

COLLEGE CATALOG

For Students Entering
Maritime College
During The
2016-17 Academic Year

Table of Contents

A Message from the President

Mission, Vision, and Core Values

Leadership

Accreditations

Non-Discrimination Policy

Admissions

Application and Evaluation Procedures

Requirements for Admissions

Additional Candidacy Categories

Pre-Freshman Testing

Undergraduate Transfer Credit Policies and Procedures

Sources of Transfer Credit

General Transfer Credit Guidelines

Transfer Credit Procedures

Credit Earned While in High School

Experiential Learning

Articulation Agreements

Advanced Placement Examinations Table

CLEP Table

Graduate Transfer Credit Policies and Procedures

2016-17 Tuition and Fees

Tuition, Fees, and Refund Policies

Health Insurance

Meal Plans

New York State Residency

Past Due Accounts

Refund Schedules

Financial Aid

Applicant Eligibility

Application and Procedures

Academic Departments and Contact Information

Academic Policies and Procedures

Academic Advising

Academic Board

Academic Distress and Sanctions Policy – Undergraduate

Academic Distress and Sanctions Policy - Graduate

Academic Integrity

Accommodation Services

Administrative Disenrollment

Auditing a Course

Credit Course Load

Credit Hour Policy

Declaring a Major

Double Majors

Drop/Add a Course

Education Law (224-A)

FERPA

Final Examinations

Forgiveness Policy

Good Academic Standing

Grade Appeal

Graduation Honors

Graduation Requirements

Leave of Absence

Lines of Communication

Official Grades and Calculation of GPA

Readmission after a Withdrawal/Academic Disenrollment/Administrative Disenrollment

Registration

Repeat a Course

Satisfactory Academic Progress Policy for Financial Aid

Semester Honors

STCW (Standards of Training, Certification and Watchkeeping)

Syllabus

Withdrawal from School

General Education at SUNY Maritime College

Degrees, Majors, and Professional Experience Options

Undergraduate Degree Curricula Notes

General Remarks

Rules about Curriculum Changes

Definitions of Elective Categories for Undergraduate Degree Curricula

Undergraduate Degree Curricula

B.E. in Electrical Engineering (Deck, Engine, Internship)

B.E. in Facilities Engineering (Engine, Internship)

B.E. in Marine Engineering (Engine)

B.E. in Mechanical Engineering (Engine, Internship)

B.E. in Naval Architecture (Deck, Engine, Internship)

B.S. in International Transportation and Trade with Internship

B.S. in Marine Environmental Science, Marine Biology Minor (Deck, Internship)

B.S. in Marine Environmental Science, Meteorology & Oceanography Minor (Deck, Internship)

B.S. in Marine Operations (Deck, Engine)

B.S. in Marine Transportation (Deck)

B.S. in Maritime Studies (Deck, Internship)

A.A.S. in Marine Technology: Small Vessel Operations (Limited Engine, Limited Deck)

Minors Policy

List of Approved Minors and Requirements

Graduate Degree Curricula Notes

General Remarks

Rules about Curriculum Changes

Graduate Degree Curricula

M.S. in International Transportation Management

M.S. in Maritime and Naval Studies

Advanced Certificate in Supply Chain Management

Undergraduate Course Descriptions

Course Prefixes

General Note on the Scheduling of Courses

Definition of Prerequisite and Corequisite Courses

SUNY General Education Requirements

BIO Biology

CHEM Chemistry

CHIN Chinese

CS Computer Science

ENGL English

ENGR Engineering

ES Environmental Science

GBAC Accounting

GBEC Economics and Finance

GBLW Law

GBMG Management

GBTT Transportation Systems

GBUS General Business

GEOL Geology

HIST History

HUMN Humanities

LEAD Leadership

MATH Mathematics

METE Meteorology

MTDO Marine Technology Deck Officer

MTEO Marine Technology Engine Officer

MT Marine Transportation

NAUT Nautical Science

NAVG Navigation

NVSC Naval Science

OCEA Oceanography

PE Physical Education

PHYS Physics

PS Professional Studies

SPAN Spanish

SS Social Science

Courses in Reserve

Courses Deleted from Course Catalog

Graduate Course Descriptions

Course Prefixes

General Note on the Scheduling of Courses

Definitions of Prerequisite and Corequisite Courses

MNST Maritime and Naval Studies

TGMT Transportation Management

Courses in Reserve

Courses Deleted from Course Catalog

Faculty Directory

Academic Calendar – Summer 2016

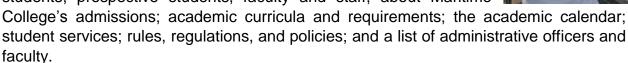
Academic Calendar - Fall 2016 / Spring 2017

A Message from the President

Dear Maritime College Community,

Maritime College is a unique institution of higher learning with a very specific mission: educating dynamic leaders for the maritime industry. As the oldest and largest maritime academy in the country, we have a long tradition of ensuring our graduates are well prepared for exciting career opportunities in the maritime, engineering, energy, marine environmental, and business sectors. Key to your success are our core values: academic excellence, student centeredness, applied learning, relevance, leadership, integrity, and respect.

Our e-Catalog provides a one-stop source of information for our students, prospective students, faculty and staff, about Maritime



I encourage you to review this catalog, refer to it often, and provide feedback regarding how we can improve it make it more useful for you and others.

I hope that you have a positive and rewarding experience while at SUNY Maritime College. I look forward to seeing you on campus.

All the best,

Michael A. Alfultis, Ph.D.

Muchael alfultis

Rear Admiral, United States Merchant Marine Service

President, SUNY Maritime College



MISSION STATEMENT

First and foremost, Maritime College educates dynamic leaders for the global maritime industry.

VISION STATEMENT

Maritime College will be recognized as the leading maritime educational institution.

CORE VALUES

Academic Excellence - Maritime College is committed to the pursuit of excellence in teaching, scholarship, and research

Student-Centeredness - Maritime College is committed to an environment that values student success, development and personal growth

Integrity - Maritime College is committed to principles of integrity and ethics in all aspects of our operations

Respect - Maritime College embraces diversity & inclusion, and celebrates the unique contributions of all

Leadership - Maritime College is committed to providing multiple leadership development opportunities for all students

Applied Learning - Maritime College programs and majors are infused with hands-on, experiential learning opportunities

Relevance - Maritime College has an adaptive curriculum that responds to the complex and evolving needs of the maritime industry

Leadership

SUNY Board of Trustees

H. Carl McCall, Chair Eunice A. Lewin Joseph Belluck Marshall Lichtman Courtney Burke Stanley Litow Marc Cohen Richard Socarides Eric Corngold Carl Spielvogel Robert Duffy Edward Spiro Cary Staller Ronald Ehrenberg Nina Tamrowski Angelo Fatta Peter Knuepfer Lawrence Waldman

SUNY Chancellor's Cabinet

Nancy L. Zimpher, Chancellor

Alexander N. Cartwright, Provost and Executive Vice Chancellor

Eileen G. McLoughlin, Senior Vice Chancellor for Finance and Chief Financial Office

Joseph Porter, Senior Vice Chancellor for Legal Affairs and General Counsel

Stacey Hengsterman, Chief of Staff

Johanna Duncan-Poitier, Senior Vice Chancellor for Community Colleges and the Education Pipeline Robert Haelen, Vice Chancellor for Capital Facilities, & General Manager of the Construction Fund

Elizabeth L. Bringsjord, Vice Chancellor for Academic Affairs and Vice Provost

Jennifer LoTurco, Associate Vice Chancellor for External Affairs

Mary Beth Labate, Senior Advisor to the Chancellor for Fiscal Policy

SUNY Maritime College Council

Timothea S. Larr, Chair

Mark J. Brosnan

Joseph R. Conway

William J. Garry

Christopher Deddo

President's Cabinet

RADM Michael Alfultis, USMS, Ph.D., President

Dr. Joseph C. Hoffman, Interim Provost and Vice President for Academic Affairs

Aimee Bernstein, Vice President of University Relations

Scott Dieterich, Vice President of Finance & Administration

CAPT Richard Smith, Captain of the Training Ship

CAPT Mark Woolley, Chief of Staff, Director of Institutional Research & Assessment

Governance

Maritime College operates on the principle of *Shared Governance*, a belief that it is necessary for the welfare of the institution that the values, effort, and responsibility be shared between faculty, staff, and administration to effect the desired outcomes for the students. This principles intended to be consistent

and compliant with the *Policies of the SUNY Board of Trustees* (see http://www.suny.edu/about/leadership/board-of-trustees/),

As a consequence, faculty and staff have and will continue to have roles in determination of policy, establishment and changes to the curricula, searches for personnel, implementation of academic rules and regulations, and the conduct of student affairs.

The Faculty of Maritime College, as defined by the College By-Laws, includes the following committees which play keys roles in these aspects of Shared Governance:

- Curriculum Committee
- Faculty Policies Committee
- Student Policies Committee
- Faculty Assessment Committee

The faculty and staff also play key roles on the Academic Board and the Faculty Student Association.

Accreditations

SUNY Maritime College is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104 (267-284-5000). The Middle States Commission on Higher Education (MSCHE) is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. SUNY Maritime College has been a member of MSCHE since 1952, and was most recently reaffirmed on June 28, 2012. The next Periodic Review Report is due 2017, and the next Self-Study Evaluation is due 2012-2022.

In addition, SUNY Maritime College's Bachelor of Engineering programs (Electrical, Facilities, Marine, Mechanical and Naval Architecture) are also accredited by the Accreditation Board for Engineers and Technology (ABET). ABET is a non-profit and non-governmental accrediting agency for academic programs in the disciplines of applied science, computing, engineering, and engineering technology. ABET is a recognized accreditor in the United States (U.S.) by the Council for Higher Education Accreditation. SUNY Maritime College's engineering programs have been accredited since 2009-2010. The next Comprehensive Review is due 2016-2017.

Non-Discrimination Policy

It is the policy of SUNY Maritime College to ensure equality without discrimination or harassment on the basis of race, color, national origin, religion, creed, age, sex, sexual orientation, disability, gender identity or expression, familial status, pregnancy, predisposing genetic characteristics, military status, domestic violence victim status or criminal conviction. It is also the policy of SUNY Maritime College that employees, students and guests respect diversity and react to one another with civility.

Any and all forms of discrimination or harassment which involve or affect SUNY Maritime College ("the College") or which occur on the College's campus, or in any off-campus location that could be considered an extension of the College, (i.e., the Empire State Training Ship even at times it is away from the campus, or when employees, students, and others are in official travel status as representatives of the College, etc.), are prohibited by this policy.

Please Note:

The information provided in this catalog reflect the most up-to-date information available at the time of publication. Supplementary material will be provided when possible in the event of change. The College reserves the right to revise any material provided herein at any time, including the deletion of various courses and programs.

Admissions

Admission to Maritime College is based on the qualifications of the applicant, and is granted without regard to race, color, gender, religious beliefs, sexual orientation, gender identity, or national origin. Successful applicants must meet the requirements for admission as stated below. Applicants are welcome to provide the Admissions Office with additional information regarding their achievements or with a statement concerning their exceptional circumstances.

Regional Status

New York's Maritime College is now the Regional Maritime Academy for students from Alabama, Connecticut, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Pennsylvania, Rhode Island, South Carolina, Virginia, and Washington D.C. Students from these states pay a discounted in-region tuition rate to attend SUNY Maritime College.

Application and Evaluation Procedures

Freshmen Application

Application for admission to Maritime College may be obtained online through the SUNY App or the Common Application at www.sunymaritime.edu/admissions. All candidates must submit the following:

- **Application for Admission**
- **Transcript of high school record** (forwarded by your HS to the Admissions Processing, 279A Broadway, Albany NY 12204)
- **Transcript of college record** (forwarded by previous college to the
- Admissions Processing, 279A Broadway, Albany, NY 12204)
- **Results of the SAT/ACT** (forwarded by the testing agency directly to the Maritime College)
- Two Letters of Recommendations (to be sent directly to the Admissions Processing, 279A Broadway, Albany, NY 12204)
- **Essay** (essays are to be submitted through the SUNY application or the Common Application)

Candidates for admission through the Educational Opportunity Program (EOP) must indicate so on the application and submit the Free Application for Federal Student Aid (FAFSA) so that eligibility can be verified.

International applicants should follow instructions in the International Students section that follows in this section of the catalog.

Evaluation

Freshman admission decisions are based on the strength of your high school curriculum taken, SAT or ACT, extra-curricular activities and letters of recommendation. The items below are viewed as key components of the admissions decision.

- high school average
- SAT or ACT scores *
- mathematics/science average
- teacher/counselor
- level of difficulty of high school

recommendations.

courses attempted

* All freshman applicants must take the SAT or ACT. We look at the combined score of critical reading/evidence based reading & writing and mathematics sections on the SAT or composite ACT score. Our exam codes are:

SAT: 2536

ACT: 2954

Decisions fall into the following categories: accept, deny, and waitlist. Students are considered for acceptance if they meet the requirements stated in the following section at the time of application. Deferred status must be approved and is granted for up to a year.

Decision Deadlines

The fall early decision application deadline is Nov. 1. The regular deadline to apply for fall admission is Jan. 31. Spring application deadline is Nov. 1.

Requirements for Admissions

Scholastic Requirements

Applicants must be high school graduates, recipients of a high school equivalency diploma (GED) or expect same by the time of enrollment. At the time of graduation, HS students must have completed at least 14 units of credit unless state or local requirements for graduation differ. These include the following:

- 4 years of English
- 4 years of social studies
- 3 years of mathematics (pre-calculus is required for engineering)
- 3 years of science (chemistry and physics are strongly recommended)

Students are encouraged to pursue mathematics and science beyond the required minimum. The remaining required units can be in social studies, science, mathematics, and foreign languages. Units in other subjects will be individually evaluated. Some experience and familiarity with computer applications and/or a programming language is suggested, particularly for engineering applicants.

Health Requirements

General

New York State law requires all college students born on or after January 1, 1957 to be immunized against measles, mumps and rubella. All undergraduate and graduate students have to show proof of immunity. Immunization for measles requires two doses of vaccine. Exemption from this requirement is possible for those documenting valid religious or medical reasons.

Accepted students are required to complete a physical examination by a physician of their choice prior to enrollment. Medical forms to be used for this examination will be sent to all students by the College. Completed physical examination forms are to be returned to the Admissions Office by the student. Applicants who have applied for ROTC scholarship competition, or for admission to a service academy, may request a copy of their physical examination report from the Department of Defense Medical Review Board and forward it to the Health Services Office.

License Program Candidates

In general, recognized illnesses or physical defects, such as epilepsy and diabetes, that would render the applicant incapable to perform the regular duties or interfere with the ordinary duties of an officer at sea are disqualifying. A complete list of disqualifying illnesses may be obtained from the Health Services Office.

Vision Requirements (Licensing Programs)

Coast Guard regulations concerning the original licensing of Merchant Marine Officers require applicants to have uncorrected vision of at least 20/100 in both eyes, correctable to at least 20/20 in one eye and

20/40 in the other eye for Deck Officers. For Engineering Officers, vision must be 20/100 in both eyes, correctable to at least 20/30 in one eye and 20/50 in the other. Inadequate color perception may disqualify an applicant for licensure. The vision of all prospective cadets will be confirmed by the college. (The Coast Guard routinely authorizes waivers of uncorrected vision up to 20/200 and will consider waivers for vision below that level.)

