics; ocean topography; sediments; seawater chemistry and ocean physics: atmospheric and ocean circulation: wave dynamics and tides; the marine ecosystem; productivity and marine animals; marine resources and environmental concerns.
Prerequisites: **CHEM 100, MATH 120; PHYS 110**
3 class hours a week

Department of Physical Education and Athletics

The importance of the Physical Education and Athletics programs at a federal service academy cannot be overemphasized. Each Midshipman must maintain a healthy lifestyle and appropriate habits, and consistently meet or exceed the level of physical conditioning required to meet USNR commissioning requirements.

Midshipman participation in intramurals, club sports, and intercollegiate sports programs and activities is expected. The Academy's mission, history, and reputation is that of a premier source of future leaders in the commercial maritime industry and armed forces. Leaders must know how to follow and work effectively and collaboratively as part of a team. Competitive sports activities convey life-long lessons on the importance of strategy, tactics, and the importance of preparation in successful outcomes. Good team and leadership skills are the outcome of the fast pace of competitive sports activities.

The department is responsible for ensuring that each Midshipman acquires the skills involved in swimming, aquatic survival, self-defense and first aid. Additional physical education experiences are offered through the Physical Education Activities courses. All Midshipmen annually take an Academy physical fitness test patterned after the U.S. Navy's Physical Readiness Test.

The department additionally provides necessary instruction in ship's medicine. Plebes learn the basics of emergency health care, including cardiopulmonary resuscitation (CPR). An advanced ship's medicine course is offered in the upper-class years, focusing on medical treatments proven effective at sea where comprehensive medical care may be not available.

The athletic program offers 18 varsity team and intramural sports. These teams have been successful at levels ranging from NCAA Division III National Champions to Conference Champions. The varsity teams are:

Fall

Football, Men's Soccer, Men's and Women's Cross Country, Women's Volleyball.

Winter

Men's and Women's Basketball, Wrestling, Men's and Women's Swimming and Diving, Men's and Women's Indoor Track and Field.

Spring

Baseball, Men's and Women's Lacrosse, Men's and Women's Outdoor Track and Field, Men's Tennis.

DEPARTMENT HEAD

Mo White (2015)
B.A., Providence College
M.S., University of Connecticut

ASSISTANT DEPARTMENT HEAD

William Fell (2004)
B.S., U.S. Naval Academy
M.S., Troy State University

PROFESSIONAL FACULTY

Rob Alfheim (2004)
B.S., Sacred Heart University
M.S., Northern Illinois University

Daniel Braut (2012)
B.S., Towson University

Jeffrey Broadwell (2011)
B.A., University of Washington

Beau Bruno (2009)
B.S., Binghamton University
M.S., Fordham University

John Cavanaugh (1980)
B.S., Long Island University- Post (dual degrees)
M.Ed., Long Island University- Post

Jonathan Churchill (2012)
B.S. Bucknell University
M.S. Rowan University

Geoff Cochrane (2015)
B.A., Elizabethtown

Jameson Croall (2012)
B.S. Springfield College

Matt Dempsey (2008)
B.S., Castleton State College
M.A., Castleton State College

Doug Dwyer (2004)
B.S., Southern Connecticut
M.S., Adelphi University

Melinda Eng (2001)
B.S., Hofstra University
M.S., Wagner College

Tim Gaiser (2016)
B.A. Charter Oak Stat College
M.A., Southern New Hampshire University

Tom Gill (1990)
B.S., Hofstra University
M.S., Hofstra University

Joseph Guster (2014)
B.S., St. John's University
M.B.A., St. John's University

Greg Ilaria (2008)
B.S., The College of New Jersey
M.S., Springfield College

Dennis Kazimir (2014)
B.S., Seton Hall
M.A., Virginia Commonwealth University

James Kikel (2016)
B.S., Springfield College
M.S., Springfield College

David Lawrence, Jr. (2013)
B.S., Sacramento State
M.S., California University of Pennsylvania

