

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.
5. 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://mcs.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, Merchant Marine Reserve, 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 (DOD-MERB) 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 dis-

play 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 in 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 Merchant Marine Reserve, 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 total educational experience as a midshipman. This program has one aim - to develop superior frontline leaders for the merchant marine fleet, the armed forces and the shoreside maritime and transportation industries.

All midshipman regimental activities and policies are designed to support this goal and to provide you with the experience and training necessary to be successful in your chosen area of endeavor.

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 areas of midshipman life - the academic and the regimental - are highly compatible and together produce the type of graduate which is the Academy's goal.

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. This terminology is employed throughout this catalog.

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, under the supervision of the Academy's Commandant of Midshipmen and his staff, exercise command of the regiment. 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.

These top-ranking midshipman officers work closely with the Commandant in 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 indoctrination 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 to value and



budget your time. Your daily indoctrination schedule is rigid and time-consuming, requiring you to perform and accomplish tasks in specified periods.

Plebe year is very demanding. 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 for fourth classmen
- 6:30.....Reveille for upper classmen
- 6:25-7:20.....Breakfast
- 7:30.....Room inspection
- 7:50.....Colors formation
- 8:00-11:20.....Classes
- 11:30.....Lunch formation
- 12:30-4:50.....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 term, 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 term. This **may** coincide with the Easter and Passover holidays. In addition, upperclassmen 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. The extent of this liberty is dependent on class, academic and regimental performance, and Academy obligations. Plebes are the only class not usually granted overnight liberty.

In addition to weekend liberty, upper-class 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 Commandant may grant sick or emergency leave to a midshipman when circumstances warrant, and may also grant special leave or liberty for participation in extracurricular activities and special events.

The Honor Code

The Honor Code at the Academy belongs to the regiment. It is designed to benefit all midshipmen by creating an atmosphere which improves the quality of life and the educational experience at the Academy.

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 protect them in their daily living, to give greater value to their academic degrees, and to instill in them the principles of honesty and integrity which are so essential to a full and rewarding life.



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

Beginning with the Class of 2010, all midshipmen are required to purchase, at cost, two laptops from the Academy. The first laptop is purchased during the Indoctrination period prior to the start of the plebe year. The second laptop must be purchased at the beginning of the first class, or senior, year. The purchase price of the first laptop includes popular software products selected by the Academy. There are no software charges for the purchase of the second laptop.

Midshipmen are required to maintain their

issued laptops while enrolled at the Academy. A computer service center, located in the CAORF Building, is available seven days a week to provide hardware and software support.

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, public instant messaging networks, and under restricted circumstances, access to public e-mail networks. The Academy maintains a 100 megabit-per-second connection to the Internet, and the ability to participate in Internet2, a non-commercial Internet consisting of research institutions throughout the United States.

CAORF

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’s duplication of a ship’s bridge environment, its detailed modeling of ship handling responses, its sophisticated control station, and its capability to simulate any vessel in any part of area of the world -- all became the core of a complex human factors laboratory dedicated to examining the “human element” in marine operations.

Over three decades, CAORF has been utilized to improve the safety and versatility of ports and waterways; to evaluate ship and equipment designs; and to establish regulatory requirements and standards for simulation training and certification.

Today, the advanced technology of CAORF is used to hone the watchstanding and ship handling skills of the Academy’s midshipmen. CAORF now houses multiple computer-oriented applications, including two International Marine Simulator Forum Interactive Visual Bridge Simulation Systems, Virtual Reality binoculars, and a Liquid Cargo Handling Simulator.

In addition to CAORF, the Academy uses desktop and laptop simulators, a 12-Ship Radar/Automatic Radar Plotting Aid (ARPA) simulator, and 15 PC-based Global Maritime Distress and Safety at Sea (GMDSS) simulators. These help instruct midshipmen in the principles and operation of collision avoidance radar and other equipment typically found aboard ship.

The Curriculum

The U.S. Merchant Marine Academy provides you with 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 Merchant Marine Reserve of the U.S. Navy). The curriculum is demanding, comprehensive and stimulating. It has been carefully designed to ensure that you graduate professionally competent, trained for leadership and responsibility, and well-rounded intellectually.

Midshipmen complete a series of required courses which comprise 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 which span 11 months, from late July to late June. Credit for courses is given in semester credit hours.

Core Curriculum

This core curriculum has several components:

- A. Mathematics
- B. Science
- C. English
- D. History
- E. Comparative Literature and History
- 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.

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 Operations and Technology** - A marine transportation program enhanced with marine engineering studies.
- C. **Logistics and Intermodal Transportation** - A program combining nautical science and logistics and intermodal management.
- D. **Marine Engineering** - An engineering program focused on shipboard engineering operations.

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

F. **Marine Engineering and Shipyard Management** - A program based on a marine engineering core and emphasizing the management of shipyards and other large engineering endeavors. ABET accredited.

These major programs are explained in detail later in the catalog.

License Programs

Midshipmen who have selected the Marine Transportation major or the Logistics and Intermodal Transportation major prepare for the third mate (deck officer) license examination. Maritime Operations and Technology majors take the third mate license examination as well as the QMED (Qualified Member of the Engine Department) engineering 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 midshipmen'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 not eligible to receive the license, e.g., foreign national, medical disqualification for a duty-related injury, etc., must, nevertheless, pass the examination. Midshipmen enrolled in the Maritime Operations and Technology curriculum are also required to pass all designated portions of the QMED examination administered by the USCG.
- 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 Merchant Marine Reserve of the U.S.Navy).
- Pass the Academy Physical Fitness Test.

The Program 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 coursework 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.

Marine Transportation Majors

The Department of Marine Transportation offers three majors: Marine Transportation, Maritime Operations and Technology, and Logistics and Intermodal Transportation. These majors all share a common nautical science and business core.

Nautical science courses prepare midshipmen specifically for their shipboard responsibilities and the 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 course of study includes general as well as specific maritime subjects which

familiarize midshipmen with a ship as a system, its equipment and operation. Also covered are physical, economic, environmental and regulatory concerns. Specifically, midshipmen will study navigation and the rules for collision avoidance, naval architecture, materials handling, shipboard and portside cargo operations, safety of life at sea, pollution control, meteorology and oceanography, 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 management decision making. 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 shoreside 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 Principles of Logistics and Transportation, Economics, Management, Marketing, Business and Maritime Law, Accounting and Finance, and International Business and Ocean Shipping.

Marine Transportation Program

The Marine Transportation major builds on this business core which offers additional courses for those students planning a shore-side career in the maritime industry. Most of the courses in the major are maritime specific. Moreover, they are all designed to introduce students to parts of the industry where many Kings Pointers have made careers in the past, and are likely to go into in the future.

The course in Chartering and Brokerage, for example, relates to the tanker and dry bulk sectors of the maritime industry -- an area in which many graduates have specialized and will continue to do so. The course in Marine Insurance covers a career that has also proven popular with Kings Pointers. The course in Maritime Law and International Law of the Sea introduces the student to Admiralty Law, a profession where Kings Pointers have distinguished themselves. The course in Human Resource Management is also industry specific. This course includes Maritime Labor Relations, which is an important aspect of the maritime industry. No manager in the industry can be effective without understanding the role of unions and other aspects of labor relations. The Marine Transportation major also includes one elective, which must be selected from the Maritime Business area (in addition to the free electives in each major that students can still take in any department).

In general, this major has 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 as the premier maritime academy, and this major draws on that expertise 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.