Drug Testing (Licensing Programs)

All cadets, and all students enrolling in any program aboard the Training Ship, are required to submit to a federally mandated drug test prior to each Summer Sea Term, and again with application for licensure.

Additionally, prior to taking the license examinations, First Class cadets must make an application to the U.S. Coast Guard. Several College officials must attest to the character and temperate habits of the cadet on their application. Questions concerning drugs and court convictions must also be answered under oath by the cadet.

Cadets may be removed from the license program for inaptitude.

Cadet (Not Physically Qualified)

Applicants who do not meet the physical requirements for license as an officer for the Merchant Marine but who are otherwise fully capable of participating in all facets of the program without endangering themselves or others may enroll in a Degree/License program at the Maritime College, take degree and license courses including Summer Sea Terms, and participate fully in all facets of the Maritime College program. Graduates may request a waiver of physical requirements from the Coast Guard. Since physical waivers for license are determined on an individual basis at the time of applying for the license during the senior year, cadets who are not physically qualified should not anticipate receiving a waiver. While a cadet may not be physically qualified for license in the Merchant Marine, he/she may be eligible for commission in the Naval Reserve through NROTC as physical requirements for the two programs differ, especially with regard to vision. Students who are not physically qualified for the Degree/License Programs do qualify for the Degree Programs.

Additional Candidacy Categories

Transfer Students

Transfer students are selected primarily on the basis of all college level academic performance. To be considered a transfer applicant, submit the following credentials:

- A completed application (available through the SUNY Application or the Common Application online at www.sunymaritime.edu/admissions).
- Official college transcripts documenting all post-secondary work, sent directly from the institution to the Maritime College Admissions Office.

Transfer students pursuing the Degree/License Program are required to complete the Indoctrination Program (see "Student Life") in August, prior to commencement of the fall semester. Upon completion of the Indoctrination Program, transfer students from sea service academies and other maritime institutions may request upgrade of class status. All other transfer students into Degree/License Programs will enroll as Fourth Class cadets for their first year at Maritime. Transfer students pursuing a Degree Program are required to attend the new student orientation, but will enroll directly at the appropriate class level.

A separate section on transfer credit policies and procedures can be found in this catalog following the admissions section.

International Students

Admission for international students is based on a review of the appropriate educational documents as well as proficiency in English as measured by the Test of English as a Foreign Language (<u>TOEFL</u>) or International English Testing System (<u>IELTS</u>). Freshman applicants may also submit SAT or ACT scores.

Prospective transfer and graduate degree candidates must arrange to have a course-by-course evaluation of all college coursework completed outside the U.S. sent to the Office of Admissions. Those individuals who have completed courses in the U.S. must arrange for official transcripts to be sent directly to the Office of Admissions.

- TOEFL (Test of English as a Foreign Language) minimum scores are: 79 for the internet-based test, 213 for the computer-based test and 550 for the paper-based test.
- IELTS (International English Language Testing System) minimum score is: 6.5.

International students who enroll as cadets pursuing the Degree/License Program participate in all facets of campus life, including regimental responsibilities ashore, and as cadet officers during Summer Sea Terms. At graduation, international students receive the B.S. or B.E. Degree and may be certified by the Coast Guard that they meet all requirements for licensure except citizenship. International students who enroll as students pursuing the degree programs are eligible for all leadership roles within that program, including Resident Assistantships.

Educational Opportunity Program (EOP)

SUNY's Educational Opportunity Program provides access, academic support and financial aid to students who show promise for succeeding in college but who may not have otherwise been offered admission. Available primarily to full-time, matriculated students, the program supports students throughout their college careers. EOP is designed for students who need special academic assistance as well as financial aid. You will be asked to complete additional application materials and financial aid forms by the colleges to which you are applying.

Educational Opportunity Program students may receive support services, such as academic, career, and personal counseling; tutoring and supplemental instruction. As part of a student's overall financial aid package, the Educational Opportunity Program provides financial assistance for non-tuition related expenses (e.g. books, supplies, etc.).

Questions should be directed to either the Office of Admissions or the Director of the EOP program.

Pre-Freshman Testing

Testing in mathematics is required of all entering freshmen. The Academic Dean administers these examinations at the College during the summer before entrance. For those who cannot travel to the campus, arrangements can be made with your HS guidance counselor to have the tests administered at your high school. Students will have the opportunity to be re-tested during the orientation period.

All 4-year programs at the Maritime College require at least two semesters of mathematics, and engineering programs are designed with the expectation that students will start Calculus I at the beginning of their freshman year. The mathematics placement test is designed to assess whether additional mathematics preparation is required and at what level. Some students may be advised to take an appropriate remedial mathematics course at Maritime over the summer or an equivalent program at another institution before matriculation in the Fall semester. Failure to do so may prevent a student from graduating in a timely manner.

TRANSFER CREDIT POLICIES AND PROCEDURES

UNDERGRADUATE

Transfer of credit to SUNY Maritime College involves consideration of the comparability of coursework and the applicability of that coursework to a Maritime degree program. This document of transfer policies and procedures will help you transition to the undergraduate program of your choice at SUNY Maritime College.

There are two limitations on the number of transfer credits that can be awarded to a student:

The maximum number of transfer credits from all sources described in this document, whether for courses taken before arrival or while a student at SUNY Maritime College is: 90 credits for a bachelor's degree, 45 credits for an associate's degree.

All bachelor's degree students must take a minimum of 42 credits at SUNY Maritime College, at least 18 of which must be via upper-division major courses as identified by the major department; all associate's degree students must take a minimum of 30 credits at SUNY Maritime College, at least 12 of which must be via major courses as identified by the major department.

PART ONE

Sources of Transfer Credit

Transfer Credit Procedures

PART TWO

Credit Earned While in High School

- Advanced Placement
- International Baccalaureate
- College courses taken through a college

Experiential Credit

- CLEP Exams
- DANTES Exams
- Excelsior Exams
- Military Service
- Governmental and Corporate Training

PART THREE

Articulation Agreements

PART ONE

SOURCES OF TRANSFER CREDIT

SUNY Maritime College standardly evaluates and awards transfer credit for course work at post-secondary institutions that are regionally accredited. The regional accrediting agencies are:

- Middle States Association of Colleges and Schools (MSA, www.msache.org)
- Northwest Commission on Colleges and Universities (NASC, www.nwccu.org)
- New England Association of Schools and Colleges, Inc.—Commission on Institutions of Higher Education (NEASC-CIHE, www.neasc.org)
- North Central Association of Colleges and Schools (NCA, www.ncahigherlearningcommission.org)
- Southern Association of Colleges and Schools/Commission on Colleges (SAS-CC, www.sacscoc.org)
- Western Association of Schools and Colleges (WASC, <u>www.wascweb.org</u>)

Students with prior college-level course work at institutions without regional accreditation may request a meeting with the Academic Dean for an evaluation; detailed syllabi may be required in order to receive transfer credit.

SUNY Maritime College also transfers credit completed at recognized post-secondary institutions outside the United States. In most cases, foreign institutions are chartered and authorized to grant degrees by their national governments, usually through a Ministry of Education or similar ministerial body. SUNY Maritime College does not evaluate these credits. Students must have the credits evaluated by World Education Services (WES, www.wes.org) or an equivalent professional credential evaluation organization.

Credit by standardized exams is also accepted. These exams are: Advanced Placement (AP), International Baccalaureate (IB), College Level Examination Program (CLEP), DANTES Subject Standardized Tests (DSST), and Excelsior College Exams (ECE, formerly Regents Exams). Details about earning credit for these exams are found in **PART TWO** below.

Transfer credit may be awarded for work completed outside a college setting if that work has been evaluated and approved for credit by ACE. This includes credit for military service and credit from corporate and governmental trainings. The credit must have been ACE-approved at the time it was earned. If the credit recommendation states that credit may be granted on the "basis of institutional evaluation," Maritime College does not grant credit as it does not perform such evaluations of transfer credit.

Credit for courses more than ten years old may be denied based on currency issues, e.g., course content outdated, new technology considerations, student review of subject matter necessary.

TRANSFER CREDIT PROCEDURES

Transfer credit for all courses is determined by the Academic Dean and the chair of the relevant department. For Deck or Engine license courses, strict equivalency and appropriate recency must be established before transfer credit is awarded. The U.S. Coast Guard's policy is that the academy from which a student graduates is responsible for documenting completion of all program requirements in accordance with the approval granted to that academy. Therefore, students who wish to transfer certain license or STCW courses from another maritime academy must provide a transcript, training record book (if appropriate) and any other pertinent documentation to be evaluated on a case-by-case basis, to determine whether such training and education was successfully completed, and is thus transferable. The Dean of Maritime Education and Training, in consultation with the appropriate license Department Chair (or designee), will conduct a review of this information, in accordance with current U.S. Coast Guard and MARAD national and international regulations and policy, and provide a determination regarding acceptable transfer credit.

Note that transfer credits may be awarded for courses that do not meet the requirements of a student's chosen degree program. Thus, a student's transfer credits may include some that apply towards the degree and some that do not. If a student changes his/her degree program, the applicability of credits may also change.

To assure that credit will be awarded for courses taken *after* matriculation at SUNY Maritime College, students should seek *prior* approval from the appropriate department.

Transfer credit for SUNY General Education requirements:

All SUNY students must complete thirty (30) SUNY General Education credits covering a minimum of seven of ten knowledge and skills areas. Two of these seven areas are required: Basic Communication and Mathematics. Completion of the remaining credits to meet the SUNY General Education Program Requirements must be earned in at least five of the eight remaining areas: American History, Foreign Language, Humanities, Natural Sciences, Other World Civilizations, Social Sciences, The Arts, and Western Civilization. A course at one SUNY college that has been approved by SUNY Central as meeting a specific General Education requirement meets that requirement at *all* SUNY institutions. Transfer courses from non-SUNY institutions will be evaluated for General Education credits upon entry to SUNY Maritime College. At SUNY Maritime College, no single course may be used to fill more than one category.

Courses taken at other institutions are applied toward the degree program at SUNY Maritime College only after receipt of final, official transcripts from all other institutions attended.

GRADES: Grades of "C" and above are transferrable to SUNY Maritime College. Passing grades of "C-" and below will be accepted within a completed associate degree, but students may be encouraged to repeat low grades in courses that lay the foundation for success in subsequent coursework. The cumulative GPA at SUNY Maritime College includes only courses taken at Maritime College; transfer grades are not included, though they may be used to make admission and academic decisions and recommendations.

CREDITS: Credit hours awarded for transferred courses are based on the number of credits earned at Maritime College for equivalent courses. If a three-credit Calculus I course was successfully completed and transferred from another institution, Maritime College will record four credits on a student transcript, since Calculus I at Maritime College is a four-credit course. Conversely, if a four-credit Statistics course was successfully completed and transferred from another institution, Maritime will record three credits since Statistics at Maritime College is a three-credit course.

Transfer Credit Policy 04/27/17

PART TWO

CREDIT EARNED WHILE IN HIGH SCHOOL

• ADVANCED PLACEMENT EXAMINATIONS

An official score report from the College Board showing the score on any AP examination is required for credit. A table showing credits earned by AP exams and minimum required scores is found at AP Table.

• INTERNATIONAL BACCALAUREATE

Students who completed higher-level (HL) exams with scores of 4 or better may receive credit after the submission of an official report from the International Baccalaureate Organization. No credit is awarded for Standard Level Examinations. No credit is awarded for IB English language exams taken in a non-native English-speaking country or by a student whose native language is not English.

COLLEGE COURSES TAKEN THROUGH A COLLEGE

A final official transcript must be sent to SUNY Maritime College directly from the college offering courses taken while in high school. Upon receipt, transcripts will be evaluated on a course-by-course basis.

EXPERIENTIAL CREDIT

• COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

The College Board's CLEP Program makes it possible for an individual to earn college credit for learning that has taken place outside the college classroom. An official score report from the College Board showing the score on any CLEP examination is required for credit. A table showing credits earned by CLEP exams and minimum required scores is found at CLEP Table.

Note that, even if taken while a student at Maritime, CLEP exams will not meet residency requirements and may not be used to meet full-time enrollment status.

- DANTES SUBJECT STANDARDIZED TESTS (DSST) and
- EXCELSIOR COLLEGE EXAMS (ECE) (formerly Regents College Exams)

If appropriate, credit may be awarded for Dantes Subject Standardized Tests and Excelsior College Exams. The American Council on Education determines examination scores for which credit may be awarded.

• MILITARY SERVICE

Transcripts from the military service are evaluated according to recommendations in the American Council on Education's Guide to the Evaluation of Educational Experiences in the Armed Services.

The first step to claiming the credits you have earned is to request a transcript from your military service. Each service will provide unofficial personal copies and will send schools an official copy of your transcript at no charge. There are currently two systems for recording your military education and experience credits:

Army, Navy, Marine Corps, Coast Guard The Joint Services Transcript (JST) lists academic credits from military training and standardized tests. It is available to both active personnel and veterans from all Army components, Coast Guard, Marine Corps, and Navy. Information about obtaining a JST is available at https://jst.doded.mil/smart/signIn.do.

Air Force The Community College of the Air Force (CCAF) automatically captures training, experience and standardized test scores. Information about obtaining a CCAF transcript is available at http://www.airuniversity.af.mil/Barnes/CCAF/.

SUNY Maritime College's Office of Veteran and Military Affairs can assist in obtaining transcripts.

CORPORATE AND GOVERNMENTAL TRAINING

Companies and agencies may ask to have training programs evaluated by the American Council on Education. If you know your training has been evaluated, you may request an ACE transcript by visiting http://www.acenet.edu/AM/Template.cfm?Section=Trans Services1&CONTENTID=28037&TEMPLATE=/CM/ContentDisplay.cfm

PART THREE

ARTICULATION AGREEMENTS

SUNY Maritime College prides itself on being a transfer-friendly institution. Our faculty and staff work hard to make the transition from another college to SUNY Maritime College as smooth and seamless as possible. The College assures all transfer students the best possible application of their transfer credits to the degree requirements at Maritime College in order to facilitate degree completion in a timely manner.

Transfer most often takes place without articulation, with credits being awarded on a course-to-course basis as outlined above. However, to further enhance the transfer process, Maritime College has formalized transfer relationships with many community colleges in the form of dual admissions agreements, articulation agreements, or general cooperative agreements. A dual admission agreement will allow a student to simultaneously enroll in the two-year college and SUNY Maritime College. An articulation agreement matches coursework between a community college and SUNY Maritime College. A general cooperative agreement outlines the transfer policies endorsed by both institutions.

Below is a listing of institutions with which Maritime College has agreements. If you do not see your school listed, you may still transfer your coursework to SUNY Maritime College on a course-by-course basis.