Johan Lopez (2013)
B.S., CUNY Lehman College

Matt Mancini (2012)
B.A., Hamilton College
M.P.S., Georgetown University

Michael Notebaert (2007)
B.S., Ithaca College
M.B.A., Dowling College

Alexa Shields (2008)
B.S., The College of New Jersey
M.A., Rutgers University

Kyle Simensky (2012)
B.S., SUNY Cortland
M.A., Adelphi University

Michael Smolens (1990)
B.S., Springfield College
M.S., Adelphi University

Sean Tedesco (2001)
B.S., University of Connecticut
M.B.A., Adelphi University

Michael Toop (2005)
B.S., United States Merchant Marine Academy
M.S., SUNY Albany

Daniel Unverzagt (2012)
B.S., Lyndon State College
M.S., Manhattan College

PE&A 110 Basic Swimming
Credits: 1

Midshipmen receive instruction in various strokes and procedures which may be utilized in water survival situations. Midshipmen also develop their fitness component through their work in the pool. Individual remedial instruction is available for students with little or no experience in the water. This course fulfills STCW requirements in selected Aquatic Survival techniques.
2 laboratory hours a week

PE&A 130 Aquatic Survival
Credits: 1

Midshipmen learn how to react in a correct manner during water emergency situations, take measures appropriate to his/her own survival and to the survival of others. Midshipmen also receive instructions in the prevention of aquatic emergencies and the use of survival equipment. This course fulfills STCW requirements in Aquatic Survival techniques.
Prerequisites:* PE&A 110 *Basic Swimming
2 laboratory hours a week

PE&A 120 First Aid
Credits: 0.5

First aid is designed to train Midshipmen to recognize and provide elementary care for victims of illness and injury according to current first aid standards. Midshipmen will learn to administer proper respiratory and cardiac care in emergency situations.
2 laboratory hours a week (for 6 weeks)

PE&A 125 Self Defense Tactics
Credits: 0.5

Midshipmen receive instruction in the principles and fundamental skills of self-defense geared to the beginning and intermediate levels. It provides Midshipmen a basic understanding of the essential techniques of unarmed combat and contributes to their individual fitness, alertness, confidence, self-control, and ability to adapt to various situations while at sea.
2 laboratory hours a week (for 6 weeks)

PE&A 200 Medical Care Provider Credits: 1

Midshipmen receive instruction which will teach ship's personnel to provide emergency care with a degree of competence to increase chances of survival at sea. Midshipmen are taught anatomy, physiology, and how to use emergency medical techniques and equipment, as well as their proper application. This course fulfills STCW requirements for Advanced First Aid.
***Prerequisites:* PE&A 120**
2 laboratory hours a week

ELECTIVES

PE&A Shipboard Safety and Wellness Concentration

PE&A 400 Lifeguarding
Credits: 2.5

Midshipmen receive instruction in Lifeguarding skills. They will develop the necessary knowledge and skills needed to help prevent and respond to aquatic emergencies. This includes land and water rescue skills, as well as first aid and CPR/AED.
***Prerequisites:* PE&A 110, PE&A 130**

PE&A 410 Surface Rescue Swimmer Fitness Training (SRS) Credits: 2.5

Midshipmen receive instruction in SRS training and will develop the necessary knowledge and fitness capabilities to by-pass the SRS development program. MSC and several shipping companies use this program for their employees. The course includes rigorous land and water fitness training.
***Prerequisites:* PE&A 110, PE&A 130**

PE&A 420 Lifetime Activities for Business and Leisure
Credits: 1

This lifetime activities course will be team taught and divided into three sections with a focus of developing an understanding and competency in Golf, Racquetball, and Tennis. Midshipmen will be exposed to the rules, etiquette, and basic skillsets necessary in participation of the three sports. Upon completion of the course, midshipmen will have gained confidence and required skills to participate in these activities. Such skills will contribute to the promotion of lifelong participation in physical activity, as well as an avenue to use for future business endeavors including networking, stewardship, and negotiation.

PE&A 470 Combative Sports
Credits: 1

This course is designed to train Midshipmen in a range of combative sports including: Boxing, Wrestling, and Jui-Jitsu. The course will be team taught and it covers basic and advanced techniques and strategies of each discipline. During the course the

Midshipmen will be taught how to safely and accurately perform the technique in each sport. The Midshipmen will actively practice all techniques, and have the opportunity to utilize their training in live competition with other Midshipmen in the class.
Prerequisites: **PE&A 125**

PE&A 450 Mental Skills Training Credits: 2

This course is designed to teach skills that are consistent with the mental training principles used by the Navy Seals and the Army Center for Enhanced Performance for athletes, exercisers, business professionals, and those pursuing other lifetime achievement goals. The skills taught include: self-awareness training, goal setting, imagery and visualization, cognitive strategies, intensity regulation, stress management, and focus control. The history and theory of each mental skill will be taught and a practical application to that theory will be covered and used by the Midshipmen. The course will conclude by covering the application of the mental skills learned in class into professional and career skills to be used as an officer in the Merchant Marine.