Graduates of the Marine Transportation program, with their broad educational background complemented by specific professional management skills, have a wide variety of career opportunities. All branches of the Armed Forces offer possibilities for active duty. The U.S. Coast Guard commissions graduates to serve in marine inspection and environmental regulation. In the commercial sector, job opportunities include serving on a merchant ship as an officer; in terminal operations management; ship and cargo surveying; vessel chartering and brokerage; sales and marketing; port administration; admiralty and business law; marine insurance; stevedoring; commodities trading; international banking and finance. Graduates can also serve in state and federal government agencies that regulate transport and commerce; in the Foreign Service; and in research policy analysis.

Marine Transportation Curriculum

(Note: There are three terms in each academic year)

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
HH100	History of Seapower	3		3.00
HP101	Ethics Primer	1		1.00
KP100	MaritimeProf Studies	3	2	4.00
MC100	General Chemistry	3	2	4.00
MM101	Calculus 1	3		3.00
NS120	Intro to MMNR	2		2.00
PE101	Self Defense		2	1.00
		15	6	18.00
TERM 2				
DB110	Princ of Log. & Trans.	3		3.00
DN120	Terr. Navigation	2	2	3.00
HE101	English 1	3		3.00
MM120	Calculus 2 - Deck	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00
TERM 3				
DN110	Basic Fire Fighting	2		2.00
DN121	Celestial Navigation	3	2	4.00
DN140	Meteorology	3		3.00
MM210	Problty & Statistics	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		14	6	17.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
HH100	History of Seapower	3		3.00
HP101	Ethics Primer	1		1.00
KP100	MaritimeProf Studies	3	2	4.00
MC100	General Chemistry	3	2	4.00
MM101	Calculus 1	3		3.00
NS120	Intro to MMNR	2		2.00
PE101	Self Defense		2	1.00
		15	6	18.00
TERM 2				
DN110	Basic Fire Fighting	2		2.00
DN120	Terr. Navigation	2	2	3.00
DN140	Meteorology	3		3.00
MM120	Calculus 2 - Deck	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		13	6	16.00
TERM 3				
DB110	Princ. of Log. & Trans.	3		3.00
DN100	Safety/Life at Sea	1	2	2.00
DN121	Celestial Navigation	3	2	4.00
HE101	English 1	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		13	8	17.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 4				
DB210	Economics	3		3.00
DB230	Management	3		3.00
DB310	Accounting & Finance	3		3.00
DN100	Safety/Life at Sea	1	2	2.00
HH310	Modern World	3		3.00
NS220	MM NR Officer	2		2.00
		15	2	16.00
TERM 5				
DS220	Navigation 1			2.00
DS221	Navigation Law 1			1.00
DS230	Cargo 1			1.00
DS240	Seamanship 1			1.00
DS241	Ship Struct. & Term.			1.00
EC120	Mar. Engr. for Deck			1.00
		0	0	7.00
TERM 6				
DN210	Cargo Operations	3		3.00
DN220	Electronic Navigation	2	2	3.00
DN230	Seamanship/Shiphandling	2	2	3.00
DN240	Tankship D1 Cargo	3		3.00
ELEC	Elective 1	3		3.00 EL
NS402	Nav Leadship & Ethics	2		2.00
		15	4	17.00
TERM 7				
DB240	Marketing	3		3.00
DB300	Business & Maritime Law	3		3.00
DM300	Info. Tech. Mgmt.	3		3.00
DM320	Human Res. Mgmt. Labor	3		3.00
HE202	English 2	3		3.00
PE200	Ships Medicine		2	1.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		15	6	17.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 4				
DS220	Navigation 1			2.00
DS221	Navigation Law 1			1.00
DS230	Cargo 1			1.00
DS240	Seamanship			1.00
DS241	Ship Struct. & Term.			1.00
EC120	Mar. Engr. for Deck			1.00
		0	0	7.00
TERM 5				
DN210	Cargo Operations	3		3.00
DN220	Electronic Navigation	2	2	3.00
DN230	Seamanship/Shiphandling	2	2	3.00
DN240	Tankship D1 Cargo	3		3.00
MM210	Problty & Statistics	3		3.00
NS220	MM NR Officer	2		2.00
		15	4	17.00
TERM 6				
DS320	Navigation 2			3.00
DS321	Navigation Law 2			2.00
DS322	Electronic Navigation			2.00
DS330	Cargo Operation 2			1.50
DS340	Seamanship 2			1.50
		0	0	10.00
TERM 7				
DS341	Ship Stru. & Stability			1.50
DS390	Maritime Business			1.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	5.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 8				
DS320	Navigation 2			3.00
DS321	Navigation Law 2			2.00
DN322	Electronic Navigation			2.00
DS330	Cargo Operation 2			1.50
DS340	Seamanship 2			1.50
		0	0	10.00
TERM 9				
DS341	Ship Stru. & Stability			1.50
DS390	Maritime Business			1.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	5.50
TERM 10				
DM340	Maritime & Sea Law	3		3.00
DN410	Adv Firefighting	1	1	1.50
DN420	Advanced Navigation	3		3.00
DN440	RADAR/ARPA	3	2	4.00
DN460	Bridge Watchstanding	1	2	2.00
EM300	Naval Arch. (Deck)	3		3.00
		14	5	16.50
TERM 11				
DB410	Int. Bus & Ocean Ship.	3		3.00
DN421	Navigation Law	2	2	2.50
DN430	Maritime Comm.	3	2	4.00
ELEC	Elective 2	3		3.00 EL
HC400	Topics in History	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		14	8	16.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 8				
DB210	Economics	3		3.00
DB230	Management	3		3.00
DB300	Business & Maritime Law	3		3.00
DM300	Info. Tech. Mgmt.	3		3.00
HE202	English 2	3		3.00
NS402	Nav Leadership & Ethics	2		2.00
PE200	Ship's Medicine		2	1.00
		17	2	18.00
TERM 9				
DB240	Marketing	3		3.00
DB310	Accounting & Finance	3		3.00
DM340	Maritime & Sea Law	3		3.00
ELEC	Elective 1	3		3.00 EL
HH310	Modern World	3		3.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		15	4	16.00
TERM 10				
DM320	Hum. Res. Mgt. Labor	3		3.00
DN410	Adv Firefighting	1	1	1.50
DN420	Advanced Navigation	3		3.00
DN440	RADAR/ARPA	3	2	4.00
DN460	Bridge Watchstanding	1	2	2.00
EM300	Naval Arch. (Deck)	3		3.00
		14	5	16.50
TERM 11				
DB410	Int. Bus & Ocean Ship.	3		3.00
DN421	Navigation Law	2	2	2.50
DN430	Maritime Comm.	3	2	4.00
ELEC	Elective 2	3		3.00 EL
HC400	Topics in History	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		14	8	16.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 12				
DM400	Marine Insurance	3		3.00
DM410	Chartering & Brokerage	3		3.00
DN470	License Seminar		4	2.00
ELEC	Elective 3	3		3.00 EL
HH360	Modern American History	3		3.00
NS412	Adv MMNR Officer	2		2.00
		14	4	16.00
Total Credits				173.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 12				
DM400	Marine Insurance	3		3.00
DM410	Chartering & Brokerage	3		3.00
DN470	License Seminar		4	2.00
ELEC	Elective 3	3		3.00 EL
HH360	Modern American History	3		3.00
NS412	Adv MMNR Officer	2		2.00
		14	4	16.00
Total Credits				173.50

Maritime Operations and Technology Program

The Maritime Operations and Technology program is administered by the Department of Marine Transportation in conjunction with the Department of Engineering.