Dual Admission Agreements

Monroe Community College Valley Forge Military College

Current Articulation Agreements

Atlantic Cape Community College

- A.S., Business Administration to B.S., International Transportation and Trade
- A.S., Engineering Science to B.E., Mechanical Engineering
- A.S., Environmental Science to B.S., Marine Environmental Science
- A.S., General Studies to B.S., Maritime Studies

Bergen Community College

A.S., Professional Studies, International Business to B.S., International Transportation and Trade

Bronx Community College

- A.S., Business Administration, Management Option to B.S., International Transportation and Trade
- A.S., Engineering Science to B.E., Electrical Engineering

Community College of Rhode Island

General Cooperative Agreement with all applicable programs off study

Herkimer Community College

A.S., Business Administration to B.S., International Transportation and Trade

Transfer Credit Policy 04/27/17

Jamestown Community College

A.S., Environmental Science to B.S., Marine Environmental Science

Monroe Community College

- A.S., Business Administration to B.S., International Transportation and Trade
- A.S., International Business to B.S., International Transportation and Trade

Nassau Community College

- A.S., Accounting to B.S., International Transportation and Trade
- A.S., Business Administration to B.S., International Transportation and Trade
- A.S., Liberal Arts and Science, Mathematics to B.S., Marine Environmental Science
- A.S., Liberal Arts and Science, Mathematics and Science to B.S., Marine Environmental Science
- A.S., Engineering Science to B.E., Electrical Engineering
- A.S., Engineering Science to B.E., Facilities Engineering
- A.S., Engineering Science to B.E., Mechanical Engineering
- A.S., Engineering Science to B.E., Naval Architecture

Queensborough Community College

- A.S., Engineering Science to B.E., Electrical Engineering
- A.S., Engineering Science to B.E., Facilities Engineering
- A.S., Engineering Science to B.E., Mechanical Engineering
- A.S., Engineering Science to B.E., Naval Architecture

Schenectady Community College:

A.S., Business Administration to B.S., International Transportation and Trade

Valley Forge Military College

- A.A., Business to B.S., International Transportation and Trade
- A.S., Life Sciences to B.S., Marine Environmental Science
- A.S., Physical Sciences to B.S., Marine Environmental Science

Westchester Community College:

- A.S., Engineering Science to B.E., Electrical Engineering
- A.S., Engineering Science to B.E., Facilities Engineering
- A.S., Engineering Science to B.E., Mechanical Engineering
- A.S., Engineering Science to B.E., Naval Architecture
- A.S. Liberal Arts: Math and Science to B.S., Marine Environmental Science
- A.S., Business Administration to B.S., International Transportation and Trade

Advanc	ed Placem	ent (AP) Examinations Credits Earned	
AP EXAMINATION	MINIMUM SCORE	MARITIME COLLEGE COURSE	CREDITS
Art History	3	HUMN 400 History of Art	3
Biology	5	BIO 201 & 202 General Biology I & II	4 + 4
O.	4	BIO 201 General Biology I	4
	3	GERN 000 General Education: Natural Sciences	3
Calculus AB	4	MATH 101 Calculus I	4
	3	GERM 000 General Education: Mathematics	3
Calculus BC	4	MATH 101 & 102 Calculus I & II	4 + 4
	3	GERM 000 General Education: Mathematics	3
Chemistry	5	CHEM 121 /122 & 123/124 General Chemistry + Lab &	(3+1) + (3+1)
	4	CHEM 121 /122 General Chemistry + Lab I	3 + 1
	3	GERN 000 General Education: Natural Sciences or CHEM 100	3
Chinese Language & Culture	5	CHIN 101 & 102 Mandarin I & II	3+3
	3	CHIN 101 Mandarin I	3
Computer Science A 4		CS 131 Introduction to Computer Programming	3
	3	SCI 000 Science Elective	3
Computer Science Principles	4	CS 131 Introduction to Computer Programming	3
	3	SCI 000 Science Elective	
English Language	3	ENGL 101 Freshman English I	
English Literature	3	ENGL 101 Freshman English I	
English Language AND			
English Literature	3 on each	ENGL 101 & 102 Freshman English I & II	
Environmental Science	4	ES 101 Introduction to Environmental Science	3
	3	GERN 000 General Education: Natural Sciences	3
European History	3	GERW 000 General Education: Western Civilization	
French Language & Culture	5	2 GERF 000 General Education: Foreign Language	
	3	GERF 000 General Education: Foreign Language	
German Language & Culture	5	2 GERF 000 General Education: Foreign Language	
	3	GERF 000 General Education: Foreign Language	3
Government & Politics Comp	3	GERO 000 General Education: Other World Civilizations	3
Government & Politics US	3	GERH 000 General Education: American History	3
		or GERS 000 General Education: Social Sciences	

Advanced Placement (AP) Examinations Credits Earned (cont.)				
AP EXAMINATION	MINIMUM SCORE	MARITIME COLLEGE COURSE	CREDITS	
Human Geography	3	GERO 000 General Education: Other World Civilizations	3	
Italian Language & Culture	5	2 GERF 000 General Education: Foreign Language	3 + 3	
	3	GERF 000 General Education: Foreign Language	3	
Japanese Language & Culture	5	2 GERF 000 General Education: Foreign Language	3 + 3	
	3	GERF 000 General Education: Foreign Language	3	
Latin	5	2 GERF 000 General Education: Foreign Language	3 + 3	
	3	GERF 000 General Education: Foreign Language	3	
Macroeconomics	3	GBEC 121 Macroeconomics	3	
Microeconomics	3	GBEC 122 Microeconomics	3	
Music Theory	3	GERA 000 General Education: The Arts	3	
Physics 1	4	PHYS 211 & 213 General Physics I & Lab	3 + 0.5	
	3	GERN 000 General Education: Natural Sciences	3	
Physics 2	4	PHYS 214 & 216 General Physics I & Lab	4 + 0.5	
	3	GERN 000 General Education: Natural Sciences	3	
Physics B 4 3		PHYS 211 & 213 General Physics I & Lab	3 + 0.5	
		GERN 000 General Education: Natural Sciences	3	
Physics C: Mechanics 4 PHYS 102 & :		PHYS 102 & 104 Engineering Physics I & Lab	4 + 0.5	
	3	GERN 000 General Education: Natural Sciences	3	
Physics C: Electricity&Magnetism	4	PHYS 201 & 203 Engineering Physics II & Lab	4 + 0.5	
	3	GERN 000 General Education: Natural Sciences	3	
Psychology	3	GERS 000 General Education: Social Sciences	3	
Spanish Language & Culture	5	SPAN 101 & 102 Spanish I & II	3 + 3	
	3	SPAN 101	3	
Spanish Literature & Culture	3	GERU 000 General Education: Humanities	3	
Statistics	4	MATH 251 Statistics	3	
	3	GERM 000 General Education: Mathematics	3	
Studio Art	3	HUMN 401 Studio Drawing and Painting	3	
U. S. History	5	HIST 101 & 102 American Civilization I & II	3 + 3	
-	3	HIST 101 American Civilization I	3	
World History	3	GERO 000 General Education: Other World Civilizations	3	

College Level Examination Program (CLEP) Examinations Credits Earned				
CLEP EXAMINATION	MINIMUM SCORE	MARITIME COLLEGE COURSE	CREDITS	
American Government	60	GERH 000 General Education: American History	3	
		or GERS 000 General Education: Social Sciences		
American Literature	50	Humanities elective	3	
Introductory Business Law	50	GBLW 431 Business Law	3	
Calculus	50	MATH 101 Calculus I	4	
Chemistry	50	CHEM 121 General Chemistry I	3	
English Literature	50	Humanities elective	3	
Financial Accounting	50	GBAC 311 Financial Accounting	3	
French Language	60	2 GERF 000 General Education: Foreign Language	3+3	
	50	GERF 000 General Education: Foreign Language	3	
German Language 60 2 GERF 000 General Education: For		2 GERF 000 General Education: Foreign Language	3+3	
	50	GERF 000 General Education: Foreign Language	3	
Principles of Macroeconomics	50	GBEC 121 Macroeconomics		
Principles of Management	50	GBMG 341 Organizational Management	3	
Principles of Marketing	50	GBMG 345 Fundamentals of Marketing	3	
Principles of Microeconomics	50	GBEC 122 Microeconomics	3	
Precalculus	50	MATH 090 Introduction to College Mathematics	4	
Introductory Psychology	50	Liberal Arts & Sciences elective	3	
Introductory Sociology	50	Liberal Arts & Sciences elective	3	
Spanish Language	60	SPAN 101 & 102 Spanish I & II		
	50	SPAN 101 Spanish 101	3	
History of the United States I	60	HIST 101 American Civilization I	3	
History of the United States II	60	HIST 102 American Civilization II	3	
Western Civilization I	50	Humanities or International Studies elective	3	
Western Civilization II	50	Humanities or International Studies elective	3	

Note: If a CLEP exam is not listed in the above table, then it is not accepted for transfer credit.



OFFICE of the REGISTRAR

TRANSFER CREDIT POLICIES AND PROCEDURES

GRADUATE

Transfer of credit to SUNY Maritime College involves consideration of comparability of coursework and applicability of that coursework to a Maritime graduate degree program. This document of transfer policies and procedures will help you transition to the program of your choice at SUNY Maritime College.

The maximum number of transfer credits awarded towards a graduate degree, whether for courses taken before arrival or while a student at SUNY Maritime College, is 9 credits.

- Graduate courses completed before entering graduate study at Maritime College for which transfer credit is desired should, upon admission, be presented for consideration to the Dean of Graduate Studies.
- 2. Candidates in graduate programs at Maritime College are required to receive the approval of their Department Chair or Graduate Program Coordinator before registering for graduate courses at other colleges if they plan to present them for transfer credit.
- 3. Graduate courses presented must be appropriate to the student's graduate program.
- 4. Graduate courses presented must have been given by an institution authorized to grant graduate degrees.
- 5. Graduate courses presented for transfer credit completed while the student was in undergraduate status shall be eligible for transfer.
- 6. Graduate courses presented must be completed with grades of B or better.
- 7. Unless submitted as part of the application for program admission, an official transcript of the student's record in the graduate course(s) presented for transfer credit should be sent to the Office of the Registrar.
- 8. An official description of the graduate course(s) should accompany the request for transfer credit.
- 9. Graduate courses accepted for transfer credit are not used in computing the student's academic average.
- 10. Credit for courses more than five years old may be denied based on currency issues, e.g., course content outdated, new technology considerations, student review of subject matter necessary.

State University of New York Maritime College Transfer Credit Appeal Application

Name:	Date:
Address:	ID #
Telephone:E-mail	:
	ARITIMECOLLEGE SUNYMARITIMECOLLEGE
	•
Transfer Course in Question: (one course p	er form):
Number of credits:	
Rationale for request:	
Student Signature:	
completed. Other relevant supporting mate submitted but are not required.	the catalog description from the year the course was rials (syllabus, textbook titles, projects completed) may be ARITIMECOLLEGE SUNYMARITIMECOLLEGE
Submit this form to:	
Academic Dean c/o Enrollment Services Registrar Baylis Hall Fax: 718-409-7264	
The campus has 10 business days in which	
Please indicate how you would like to rece	ive correspondences: Telephone E-mail

2016-17 Tuition and Fees

	2016-17 Tuition and F	-ees			
ESCRIPTION	PERIOD	FALL 2016	SPRING 2017	SUMMER 2017	TOTAL 2016-2017
UNDERGRADUATE					
TUITION-IN STATE UNDERGRAD F/T*	SEMESTER PER CREDIT	\$ 3,235.00 \$ 270.00	\$ 3,235.00 \$ 270.00	\$ \$ 270.00	6,470.00
TUITION-IN REGION RETURNING UNDERGRAD F/T**	SEMESTER	\$ 4,045.00	\$ 4,045.00	\$ 270.00	8,090.00
	PER CREDIT	\$ 337.00	\$ 337.00	\$ 337.00	-,
TUITION-IN REGION NEW UNDERGRAD F/T*** ****	SEMESTER	\$ 4,855.00	\$ 4,855.00	\$	9,710.00
THITION OUT OF REGIONALINDERSONAD EX	PER CREDIT	\$ 405.00	\$ 405.00	\$ 405.00	40,000,00
TUITION-OUT OF REGION UNDERGRAD F/T	SEMESTER PER CREDIT	\$ 8,160.00 \$ 680.00	\$ 8,160.00 \$ 680.00	\$ \$ 680.00	16,320.00
GRADUATE	TER GREET	φ 000.00	Ψ 000.00	Ψ 000.00	
TUITION-IN STATE GRAD F/T*	SEMESTER	\$ 5,435.00	\$ 5,435.00	\$	10,870.00
TUTION IN DECICULART INVITED OF AR FITTE	PER CREDIT	\$ 453.00	\$ 453.00	\$ 453.00	
TUITION-IN REGION RETURNING GRAD F/T**	SEMESTER PER CREDIT	\$ 6,795.00 \$ 566.00	\$ 6,795.00 \$ 566.00	\$ \$ 566.00	13,590.00
TUITION-IN REGION NEW GRAD F/T*** ****	SEMESTER	\$ 8,155.00	\$ 8,155.00	\$ 500.00	16,310.00
	PER CREDIT	\$ 680.00	\$ 680.00	\$ 680.00	,
TUITION-OUT OF REGION GRAD F/T	SEMESTER	\$ 11,105.00	\$ 11,105.00	\$	22,210.00
	PER CREDIT	\$ 925.00	\$ 925.00	\$ 925.00	
ROOM-DOUBLE	SEMESTER	\$ 3,857.00	\$ 3,857.00	\$	7,714.00
ROOM-TRIPLE	SEMESTER	\$ 3,075.00	\$ 3,075.00	\$	6,150.00
ROOM-QUAD	SEMESTER	\$ 2,456.00	\$ 2,456.00	\$	4,912.00
ROOM-SUMMER PER SEMESTER	SUM. SEM.			\$1,094.00 \$	1,094.00
MEAL PLAN A-RESIDENTIAL STUDENTS	SEMESTER	\$ 2,117.00	\$ 2,117.00	\$	4.234.00
MEAL PLAN B-RESIDENTIAL STUDENTS	SEMESTER	\$ 1,937.00	\$ 1,937.00	\$,
MEAL PLAN C-COMMUTER STUDENTS	SEMESTER	\$ 886.00	\$ 886.00	\$	1,772.00
MEAL PLAN D-COMMUTER STUDENTS	SEMESTER	\$ 570.00	\$ 570.00	\$	1,140.00
DOMESTIC HEALTH INSURANCE (ANNUAL)	ANNUAL	\$ 1,167.00		\$	1,167.00
DOMESTIC HEALTH INSURANCE (ANNUAL) DOMESTIC HEALTH INSURANCE (SPRING ENTRANCE)	SPRING	ψ 1,107.00	\$ 659.00	\$	659.00
HEALTH INSURANCE- FOREIGN STUDENTS PENDING	FALL	\$ 542.50	*	\$	542.50
HEALTH INSURANCE- FOREIGN STUDENTS PENDING	SPRING/SUMMER		\$ 759.50	\$	759.50
UNDERGRADUATE FEES					
COLLEGE FEE	SEMESTER	\$ 12.50	\$ 12.50	\$	25.00
HEALTH FEE	SEMESTER	\$ 125.00	\$ 125.00	\$	250.00
STUDENT ACTIVITY FEE	SEMESTER	\$ 92.00	\$ 92.00	\$	184.00
ATHLETIC FEE	SEMESTER	\$ 233.50	\$ 233.50	\$	467.00
WELLNESS FEE TECHNOLOGY FEE	SEMESTER SEMESTER	\$ 12.50 \$ 206.50	\$ 12.50 \$ 206.50	\$ \$	25.00 413.00
TOTAL UNDERGRADUATE FEES	SEINESTER	\$ 682.00	\$ 682.00	<u>-</u> \$	
	PER CREDIT	\$ 56.64	\$ 56.64	\$ 0.85 \$	
GRADUATE FEES					
COLLEGE FEE	SEMESTER	\$ 12.50	\$ 12.50	\$	25.00
WELLNESS FEE	SEMESTER	\$ 12.50	\$ 12.50	\$	
TECHNOLOGY FEE	SEMESTER	\$ 206.50	\$ 206.50	<u>\$</u>	413.00
TOTAL GRADUATE FEES	DED ODEDIT	\$ 231.50	\$ 231.50	\$ 0.05 \$	463.00
REGIMENT FEES	PER CREDIT	\$ 19.10	\$ 19.10	\$ 0.85 \$	38.58
BARBER FEE - Male Only	SEMESTER	\$ 45.00	\$ 45.00	\$	90.00
DRUG TESTING FEE	SEMESTER	\$ 30.00	\$ 30.00	\$	60.00
INDOCTRINATION FFFC FALL NON BESTINGARY					
INDOCTRINATION FEES - FALL - NON REFUNDABLE FALL INDOC ROOM (SHIP)	ONE TIME	\$ 406.00		\$	406.00
FALL INDOC MEAL	ONE TIME	\$ 461.00		\$ \$	461.00
FALL INDOC INSURANCE	ONE TIME	\$ 40.00		\$	40.00
FALL INDOC BARBER (Male Only)	ONE TIME	\$ 20.00		_\$	20.00
TOTAL INDOC FEES		\$ 927.00		\$	927.00
ORIENTATION FEE- NON REFUNDABLE					
ORIENTATION FEE- All Undergraduate Students	ONE TIME	\$ 175.00		\$	175.00
ORIENTATION FEE- All Civilian Undergraduate Students	ONE TIME		\$ 40.00	\$	
MISCELLANEOUS CHARGES LATE PAYMENT FEE	PER OCCURRENCE			\$	30 - 50
LATE REGISTRATION FEE	I ER OCCORRENCE			\$	
ID CARD REPLACEMENT FEE				\$	
RETURNED CHECK FEE				\$	
ADD/DROP COURSE FEE TRANSCRIPT FEE				\$ \$	
PARKING FINE				\$	
				\$	
PARKING BOOT REMOVAL FEE				\$	200.00
TOWING CHARGES					
TOWING CHARGES PARKING PASS RESIDENT	ANNUAL			\$	
TOWING CHARGES PARKING PASS RESIDENT PARKING PASS COMMUTER	ANNUAL ANNUAL			\$	80.00
TOWING CHARGES PARKING PASS RESIDENT PARKING PASS COMMUTER ROOM KEY REPLACEMENT				\$	80.00 150.00
TOWING CHARGES PARKING PASS RESIDENT PARKING PASS COMMUTER				\$	80.00 150.00 25.00
TOWING CHARGES PARKING PASS RESIDENT PARKING PASS COMMUTER ROOM KEY REPLACEMENT DIPLOMAS				\$ \$ \$	80.00 150.00 25.00 50.00 10.00