PE&A 440 Health and Wellness Credits: 3

Health and wellness issues are confronting American Society. This course serves as a tool that will allow Midshipmen to build a wellness plan based on the principles and concepts of health and wellness. It will emphasize basic human physiology concepts and the mechanisms by which the body adapts to and benefits from physical training. Midshipmen will learn how to assess, monitor, develop, and maintain their wellness in all four components: cardio respiratory, muscular strength, muscular endurance, and flexibility and body composition.

PE&A 430 Emergency Medical Technician (Basic) Credits: 6

This course prepares Midshipmen for the EMT certification. The State of New York Department of Health, Bureau of Emergency Health Services and national EMT-B standards mandates the content and sequence of the course materials. The Midshipmen will learn the skills and knowledge needed to provide definitive care for a patient rapidly and safely as a situation dictates. This course consists of lecture, laboratory, online material and clinical hospital/ambulance observation. The Midshipmen will gain proficiency in CPR, oxygen therapy, as well as assessment and treatment of various medical and traumatic illnesses and injuries. The class will meet 6 hours per week of mixed lecture and laboratory time, as well as 5 Saturdays for double sessions over 1.5 trimesters.

PE&A 450 Medical Person in Charge Credits: 3

This course is for ship's personnel who will provide emergency care and short term care for those aboard a ship. Midshipmen will be versed in emergency care, aspects of nursing, diseases and prevention of diseases, dental care, alcohol and drug abuse, pregnancy and childbirth, hygiene, death at sea, external assistance and record keeping. This course fulfills the STCW requirement of competence in Medical Person in Charge.
Prerequisites: **PE&A 120, PE&A 200**

PE&A 460 Medical Person in Charge – Bridge Course Credits: 1.5

This course will cover all the subjects of the MPIC course, but is for those Midshipmen who successfully completed the EMT-Basic course. It will bridge the EMT course to the STCW requirements of Medical Person in Charge. This course will be offered third term of first class year.

Prerequisites: **PE&A 120, PE&A 200, PE&A 430**

DN 300 Fast Boat Rescue Credits: 1.5

This course found in the Department of Marine Transportation section, may be used to help fulfill the 9 credits needed for a concentration in Shipboard Safety and Wellness.

Department of Naval Science

The U.S. Navy and America's merchant marine have shared a close, mutually supportive relationship since the Revolutionary War. Today, that relationship is especially vital as merchant ships carry critical raw materials and other necessary cargoes, while naval ships ensure safe and open sea lanes for our nation's ocean commerce.

Graduates of the Academy receive commissions as Ensigns in the Strategic Sealift Officer (SSO) Program U.S. Navy Reserve, unless they apply and are accepted for active duty service in the Navy or apply and are accepted for active duty or reserve service in one of the other U.S. Armed Services.

The mission of the Department of Naval Science is to provide appropriate instruction to prepare Midshipmen for commissions in the U.S. Navy Reserve. This instruction will enable these officers to operate effectively with the Navy in time of peace, national emergency or war, and to perform other tasks and functions as directed by higher authority.

The curriculum focuses on the skills and knowledge graduates will need to serve as officers in the Navy Reserve. All Midshipmen take courses in Strategic Sealift and Leadership and Ethics.

DEPARTMENT HEAD

CDR Bradley S. Hawksworth, USN (2015)
B.S., Worcester Polytechnic Institute
M.A., U.S. Naval War College

ASSISTANT DEPARTMENT HEAD

LT Lamont R. Johnson, USN (2016)
B.S., University of Pennsylvania

ASSOCIATE PROFESSORS

LT Gregory M. Christod, USN (2017)
B.S., St. John's University

LT Krisandra T. Hardy, USN (2017)
B.S., U.S. Naval Academy

LT William P. Sprouse, USN (2017)
B.S., U.S. Merchant Marine Academy

NASC 100 Introduction to Naval Science **Credits: 2**

The course introduces Strategic Sealift (SSO) Midshipmen to the organization of the Naval Service, varied career opportunities, long-held customs and traditions of the services, capabilities of the United States Navy, duties of a junior officer, and Navy policies on relative wellness issues. Additionally, the course prepares SSO Midshipmen for their first experience onboard a Navy ship by imparting basic information concerning shipboard procedures.