The purpose of the Maritime Operations and Technology program is to produce a deck officer who is well prepared for the new generation of modern, efficient vessels with unattended engine rooms. These vessels feature engine control and monitoring equipment on the navigating bridge. The Maritime Operations and Technology major will be prepared to take the third mate's license examination, but will also graduate with an enhanced knowledge of pragmatic marine engineering and an excellent business background. Such a graduate will be effective within any modern, sophisticated organization in the transportation industry, afloat or ashore.

Midshipmen in the Maritime Operations and Technology program take courses in the core curriculum, nautical science and maritime

business administration. They take fewer electives than the Marine Transportation major. This feature allows for additional courses in marine engineering .

Graduates of this program will earn a third mate's license and certification as a Qualified Member of the Engine Department, the highest unlicensed position in the engine room.

The Maritime Operations and Technology program gives the student a firm foundation in three critical areas: nautical science, maritime business, and marine engineering. The student can increase education in any of the three fields of study. A Maritime Operations and Technology major will have the same nautical science background as the Marine Transportation major, and the same maritime business core courses. Postgraduate work, after sailing, can be pursued in any number of fields. This is a versatile program for the student with interest in several fields.

Maritime Operations and Technology Curriculum

(Note: There are three terms in each academic year.)

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
HH100	History of Seapower	3		3.00
HP101	Ethics Primer	1		1.00
KP100	MaritimeProf Studies	3	2	4.00
MC100	General Chemistry	3	2	4.00
MM101	Calculus 1	3		3.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		15	6	18.00
TERM 2				
DB110	Princ of Log & Transportation	3		3.00
DN120	Terr. Navigation	2	2	3.00
HE101	English 1	3		3.00
MM120	Calculus 2 - Deck	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00
TERM 3				
DN110	Basic Fire Fighting	2		2.00
DN121	Celestial Navigation	3	2	4.00
DN140	Meteorology	3		3.00
EG111	Engineering Shop 1		3	1.00
EM100	Introduction to ME	3	2	3.50
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		14	11	18.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
HH100	History of Seapower.	3		3.00
HP101	Ethics Primer	1		1.00
KP100	MaritimeProf Studies	3	2	4.00
MC100	General Chemistry	3	2	4.00
MM101	Calculus 1	3		3.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		15	6	18.00
TERM 2				
DN110	Basic Fire Fighting	2		2.00
DN120	Terr. Navigation	2	2	3.00
DN140	Meteorology	3		3.00
MM120	Calculus 2 - Deck	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		13	6	16.00
TERM 3				
DN100	Safety/Life at Sea	1	2	2.00
DN121	Celestial Navigation	3	2	4.00
EG111	Engineering Shop 1		3	1.00
EM100	Introduction to ME	3	2	3.50
HE101	English 1	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		13	13	18.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 4				
DB210	Economics	3		3.00
DB230	Management	3		3.00
DN100	Safety/Life at Sea	1	2	2.00
HH310	Modern World	3		3.00
MM210	Problty & Statistics	3		3.00
NS220	MM NR Officer	2		2.00
		15	2	16.00
TERM 5				
DS220	Navigation 1			2.00
DS221	Navigation Law 1			1.00
DS230	Cargo 1			1.00
DS240	Seamanship 1			1.00
DS241	Ship Struct. & Term.			1.00
EC120	Mar. Engr. 1 for MOPS			1.00
		0	0	7.00
TERM 6				
DB240	Marketing	3		3.00
DN210	Cargo Operation	3		3.00
DN220	Electronic Navigation	2	2	3.00
DN230	Seamanship/Shiphandling	2	2	3.00
DN240	Tankship D1 Cargo	3		3.00
EO201	Mat & Pro for MOPS	2	3	3.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		15	11	19.00
TERM 7				
DB300	Business & Maritime Law	3		3.00
DB310	Accounting & Finance	3		3.00
EO 301	Elect. Technology	4	2	4.50
HE202	English 2	3		3.00
NS402	Nav Leadership & Ethics	2		2.00
		15	2	15.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 4				
DS220	Navigation 1			2.00
DS221	Navigation Law 1			1.00
DS230	Cargo 1			1.00
DS240	Seamanship 1			1.00
DS241	Ship Struct. & Term.			1.00
EC121	Mar. Engr. 1 for MOPS			1.00
		0	0	7.00
TERM 5				
DN210	Cargo Operation	3		3.00
DN220	Electronic Navigation	2	2	3.00
DN230	Seamanship/Shiphandling	2	2	3.00
DN240	Tankship D1 Cargo	3		3.00
EO201	Mat & Pro for MOPS	2	3	3.00
NS220	MM NR Officer	2		2.00
PEEL1	PE Elective 1		2	0.50PE
PEEL2	PE Elective 2		2	0.50PE
		14	11	18.00
TERM 6				
DS320	Navigation 2			3.00
DS321	Navigation Law 2			2.00
DS322	Electronic Navigation			2.00
DS330	Cargo Operation 2			1.50
DS340	Seamanship 2			1.50
EC257	Mar. Engr. 2 for MOPS			3.00
		0	0	13.00
TERM 7				
DS341	Ship Structure & Stability			1.50
DS390	Maritime Business			1.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	5.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 8				
DS320	Navigation 2			3.00
DS321	Navigation Law 2			2.00
DS322	Electronic Navigation			2.00
DS330	Cargo Operation 2			1.50
DS340	Seamanship 2			1.50
EC257	Mar. Engr. 2 for MOPS			3.00
		0	0	13.00
TERM 9				
DS341	Ship Structure & Stability			1.50
DS390	Maritime Business			1.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	5.50
TERM 10				
DN410	Advanced Firefighting	1	1	1.50
DN421	Navigation Law	2	2	2.50
DN440	RADAR/ARPA	3	2	4.00
DN460	Bridge Watchstanding	1	2	2.00
EO402	Aux Prop Mach	3	2	3.50
HH360	Mod American History	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		13	13	17.50
TERM 11				
DN420	Advanced Navigation	3		3.00
DN430	Maritime Communication	3	2	4.00
ELEC	Elective 1	3		3.00 EL
EO401	Ship System Ops	2	2	2.50
HC400	Topics in History	3		3.00
PE200	Ships Medicine		2	1.00
		14	6	16.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 8				
DB110	Princ of Log & Transportation	3		3.00
DB210	Economics	3		3.00
DB300	Business & Maritime Law	3		3.00
HE202	English 2	3		3.00
MM210	Problty & Statistics	3		3.00
NS402	Nav Leadership & Ethics	2		2.00
		17	0	17.00
TERM 9				
DB230	Management	3		3.00
DB240	Marketing	3		3.00
DB310	Accounting & Finance	3		3.00
EO301	Elect. Technology	4	2	4.50
HH310	Modern World	3		3.00
PE200	Ship's Medicine		2	1.00
		16	4	17.50
TERM 10				
DN410	Advanced Firefighting	1	1	1.50
DN421	Navigation Law	2	2	2.50
DN440	RADAR/ARPA	3	2	4.00
DN460	Bridge Watchstanding	1	2	2.00
EO402	Aux Prop Mach	3	2	3.50
HH360	Mod American History	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		13	13	17.50
TERM 11				
DN420	Advanced Navigation	3		3.00
DN430	Maritime Communication	3	2	4.00
ELEC	Elective 1	3		3.00 EL
EO401	Ship System Ops	2	2	2.50
HC400	Topics in History	3		3.00
		14	4	15.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 12				
DB410	Int. Bus & Ocean Ship.	3		3.00
DN470	License Seminar		4	2.00
ELEC	Elective 2	3		3.00 EL
EM300	Naval Arch (Deck)	3		3.00
NS412	Adv MMNR Officer	2		2.00
		11	4	13.00
		Total Credits		176.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 12				
DB410	Int. Bus & Ocean Ship.	3		3.00
DN470	License Seminar		4	2.00
ELEC	Elective 2	3		3.00 EL
EM300	Naval Arch (Deck)	3		3.00
NS412	Adv MMNR Officer	2		2.00
		11	4	13.00
		Total Credits		176.50

Logistics and Intermodal Transportation Program

The principal objective of the Logistics and Intermodal Transportation Program is to prepare future leaders of the nation's commercial and military logistics and transportation systems. This purpose is consistent with the Academy's mission to graduate officers and leaders who are "dedicated to serving the economic and defense interests of the United States...and who will contribute to an intermodal transportation system that effectively ties America together." The goal is achieved through an integrated program of study and experiential learning, the cornerstone of which is an academic major. The Logistics and Intermodal Transportation Program builds on the Academy's traditional maritime core competencies to provide midshipmen with the knowledge and skills required to manage complex intermodal supply chains and to address the challenges facing the global transportation system.