2016-17 Tuition and Fees

ESCRIPTION	PERIOD	FALL	SPRING	SUMMER	TC	OTAL
LAB/COURSE FEES	COURSE NUMBER				AMOUN	١T
GENERAL BIOLOGY	BIO 201 L				\$	30
GENEREAL BIOLOGY II	BIO 202 L				\$	30
INVERTEBRATE ZOOLOGY	BIO 320 L				\$	30
ECOTOXICOLOGY	BIO 420 L				\$	30
20010/1002001	5.0 .20 2				•	•
GENERAL CHEMISTRY I LABORATORY	CHEM 122				\$	30
GENERAL CHEMISTRY II LABORATORY	CHEM 124				\$	30
ORGANIC CHEMISTRY LABORATORY	CHEM 222				\$	30
ono and one month a bottation.	0.12.11.222				•	•
COMPUTER LABORATORY	CS 101				\$	30
INTRODUCTION TO ENVIRONMENTAL SCIENCE	ES 101 L				\$	3
REMOTE SENSING	ES 305 L				\$	2
FIELD METHODS IN ENVIRONMENTAL SCIENCE	ES 451 L				\$	3
ENGINEERING GRAPHICS	ENGR 100				\$	1
STRENGTH OF MATERIALS LAB	ENGR 348				\$	5
TRANSPORT PROCESSES LABORATORY	ENGR 349				\$	5
MARINE ENGINEERING DESIGN I	ENGR 354 L				\$	3
LECTRICAL ENGINEERING II	ENGR 380 L				\$	3
ELECTRONICS II	ENGR 388 L				\$	3
COMPUTERIZED CONTROL SYSTEMS	ENGR 428 L				\$	3
MARINE ENGINEERING DESIGN III	ENGR 450 L				\$	3
					\$ \$	
DIGITAL CONTROLS	ENGR 452 L				-	3
POWER BOAT PRINCIPLES AND DESIGN	ENGR 476 L				\$	3
LECTRICAL DESIGN II	ENGR 489 L				\$	3
MANUFACTURING PROCESSES I	ENGR 503 L				\$	5
MANUFACTURING PROCESSES II	ENGR 504 L				\$	5
NTRODUCTION TO SHIP SYSTEMS	ENGR 540 L				\$	3
DDE II (DESIGNATED DUTY ENGINEER)	ENGR 562 L				\$	3
ROPICAL CYCLONES	METE 402 L				\$	2
EATHER FORECASTING	METE 422 L				\$	2
METEOROLOGY FOR MARINERS	METE 201 L				\$	1
SYNOPTIC METEOROLOGY	METE 350 L				\$	2
MARINE CLIMATOLOGY	METE 411 L				\$	3
MARINE CARGO OPERATIONS	MT 322 L				\$	5
MARITIME COMMUNICATIONS LAB	MT 426 L				\$	5
MARITIME COMMUNICATIONS (FCC LICENSE FEE)	MT 426 L				\$	3
					_	_
NTRODUCTION TO VESSEL OPERATION AND SEAMANSHIP	NAUT 102				\$;
IAUTICAL OPERATIONS: SAFETY	NAUT 308				\$	
NAUTICAL OPERATIONS: SAFETY - ADVANCED FIRE FIGHTING	NAUT 308				\$	16
COLLISION AVOIDANCE	NAUT 315				\$	5
BRIDGE RESOURCE MANAGEMENT (UNLIMITED LICENSE)	NAUT 416 L				\$	
PILOTING & SHIP HANDLING	NAUT 420				\$	
AST RESCUE BOAT OPERATIONS & SMALL BOAT HANDLING	NAUT 476				\$	
ELECTRONIC NAVIGATION AND VOYAGE PLANNING	NAVG 312				\$;
MARINE BIOGEOCHEMISTRY LAB	OCEA 416				\$;
GENERAL OCEANOGRAPHY LAB	OCEA 102				\$;
SAILING (CERTIFICATION US SAILING BASIC KEELBOAT)	PE 219				\$	7
SAFE POWERBOAT HANDLING (SAFETY CERTIFICATION)	PE 220				\$	7
AYAKING	PE 260				\$	1
VATER SAFETY AND SURVIVAL FOR MARINERS	PS 103				\$	1
ENGINEERING PHYSICS I	PHYS 104				\$	1
NGINEERING PHYSICS LAB	PHYS 202				\$	3
ENGINEERING PHYSICS II	PHYS 203				\$	1
GENERAL PHYSICS I LAB	PHYS 213				\$	1
GENERAL PHYSICS II LAB	PHYS 216				\$	1
STCW BASIC TRAINING	PS 112 L				\$,
					\$	16
STOW BASIC TRAINING - BASIC FIRE FIGHTING						
	PS 112 L PS 120				\$	7
STCW BASIC TRAINING - BASIC FIRE FIGHTING PRIMER OF TOWING BRIDGE RESOURCE MANAGEMENT (LIMITED LICENSE)	PS 112 L PS 120 PS 414				\$ \$	

^{*} In State rates apply to eligible veterans and their dependents.

** Students who started at Maritime prior to Fall 2010.

*** Students who started at Maritime in the Fall of 2010 and after.

***In Region rates apply to students whose residency is in Alabama, Connecticut, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Penns Phodo Island, South Carolina, Virginia and Washington, DC Rhode Island, South Carolina, Virginia and Washington, DC.

Tuition, Fees, and Refund Policies

Health Insurance

All full-time undergraduate students must carry comprehensive health insurance. SUNY Maritime offers insurance to our students through CHP Student Health Plans. The annual insurance fee will be included in the Fall Semester tuition bill provided you are registered for at least 12 credits. (If you are currently registered for less than 12 credits, the insurance will not be billed until reaching full time status.)

Meal Plans

All Resident Students are assigned Meal Plan A (19 swipes/week) by default. Students may select Meal Plan B (14 swipes/week) by submitting the Resident Meal Plan Selection form found below. Commuter students have the option of purchasing any meal plan.

Mandatory for Resident Students

- Meal Plan A \$2,117.00 19 swipes a week, including weekends all locations
- Meal Plan B \$1,937.00 14 swipes a week, weekdays only all locations

Only Available for Purchase by Commuter Students

- Meal Plan C \$886.00 8 swipes per week from 6:30am until 8pm in any location
- Meal Plan D \$570.00 5 swipes per week from 6:30am until 8pm in any location

New York State Residency

If you are charged tuition at the out-of-state rate and believe you are eligible for in-state tuition rates, you will need to apply for New York State Residency for Tuition Billing Purposes. The application is available on the Student Accounts page of the Maritime website. The fall semester application deadline is October 1, and the spring semester deadline is March 1.

Completing the Application

- If you are you financially independent (emancipated) and no longer receive any financial support from your parents or legal guardians, complete Sections A and B of the application.
- If you receive financial support from your parents, legal guardians, or spouse, complete Sections A and C of the application.

Signing the Application

Applications must be signed before a Notary Public by anyone whose personal information appears on the application. All students must sign the attestation on page 2; all parents, legal guardians, or spouses must sign the attestation on page 3.

Providing Documentation

A minimum of three (3) documents from the list below must be submitted. Documents must bear issue dates of one year or more prior to the start date of the semester, term or module for which you are applying for residency. Students claiming financial independence must provide evidence of both financial independence as well as a New York State domicile (see Column 1, Independent Student). Students who are financially dependent upon parents or legal guardians must submit supporting documents in the name of the parent/guardian (see Column 2, Dependent Student). The definition of domicile is a fixed, permanent home for legal purposes to which a person returns after a period of absence.

Acceptable Document Type	Independent Student (Application Sections A & B)	Dependent Student (Application Sections A & C)
Alien Registration Card or Visa (Non-U.S.	,	,
Citizens only) Permanent Residents, Refugees		
and Asylees, including those with pending		
applications, certain visa holders** and some		
undocumented aliens may establish NYS	Student	Student and Parent
residency in accordance with these policies.		
**A1-A3, E1, E2, G1-G5, H1B, H1C, H4, I,		
K1-K4, L1, L2, N8, N9, O1, O3, S5-S7, T1-		
T4, U1-U4, and V1-V3.		
The following documents may be used as evid	ence of domicile:	
NYS Driver License NYS Learner Permit NYS	Student	Student and Parent
Identification Card	Student	Parent/Guardian
NYS Vehicle Registration		Parent/Guardian
NYS Voter Registration Signed NYS Residential Lease, Deed, or	Student	raieni/Guardian
Property Taxes	Student	Parent/Guardian
Utility Bill, e.g.:		
Electric/Gas/Heating/Water/Sewer/Cable		
(Currently held account: one current statement	Student	Parent/Guardian
and one issued 12 months prior to the start of	Student	Tarent/Guardian
the semester.)		
The following documents may be used to dem	onstrate financial indepen	dence, and in some cases.
domicile*:		
*Signed NYS and Federal Income Tax Returns	Ctord and	Donant/Crondian
(From prior year.)	Student	Parent/Guardian
* NYS Bank Account (Currently held account:		
one current statement and one issued 12	Student	Parent/Guardian
months prior to the start of the semester.)		
TA/RA/GA departmental offer letter with	Student	N/A
signatures		
Form 1099; Form W-2; Trust Documents, etc.	Student	N/A
Exceptions to Domicile Rule:		
Military Home of Record – Form DD-4		
(Dependents and spouses of Full-Time Active	N/A	Parent/Guardian
Members of the U.S. Armed Forces stationed	1,712	
out-of-state, whose Home of Record is NYS.)		
Active Duty Military Orders (Members of U.S.		
Armed Forces on Full-Time Active Duty and	Student	Parent/Guardian
stationed in NYS, and their spouse and		
dependents.) Official/Final High School Transcript w/award		
	Student	N/A
of degree. Affidavit of Intent to Legalize Immigration		
Status	Student	Student
*Documents must support the claim to have r	esided in New York State	for at least 12 consecutive
months prior to the beginning of the semester		ioi at icast 12 consecutive
months prior to the beginning of the semester	от аррисанон.	

Past Due Accounts

The following events will occur if a student account becomes late or delinquent.

Holds

The Students Account office places a "hold" on student accounts that have an outstanding balance. The hold prevents the student from accessing their grades on-line, registering for the subsequent semesters and obtaining a transcript/diploma. Students can view holds on their account through the internet. When payment is received the hold will be removed.

Late Payment Charge

A late payment charge is placed on the student's account when payment is not received by the specified payment due date.

Attorney General

Delinquent accounts over 120 days are transferred to the Office of the Attorney General. The college will send a minimum of three notices of payment requests to the student prior to the release of the account to the Attorney General Office. Once the account is with the Attorney General Office (AG), all payments and correspondences must be addressed to the Office of the Attorney General.

Refund Schedules

Fall or Spring – Full Semester

1 0			
Withdrawal During:	Refund Percent:		
1 st Week	100%		
2 nd Week	70%		
3 rd Week	50%		
4 th Week	30%		
5 th Week	0%		

Fall or Spring - Online 8-Week Session I or II

Withdrawal During:	Refund Percent:
1 st Week	100%
2 nd Week	40%
3 rd Week	20%
4 th Week	0%

Summer Ashore Graduate I or II

Withdrawal During:	Refund Percent:
1 st Week	100%
2 nd Week	40%
3 rd Week	20%
4 th Week	0%

Summer Ashore Undergraduate I or II

Withdrawal During:	Refund Percent:
1 st Week	100%
2 nd Week	25%
3 rd Week	0%

Financial Aid

The Office of Financial Aid is open year round to assist students and their families in identifying scholarship and other financing options for educational costs. The office provides information about financial aid programs available through SUNY Maritime and the federal/state governments, as well as various financing options including external student loans, scholarships, and parent loan programs.

In most cases, to receive financial aid, students must demonstrate financial need. Financial need is the difference between the total cost of attendance and the amount that a student and or family can reasonably be expected to contribute as determined by Federal guidelines using the Free Application for Federal Student Aid (FAFSA). Financial aid awards are "packaged" to meet the needs of the recipient within the framework of the funds available and may include:

- Scholarships and grants such as New York State Tuition Assistance Program (<u>TAP</u>) and SUNY Tuition Credit or Federal Pell Grants, which do not have to be repaid;
- Federal Direct Loans which must be repaid to Department of Education, and Federal Work-Study, which requires that the student work for monies awarded.

Applicant Eligibility

To be considered for financial aid at SUNY Maritime, an applicant must:

- Be accepted for admission to the college
- Be enrolled in an eligible program of study
- Be a US citizen or permanent resident of the United States.
- Have completed the annual FAFSA application
- Have completed the annual <u>TAP</u> application (for Undergraduate New York Residents)
- Not be in default on a federal student loan.
- Not owe a refund on a federal grant.
- Demonstrate financial need. (Financial Need = Cost of Attendance minus Expected Family Contribution)
- Students must re-apply for financial assistance every year by completing the requirements stated above. The award does not continue automatically beyond award period.
- Meet the requirements of the Satisfactory Academic Progress (SAP) Policy.