2 class hours per week

NASC 200 Strategic Sealift **Credits: 2**

Strategic Sealift provides an

introduction to the role that the U.S. Merchant Marine plays within the U.S. Navy's Strategic Sealift mission. Using a multi-disciplinary approach, this course will study the history, role and function of the U.S. Navy/ U.S. Merchant Marine relationship, the development and execution of Sealift as a part of United States Maritime Strategy, and the operational skill set required for Fleet interoperability.

Prerequisites: NASC 100
2 class hours a week

NASC 400 Naval Leadership and Ethics Credits: 2

SSO Midshipmen learn an ethical foundation and the basic leadership tools needed to be effective junior officers. Additionally, the course provides broad knowledge of the various moral, ethical, and leadership philosophies that strengthen personal character and presents an overview of duties, responsibilities, and expectations of junior officers in the United States Navy.
Prerequisites: NASC 100
2 class hours a week

NASC 410 Naval Science Senior Seminar Credits: 2

This course is an in-depth study of a series of procedures, policies, and practices that form the foundation of service as a Naval Officer. It also includes an examination of your responsibilities as a future Naval Officer in the United States Navy Reserve.
Prerequisites: NASC 100, NASC 200 **and** NASC 400
2 class hours a week

Department of Professional Development and Career Services

The Department of Professional Development and Career Services consists of:

- Office of Shipboard Training
- Office of Career Services

The Shipboard Training Program

All Midshipmen, as an integral part of their professional training, participate in a cooperative educational program during the two periods of their sea year. Training aboard ship is designed to give the Midshipman practical knowledge of the performance and operating characteristics of various classes of vessels, the operating requirements in different trade routes, and labor relations in the ocean shipping industry.

The first sea period lasts approximately 135 days. During this period, the Midshipman is assigned to different types of dry cargo vessels. The Midshipman then returns to the Academy to build on his/her experiences at sea. The second sea period is longer, roughly 265 days. During this period, the Midshipman finishes his/her sea service requirement of 300 days aboard ocean going vessels and completes an internship with a company or organization with involvement in the transportation or marine engineering industry.

Academy Training Representatives assign Midshipmen to vessels, monitor and guide their progress, and maintain liaison between the Midshipmen, the shipping companies, and the Department of Shipboard Training.

The shipboard training program provides Midshipmen with the opportunity to use a ship as a seagoing laboratory. Midshipmen are given a number of courses called the “Sea Project” which, in addition to their shipboard duties, they are required to complete and submit for evaluation and grading. The assignments are carefully designed to ensure that Midshipmen, while aboard ship, apply the knowledge and skills learned in the Academy classrooms and acquire a firm foundation for advanced study when they return to the Academy. In addition to written assignments, Midshipmen take oral and written examinations after returning from sea.

Aboard ship, marine transportation majors are assigned to the vessel’s Deck Department, and engineering majors to the Engineering Department. Sea project courses concentrate on subject matter appropriate to the Midshipman’s major.

Should a Midshipman, prior to the second sailing period, acquire a definite maritime career goal, the department may arrange a program of shipboard assignments to provide opportunities for specialized experience in the last sailing period.

During the second sailing period, Midshipmen with a strong interest in a career with the sea services of the U.S. Armed Forces or National Oceanographic and Atmospheric Administration (NOAA) may request an assignment aboard a vessel of the U.S. Navy, U.S. Coast Guard, U.S. Army Corps of Engineers or NOAA Corps. Midshipmen may also request an assignment aboard tugs or towing vessels.

Internships

The second sea period includes a two-to six-week internship assignment ashore, depending on the Midshipman’s major, to provide the opportunities to observe and participate in the management operations of a maritime, transportation, or engineering related organization. This will enable the Midshipman to acquire concepts of organization, decision-making, operating procedures and proper work ethic. The Midshipman makes his/her own decision regarding where to do the internship. The assignment is for two weeks, except for the Marine Engineering and Shipyard Management majors, whose internship is six weeks long.