Midshipmen who elect this major take the same core courses in Nautical Science, Maritime Business, and general education (math, science, and humanities) as do their counterparts enrolled in other majors in the Department of Marine Transportation. They must also meet requirements for a U.S. Coast Guard license as third mate. Courses specific to the Logistics and Intermodal Transportation major

include Integrated Logistics Management, Intermodal Transportation Systems, Intermodal Port and Terminal Operations, Global Supply Chain Management, and the capstone Logistics and Intermodal Seminar. Elective options include such offerings as Operations Research for Transportation, Information Technology and Management, Defense Transportation System, and Environmental Management. Central themes of the major are the role of ports and maritime elements in logistical and intermodal systems, the development of a systems view, the application of information technology, and the importance of an international orientation.

The major emphasizes the development of oral and written communications capabilities through research papers, written reports, and formal presentations. Teamwork skills are enhanced through case studies and applied research projects that focus on real-world tasks identified through the program's extensive industry outreach efforts. Problem solving abilities are refined through use of computer-based simulation and analysis software. 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 career opportunities for graduates.

The internship experience for midshipmen enrolled in the Logistics and Intermodal Transportation Program is carefully structured to ensure that it is fully supportive of, and integrated with, the academic component. Based in part on the specific interests of individual midshipmen, internship placement is planned to provide the student with exposure to best practice in leading-edge organizations within a particular segment of the logistics and intermodal industry.

Career opportunities for graduates of the Logistics and Intermodal Transportation Program are diverse and rewarding. Reflecting the

changing nature of the maritime transportation system, fulfillment of the professional obligation may be accomplished through service in a wide variety of logistics and transportation occupations in commercial, government, and military domains. Examples of entry-level positions include logistics system coordinator, transportation analyst, intermodal terminal supervisor, customer service associate, logistics/transportation consultant, ITS (Intelligent Transportation Systems) specialist, traffic coordinator, shipping supervisor, and project manager, to name a few.

Logistics and Intermodal Transportation Curriculum

(Note: There are three terms in each academic year.)

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
HH100	History of Seapower.	3		3.00
HP101	Ethics Primer	1		1.00
KP100	MaritimeProf Studies	3	2	4.00
MC100	General Chemistry	3	2	4.00
MM101	Calculus 1	3		3.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		15	6	18.00
TERM 2				
DB110	Princ of Log & Transportation	3		3.00
DN120	Terr. Navigation	2	2	3.00
HE101	English 1	3		3.00
MM120	Calculus 2 - Deck	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
HH100	History of Seapower.	3		3.00
HP101	Ethics Primer	1		1.00
KP100	MaritimeProf Studies	3	2	4.00
MC100	General Chemistry	3	2	4.00
MM101	Calculus 1	3		3.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		15	6	18.00
TERM 2				
DN110	Basic Fire Fighting	2		2.00
DN120	Terr. Navigation	2	2	3.00
DN140	Meteorology	3		3.00
MM120	Calculus 2 - Deck	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		13	6	16.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 3				
DN110	Basic Fire Fighting	2		2.00
DN121	Celestial Navigation	3	2	4.00
DN140	Meteorology	3		3.00
MM210	Problty & Statistics	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		14	6	17.00
TERM 4				
DB210	Economics	3		3.00
DB230	Management	3		3.00
DB310	Accounting & Finance	3		3.00
DN100	Safety/Life at Sea	1	2	2.00
HH310	Modern World	3		3.00
NS220	MM NR Officer	2		2.00
		15	2	16.00
TERM 5				
DS220	Navigation 1			2.00
DS221	Navigation Law 1			1.00
DS230	Cargo 1			1.00
DS240	Seamanship 1			1.00
DS241	Ship Struct. & Term.			1.00
EC120	Mar. Engr. for Deck			1.00
		0	0	7.00
TERM 6				
DL200	Integrated Log. Mg.	3		3.00
DN210	Cargo Operation	3		3.00
DN230	Seamanship/Shiphandling	2	2	3.00
DN240	Tankship D1 Cargo	3		3.00
HE202	English 2	3		3.00
NS402	Nav Leadership & Ethics	2		2.00
		16	2	17.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 3				
DB110	Princ of Log & Transportation	3		3.00
DN100	Safety/Life at Sea	1	2	2.00
DN121	Celestial Navigation	3	2	4.00
HE101	English 1	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		13	8	17.00
TERM 4				
DS220	Navigation 1			2.00
DS221	Navigation Law 1			1.00
DS230	Cargo 1			1.00
DS240	Seamanship 1			1.00
DS241	Ship Struct. & Term.			1.00
EC120	Mar. Engr. for Deck			1.00
		0	0	7.00
TERM 5				
DN210	Cargo Operation	3		3.00
DN220	Electronic Navigation	2	2	3.00
DN230	Seamanship/Shiphandling	2	2	3.00
DN240	Tankship D1 Cargo	3		3.00
MM210	Problty & Statistics	3		3.00
NS220	MM NR Officer	2		2.00
PEEL1	PE Elective 1		2	0.50PE
PEEL2	PE Elective 2		2	0.50PE
		15	8	18.00
TERM 6				
DS320	Navigation 2			3.00
DS321	Navigation Law 2			2.00
DS322	Electronic Navigation			2.00
DS330	Cargo Operation 2			1.50
DS340	Seamanship 2			1.50
		0	0	10.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 7				
DB240	Marketing	3		3.00
DB300	Business & Maritime Law	3		3.00
DL300	Intermodal Tran. Sys.	3		3.00
DS220	Electronic Navigation	2	2	3.00
ELEC	Elective 1	3		3.00 EL
PE200	Ships Medicine		2	1.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		<hr/>		
		14	8	17.00
TERM 8				
DS320	Naviation 2			3.00
DS321	Navigation Law 2			2.00
DN322	Electronic Navigation			2.00
DS330	Cargo Operation 2			1.50
DS340	Seamanship 2			1.50
		<hr/>		
		0	0	10.00
TERM 9				
DS341	Ship Stru. & Stabily			1.50
DS390	Maritime Business			1.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		<hr/>		
		0	0	5.50
TERM 10				
DL400	Intermodal PortTerm	3		3.00
DN421	Navigation Law	2	2	2.50
DN430	Maritime Comm.	3	2	4.00
EM300	Naval Arch (Deck)	3		3.00
HH360	Mod American History	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		<hr/>		
		14	8	16.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 7				
DS341	Ship Struture & Stability			1.50
DS390	Maritime Business			1.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		<hr/>		
		0	0	5.50
TERM 8				
DB210	Economics	3		3.00
DB230	Management	3		3.00
DB240	Marketing	3		3.00
DB300	Business & Maritime Law	3		3.00
DL200	Integrated Log. Mgt.	3		3.00
NS402	Naval Lead. & Ethics	2		2.00
PE200	Ship's Medicine	2	2	1.00
		<hr/>		
		17	2	18.00
TERM 9				
DL300	Intermodal Tran. Sys.	3		3.00
DN430	Maritime Comm.	3	2	4.00
DN460	Bridge Watchstanding	1	2	2.00
DN440	Radar/ARPA	3	2	4.00
HH310	Modern World	3	2	3.00
		<hr/>		
		13	6	16.00
TERM 10				
DL400	Intermodal PortTerm	3		3.00
DN410	Advanced Firefighting	1	1	1.50
DN420	Advanced Navigation	3		3.00
ELEC	Elective 1	3	1	3.00
EM300	Naval Arch (Deck)	3		3.00
HH360	Mod American History	3		3.00
PEEL3	PE Elective 3		1	0.50PE
PEEL4	PE Elective 4		1	0.50PE
		<hr/>		
		16	4	17.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 11				
DL420	Global Sup. Chain Mgt.	3		3.00
DN410	Advanced Firefighting	1	1	1.50
DN420	Advanced Navigation	3		3.00
DN440	RADAR/ARPA	3	2	4.00
DN460	Bridge Watchstanding	1	2	2.00
ELEC	Elective 2	3		3.00 EL
HC400	Topics in History	3		3.00
		<hr/>		
		17	5	19.50
TERM 12				
DB410	Int. Bus & Ocean Ship.	3		3.00
DL450	Log. & Intermodal Sys.	3		3.00
DN470	License Seminar		4	2.00
ELEC	Elective 3	3		3.00 EL
NS412	Adv MMNR Officer	2		2.00
		<hr/>		
		11	4	13.00
Total Credits				173.50