Application and Procedures

SUNY Maritime College requires students to file their FAFSA application electronically at www.fafsa.ed.gov (school code **002853**). Filing the FAFSA also initiates the TAP application process for undergraduate New York residents. The TAP application may be completed electronically at www.tapweb.org (school code **0955**). These applications must be filed/renewed on an annual basis. The financial aid year at the College covers the summer, fall, and spring semesters – in that order. Therefore, the summer semester is the first semester in the financial aid year.

It is not necessary to file federal income tax return(s) prior to filing for financial aid. Income information required to apply for financial aid is based on the prior tax year information so there is minimal delay in processing financial aid awards.

The staff is available to assist in completing applications and to explain eligibility criteria for the various programs. Note: invoices include approved financial aid awards, which are deducted from the balance due. Students will periodically receive electronic notice of the status of their financial aid file, award, and student bill via their College email account and/or Self-Service account.

Academic Departments and Contact Information

Academic Dean

Dr. Gilbert Traub, Academic Dean & Professor of Mathematics

gtraub@sunymaritime.edu

Phone 718-409-7385 Science and Engineering Building, 2nd Floor 2-12

The Academic Dean manages the ongoing academic operations at Maritime College. His tasks include: supervision of the Registrar's Office, evaluation of transfer credits and registration for new transfer students, and **maintenance of degree curricula and course descriptions published on our website.** Students are always welcome to bring their questions/problems about any of these matters directly to him.

Engineering Department

Dr. Carl Delo, Chair

cdelo@sunymaritime.edu

Andrew Turtora, Vice Chair

aturtora@sunymaritime.edu

Administrative Assistant: Mrs. Deborah Fountain-Toomer

Phone: 718-409-7411, Science and Engineering Building, 2nd Floor 2-35

The Engineering Department oversees all of the engineering degree programs, as well as the USCG engine license program. Degree areas include the B.Engr. in Electrical Engineering, Facilities Engineering, Marine Engineering, Mechanical Engineering, and Naval Architecture.

Global Business and Transportation (GBAT)

Robert Edmonds, Chair

redmonds@sunymaritime.edu

Administrative Assistant, Nina Timonina

Phone 718-409-7285, MAC 221

The GBAT Department oversees the MS degree program in International Transportation Management (ITM) and the BS degree program in International Transportation and Trade (ITT). The ITT program offers a minor in Intermodal and Maritime Security. The ITM program offers a Certificate in Supply Chain Management and a Certificate in Chartering (jointly offered by Maritime College and the Association of Ship Brokers and Agents). The department teaches courses in the following six themes; economics, law, transportation and operations management, logistics and supply chain, risk and security, and organization and control systems.

Humanities

Dr. Karen E. Markoe, Chair

kmarkoe@sunymaritime.edu

Administrative Assistant, Ms. Sandra Hunt

Phone: 718-409-7247, Fort (West side), 2nd Floor, Office directly above the Sallyport

The Humanities Department oversees the BS degree programs in Marine Business and Commerce and Maritime Studies, the former a deck license program, the latter, an intern program. Incoming students can major in Maritime Studies with a deck license, or Maritime Studies internship option. The department teaches courses in composition and literature, technical writing, history, foreign languages and the humanities, including film, art and music.

Marine Transportation (MT)

Anthony Palmiotti, Chair

apalmiotti@sunymaritime.edu

Administrative Assistant, Ms. Wanda Weeks

Phone: 718-409-7286, Fort (South side), 1st Floor,

The MT Department oversees the BS degree programs. The department teaches courses in marine transportation, nautical science, navigation.

Naval Science and NROTC Program

US Navy Captain Heedong Choi CO.NROTC@sunymaritime.edu

Phone: 718-409-7212, S & E Building, 1st Floor, Naval Science Wing

The Naval Science Department oversees all of the Naval Science courses offered at the College, as well as commissioning programs for the US Navy and US Marine Corps.

Professional Education and Training (PET)

Capt. Ernest J. Fink, USCG (Ret.), Dean Maritime Education & Training

efink@sunymaritime.edu

Administrative Assistant, Margaret Poppiti

Phone: 718-409-5988, Fort, L-202

The PET Department is an academic department that offers common courses to both deck and engine license students. The department also administers the college's two Associate Degree Programs and U.S. Coast Guard approved programs for a limited deck or limited engine license, and offers an array of U.S. Coast Guard approved training courses to professional mariners.

Science

Dr. Kathy Olszewski, Chair

kolszewski@sunymaritime.edu

Administrative Assistant, Ms. Theadorsia G. Yeadon

Phone: 718-409-7365, Science and Engineering Building, 2nd Floor, SCI 2-32

The Science Department oversees the BS in Marine Environmental Science (MES) degree program and the two minors offered within the MES program: Marine Biology and Meteorology & Oceanography. A minor in Environmental Science is available to students with other majors. The department teaches courses in the mathematical and physical sciences such as biology, chemistry, computer science, environmental science, geology, mathematics, meteorology, oceanography, and physics.

Academic Policies and Procedures

Academic Advising

Each student is assigned a Freshman Advisor upon entering Maritime College through the LEAD 101 program. At the beginning of the second semester freshman year, students are assigned a faculty advisor from their major department. (Note: transfer students typically work with the Academic Dean upon entering Maritime College). Advisors assist students in exploring academic and professional opportunities offered at Maritime and guide students in making appropriate decisions about their area of study.

Students should see their advisor to:

- Address any problems which affect academic performance
- Select courses for the upcoming semester
- Discuss academic performance
- Explore academic or professional concerns
- Discuss departmental requirements and course sequences
- Discuss elective coursework in the major and other departments.

Academic Board

The Academic Board consists of the Vice President for Academic Affairs, the chairs of the academic departments, Commandant of Cadets, the Librarian, two members elected by the faculty and four non-voting members: the Registrar, the Dean of Student Affairs, the Dean of Admissions, and the Academic Dean. The board normally meets at the end of the fall and the spring semesters to determine academic status.

Academic Distress and Sanctions Policy - Undergraduate

Each semester, undergraduate students with a (semester and/or cumulative) GPA below the required graduation GPA (2.0) are reviewed for academic progress.

Any student with a cumulative GPA below 2.0 shall be considered "not in good academic standing." Students under this designation are ineligible to participate in intercollegiate athletics, club sports or the student worker program.

Any student with a term GPA (Fall or Spring semester) below 2.0 shall be placed on "Academic Probation." This sanction is noted on the transcript. A student on academic probation is required to meet with his/her academic advisor to choose appropriate courses in which to enroll.

Students who are placed on Academic Probation while "not in good standing" shall be allowed to take no more than 15 credits, and shall be encouraged to retake courses in which they earned a grade of D, F, or W.

Three consecutive terms on Academic Probation—or four terms aggregate during one's tenure at Maritime College—shall lead to Academic Disenrollment. Students whose cumulative GPA at the conclusion of their second semester at Maritime College is under 1.0 shall be **disenrolled**.

Students may appeal Academic Disenrollment to the Academic Board. Students may not appeal placement on Academic Probation, nor may they appeal "not in good standing."

Academic Distress and Sanctions Policy - Graduate

Each semester, graduate students with a (semester and/or cumulative) GPA below the required graduation GPA (3.0) are presented to the Academic Board for consideration and may be disenrolled for at least one year.

Academic Integrity

In keeping with the spirit and mission of the Maritime College, academic integrity and honesty are expected of all students. <u>Breaches of academic integrity will not be tolerated</u>. This includes but is not limited to, cheating, plagiarism, and receiving unauthorized assistance on assignments. Instructors will determine the course of disciplinary action to be taken in the case of breaches of academic integrity associated with classroom work.

The Academic Integrity Policy, as determined by the Faculty, can be found at http://www.sunymaritime.edu/sites/default/files/media/Documents/AcademicIntegrityPolicy.pdf

and in the Student Code of Conduct. Penalties may include failure of an assignment, failure of a course, or disenrollment from the College.

Accommodation Services

Maritime College values access, inclusion and works to ensure full participation. To discuss barriers you may reach the Associate Dean of Students.

Students with a documented disability and seeking to utilize services must self-disclose to the Interim Dean of Student Affairs. All accommodations are assessed and provided on an individual basis and must be grounded in documentation submitted by or on behalf of the student. While students can request a particular type of accommodation SUNY Maritime College determines and develop plans for reasonable accommodations such as academic adjustments, auxiliary aids, and/or services as mandated under Title II of the Americans with Disabilities Act, Amendments Act (ADAAA) of 2008 and Section 504 of the Rehabilitation Act of 1973.

Alternative accommodations may be offered above those requested by the student. Accommodations may be denied if the request is not reasonably grounded in documentation or the resulting accommodation has the effect of lowering academic standards of a course or program, or presents an undue financial or administrative burden to the College. All student disability information is confidential.

Students must meet and register with Accommodation Services in each semester they wish to receive services. Once approved for accommodations, the student is responsible for notifying professors for the courses in which they desire to receive accommodations. Students who do not register with Accommodations Services in a given semester will not be entitled to accommodations for that term, even if they had registered previously. Accommodations related to a disability cannot be implemented or considered retroactively.

Accommodations will be made during the academic year for KUP's (knowledge, understanding, and proficiency) tested as part of a written exam. No accommodations will be made for practical assessments outlined in the STCW guidelines. There are some courses which have Standards of Training, Certifications and Watch-standing for Seafarers, 1978, as amended (STCW) components which measure safety and involve the demonstration of various competencies through practical assessments. Special

accommodations are not allowed during these safeties related practical assessments, as safety at sea is an important tenet of the merchant marine professional and to the maritime transportation industry.

Any student who is seeking special accommodations and plans to enroll in a degree program which requires the passing of the United States Coast Guard license examination should know that at this time, there are NO special accommodations provided when taking the U.S. Coast Guard exam. All students pursuing a U.S. Coast Guard license are also required to take course(s) commonly referred to as "seminar." The seminar course(s) are designed to reflect the testing conditions of the U.S. Coast Guard license examination.

All students participating in Summer Sea Term, (SST) should know that SST is considered a training laboratory, and special accommodations are not provided when safety and required practical assessments are being evaluated at sea. Accommodations may be granted for academic work only.

Administrative Disenrollment

Administrative Disenrollment refers to a student who ceases to attend school for a semester without having officially withdrawn or filed for a Leave of Absence. Notation of Administrative Disenrollment will appear on the student's transcript. Students who wish to return after being Administratively Disenrolled will need to apply for readmission. For information on the procedure for Readmission, please refer to the section entitled "Readmission after a Withdrawal/Academic Disenrollment/Administrative Disenrollment" in the student Handbook for further information.

Auditing a Course

An individual may audit a course only with the consent of the instructor. Course auditors will not be enrolled nor listed on an official class roster. Course auditors will not receive credit or formal recognition for completing the course and cannot subsequently change their status from audit to credit.

Credit Course Load

Undergraduate students

The maximum number of credits an undergraduate can take in a Fall or Spring semester is 22 credits. The maximum number of credits an undergraduate can take in any Summer Session is 8 credits. Students who wish to take more credits must obtain permission on a Credit Overload form. Additional approvals and signatures are required.

For Fall – Spring Semesters:

- More than 22 credits requires approval from the Chairperson of the Department
- 25 credits and beyond require the additional approval of the Provost.

For any Summer Session:

• More than 8 credits requires approval from the Chairperson of the Department

Graduate Students

Maximum number of credits a graduate student can take is 13 credits. Additional approval and signature of the Chairperson of the Department is required for students taking 13 or more credits.

Declaring a Major

Undergraduates at SUNY Maritime College are required to declare their major by the completion of their 64th credit toward the degree (including all transfer credits from previous institutions). Students with more than 64 credits may request a one semester waiting period within the *Undeclared* category. The student must declare a program of study after the one semester period in Undeclared. If the student is not accepted into the program of choice, the student is subject to disenrollment by the Academic Board.

Students changing or declaring a major are required to follow the curriculum at the time of acceptance and must meet the academic criteria for graduation within that program.

Double Majors

A student may have a second major transcripted and appear on the diploma under the following conditions:

- 1. Academic departments shall publish "Double Major Guidelines" specific to the second major defining requirements. All courses in the second curriculum must be completed within the guidance of the Double Major Guidelines of the second major.
- 2. Any plan for a second major must be approved in advance by both Department Chairs and the Provost.
- 3. If the additional required courses necessary to complete the second major are less than a total of 18 credits, additional courses must be taken so that at least 18 credits are taken in the second major. These additional required courses must not be in common with the first major. These credits are to be in upper division courses approved in advance by the Chair of the second major department. For the purpose of this paragraph 3, upper division courses are defined to be courses with a number of 300 or higher not including license courses.
- 4. Students must adhere to the Double Major Guidelines of both departments.
- 5. An overall GPA of 2.7 must be achieved.
- 6. There will be no mixed degrees, e.g. B.S. and B.E.

Drop/Add a Course

Course Drop/Add can be processed online up to the published deadline (see Academic Calendar). Certain registration activity (lack of prerequisite, closed course, etc.) will require special overrides. In these cases, the Drop/Add procedure will require approval of Instructor, Chairperson and/or Provost. In most cases, a Drop/Add requiring a special override must be processed in person at the Registrar's Office with accompanying forms.

Dropping below full time status during a semester may jeopardize financial aid eligibility, housing privileges, and NCAA eligibility. Provost's approval is required for drop/withdraw requests that result in student being less than full-time status.

Withdrawing from courses after the Drop/Add period will result in a W grade on record and require the student to obtain the instructor's signature on the Drop/Add form. This form then must be processed at the Registrar's Office. Request to withdraw from a course after the withdrawal period will require special approval and will result in a WF grade on record. Registration dates and deadlines specific to adding, dropping and/or withdrawing from courses are posted on the Academic Calendar.

Education Law (224-A)

- 1. No person shall be expelled from or be refused as a student to an institution of higher education for the reason that he or she is unable, because of his or her religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.
- 2. Any student in an institution of higher education who is unable, because of his or her religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.
- 3. It shall be the responsibility of the faculty and the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his or her religious beliefs, an equivalent opportunity to make up any examinations, study or work requirements which he or she may have missed because of such absence on any particular day or

- days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.
- 4. If classes, examinations, study or work requirements are held on Friday after four o'clock post meridian or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.
- 5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his or her availing him/herself of the provisions of this section.
- 6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply with the provisions of this section, shall be entitled to maintain an action of proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his or her rights under this section.

FERPA

Under The Family Educational Rights and Privacy Act (FERPA), also known as the Buckley Amendment, only the student may have access to the student's own record.

The College may not issue any information about a student to any other institution, agency, or organization without the written consent of the student, except under circumstances as required by law, or under the issue of the Solomon Amendment.

Therefore, only the student may request in writing with the student's own signature, that the Office of the Registrar process or release any information concerning the student. A formal written request or the required form must be completed to request a letter of enrollment, a verification of enrollment or degree. In addition, only the student may request that a transcript (official or an unofficial copy) be issued to the appropriate institution, agency or organization.

FERPA also gives the student the right to inspect his/her academic record, in the Registrar's Office by filing a written request to see his/her file. The student must submit the written request, and make an appointment to meet with the College Registrar in order to review the student's record. The student will be required to show the College ID Card as documentation of the student's identity. All requests shall be granted within 45 days from the date requested. There are specific limitations as to which documents the student may review. The school is not required to show the student "any financial information submitted by parents; confidential letters and recommendations placed in the file before 1975, and confidential letters and statements of recommendations placed in the records after 01/01/1975." [FERPA Regulations].