Depending upon a Midshipman's field of specialty and interest, the Midshipman may be assigned to a shipping company, shipyard, ship repair facility, ship brokerage and chartering firm, stevedoring firm, marine surveyor's office, towing company, port and terminal facility, or a similar enterprise. Optional internship assignments are also available with shore-based commands of the U.S. Armed Forces. Midshipmen are required to complete a written report on their experience, which is submitted to their designated Academy Training Representative for evaluation and grading.

The following is a description of the specific internship programs:

INSP 100 Internship Program - 2 Weeks Credits: 1

This program provides each Midshipman an opportunity to observe the management environment in an Academy mission (maritime, transportation, engineering, government agency, Armed Forces, etc.) related organizations for the periods of two weeks. Ranging from a basic survey to participation in executive, mid- and entry-level management projects, the Midshipman's choice of an internship requires investigation of the organization's background and history; current organizational structure; decision-making processes; operating procedures; and work place ethics. The Midshipman demonstrates in a written report a comprehension and understanding of these factors as well as basic management concepts as applied to the host organization. This internship must be completed by all majors as part of courses required for graduation.

INSP 100 and EPRJ 400 Shipyard Management Internship - 6 Weeks Credits: 3

This program is open to Midshipman enrolled in the Marine Engineering and Shipyard Management Program who has completed courses in Engineering Shop and Ship Engineering Operations, combines the requirements of the INSP 100 Internship (Management Orientation) Program with specific objectives of the Marine Engineering and Shipyard Management major. The specific objectives include learning procedures and obtaining practical skills in specific areas of shipyard operations at a major or a mid-sized shipyard or repair facility, and collecting data for a capstone design project in the first class year. Upon completion of the internship, the Midshipman demonstrates in a written report a comprehensive and understanding of the management concepts and engineering operations at the host facility. The minimum six week internship must be completed by all Marine Engineering and Shipyard Management majors as part of the courses required for graduation. Upon application, Professional Service Time in Lieu of Ship Service Time may be requested for up to 50 days of the Shipyard Management Internship period.

Career Services

The Career Services Office assists Midshipmen with career development starting in their plebe year and continuing until graduation. The Office provides a series of presentations by Academy personnel, alumni and industry partners focusing on obligation-fulfilling careers that also fulfill a Midshipman's personal career goals.

The Office presents two annual career fairs: "Sea Fair" each fall; and "The Shipping-Out Fair" each spring. In addition, off-campus events are arranged, such as tours of shipping companies and industry conferences. There are numerous on-campus career information and recruiting events through the year. When possible, these evening presentations are hosted by a Midshipman liaison who is interested in a career with a specific company. The Department maintains a close relationship with maritime companies, unions and government/military contacts. Up-to-date information is shared with Midshipmen via Intranet or by email Employment announcements are also posted in the USMMA Alumni Foundation Job Bulletin. The Office assists Midshipmen with application procedures and other professional correspondence. The Office maintains as open-door policy.

DEPARTMENT HEAD

CAPT Eugene R. Albert (2004)[4]
B.S., U.S. Merchant Marine Academy
M.S., Albertus Magnus
Licenses: Master of Steam and Motor Vessels of Any Gross Tons, Oceans;

ACADEMY TRAINING REPRESENTATIVES

CAPT Donald C. Farmer, USMS (2001)
B.S., U.S. Merchant Marine Academy
License: Master of Steam and Motor Vessels of Any Gross Tons, Oceans.
Military: LT, USNR (Ret.)

LCDR Ian Jones, USMS (2010)
B.S., U.S. Merchant Marine Academy
MA: American Military University
License: Third Mate of Steam and Motor Vessels of Any Gross Tons, Oceans.
Military: LT, USNR

CAPT Stephen T. Treacy (2011)
B.S., U.S. Merchant Marine Academy
J.D., St. John's University School of Law
Military: CAPT, USN (Ret.)
Admitted: NY, NJ, and Federal Bars

CAREER PLACEMENT PROGRAM OFFICER

Vacant

Administration and Staff

Administrative titles at the Academy differ from those at civilian colleges, but in essence the responsibilities that accompany the titles are the same. The *Superintendent* is akin to a college president and ultimately governs all aspects of Academy operation. The *Deputy Superintendent* is the principal executive for management control. The *Academic Dean*, like a college dean of faculty, is responsible for the curriculum and the supervision of the academic departments. The *Commandant of Midshipmen* is akin to the dean of students and handles all Midshipmen affairs of a non-academic nature, including military organization, conduct and discipline. These administrative officers comprise the Academy's senior staff, and are assisted by capable office personnel in the daily operation of the institution.