B-SPLIT

		Class Hours	Lab Hours	Credits
1				
TERM 11				
DB310	Accounting & Finance	3		3.00
DL420	Global Sup. Chain Mgt.	3		3.00
DN421	Navigation Law	2	2	2.50
ELEC	Elective 2	3		3.00 EL
HC400	Topics in History	3		3.00
HE202	English 2	3		3.00
		<hr/>		
		17	2	17.50
TERM 12				
DB410	Int. Bus & Ocean Ship.	3		3.00
DL450	Log. & Intermodal Sys.	3		3.00
DN470	License Seminar		4	2.00
ELEC	Elective 3	3		3.00 EL
NS412	Adv MMNR Officer	2		2.00
		<hr/>		
		11	4	13.00
Total Credits				173.50

Engineering Majors

The Engineering Majors provide midshipmen with the education and training to design, build, operate, maintain and repair the engineering systems 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 for an unrestricted license as a third assistant engineer of steam and motor 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.

Marine Engineering Program

The Marine Engineering program prepares midshipmen to serve as licensed 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.

Marine Engineering Curriculum

(Note: There are three terms in each academic year.)

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
DN110	Basic Fire Fighting	2		2.00
HE101	English 1	3		3.00
KP100	MaritimeProf Studies	3	2	4.00
MM101	Calculus 1	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
DN110	Basic Fire Fighting	2		2.00
HE101	English 1	3		3.00
KP100	MaritimeProf Studies	3	2	4.00
MM101	Calculus 1	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 2				
EE120	Introduction to Elect Engr.	2	2	2.50
EG111	Engineering Shop 1		3	1.00
ES110	Computer Engineering	2		2.00
HP101	Ethics Primer	1		1.00
MC100	General Chemistry	3	2	4.00
MM130	Calculus 2 - Engineering	4		4.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		14	9	17.50
TERM 3				
EG100	Engineering Graphics	1	2	2.00
EM100	Introduction to ME	3	2	3.50
ES100	Engineering Mechanics	3		3.00
HH100	History of Seapower	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		13	8	16.50
TERM 4				
DN100	Safety/Life at Sea	1	2	2.00
ES200	Introduction to Material Engr.	2		2.00
ES210	Transport Process 1	3	2	3.50
HE202	English 2	3		3.00
MM232	Math Engineering 1	4		4.00
NS220	MM NR Officer	2		2.00
		15	4	16.50
TERM 5				
DS210	DeckOps/Engr.Proj.			1.00
EC110	Machine Shop 1			1.00
EC111	Marine Propulsion			2.00
EC115	Shipboard Systems			2.00
		0	0	6.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 2				
EG100	Engineering Graphics	1	2	2.00
EM100	Introduction to ME	3	2	3.50
HH100	History of Seapower	3		3.00
MM130	Calculus 2 - Engineering	4		4.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		14	8	17.50
TERM 3				
DN100	Safety/Life at Sea	1	2	2.00
EE120	Introduction to Elect Engr.	2	2	2.50
EG111	Engineering Shop 1		3	1.00
ES100	Engineering Mechanics	3		3.00
HP101	Ethics Primer	1		1.00
MC100	General Chemistry	3	2	4.00
NS120	Intro to MMNR	2		2.00
PE101	Self Defense		2	1.00
		12	11	16.50
TERM 4				
DS210	DeckOps/Engr.Proj.			1.00
EC110	Machine Shop 1			1.00
EC111	Marine Propulsion			2.00
EC115	Shipboard Systems			2.00
		0	0	6.00
TERM 5				
EG211	Engineering Shop 2		3	1.00
EM200	Mar. Engineering 1	3	2	3.50
ES110	Computer Engineering	2		2.00
ES210	Transport Process 1	3	2	3.50
MM232	Math Engineering 1	4		4.00
NS220	MMNR Officer	2		2.00
PEEL1	PE Elective 1		2	0.50PE
PEEL2	PE Elective 2		2	0.50PE
		14	11	17.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 6				
DB210	Economics	3		3.00
EE300	Electric Circuits	2	2	2.50
EG211	Engineering Shop 2		3	1.00
ELEC	Elective 1	3		3.00 EL
EM200	Mar. Engineering 1	3	2	3.50
ES301	Strength of Materials	2		2.00
HH310	Modern World	3		3.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		16	11	19.00
TERM 7				
EM301	Naval Arch (Engineering)	3		3.00
EM302	Mech. Aspect of ME	3	2	3.50
ES310	Transport Process 2	3	2	3.50
HC400	Topics in History	3		3.00
MC300	Engineering Chem.	2	2	3.00
NS402	Nav Leadership & Ethics	2		2.00
		16	6	18.00
TERM 8				
EC252	Electrical Engineering			1.00
EC253	Maintenance Management			1.00
EC260	Marine Propulsion			2.50
EC261	Marine Propulsion			2.50
EC262	Shipboard Systems			2.00
EC265	Refrigeration			1.00
		0	0	10.00
TERM 9				
DS390	Maritime Business			1.00
EC264	Naval Architecture			2.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	6.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 6				
EC252	Electrical Engineering			1.00
EC253	Maintenance Management			1.00
EC260	Marine Propulsion			2.50
EC261	Marine Propulsion			2.50
EC262	Shipboard Systems			2.00
EC265	Refrigeration			1.00
		0	0	10.00
TERM 7				
DS390	Maritime Business			1.00
EC264	Naval Architecture			2.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	6.00
TERM 8				
DB210	Economics	3		3.00
EE300	Electric Circuits	2	2	2.50
ELEC	Elective 1	3		3.00 EL
ES200	Introduction to Material Engr.	2		2.00
ES301	Strength of Materials	2		2.00
HE202	English 2	3		3.00
NS402	Nav Leadership & Ethics	2		2.00
		17	2	17.50
TERM 9				
EM301	Naval Arch (Engineering)	3		3.00
EM302	Mech. Aspect of ME	3	2	3.50
ES310	Transport Process 2	3	2	3.50
HC400	Topics in History	3		3.00
HH310	Modern World	3		3.00
MC300	Engineering Chemistry	2	2	3.00
		17	6	19.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 10				
EE400	EI Mach & Anlg Elec.	3	2	3.50
EM400	Marine Engineering 2	3	3	3.50
EM410	Marine Refrigeration	3	3	3.50
EM425	Gas Turbines	3		3.00
ES305	Materials Engineering Lab		2	1.00
NS412	Adv MMNR Officer	2		2.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		<hr/>		
		14	14	17.50
TERM 11				
EE401	Digital Elec & Instru.	2	2	2.50
ELEC	Elective 2	3		3.00 EL
EM415	Int. Comb. Eng	3	3	3.50
EM420	Diesel Simulator		3	1.00
EM460	ThermAn/MarPwr	2	2	3.00
HH360	Modern American History	3		3.00
PE200	Ships Medicine		2	1.00
		<hr/>		
		13	12	17.00
TERM 12				
DB230	Management	3		3.00
DN410	Advanced Firefighting	1	1	1.50
ELEC	Elective 3	3		3.00 EL
EM430	Diesel Maintenance		6	2.00
EM470	License Seminar		3	1.00
EP310	Engineering Economics	3		3.00
		<hr/>		
		10	10	13.50
			Total Credits	174.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 10				
EE400	EI Mach & Anlg Elec.	3	2	3.50
EM400	Marine Engineering 2	3	3	3.50
EM410	Marine Refrigeration	3	3	3.50
EM425	Gas Turbines	3		3.00
ES305	Materials Engineering Lab		2	1.00
NS412	Adv MMNR Officer	2		2.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		<hr/>		
		14	14	17.50
TERM 11				
EE401	Digital Elec & Instru.	2	2	2.50
ELEC	Elective 2	3		3.00 EL
EM415	Int. Comb. Eng	3	3	3.50
EM420	Diesel Simulator		3	1.00
EM460	ThermAn/MarPwr	2	2	3.00
HH360	Modern American History	3		3.00
PE200	Ships Medicine		2	1.00
		<hr/>		
		13	12	17.00
TERM 12				
DB230	Management	3		3.00
DN410	Advanced Firefighting	1	1	1.50
ELEC	Elective 3	3		3.00 EL
EM430	Diesel Maintenance		6	2.00
EM470	License Seminar		3	1.00
EP310	Engineering Economics	3		3.00
		<hr/>		
		10	10	13.50
			Total Credits	174.50