After viewing the record, the student believes there is any discrepancy within the record, they may file a letter to challenge a discrepancy in the file. The student is required to submit a written letter, signed by the student, identifying the specific discrepancy to the College Registrar. The College Registrar is then required to submit the letter from the student and a copy of the student's record to the Associate Provost for review and consideration.

In order to maintain the confidentiality of the each student, each student is given a Maritime ID number, which is used as the identifying number for the student. In addition, the student will be given a PIN. With the use of the ID and the PIN, each student can access his/her academic record on the web.

Additional FERPA information can be found in the Student Handbook.

Final Examinations

The final examination is considered an integral part of courses. The final exam schedule allows for one hour of examination for each credit assigned.

Where the nature of a course or the conduct of a course is thought to justify exemption from a final examination, approval must be received from the Vice President via the department chair, setting forth the justification.

Where an examination is to be given, but a portion of the class is to be exempt, this may be done according to the criteria established within each department. However, where such exemptions exceed ten percent of the class, or are to be given to students with other than an "A" average, justification must be provided and the approval sought and received from the Vice President via the department chairman.

Forgiveness Policy

There are certain circumstances in which a student's grade for a course may be "forgiven", i.e., removed from the student's cumulative GPA. (The course and grade remains on the student's record.) Such courses appear on a transcript with an "E" (exclude) next to the grade.

Repeated Courses

If the student does not successfully complete a course, she/he may only attempt the same course an additional two times. A student may repeat a successfully completed course to improve her/his GPA. The total number of attempts must be no more than three.

An attempt is defined as registering for and remaining in the course after the date where dropping is noted on the transcript as a W or WF (including those at other institutions).

Under exceptional circumstances, the student may request a fourth attempt of a course. A fourth attempt requires approval of the student's major department chair and the Associate Provost via a Fourth Attempt of Repeated Course Form.

A student may receive credit for a successfully completed course only once. If a student takes a course and then repeats it, only the grade for the repeated course will be included in the Cumulative GPA.

The first course is flagged with the "E" notation and the repeated course is denoted with an "I" (include) repeat flag. (If the course is repeated several times, only the grade for the last time taking the course will remain in the cumulative GPA) The "E" will appear for each attempt except the last one, which will have the "I" flag notation. Note that this rule applies even if the repeated course grade is lower than the original course grade.

For courses with identical numbers and names, this process is done automatically by the registration system. If the course number or course name changes over the years, then a manual change is required. The College Registrar will make such changes. The student has a right to point out in writing any repeated course that has not been forgiven. There is also a review for additional repeated courses by the College Registrar when the student applies for graduation.

Repeated courses that qualify to be "forgiven" include:

- Courses for which student received a poor or failing grade and then retakes the course to satisfy the course requirement.
- Courses for which student took the course at Maritime College and then retakes an equivalent course at another College (an official transcript is received with the grade of C or better for undergraduate and grade of B or better for graduate) which is posted as transfer credits on the Maritime College record.
- Courses that fulfill the same degree requirement.

Change of Curriculum (Fresh Start)

If a student changes Major or changes Professional Experience (Deck, Engine, Intern), he/she may request a "Fresh Start" that would exclude grades from GPA calculation for all courses that are not applicable to the new curriculum. If so requested, then:

- 1. Grades for all courses that satisfied requirements of the old curriculum but cannot be used to meet any requirement in the new curriculum will be excluded from GPA. Courses and grades will remain on the academic transcript, with an E to the right of grade denoting the Exclusion of grade.
- 2. If two courses can be used to satisfy one requirement in the new curriculum, the course with the higher grade will be used and the grade of the other course will be excluded from GPA.
- 3. A course with an excluded grade can never again be used to satisfy the requirements of any curriculum.
- 4. The notation "Fresh Start" will appear on the transcript for the semester when request was granted.

A student may request the fresh start after meeting with the Academic Dean, who will explain how the grade exclusions would affect the student's GPA and discuss the possible impact of the exclusions on the student's financial aid status.

Good Academic Standing

<u>Graduate Programs</u> - When a student's Cumulative GPA and Current Term GPA (for the most recent term) are 3.0 or better, that student is in good academic standing.

<u>Undergraduate Programs</u> – Any student with a <u>cumulative</u> GPA below 2.0 shall be considered "not in good academic standing." Students under this designation are ineligible to participate in intercollegiate athletics, club sports or the student worker program.

Grade Appeal

The purpose of grades is to communicate the instructor's evaluation of student performance in terms of learning outcomes and standards of achievement. The assignment of grades based on the evaluation of student work is at the heart of the institution's academic integrity. A student may appeal a grade by a faculty member if he/she feels that the grade is inappropriate.

Examples of appropriate reasons for a grade appeal include (this list in not comprehensive):

- Demonstrable arithmetical, editing, or factual error in calculating the grade;
- Omission of assignments or parts of assignments in calculating the grade;
- Grade demonstrably based on impermissible factors such as discrimination, bias, retaliation or retribution.

To appeal a grade, the student should first speak to the instructor of the course in question. If the instructor denies the appeal or is not available, the student can appeal to the Chair of the Department offering the course. If there is still no resolution, the student may appeal to the Provost.

The Provost may uphold the Department Chair's decision, and the appeal process is then finished; OR, the Provost may appoint a panel to review the documentation/materials. The Panel is comprised of two to three professors from the course's content area. The Panel forwards their recommendation to the Provost. The Provost may or may not uphold the Panel's findings. The appeal process ends here.

Graduation Honors

Students may be awarded cumulative GPA based honors at graduation. The indices are as follows:

Undergraduate Students

- **Valedictorian** is the undergraduate student having earned a bachelor's degree with the highest GPA closest to 4.000 and at least 60 credits earned at Maritime College
- **Salutatorian** is the undergraduate student having earned a bachelor's degree with the next highest GPA and at least 60 credits earned at Maritime College
- Summa Cum Laude is for a cumulative GPA rounding to at least 3.75 (i.e., \geq 3.745).
- Magna Cum Laude is for a cumulative GPA rounding to at least 3.50 (i.e., \geq 3.495).
- **Cum Laude** is for a cumulative GPA rounding to at least 3.00 (i.e., \geq 2.995)

Graduate Students

• With Honors is for a cumulative GPA rounding to at least 3.75 (i.e., $GPA \ge 3.745$).

Graduation Requirements

SUNY Maritime College has four degree conferral dates (graduation dates) per academic year. Below are the months in which they occur.

- July
- September
- January
- May

The official conferral dates are posted on the Academic Calendar each year. All degree requirements must be satisfied prior to the official graduation date in order to be eligible to receive the degree for that date.

Application Procedures

All students must submit an application for graduation to the Registrar in order to have their records reviewed for degree conferral. Applications deadlines are posted on the Academic Calendar each year. Below are the necessary application steps.

- Complete and submit an Application for Graduation (available on the Registrar webpage).
- Include a copy of your current DegreeWorks audit worksheet. The DegreeWorks audit worksheet should display all requirements as complete or in-progress at the time the application is submitted. Requirements that are not marked as met or in-progress must include an explanatory note as to how the requirement will be satisfied by your graduation date (outstanding transfer course, etc.). Students are encouraged to work with their advisor for assistance with their DegreeWorks worksheet and in determining their appropriate graduation date.
- Submit graduation fee payment of \$50. Note: Applications submitted after the posted deadline will incur a \$25 late fee and may delay the arrival of diploma and/or may prevent the student's name from being printed in the commencement program.

Students will be notified of their status towards graduation via their Maritime email account after the Registrar has conducted an initial review of the graduation applications submitted for an upcoming graduation date.

In order to participate in commencement exercises in January, May or the Recognition Ceremony in September (includes the July 1^{st} graduation date), students must satisfy all Academic, Financial and Regimental (where applicable) requirements for their degree prior to commencement. Students who do not successfully complete all degree requirements, clear all financial or Regimental obligations (where applicable) are ineligible to participate in commencement exercises. To earn an undergraduate degree in all majors, a cumulative GPA rounding to at least 2.00 (i.e., $GPA \ge 1.995$ on transcript) is required at the

time of graduation. To earn a graduate degree in all majors, a cumulative GPA rounding to at least 3.00 (i.e., $GPA \ge 2.995$ on transcript) is required at the time of graduation.

For students in license degree programs, degree requirements include the passing of all seven modules for 3rd Mate, or eight modules for the 3rd Assistant Engineer of the USCG license exam. Additionally, all sea time requirements must be met. You will not be eligible to participate in either the January or May commencement or the Recognition Ceremony in September, without having passed all modules of the USCG license exam.

Additionally, License/STCW course certificates will not be issued to any student unless they successfully complete the USCG/MARAD approved (46 CFR 310) program. For students in the 2-year license degree programs, course certificates will only be issued when students successfully complete the USCG-approved Deck or Engine license program.

Graduation Checkout Procedures

Students are asked to complete a Graduation Survey. The survey will be emailed to the student's Maritime email account sometime after the Registrar has reviewed their graduation application.

All graduation candidates must be in good standing with the departments at the college listed below in order to receive their diploma and/or proof of graduation upon degree conferral.

- Student Accounts: All outstanding balances owed to the college must be resolved.
- Financial Aid: All students that borrowed federal loans and/or Perkins loans are required to complete exit counseling. For Stafford loans, the exit counseling can be completed online at www.studentloans.gov. Students that received Perkins loans will receive additional instructions via email from the Financial Aid Department.
- Library: All books borrowed from the library must be returned and any overdue fines must be resolved
- Regiment: All outstanding issues with the Regiment must be resolved (i.e. ED's, class 1 alcohol sanctions, SAP, Alcohol EDU's etc) for those students in the Regiment.
- Housing: Students living on campus must properly check out of housing and return keys.
- International Students: F1 students must have an exit meeting with the International Student Coordinator.

Commencement Ceremonies

There are two commencement ceremonies held during the academic year.

- Winter Commencement (held in January)
- Spring Commencement (held in May)

Students that graduated earlier in the academic year may choose to attend either of these commencement ceremonies. Students may only attend one commencement ceremony per degree earned. All degree requirements must be satisfied prior to the graduation date in order to be eligible to participate in commencement/recognition ceremonies. This includes passing all seven modules of the USCG license exams for those students in a license degree program.

Diplomas

Diplomas are distributed at commencement for those that graduate. For students that do not attend commencement diplomas will be mailed to their home shortly thereafter. Or, a student may choose to pick up their diplomas from the Registrar's Office.

Leave of Absence

A leave of absence is permission to be away from the college temporarily, for medical, financial, military or personal reasons, including to study at another educational institution. Students must file a *Leave of Absence* form with the Office of the Registrar. Students may be on leave for up to two consecutive semesters. Students planning to take courses at another institution during their LOA should obtain preapproval by submitting a *Request to Take Course Off Campus* form (available on the Registrar's webpage).

Students who are placed on "involuntary psychological leave" must submit appropriate documentation before being allowed to return or register (see Section III, College Policies, Article XVII "Mental Health Leave of Absence" in the Student Code of Conduct for further information).

Students who return from a LOA in the semester they indicated must notify the Registrar of their return prior to the start of the semester. They will need to meet with their advisor to obtain their alternate PIN number for registration.

Students who do <u>not</u> return from a *Leave of Absence* in the semester they indicated will be *Administratively Disenrolled* from the college and will need to apply for readmission if they wish to return. For information on the procedure for Readmission, please refer to the section entitled "Readmission after a Withdrawal/Academic Disenrollment/Administrative Disenrollment" in the student Handbook for further information.

Lines of Communication

Students having questions or complaints about their academic status at the college should proceed in the following manner: 1) Take up questions and issues with the instructor whenever possible; 2) If consultation with the instructor is not possible or unsatisfactory, see the Department Chairperson; 3) If further help is required, go to the Vice President for Academic Affairs.

Official Grades and Calculation of GPA

The GPA is calculated by multiplying the numerical value of a letter grade by the number of credits for the course, yielding the "quality points" for the course, and then taking the sum of the quality points and dividing by the sum of the credits attempted. This process is used both for semester and cumulative GPAs. The numerical values for the letter grades are:

	A 4;	A- 3.667;
B + 3.333;	B 3;	B- 2.667;
C + 2.333;	C 2;	C- 1.667;
D + 1.333;	D 1;	

F, WF 0.

P, **TC**, are not included in GPA calculation but are included in credits earned.

X, W, I, are not included in GPA calculation and are not included in credits earned.

I incomplete

P passed in pass-fail courses only

TC transfer credit

 \mathbf{X} exempted

W reflects an official withdrawal from the course and is not included in GPA calculations.

WF is a withdrawal from the course after the 10th week of the semester and is equivalent to an F in GPA calculations.

Additional notations:

"E" (Exclude) indicates a course that is no longer being counted in the cumulative GPA.

"I" (Include) indicates a course that has been repeated, with the grade for the course, included in the cumulative GPA.

Grades not used under certain circumstances:

† D or D+ grades may not be issued in STCW Coast Guard license courses, effective Spring 2005.

D and D+ are not utilized for Graduate courses

Readmission after a Withdrawal/Academic Disenrollment/Administrative Disenrollment

If you are seeking readmission after a Withdrawal/Academic Disenrollment/Administrative Disenrollment:

Students wishing to return after Withdrawal/Academic Disenrollment/Administrative Disenrollment will need to first apply for readmission through the Office of Admissions. Upon readmission student follows the current curriculum at the time of return. Upon reacceptance to the College, the student should meet with their respective Department Chair to review their program for any curriculum updates and receive their alternate PIN number for registration. Students who wish to return to the Regiment must formally meet with the Deputy Commandant.

A student who has been academically disenrolled will be considered for readmission only after completing a "get well program" (successful completion of 12 transferrable credits with a grade of "C" of better). Official transcripts should be provided to Admissions and the Academic Dean for review. The Academic Dean in consultation with the Department Chair will decide if the student is readmitted to the college. The Academic Dean may request additional information (resume, letters of recommendation, essay, and/or interview). The College will generally not readmit a student after a second academic disenrollment.

Registration

Each semester, students register for new classes after meeting with their advisor to plan which courses are needed according to the degree and major requirements. *

*Exception: the first semester the student is enrolled, the Registrar's Office will process a registration on behalf of the student after receiving the results of the English and Math placement exams.

At the designated time in the calendar for advisement - prior to the registration period - students will meet with their advisor to plan a curriculum schedule of courses needed and to receive an Alternate PIN to register for courses. Note: Alternate PINs change every semester before registration. The student can register for classes or change sections of a course. The student can view their own schedule of classes including the days, the times, the instructors and the rooms for each course. Student's account must be cleared of all fees in order to register, obtain grades, get copies of transcripts or receive their diploma.

Repeat a Course

If the student does not successfully complete a course, he/she may only attempt the same course an additional two times. A student may repeat a successfully completed course to improve her/his GPA. The total number of attempts must be no more than three. All grades will appear on the transcript. The last of the grades (other than W) will contribute to the student's GPA. An attempt is defined as

registering for and remaining in the course after the date where dropping is noted on the transcript as a W or WF (including those at other institutions).

Under exceptional circumstances, the student may request a fourth attempt of a course. A fourth attempt requires approval of the student's major Department Chair and the Provost. A student may receive credit for a successfully completed course only once.

Satisfactory Academic Progress Policy for Financial Aid

Withdrawing from classes could have an effect on your eligibility for federal financial aid. The Satisfactory Academic Progress Policy is available on SUNY Maritime's Financial Aid website. You may also request a copy from the Financial Aid Office.