Board of Visitors

Public Law 291, approved by the 113th Congress in December, 2014, provides for an annual inspection of the Academy by Congress through a Board of Visitors of eighteen members who are appointed in January of each year. The Board consists of one Senator appointed by the Vice President; two Members of the House of Representatives appointed by the Speaker of the House of Representatives; the Chairmen of the Commerce, Science, and Transportation Committee of the Senate and the Committee on Armed Services of the House of Representatives as *ex-officio* members; two Senators appointed by the chairman of the Commerce, Science, and Transportation Committee of the Senate; three Members of the House of Representatives appointed by the chairman of the House Committee on Armed Services of the House of Representatives; five individuals appointed by the President; and the Commander of the Military Sealift Command, the Deputy Commandant for Operations of the Coast Guard, and the Chairman of the Advisory Board to the Academy as *ex-officio* members.

Advisory Board

Public Law 453, approved by Congress in November 1980, establishes an Advisory Board consisting of not more than seven persons of distinction in education and other fields relating to the purposes of the Academy who serve without pay. The members of the Board visit the Academy at least once during the academic year at the call of the chairman. The board's purpose is to examine the course of instruction and the management of the Academy and advise the maritime administrator and the Superintendent of their findings.

Staff

Following each name is the year of joining the staff. Also listed are job title, degrees earned, where obtained, professional licenses, and military status.

The list starting on the next page is current as of February 24, 2017.

Office of the Superintendent

RADM James A. Helis, USMS (2012)
Superintendent
B.S., U.S. Military Academy
M.S., U.S. Army Command and General Staff College
M.S., University of Pennsylvania
Ph.D., Tufts University, Fletcher School of Law and Diplomacy
Military: Colonel, USA (Ret.)

RDML Susan L. Dunlap, USMS (2013)
Deputy Superintendent
B.A., Northwestern University
M.A., Naval War College
M.S., Naval Post Graduate School
Military: Captain, USN (Ret.)

John Demers (2017)
Executive Officer
B.S., George Mason University
M.S.S., U.S. Army War College
Military: Commander, USN (Ret.)

Ilene Kreitzer (2011)
Academy Counsel
B.A, Stony Brook University
J.D., Boston University

Kelly Butruch (2008)
Risk Management Officer
B.A., St. Francis College
M.P.A., John Jay College of Criminal Justice

LT Fiona Boyle (2014)
Cadet Sea Year Officer-In-Charge
B.S., US Merchant Marine Academy
License: 2nd Mate, Steam and Motor Vessels, Unlimited.
Military: LT, USN

Office of Institutional Assessment

Dr. Lori Townsend (2016)
Director
B.S., Old Dominion University
M.B.A., Strayer University
Ed.D., Vanderbilt University

Jamie Cocheo (2010)
Assessment Coordinator
B.A., University at Albany

Office of the Academic Dean

CAPT Preston C. De Jean, USMS (2011)
Interim Academic Dean
B.S., University of Louisiana at Lafayette
J.D., Southern University Law Center
LL.M. Tax, Golden Gate University – San Francisco
Member of the Bar: State of Louisiana
Military: Lieutenant Colonel, Logistician, USAR (Ret.)