Marine Engineering and Shipyard Management Program

The Marine Engineering and Shipyard Management program prepares midshipmen as licensed 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, ship systems and marine equipment design, research, operations, mar-

keting, 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.

Marine Engineering and Shipyard Management Curriculum

(Note: There are three terms in each academic year.)

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
DN110	Basic Fire Fighting	2		2.00
HE101	English 1	3		3.00
KP100	MaritimeProf Studies	3	2	4.00
MM101	Calculus 1	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00
TERM 2				
EE120	Introduction to Elect Engr.	2	2	2.50
EG111	Engineering Shop 1		3	1.00
ES110	Computer Engineering	2		2.00
HP101	Ethics Primer	1		1.00
MC100	General Chemistry	3	2	4.00
MM130	Calculus 2 - Engineering	4		4.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		14	9	17.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
DN110	Basic Fire Fighting	2		2.00
HE101	English 1	3		3.00
KP100	MaritimeProf Studies	3	2	4.00
MM101	Calculus 1	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00
TERM 2				
EG100	Engineering Graphics	1	2	2.00
EM100	Introduction to ME	3	2	3.50
HH100	History of Seapower.	3		3.00
MM130	Calculus 2 - Engineering	4		4.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		14	8	17.50

A-SPLIT

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 3				
EG100	Engineering Graphics	1	2	2.00
EM100	Introduction to ME	3	2	3.50
ES100	Engineering Mechanics	3		3.00
HH100	History of Seapower	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		13	8	16.50
TERM 4				
DB210	Economics	3		3.00
DN100	Safety/Life at Sea	1	2	2.00
EG112	Engineering Shop 2		3	1.00
ES200	Introduction to Material Engr.	2		2.00
ES210	Transport Process 1	3	2	3.50
HE202	English 2	3		3.00
NS220	MM NR Officer	2		2.00
		14	7	16.50
TERM 5				
DS210	DeckOps/Engr.Proj.			1.00
EC110	Machine Shop 1			1.00
EC111	Marine Propulsion 1			2.00
EC115	Shipboard Systems 1			2.00
		0	0	6.00
TERM 6				
EM200	Mar. Engineering 1	3	2	3.50
EP200	Mfg. Proc.	2	1	2.50
EP300	Engr. Ship Ops.	3		3.00
ES301	Strength of Materials	2		2.00
MM230	Engineering Math 1	4		4.00
NS402	Nav Leadership & Ethics	2		2.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		16	7	18.00