Semester Honors

SUNY Maritime maintains several programs to honor students who have earned distinction in the area of academic excellence.

- Admiral's List Students with a semester average above 3.495 are eligible for Admiral's List.
- Dean's List Student with a semester average of 2.995 3.494 are eligible for Dean's List.

A minimum of 14 credits must be carried during the semester for such recognition.

STCW (Standards of Training, Certification and Watchkeeping)

Issuance of STCW Training Certificates

Training certificates shall be issued to cadets in the license programs. Training certificates shall not be issued to cadets who do not complete the approved licensing programs (deck or engine).

All original training certificates produced shall be issued by the Director of Licensing to students at graduation. Those certificates dated at the end of the course as indicated in enclosure (1) should be prepared at the end of each semester. All other certificates should be prepared prior to graduation when final grades are due.

Students may not substitute training and the academy will not accept training certificates from cadets who complete training outside the academy's approved program. The only exception to this is transfer students from another maritime academy which requires a case-by-case review of the cadets training completed at the other academy.

Sitting for the USCG exam

All U.S. Coast Guard examinations for students enrolled in our approved academy license programs must be scheduled by the Director of Licensing. When eligible, all license-track students must sit for their initial US Coast Guard examination on campus. Subsequent re-examinations (complete or partial) may be taken at a U.S. Coast Guard Regional Examination Center (REC). Exceptions to this policy must be submitted to the Director of Licensing and Dean of Students for review.

Additional Information found at: http://www.sunymaritime.edu/Campus%20Life/COASTGUARD/index

Syllabus

A written syllabus (paper or electronic) must be provided to students in each course. If there are changes to the information provided in the syllabus during the semester, they must be given to students in written form (paper or electronic).

The syllabus will include:

- Information on the course content and expectations (e.g., class attendance)
- Details on the basis for grades, including: the course's examination policy; the number and types of exams; a list of graded assignments with their approximate due dates and their weight in the final grade.
- Instructor's course policy for academic integrity
- A statement on accommodations for students with learning disabilities.

Withdrawal from School

An official withdrawal is the voluntary decision to discontinue studies/enrollment at the college. Students must file a *Withdrawal from School* form with the Office of the Registrar if they wish to withdraw from school. Students that do not properly withdraw from the college will be *Administratively Disenrolled*. Students who wish to return after an Official Withdrawal will need to apply for readmission. For information on the procedure for Readmission, please refer to the section entitled "*Readmission after a Withdrawal/Academic Disenrollment/Administrative Disenrollment*" in the student Handbook for further information.



CREDIT HOUR POLICY

To define SUNY Maritime College's policy on the assignment of semester/credit hours and the method by which the College's compliance with credit hour assignment is assured.

Office of the Provost

2016-17



State University of New York - Credit/Contact Hour Policy

SUNY Maritime College's calculations of credit hour follow the <u>State University of New York (SUNY)</u>
<u>Policy</u> which is applicable to its Community Colleges and State-Operated Campuses. The Policy is below:

Summary

The State University of New York (University), like most American higher education, has adopted a variant of the traditional "Carnegie Unit" as a measure of academic credit. This unit is known in the University by the familiar term, "semester credit hour," and is the primary academic measure by which progress toward a degree is gauged. It is recognized that such a unit measures only a part, albeit a major part, of a composite learning experience, based upon formally structured and informal interactions among faculty and students.

Policy

Over the past several years, for academic purposes, some faculties have allowed modifications of the classical Carnegie definition of a semester credit hour, which has stipulated that one semester credit hour be awarded for fifteen sessions of 50-minutes duration in classroom lecture-recitation each requiring two hours of outside preparation by the student. Today there are many types of educational experiences with which credit hour assignment may properly be associated.

In the interest of accurate academic measurement and cross-campus comparability, the following definitions and practices apply in controlling the relationship between contact and credit hours. These definitions constitute a formalization of current and historic policy in order to ensure consistency throughout the University. Courses may be composed of any combination of elements described, such as a lecture course which also has required laboratory periods or a lecture course having an additional requirement for supervised independent study or tutorial activity.

A semester credit hour is normally granted for satisfactory completion of one 50-minute session of classroom instruction per week for a semester of not less than fifteen weeks. This basic measure may be adjusted proportionately to reflect modified academic calendars and formats of study.

New York State Education Department - Guidelines

All credit-bearing degree and certificate programs at SUNY Maritime College are approved by the New York State Education Department (NYSED). Calculations of credit hours for these programs follow NYSED guidelines, which are consistent with the SUNY's adoption of the Carnegie definition of a credit hour.

Codes, Rules and Regulations of the State of New York, Title 8 – Education Department, Chapter II – Regulations of the Commissioner, Subchapter A – Higher and Professional Regulations, Part 50 – General,



Section 50.1 (o) stipulates the following: Semester hour means a credit, point, or other unit granted for the satisfactory completion of a course which requires at least 15 hours (of 50 minutes each) of instruction and at least 30 hours of supplementary assignments, except as otherwise provided pursuant to section 52.2(c)(4) of this Subchapter. This basic measure shall be adjusted proportionately to translate the value of other academic calendars and formats of study in relation to the credit granted for study during the two semesters that comprise an academic year.

Section 52.2(c)(4) stipulates: A semester hour of credit may be granted by an institution for fewer hours of instruction and study than those specified in subdivision (o) of section 50.1 of this Subchapter only: (i) when approved by the commissioner as part of a registered curriculum; (ii) when the commissioner has granted prior approval for the institution to maintain a statement of academic standards that defines the considerations which establish equivalency of instruction and study and such statement has been adopted by the institution; or (iii) in the event of a temporary closure of an institution by the State or local government as a result of a disaster, as defined in section 50.1(w) of this Title, when the commissioner has granted approval for the institution to maintain a statement of academic standards that defines the considerations which establish equivalency of instruction and study and such statement has been adopted by the institution.

NYSED - Determining Time on Task in Online Education

The College adheres to the New York State Education Department's Office of College and University Evaluation policies on "<u>Determining Time on Task in Online Education</u>," which is excerpted below.

Time on task is the total learning time spent by a student in a college course, including instructional time as well as time spent studying and completing course assignments (e.g., reading, research, writing, individual and group projects.) Regardless of the delivery method or the particular learning activities employed, the amount of learning time in any college course should meet the requirements of Commissioner's Regulation Section 50.1 (o), a total of 45 hours for one semester credit (in conventional classroom education this breaks down into 15 hours of instruction plus 30 hours of student work/study out of class.)

"Instruction" is provided differently in online courses than in classroom-based courses. Despite the difference in methodology and activities, however, the total "learning time" online can usually be counted. Rather than try to distinguish between "in-class" and "outside-class" time for students, the faculty member developing and/or teaching the online course should calculate how much time a student doing satisfactory work would take to complete the work of the course, including:

- reading course presentations/ "lectures"
- reading other materials
- participation in online discussions
- doing research
- writing papers or other assignments
- completing all other assignments (e.g., projects)



The total time spent on these tasks should be roughly equal to that spent on comparable tasks in a classroom-based course. Time spent downloading or uploading documents, troubleshooting technical problems, or in chat rooms (unless on course assignments such as group projects) should not be counted.

In determining the time on task for an online course, useful information includes

- the course objectives and expected learning outcomes
- the list of topics in the course outline or syllabus; the textbooks, additional readings, and related education materials (such as software) required
- statements in course materials informing students of the time and/or effort they are expected to devote to the course or individual parts of it
- a listing of the pedagogical tools to be used in the online course, how each will be used, and the expectations for participation (e.g., in an online discussion, how many substantive postings will be required of a student for each week or unit?)

Theoretically, one should be able to measure any course, regardless of delivery method, by the description of content covered. However, this is difficult for anyone other than the course developer or instructor to determine accurately, since the same statement of content (in a course outline or syllabus) can represent many different levels of breadth and depth in the treatment of that content, and require widely varying amounts of time.

Middle States Commission on Higher Education - Credit Hour Policy

SUNY Maritime College's calculations of credit hour comply with <u>Credit Hour Policy of the Middle States</u> <u>Commission on Higher Education</u> (MSCHE). The policy excerpted here:

Context

The Middle States Commission on Higher Education expects all candidate and accredited institutions to demonstrate that they use acceptable and consistent methods for assigning credit hours to all courses and programs of study. The credit hour is defined by the U.S. Department of Education as a basic institutional measure of the level of instruction and academic rigor that establishes eligibility for federal funding. Both within and between institutions, consistency in credit hour determinations has implications for the transferability of credit and for demonstrating that all courses and programs—regardless of teaching and learning formats or delivery mode—are of sufficient academic rigor, content, and depth.

The purpose of this document is to guide institutions in assigning credit hours in ways that are consistent with U.S. Department of Education credit hour regulations and that allow for flexibility.

Definition

The U.S. Department of Education defines "credit hour" as:



"...An amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

- (1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or,
- (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution, including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours."

The U.S. Department of Education establishes the credit hour as the basis for measuring an institution's eligibility for federal funding. The Carnegie unit, represented in point (1) above, has served as the traditional unit of measure, but the Department also recognizes that institutions are developing other measures of educational content and credit equivalency. The purpose of the credit hour policy is to ensure that credit hour measures are reasonably equivalent regardless of how institutions award credit hours to courses and programs in various modes of instruction and teaching and learning formats.

Policy

The Commission recognizes that institutions may use one or both of the options identified in the definition of credit hours when assigning credit hours.

State Maritime College - Credit Hour Policy

All semester/credit hours awarded by SUNY Maritime College will conform to the definitions listed above. Therefore, all credits awarded are in compliance with policies set forth by SUNY, NYSED and MSCHE.

The academic calendar for SUNY Maritime College follows a semester system with fall and spring semesters consisting of 15 academic weeks, which includes one week for exams. Summer terms are typically less than 15 weeks but adhere to the policy in terms of meeting time and the amount of work required. Terms for certain academic programs (for example, compressed summer schedules) have been adjusted but nonetheless adhere to the policy in terms of the amount of work required. A brief winter session with a 3 week period of instruction is used in rare situations, and only if it is possible to adhere to the credit hour policy in terms of meeting time and the overall amount of work required.

Department faculty are responsible for developing, maintaining, and assessing the curriculum within an academic program. Assignment of credit hours for courses is determined within the program based on faculty expertise and student learning outcomes. New courses are introduced only after review and approval at the department level, by the Curriculum Committee, and finally by the Faculty as a whole.



In their review and approval of new courses and major revisions of existing courses, the academic department, the Curriculum Committee and the Faculty are charged with following the policy on credit hours and certifying that the expected student learning for the course meets the credit-hour standard.

The following tables summarize how the credit hour translates to the particular instruction method. Please note that for these calculations, time is in hours where 1 contact hour = 50 minutes and a semester is 15 weeks in duration.

	Instruction	onal Time	Student-V	Minimum	
1 Credit Awarded	Minimum Inside-Class Contact Hours/ Week	Minimum Inside-Class Contact Hours/ Semester	Minimum Outside-of- Class Student Work/Week	Minimum Outside-of- Class Student Work/Semester	Total Instructional and Student- Work Time/ Semester
Lecture	1	15	2	30	45
Lab	2	30	1	15	45
Recitation	2	30	1	15	45

The Academic Dean adds newly approved courses to the College Catalog. The Registrar reviews the class schedules prior to the start of each semester to ensure that all classes are scheduled for the number of hours specified in the approved course description. Any discrepancies are brought to the attention of the appropriate academic department for correction.

Independent Study

Courses of study in which a faculty member regularly interacts and directs student outcomes with periodic contact. Minimum credit hours are determined based on faculty instructional contact minutes and student outside work time. In all such instances, such courses must match the total amount of instructional and student work time as indicated in the table above, and the faculty member is required to keep records of the meeting times and student work assigned so that contact hours can be calculated.

Internships

Courses of study in which a faculty member regularly interacts and directs student outcomes with periodic contact, but where the actual learning environment takes place on or off campus at an approved site. The learning experience will typically involve a site supervisor or preceptor, and directed activity/learning will occur outside of a lecture setting. Contact time and outside student work requirements must be established and documented and must match the total amount of instructional and student work time as indicated in the table above. The faculty member or department chair responsible for the experience is required to keep records of amount of supervised work and the amount of outside



work assigned so that contact hours can be calculated. However, total hours well exceed the minimum hours per credit requirement.

Accelerated Courses

Courses offered outside of a standard 15-week semester in which the credit hours offered are the same as standard semester courses and the content and substantive learning outcomes are the same as those in the standard semester. These courses must meet the total amount of instructional and student work time as indicated in the table above even if delivered within an accelerated time frame.

Online/Hybrid Courses

Online courses are offered entirely online without any onsite face-to-face meetings. These courses have the same learning outcomes and substantive components as a standard lecture/seminar course with an alternate delivery method. Contact time is satisfied by several means. In all instances, online courses must meet the total amount of instructional and student work time as indicated in the table above even if delivered online and asynchronously.

Hybrid courses combine online and face-to-face instruction, delivering a *substantial proportion* of the content online and typically using online discussions and a reduced number of face-to-face meetings. Contact time is assessed using both onsite definitions (for the onsite portion) and online definitions as above (for the online portion). In all such instances, these courses must meet the total amount of instructional and student work time as indicated in the table above even if delivered online or asynchronously.

Maritime Education and Training Courses

Many credit-bearing courses offered as part of the US Coast Guard (USCG) Licensing program have requirements such as sea-days, individual assessment of KUPs (Knowledge, Understanding and Proficiency areas), classroom instruction with little or no new material, vessel maintenance & repair, and watchkeeping that do not easily follow the usual calculation of credits for the total amount of instructional and student work time. However, total hours well exceed the minimum hours per credit requirement.

- ENGR 510/520/530 Summer Sea Term I/II/III
- ENGR 521 Cadet Commercial Vessel Shipping (in lieu of Summer Sea Term II)
- MT 510/520/530 Ship Operation and Management I/II/III (Summer Sea Term I/II/III)
- MT 521 Cadet Commercial Vessel Shipping (in lieu of Summer Sea Term II)
- MTDO 524/525 Cadet Commercial Vessel Shipping Limited Tonnage I/II
- MTEO 521/522/523 Cadet Commercial Vessel Shipping Assistant Engineer I/II/III

These courses are audited by the USCG and the Maritime Administration (MARAD) every five years, where all course materials are reviewed during an on-Campus visit by a joint USCG-MARAD evaluation



team. A mid-cycle internal audit must be conducted by the College and the results presented to the visiting team at the time of the audit.

Class Schedule

The Office of Registrar uses the grid below to schedule each course that is offered by the College.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00 AM					
8:30 AM					
8:50 AM					
9:00 AM					
9:45 AM					
9:50 AM					
10:00 AM					
11:15 AM					
11:30 AM					
12:45 PM					
1:00 PM					
1:30 PM					
1:50 PM					
2:00 PM					
2:45 PM					
2:50 PM					
3:00 PM			REGIMENTAL		REGIMENTAL
4:15 PM			ACTIVITIES		ACTIVITIES
4:30 PM					
4:30 PM					
5:45 PM					
6:30 PM					
6:30 PM					
(50-minutes) 7:20 PM					
(75-minutes) 7:45 PM					
(100-minutes) 8:10 PM					
(150-minutes) 9:00 PM					

Procedures

1. All courses offered at the College will be reviewed periodically by the department faculty, department chair and the Curriculum Committee for evidence of compliance with the semester/credit hour definitions as set forth by New York State, the U.S. Department of Education and the Middle States Commission on Higher Education. Information indicating such compliance will be shared with the Registrar to ensure ongoing compliance of assignment of credit hours to courses.