Dianne Taha (2000)
Assistant Academic Dean for Academic Programs
B.A., Harpur College, SUNY Binghamton
M.S., New York Institute of Technology

CDR David Pulis, USMS (2010)
B.S. U. S. Merchant Marine Academy
M.S., U.S. Merchant Marine Academy

MMC: Second Assistant Engineer of Steam Third Assistant of Motor Vessels of Any Horsepower
Military: CDR, USNR

LCDR Paul D. Acquaro (2012)
Director, Academic Center for Excellence
B.S., State University of New York Maritime College
M.S., New York Institute of Technology
Advanced Certificate, Brooklyn College
License: Third Mate Unlimited Tonnage
Military: Lieutenant (Ret.) USN

Dr. Charles R. Schultheiss (2012)
Director, Instructional Media Development Laboratory
Instructional Technology Specialist
B.S., Weber State University
M.Ed., Weber State University
Ed.D., D.C. National University College

Frances M. Wagner (2001)
Secretary to the Dean & Academic Awards Coordinator

Kathy Pilosi (1998)
Secretary to the Assistant Deans & Graduation Diploma Coordinator

Office of the Registrar

Lisa Jerry (2003)
Academy Registrar
B.S., New York Institute of Technology
M.S., New York Institute of Technology

Maribeth Widelo (2009)
Academy Assistant Registrar
B.A., Assumption College
M.A., Emerson College

Ann Aberger (2012)
Registration Assistant

Debra Deow-Kalladeen (1997)
Institutional Research Assistant

Bland Library

Donna Selvaggio (2015)
Chief Librarian
B.S., Regents College
M.L.I.S., University of Oklahoma
Ph.D., Capella University

Jan Edmiston (2017)
Technical Services Librarian
B.S., U.S. Naval Academy
M.A., St. Louis University
M.A., University of St. Thomas (Houston)
M.S., Walden University
M.L.S., University of North Texas

Jeremy Lauber (2017)
Reader Services Librarian
B.S., Stony Brook University
M.L.S., Long Island University

Department of Information Technology

Director, Department of Information Technology
Vacant

Marilyn Hetsel (1997)
Manager of Academy Simulation Systems
Diploma, Briarcliffe College

Department of Waterfront Activities

Richard J. Cain (1997)
Assistant Director of Waterfront Activities
License: 100 ton near coastal

Rick Dominique (1999)
Director of JV and Recreational Sailing
B.S., SUNY Maritime College

Department of External Affairs

Veronica Cassidy Barry (2006)
Director
B.S., Niagara University
Career Development Certificate, University of Wisconsin

Office of Admissions

CDR Michael Bedryk, USMS (2016)
Director of Admissions
B.S., Saint John's University

LCDR Keith L. Watson, USMS (2015)
Assistant Director of Admission/Director of Financial Aid
International and Western Regional Recruitment Specialist
B.S., Excelsior College
Professional Certificate, University of California, Berkeley

LT Joseph Becker, USMS (2013)
Recruitment Specialist
B.S., SUNY Maritime College
M.S., SUNY Maritime College
License: Third Mate, Unlimited Tonnage, All Vessels
Military: LT, USNR

LCDR Tina T. Schoggers, USMS (2007)
Recruitment Specialist
B.P.S., New York Institute of Technology
M.S., New York Institute of Technology

LT Chuck Wheeler, USMS (2017)
Recruitment Specialist
B.S., Milligan College

Financial Aid Specialist
Vacant

Lisa Marriott (2016)
Admissions Assistant
B.S., Saint John's University
M.S., Mercy College

Darlene McDermott (2002)
Admissions Assistant

Alexis Ramos (2005)
Admissions Assistant

Office of Academy Financial Management

David Socolof (2016)
Academy CFO
B.A. Connecticut College
M.P.A. University of Texas

Dominique Gina (2000)
Management and Program Analyst
B.S. Marymount College

Donna Harding (2010)
Budget Analyst

Mike Pinto (2015)
Accounting Technician
B.S. Brooklyn College, CUNY

Kyritsis Stylianos (1990)
Management and Program Analyst
B.S., Herbert H Lehman College (CUNY)
M.B.A., New York University

Petti Vincent (2011)
Staff Accountant
B.S., Saint Peter's University
M.B.A., Fordham University

Maurina Samuel (2011)
Program Analyst
B.S. St. Francis College
M.P.A. John Jay College

Shanmugan Tilak (2010)
Accounting Technician
B.S. University of Madras (India)
M.S. University of Madras (India)

Office of Human Resources

Raymond A. Venkersammy (2004)
Human Resources Director (Acting)
B.S., St. Johns University

Vivian Baierwalter (1985)
Human Resources Specialist

Carol Coogan (1997)
Human Resources Assistant

Office of the Chief Procurement Officer

Maximilian Diah (2004)
Chief of Contracting Office
A.A., Strayer University
B.A., Strayer University