		Class Hours	Lab Hours	Credits
TERM 3				
DN100	Safety/Life at Sea	1	2	2.00
EE120	Introduction to Elect Engr.	2	2	2.50
EG111	Engineering Shop 1		3	1.00
ES100	Engineering Mechanics	3		3.00
HP101	Ethics Primer	1		1.00
MC100	General Chemistry	3	2	4.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		12	11	16.50
TERM 4				
DS210	DeckOps/Engr.Proj.			1.00
EC110	Machine Shop 1			1.00
EC111	Marine Propulsion 1			2.00
EC115	Shipboard Systems 1			2.00
		0	0	6.00
TERM 5				
EG112	Engineering Shop 2		3	1.00
EM200	Mar. Engineering 1	3	2	3.50
EP300	Engr. Ship Ops.	3		3.00
ES110	Computer Engineering	2		2.00
ES200	Intro to Mat. Engineering	2		2.00
ES210	Transport Process 1	3	2	3.50
NS220	MMNR Officer	2	2	2.00
PEEL1	PE Elective 1		2	0.50PE
PEEL2	PE Elective 2		2	0.50PE
		15	11	18.00
TERM 6				
EC252	Electrical Engineering			1.00
EC253	Maintenance Management			1.00
EC260	Marine Propulsion 2			2.50
EC261	Marine Propulsion 3			2.50
EC262	Shipboard Systems 2			2.00
EC265	Refrigeration			1.00
		0	0	10.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 7				
EE300	Electric Circuits	2	2	2.50
EM301	Naval Arch (Engineering)	3		3.00
ES310	Transport Process 2	3	2	3.50
HH310	Modern World	3		3.00
MC300	Engineering Chem.	2	2	3.00
MM350	Quant. Method 1	3		3.00
PE200	Ships Medicine		2	1.00
		16	8	19.00
TERM 8				
EC252	Electrical Engineering			1.00
EC253	Maintenance Management			1.00
EC260	Marine Propulsion 2			2.50
EC261	Marine Propulsion 3			2.50
EC262	Shipboard Systems 2			2.00
EC265	Refrigeration			1.00
		0	0	10.00
TERM 9				
DS390	Maritime Business			1.00
EC264	Naval Architecture			2.00
HS211	Humanities Sea Project			1.00
STIND	Shipyards Internship			3.00
		0	0	7.00
TERM 10				
EE400	EI Mach & Anlg Elec.	3	2	3.50
EM400	Marine Engineering 2	3	3	3.50
EP310	Engineering Economics	3		3.00
EP400	Eng Project Mgt	3	1	3.00
EP461	Capstone Project Sem.		1	0.50
ES305	Materials Engineering Lab		2	1.00
MM450	Quant. Method 2	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		15	13	18.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 7				
DS390	Maritime Business			1.00
EC264	Naval Architecture			2.00
HS211	Humanities Sea Project			1.00
STIND	Shipyards Internship			3.00
		0	0	7.00
TERM 8				
DB210	Economics	3		3.00
EE300	Electric Circuits	2	2	2.50
EP200	Mfg. Proc.	2	1	2.50
ES301	Strength of Materials	2		2.00
HE202	English 2	3		3.00
MM230	Engineering Math 1	4		4.00
PE200	Ships Medicine		2	1.00
		16	5	18.00
TERM 9				
EM301	Naval Arch (Engineering)	3		3.00
ES310	Transport Process 2	3	2	3.50
HH310	Modern World	3		3.00
MC300	Engineering Chem.	2	2	3.00
MM350	Quant. Method 1	3		3.00
NS420	Nav. Leadership & Ethics	2		2.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		16	8	18.50
TERM 10				
EE400	EI Mach & Anlg Elec.	3	2	3.50
EM400	Marine Engineering 2	3	3	3.50
EP310	Engineering Economics	3		3.00
EP400	Eng Project Mgt	3	1	3.00
EP461	Capstone Project Sem.		1	0.50
ES305	Materials Engineering Lab		2	1.00
MM450	Quant. Method 2	3		3.00
		15	9	17.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 11				
EM410	Marine Refrigeration	3	3	3.50
EM415	Int. Comb. Eng.	3	3	3.50
EM420	Diesel Simulator		3	1.00
EM450	Mech Asp/ME (Mgt)	3		3.00
EP401	Ship Prod Mgt	3	1	3.00
EP462	Capstone Project Sem.		1	0.50
HC400	Topics in History	3		3.00
		15	11	17.50
TERM 12				
DN410	Adv Firefighting	1	1	1.50
EE401	Digital Elec & Instru.	2	2	2.50
ELEC	Elective 1	3		3.00 EL
EM470	License Seminar		3	1.00
HH360	Modern American History	3		3.00
NS412	Adv MMNR Officer	2		2.00
		11	6	13.00
Total Credits				176.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 11				
EM410	Marine Refrigeration	3	3	3.50
EM415	Int. Comb. Eng.	3	3	3.50
EM420	Diesel Simulator		3	1.00
EM450	Mech Asp/ME (Mgt)	3		3.00
EP401	Ship Prod Mgt	3	1	3.00
EP462	Capstone Project Sem.		1	0.50
HC400	Topics in History	3		3.00
		15	11	17.50
TERM 12				
DN410	Adv Firefighting	1	1	1.50
EE401	Digital Elec & Instru.	2	2	2.50
ELEC	Elective 1	3		3.00 EL
EM470	License Seminar		3	1.00
HH360	Modern American History	3		3.00
NS412	Adv MMNR Officer	2		2.00
		11	6	13.00
Total Credits				176.50

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 (EAC) of the Accreditation Board for Engineering and Technology (ABET).

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, mar-

keting, 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.

Marine Engineering Systems Curriculum

(Note: There are three terms in each academic year.)

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
DN110	Basic Fire Fighting	2		2.00
HE101	English 1	3		3.00
KP100	MaritimeProf Studies	3	2	4.00
MM101	Calculus 1	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00
TERM 2				
EE120	Introduction to Elect Engr.	2	2	2.50
EG111	Engineering Shop 1		3	1.00
ES110	Computer Engineering	2		2.00
HP101	Ethics Primer	1		1.00
MC100	General Chemistry	3	2	4.00
MM130	Calculus 2 - Engineering	4		4.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		14	9	17.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 1				
DN110	Basic Fire Fighting	2		2.00
HE101	English 1	3		3.00
KP100	MaritimeProf Studies	3	2	4.00
MM101	Calculus 1	3		3.00
MP101	Physics 1	3	2	4.00
PE110	Swimming/First Aid		2	1.00
		14	6	17.00
TERM 2				
EG100	Engineering Graphics	1	2	2.00
EM100	Introduction to ME	3	2	3.50
HH100	History of Seapower	3		3.00
MM130	Calculus 2 - Engineering	4		4.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		14	8	17.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 3				
EG100	Engineering Graphics	1	2	2.00
EM100	Introduction to ME	3	2	3.50
ES100	Engineering Mechanics	3		3.00
HH100	History of Seapower	3		3.00
MP130	Physics 2	3	2	4.00
PE120	Aquatic Survival		2	1.00
		13	8	16.50
TERM 4				
DN100	Safety/Life at Sea	1	2	2.00
ES200	Introduction to Material Engr.	2		2.00
ES210	Transport Process 1	3	2	3.50
HE202	English 2	3		3.00
MM232	Math Engineering 1	4		4.00
NS220	MMNR Officer	2		2.00
		15	4	16.50
TERM 5				
DS210	DeckOps/Engr.Proj.			1.00
EC110	Machine Shop 1			1.00
EC111	Marine Propulsion 1			2.00
EC115	Shipboard Systems 1			2.00
		0	0	6.00
TERM 6				
DB210	Economics	3		3.00
EE300	Electric Circuits	2	2	2.50
EG211	Engineering Shop 2		3	1.00
EM200	Mar. Engineering 1	3	2	3.50
ES301	Strength of Materials	2		2.00
ES305	Materials Eng Lab		2	1.00
MM332	Math for Engineering 2	3		3.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		13	13	17.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 3				
DN100	Safety/Life at Sea	1	2	2.00
EE120	Introduction to Elect Engr.	2	2	2.50
EG111	Engineering Shop 1		3	1.00
ES100	Engineering Mechanics	3		3.00
HP101	Ethics Primer	1		1.00
MC100	General Chemistry	3	2	4.00
NS120	Introduction to MMNR	2		2.00
PE101	Self Defense		2	1.00
		12	11	16.50
TERM 4				
DS210	DeckOps/Engr.Proj.			1.00
EC110	Machine Shop 1			1.00
EC111	Marine Propulsion 1			2.00
EC115	Shipboard Systems 1			2.00
		0	0	6.00
TERM 5				
EG211	Engineering Shop 2		3	1.00
EM200	Mar. Engineering 1	3	2	3.50
ES110	Computer Engineering	2		2.00
ES210	Transport Process 1	3	2	3.50
MM232	Math Engineering 1	4		4.00
NS220	MMNR Officer	2		2.00
PEEL1	PE Elective 1		2	0.50 PE
PEEL2	PE Elective 2		2	0.50 PE
		14	11	17.00
TERM 6				
EC252	Electrical Engineering			1.00
EC253	Maintenance Management			1.00
EC260	Marine Propulsion 2			2.50
EC261	Marine Propulsion 3			2.50
EC262	Shipboard System 2			2.00
EC265	Refrigeration			1.00
		0	0	10.00

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 7				
ELECT	Elective	3		3.00 EL
EM301	Naval Arch (Engineering)	3		3.00
ES310	Transport Process 2	3	2	3.50
HC400	Topics in History	3		3.00
MC300	Engineering Chem.	2	2	3.00
NS402	Nav Leadership & Ethics	2		2.00
PE200	Ships Medicine		2	1.00
		16	6	18.50
TERM 8				
EC252	Electrical Engineering			1.00
EC253	Maintenance Management			1.00
EC260	Marine Propulsion 2			2.50
EC261	Marine Propulsion 3			2.50
EC262	Shipboard Systems 2			2.00
EC265	Refrigeration			1.00
		0	0	10.00
TERM 9				
DS390	Maritime Business			1.00
EC264	Naval Architecture			2.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	6.00

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 7				
DS390	Maritime Business			1.00
EC264	Naval Architecture			2.00
HS211	Humanities Sea Project			1.00
STINX	Internship Report			2.00
		0	0	6.00
TERM 8				
DB210	Economics	3		3.00
EE300	Electric Circuits	2	2	2.50
ES200	Intro. Material Engineering	2		2.00
ES301	Strength of Materials	2		2.00
HE202	English 2	3		3.00
MM232	Math for Engineering 2	3		3.00
NS402	Nav. Leadership & Ethics	2		2.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		17	6	18.50
TERM 9				
ELECT	Elective	3		3.00
EM301	Naval Arch (Engineering)	3		3.00
ES305	Materials Engineering Lab		2	1.00
ES310	Transport Process 2	3	2	3.50
HC400	Topics in History	3		3.00
MC300	Engineering Chemistry	2	2	3.00
PE200	Ship's Medicine		2	1.00
		14	8	17.50

A-SPLIT

		Class Hours	Lab Hours	Credits
TERM 10				
EE400	EI Mach & Anlg Elec.	3	2	3.50
EM415	Int. Comb. Engineering	3	3	3.50
EM420	Diesel Simulator		3	1.00
EM480	ME Sys Des	3	3	3.50
EM 481	Design Project I		1	0.50
HH310	Modern World	3		3.00
MES01	MES Option 1	3		3.00
PEEL3	PE Elective 3		2	0.50 PE
PEEL4	PE Elective 4		2	0.50 PE
		15	16	19.00
TERM 11				
EM400	Marine Engineering 2	3	3	3.50
EM410	Marine Refrigeration	3	3	3.50
EM482	ME Design Project		1	0.50
HH360	Modern American History	3		3.00
MES02	MES Option 2	3		3.00
NS412	Adv MMNR Officer	2		2.00
ES411	Machine Design 1	3		3.00
		17	7	18.50
TERM 12				
DN410	Adv Firefighting	1	1	1.50
EE401	Digital Elec & Instru.	2	2	2.50
EM470	License Seminar		3	1.00
EM483	ME Design Proj 3	1	2	1.00
MES03	MES Option 3	3		3.00
DB230	Management	3		3.00
		10	8	12.00
	Total Credits			174.50

B-SPLIT

		Class Hours	Lab Hours	Credits
TERM 10				
EE400	EI Mach & Anlg Elec.	3	2	3.50
EM415	Int. Comb. Engineering	3	3	3.50
EM420	Diesel Simulator		3	1.00
EM480	ME Sys Des	3	3	3.50
EM 481	Design Project I		1	0.50
HH310	Modern World	3		3.00
MES01	MES Option 1	3		3.00
		15	12	18.00
TERM 11				
EM400	Marine Engineering 2	3	3	3.50
EM410	Marine Refrigeration	3	3	3.50
EM482	ME Design Project		1	0.50
HH360	Modern American History	3		3.00
MES02	MES Option 2	3		3.00
NS412	Adv MMNR Officer	2		2.00
ES411	Machine Design	3		3.00
		17	7	18.50
TERM 12				
DN410	Adv Firefighting	1	1	1.50
EE401	Digital Elec & Instru.	2	2	2.50
EM470	License Seminar		3	1.00
EM483	ME Design Proj 3	1	2	1.00
MES03	MES Option 3	3		3.00
DB230	Management	3		3.00
		10	8	12.00
	Total Credits			174.50

The Marine Engineering Systems program allows a midshipman to choose from a group of specialty option courses, or minor tracks, which address the sub-specialties of marine engineering. The availability of specific option tracks will depend on midshipman interest. The option course groups (minors) that may be offered for the Class of 2009 include:

Aeronautical Engineering

Advanced Engineering Math	MM360
Gas Turbines	EM425
Aeronautical Engineering	EM427
Automation and Control	EE402
Computation Fluid Mechanics	ES428

Electrical Engineering / Power Controls

Advanced Engineering Math	MM360
Power Electronics	EE403
Power System Designs	EE404
Automation and Control	EE402

Environmental Engineering

Environmental Chemistry	MC340
Solid Waste Management	ES430
Air and Water Pollution Control	ES431
Hazardous Waste Management	ES432

LNG Design and Operations

Math/Science Elective	
LNG Design and Operations	
Gas Turbines	EM425
LNG Safety	

Naval Architecture

Math/Science Elective	
Form and Stability (substitutes for Naval Architecture for Engineers)	EM303
Resistance and Propulsion	EM441
Ship Structures	EM442
Introduction to Ship Design	EM443
Marine Dynamics	EM444

Nuclear Engineering

Atomic Physics	MP320
Advanced Thermal Science	ES400
Introduction to Nuclear Science and Engineering	ES420
Nuclear Engineering	ES421

Mechanical Systems

Math Science Elective	
Machine Design I	ES411
Machine Design II	ES412
Solid Modeling/Finite Element Analysis	ES413
Vibrations	ES410

Offshore Engineering

Introduction to Oceanography	MC370
Ocean Engineering	EM480
Offshore Power Systems	EM481
Offshore Oil Drilling and Production	EM482

An important element in the Marine Engineering Systems program is the design experience that is interwoven throughout four years, culminating in a major 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 two 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 (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Academic Policies and Procedures

All of 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	Scholastic Significance
A	4.00	Outstanding
A-	3.67	
B+	3.33	
B	3.00	
B-	2.67	
C+	2.33	Above Average
C	2.00	
C-	1.67	
D+	1.33	Average
D	1.00	
P	0.00	Minimum Passing
F	0.00	
I		Pass
E		Failure
W		Incomplete
		Exempt
		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 requirements 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 who fails to meet the academic standards of the Academy may be recommended by the Dean to the Superintendent for disenrollment, or to be set back to the following class. 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:

1. 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.
2. An Honor Ribbon is awarded to midshipmen 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.
3. 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. In some cases, 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 who is 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 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 sub-

sequently 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 may accept transfer credits for courses taken elsewhere. Courses taken at another accredited college or university can be evaluated and may be deemed as an appropriate substitute for an existing course at the Academy. All decisions will be made by the academic department in which the student is seeking equivalency.

A course evaluation and the student's transcript for the course will determine if the student is exempt from the Academy course and/or whether the academic department accepts the transfer of credits for the course. In some cases, the student may be required to substitute an appropriate course to complete the number of credits required for a term.

Students are encouraged to get courses approved for transfer prior to joining the

Academy, and under no circumstances later than the end of the first term of the plebe year. Students may apply for a course exemption by supplying an official transcript and a course description to the Registrar and appropriate department heads for evaluation.

In no case are the quality points or grade for work accomplished elsewhere included in the student's academic record taken at the Academy. A maximum of twelve credits, including Advanced Placement (AP) credits, may be posted to a student's record. There will be no exceptions to this policy.

The Academy has a four-year residency requirement that cannot be shortened.

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 sponsorship 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.

Completion of the Kings Point Scholar Program satisfies a midshipman's credit hour elective requirement for Engineering and Marine transportation majors. Marine Engineering Systems majors can complete the program through credit overloads.

Academic Advising

Each plebe is assigned a faculty advisor, who is available through appointment to discuss a broad range of academic problems with a student.

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 support systems described above to specific cases. The academic officers work closely with the Dean's staff.

The Academic Board

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

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

Privacy Act

The Privacy Act of 1974 prohibits the disclosure of your educational records to other persons or organizations without your 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 covered by the Privacy Act.

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. Final decisions on questions arising from such reviews will be made by the Office of the Dean.

Graduation Rates

The following statistics indicate the rate of graduation at the Academy for classes of 2002 to 2006:

Class	2002	2003	2004	2005	2006
Graduating %	79.5	76.2	78.9	77.3	78.3