Deborah Porter (1997)
Contract Specialist

Carmen Feliz (2010)
Contract Specialist
A.A., Nassau Community College
B.A., SUNY Old Westbury

Douglas Pader (2011)
Contract Specialist
B.A., Miami University

Department of Public Safety

Jeffery Thomas (2016)
Director of Public Safety
B.A., University of Maryland
Military: SFC, USA (Ret)

Pete DeJesus (1999)
Public Safety Assistant

Walter Picht (2005)
Public Safety Assistant

Joseph Abbamonte (2002)
Environmental Protection Specialist

John Redfern (2002)
Occupational Safety and Health Specialist
B.A., C.W. Post College

Department of Public Works

Daniel LaPointe (2014)
Director

Office of Capital Improvement

CAPT Theodore Dogonniuck, USMS (2010)
Director
B.S., Cornell University
M.S., Columbia University
Military: Major, USMCR
License: Professional Engineer – New York State

LCDR, Robert DiTrioia, USMS (2010)
Civil Engineer
B.S., University of Maryland
Military: Capt, USAF

Edward Kaja, USMS (2004)
Mechanical Engineer
B.E., SUNY Stony Brook
License: Professional Engineer – New York State

George W. Prussack (2001)
Civil Engineer

Office of the Commandant of Midshipmen

CAPT Mikel Stroud, USMS (2016)
Commandant of Midshipmen
B.S., University of Wyoming
M.A., Naval War College
Military: LtCol, USMC (Ret)

CDR Andrew McCarthy, USMS (2013)
Deputy Commandant of Midshipmen
B.S., SUNY Maritime College
License: Third Mate, Steam and Motor Vessels, Unlimited
Military: CDR, USN

Assistant Deputy Commandant Regimental Officer
Vacant

LCDR John Pulsinelli, USMS (2008)
Assistant Deputy Commandant Plans and Policy
B.S., U.S. Merchant Marine Academy
License: Third Mate, Steam and Motor Vessels, Unlimited
Military: LCDR, USN

LCDR Robert Nixon
Director of Music
B.S., The Ohio State University
M.A., Full Sail University
Military: CWO5 US Army (Ret)

CDR Stevens Frangos, USMS (2005)
Performance and Assessment Officer
B.S., U.S. Merchant Marine Academy
License: Third Assistant Engineer, Steam and Motor Vessels, Unlimited.
Military: CDR, USN

Rick Sager (2006)
Head, Department of Health Services
B.S., New York Institute of Technology
M.P.S., New York Institute of Technology

Mitchell Glazer (1996)
Food Service Officer
B.B.A., Baruch College

LCDR Michael Roth, USMS (2010)
Tactical Officer
B.S., U.S. Merchant Marine Academy
License: Third Mate, Steam and Motor Vessels, Unlimited

LT John Curran, USMS (2011)
Tactical Officer
B.S., John Jay College of Criminal Justice
M.A., American Military University
Military: LT, USN

LT Michael Huzyak, USN (2016)
Tactical Officer
B.S. U.S. Merchant Marine Academy
License: Master Mariner, Unlimited Tonnage, All Oceans
Military: LT, USN

LT John Jaeger, USMS (2011)
Tactical Officer
B.A., Queens College (2018)
Military: 1st Class Petty Officer, USCG (Ret.)

LCDR(s) Stephen McDade, USN (2016)
Tactical Officer
B.S., US Merchant Marine Academy
M.A., SUNY Empire State
M.S., Long Island University-CW Post
License: 2nd Engineer, Steam and Motor Vessels, Unlimited.
Military: LCDR(s), USN

LT David Taliaferro, USMS (2014)
Tactical Officer
B.S., US Merchant Marine Academy
M.A., Columbia University
Military: CPT, NYARNG

LT Antoinette Waller, USMS (2010)
Tactical Officer
Military: MSgt, USMC (Ret.)

Director of Student Activities
Vacant

CPT Patrick Scappaticcio, U.S. Army Reserve (2017)
Army Liaison Officer
A.A., Valencia College
B.S., Concordia University

GySgt Brandon Reagin
Marine Corps AMOI
B.S., Oregon State University (2019)
Military: GySgt USMC

Frantze Nell (1997)
Executive Assistant

Virginia Reilly (2002)
Midshipmen Personnel Officer

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