- 2. Courses which appear to be out of compliance will be evaluated and immediate measures taken to rectify the discrepancies. New courses or changes to existing courses and curriculum will normally be evaluated as part of the work of the Curriculum Committee.
- 3. The College Catalog shall serve as the official College publication providing information on credits assigned to each college course.

4. Records of credits assigned for each course will be maintained by the Registrar.

General Education at SUNY Maritime College

SUNY Maritime College has a long history of offering baccalaureate curricula that include required courses across many disciplines, guaranteeing that our graduates have broad knowledge beyond their major fields. In 2000, SUNY established a common, system-wide approach to such a general education; there have subsequently been several revisions.

The SUNY General Education program currently requires baccalaureate candidates, as a condition of graduation, to complete no fewer than 30 credits specifically designed to achieve student learning outcomes in at least seven of ten knowledge and skill areas plus two competencies.

The knowledge and skills areas are: Basic Communication (all students must satisfy this area), Mathematics (all students must satisfy this area), Natural Sciences, American History, Western Civilization, Other World Civilizations, Social Sciences, Humanities, The Arts, and Foreign Language. The requirements of all baccalaureate curricula at Maritime College satisfy the 30 credit minimum via courses among the first seven of these ten areas; additional credits may be taken in the other three areas.* The table below (first two columns) lists each of the General Education knowledge and skills areas and the courses offered at Maritime College that meet the requirements of each area.

The competencies are: Critical Thinking and Information Management. These competencies are met by *infusion*, i.e., learning outcomes are achieved in courses throughout the curriculum.

Students who enter Maritime College having already taken courses at other colleges may receive transfer credit (grade of C or better needed) for SUNY General Education requirements in several ways:

- a course is evaluated as equivalent to a Maritime College course that satisfies a General Education requirement;
- a course taken at another SUNY college (2-year or 4-year) satisfies the General Education requirement at that college;
- a course taken at a non-SUNY college (2-year or 4-year) is evaluated as satisfying a General Education requirement.

In the first case, transfer credit is awarded for the equivalent Maritime College course. In the other two cases, transfer credit is recorded via notations for General Education Requirement (GERx 000) courses. In certain situations, such courses may be substituted for related Maritime College requirements.* The table below (last two columns) lists the notations for each knowledge and skills area; it also shows allowable substitutions.

- *A transferred course may satisfy a General Education requirement without explicitly satisfying a Maritime College degree requirement. Sometimes the course can still be applied towards degree. Examples:
- --A course called "Mathematical Ideas" may be accepted as a General Education mathematics course, but it does not count towards the math requirements for any major at Maritime College. It may, however, be used as an elective in many majors.
- --Courses counting for General Education Humanities, The Arts, or Foreign Language can be used as electives in many majors. Moreover, if such a course is left unused (i.e., electives are all filled by other courses), then it may be substituted for General Education requirements in American History, Western Civilization, and Other World Civilizations. Such substitutions must be approved by the Academic Dean.

SUNY General Education and Maritime College courses

(see online course descriptions for course titles and descriptions)

SUNY General Education knowledge & skills area	Maritime College courses (or equivalent transfer)	Gen Ed Requirement courses without Maritime equivalent receive transfer credit via GERx 000 courses	GERx 000 transfer credits for Maritime College requirements
Basic Communication	ENGL 101, 102, 103 (all Maritime 4-year curricula require ENGL 101 and ENGL 102 or 103)	GERC 000 GenEd: Basic Communication	Free Elective or Liberal Arts & Sciences Elective
Mathematics	MATH 090, 101, 102, 111, 112, 251 (all Maritime 4-year curricula require at least two such courses)	GERM 000 GenEd: Mathematics	Free Elective or Liberal Arts & Sciences Elective
Natural Sciences	one of: (& shows separate lab needed) BIO 201; CHEM 121 & 122; ES 101; GEOL 301; METE 201; OCEA 101 & 102; PHYS 102 & 104, 201 & 203, 211 & 213, 214 & 216 (most Maritime 4-year curricula require at least two such courses)	GERN 000 GenEd: Natural Sciences	Free Elective, Liberal Arts & Sciences, or GenEd: Natural Science Elective
American History	HIST 101, 102 (all Maritime 4-year curricula require both of these courses)	GERH 000 GenEd: American History	Free Elective, Liberal Arts & Sciences, or Humanities Elective HIST 101 or HIST 102*
Western Civilization	HUMN 201, 202 (all Maritime 4-year curricula require both of these courses)	GERW 000 GenEd: Western Civilization	Free Elective, Liberal Arts & Sciences, Humanities, or International Studies Elective one GERW 000 for one of HUMN 201 or 202
Other World Civilizations	HUMN 201, 202 (all Maritime 4-year curricula require both of these courses)	GERO 000 GenEd: Other World Civ	Free Elective, Liberal Arts & Sciences, Humanities, or International Studies Elective one GERO 000 for one of HUMN 201 or 202
Social Sciences	GBEC 121, 122; GBLW 435; HIST 102	GERS 000 GenEd: Social Sciences	Free Elective or Liberal Arts & Sciences Elective*
Humanities	courses listed below	GERU 000 GenEd: Humanities	Free Elective, Liberal Arts & Sciences, or Humanities Elective
The Arts	courses listed below	GERA 000 GenEd: The Arts	Free Elective, Liberal Arts & Sciences, or Humanities Elective
Foreign Language	SPAN 101, 102	GERF 000 GenEd: Foreign Language	Free Elective, Liberal Arts & Sciences, Humanities, or International Studies Elective

^{*}Bachelor of Engineering and Marine Environmental Science students must take one of HIST 101 or HIST 102 at Maritime College.

Transfer credits for GERH 000 GenEd: American History or GERS 000 GenEd: Social Sciences can be applied to one of the two courses.

Please note that the following General Education transfer credits will count towards a required course in all bachelor's degrees at Maritime College:

3 credits of GERW 000 Gen Ed: Western Civilization (counts for either HUMN 201 or HUMN 202) 3 credits of GERO 000 Gen Ed: Other World Civilizations (counts for either HUMN 201 or HUMN 202)

3 credits of GERH 000 Gen Ed: American History (counts for HIST 101 or HIST 102)

A course in General Education Humanities, The Arts, or Foreign Language that is unused (i.e., electives are all filled by other courses) may be substituted for General Education requirements in American History, Western Civilization, and Other World Civilizations.

Such substitutions must be approved by the Academic Dean.

The SUNY website maintains a master listing of all General Education course offerings for SUNY Colleges. The link to this master list is: http://system.suny.edu/academic-affairs/acaproplan/general-education/General-Education-Dashboards/

			SUNY	Maritime College		
		General	Education	n: Humanities and T	he Arts	
		(Course Off	erings as of Fall 2010	5	
	Humanities				The Arts	
FNGL 415	Literature of Colonia	alism		FNGL 407	Poetry	
ENGL 416	Literature of the Sea	3		ENGL 409	Drama	
ENGL 426	Science and Literatu	re		ENGL 410	Greek Drama	
ENGL 470	Major British Author	rs		ENGL 411	The Novel I	
ENGL 471	Major American Aut	hors		ENGL 423	Shakespeare	
ENGL 472	Major American Wri	ters: 19th	Century	ENGL 453	Creative Writing	
HIST 440	History of American	Enterprise	e I	ENGL 474	Film I	
HIST 441	History of American	Enterprise	e II	ENGL 475	Film II	
HUMN 300	Humanities III			ENGL 477	Film and Fiction Stu	udies
HUMN 400	History of Art			HUMN 400	History of Art	
HUMN 403	A History of Western	n Music		HUMN 401	Studio Drawing and	d Painting
HUMN 404	Art and Technology			HUMN 402	Images of Men, Wo	omen, and Machines
HUMN 407	Literature of Leader	ship		HUMN 403	A History of Weste	rn Music
HUMN 460	The Bible As/In Liter	rature		HUMN 404	Art and Technology	/

Degrees, Majors, and Professional Experience Options

Degree and Major

Professional Experience Options

Associate of Applied Science

Marine Technology: Small Vessel Operations Deck (Limited) / Engine (Limited)

Bachelor of Engineering

Electrical Engineering Deck / Engine / Intern

Facilities Engineering Engine / Intern

Marine Engineering Engine

Mechanical Engineering Engine / Intern

Naval Architecture Deck / Engine / Intern

Bachelor of Science

International Transportation and Trade Intern

Marine Environmental Science,

Marine Biology Minor Deck / Intern Meteorology and Oceanography Minor Deck / Intern

Marine Operations Deck / Engine

Marine Transportation Deck

Maritime Studies Deck / Intern

Master of Science

International Transportation Management None / Deck

Maritime and Naval Studies None

Advanced Certificate

Supply Chain Management None

Minors (available in some undergraduate degrees)

Environmental Science

Humanities

Intermodal and Maritime Security

Law

Management Naval Science

Undergraduate Degree Curricula Notes

A student is responsible for knowing when their required courses are offered, as shown in the published curricula, course descriptions, and curricula flow.

General Remarks

Each degree curriculum in this document is provided as a reference showing all course requirements arranged in a model sequence. All bachelor's degrees leading to USCG licensure also require passing the relevant license exams.

A student's individual degree plan may divert from the published curriculum, but must take into account the following:

- A course may be offered only in certain semesters.
- Course prerequisites and corequisites must be honored.

The semester scheduling of course offerings is available in both this document and the accompanying course descriptions document. Course prerequisites/corequisites are available in the accompanying course descriptions. The resulting "flow of courses" for each curriculum can be found in the Curricula Flow document.

<u>Rules about Curriculum Changes</u> (Students are normally required to follow the policies below. Students may appeal in a timely fashion for waivers through the Department Chair and Provost.)

- 1. Grandfather clause: A student is expected to complete their major curriculum as specified at the time of matriculation. A student may choose to follow a later curriculum, but the student must complete all of the requirements of that later curriculum.
- **2. Readmission rule:** A readmitted student follows the curriculum in effect at the time the student returns to studies. The only departure from the school that does not require readmission is an official leave of absence.
- **3. Change of major rule:** When a student changes major, they must change to the curriculum in effect at the time of the change.
- **4. Regulatory change rule:** If a regulatory body (such as the U.S. Coast Guard or ABET) institutes new requirements that change the student's curriculum, the student must complete the new requirements.

Definitions of Elective Categories for Undergraduate Degree Curricula

A **Free Elective** is defined as any course numbered 100 or higher, *not required by the student's degree program*. The sum of credits earned through Free Electives must equal the total required for the given degree program. Pass/Fail courses cannot be used as Free Electives.

An **Engineering (ENGR) Elective** is defined as any one of the following courses, *not required by the student's degree program:* any course numbered ENGR 3xx, 4xx, 50x, 54x, or 6xx; CHEM 213, CHEM 220, ES 420, ES 430, MATH 446, OCEA 308, OCEA 425, NVSC 304; and other courses with the Engineering Chair's approval.

A Global Business and Transportation (GBAT) Elective is defined as any one of the following courses, *not required by the student's degree program:* MT 350, MT 408, MT 430, MT 435, NVSC 201, all courses with the prefix GBAC, GBEC, GBLW, GBMG, GBTT, or GBUS.

A **Humanities** (**HUMN**) **Elective** is defined as any one of the following courses, *not required by the student's degree program*: CHIN 101 or higher; ENGL 200 or higher (except ENGL 452); HIST 200 or higher; HUMN 300 or higher; NVSC 102, 311 and 402; SPAN 101 or higher.

A **Law Elective** is any course from the following list, *not required by the student's degree program*: GBLW 431, GBLW 433, GBLW 435, GBLW 437, GBMG 348, HUMN 430, MT 404.

A **Liberal Arts & Sciences (LAS) Elective** is defined as any one of the following courses, *not required by the student's degree program*: CHIN 101 or higher; ENGL 200 or higher (except ENGL 452); GBEC 121, 122, 424, 428; GBLW 435; HIST 200 or higher; HUMN 300 or higher; MATH 101 or higher; NVSC 102, 311 and 402; SPAN 101 or higher; SS 101 or higher; all courses with the prefix BIO, CHEM, ES, GEOL, METE, OCEA, or PHYS.

A Marine Environmental Science (MES) Elective is any BIO, ES, METE, or OCEA course numbered 300 or higher not required by the student's degree program.

A Marine Transportation (MT) Elective is any course from the following list, *not required by the student's degree program:* MT 212, MT 350, MT 404, MT 408, MT 430, MT 435, MT 450, NAUT 420, NAUT 476.

A Physical Education (PE) Elective is any course with the prefix PE not required by the student's degree program.

A **Professional Studies (PS) Elective** is any course from the following list, *not required by the student's degree program:* PS 120, PS 410, PS 411, PS 414, ENGR 561, ENGR 562.

MINORS POLICY

For Students Entering Maritime College During the 2016-17 Academic Year

College-wide Requirements for Approved Minors*

Students may declare one of the approved minors provided they receive permission from their major Department Chair.

- 1. A minor consists of at least fifteen credits, of which at least nine credits must be upper division. A student completing a minor is also responsible for completing all prerequisite courses for the minor courses. Completing a minor may require a student to complete additional credits beyond those required by their degree program.
- 2. Students may not use a course required for their degree curricula to satisfy a requirement of a minor.
- 3. Unless otherwise stated, a course taken to satisfy an elective for a degree program may also be used to satisfy the requirement of a minor (i.e., an elective in degree program may be "double counted" as a minor requirement).
- 4. Students may declare two or more minors, but the same course may not be applied to more than one of the minors (i.e., "double counting" among minors is never allowed).

*Marine Environmental Science students must do a minor in either Marine Biology or Meteorology & Oceanography, neither of which are available to other students. The requirements set forth here do not apply to the MES minors.

List of Approved Minors and Requirements

Environmental Science

Available to all degrees except MES.

ES 101 Introduction to Environmental Science (if ES 101 is required by the student's degree program, then substitute CHEM 100 or 121)

CHEM 220 Environmental Chemistry ES 420 Environmental Pollution

and two courses (not required by the student's degree program) chosen from the following list, one of which must be upper division: GBLW 435, any course with prefix BIO, METE, OCEA, GEOL or ES.

Humanities

Available to all degrees except Maritime Studies.

Five elective courses offered by the Humanities Department

Intermodal and Maritime Security

Available to all degrees.

GBTT 460 Principles of Global Supply Chain Security GBTT 462 Science and Technology Issues of Security GBTT 465 Lectures in Contemporary Security Issues MT 430 Principles of Emergency Management Systems MT 435 Maritime Security

Additionally, if MT 435 is required by the student's degree program, the student must take one course (not required by the student's degree program) chosen from:

GBLW 437 International Law GBTT 457 Port and Terminal Operations MT 350 Hazardous Materials and Oil Spill Response MT 408 International Safety Management

Law

Available to all degrees except International Transportation and Trade.

Five courses (not required by student's degree program) chosen from:

GBLW 431 Business Law

GBLW 433 Admiralty Law

GBLW 435 Environmental Law and Policy

GBLW 437 International Law

GBTT 451 Marine Insurance

HUMN 430 Case Studies in Constitutional Law

Note that GBLW 431 is a prerequisite for GBLW 433 and GBTT 451.

Management

Available to all degrees except MT and ITT.

GBAC 311 Financial Accounting

GBLW 431 Business Law

GBMG 341 Organizational Management

GBMG 345 Fundamentals of Marketing

GBMG 440 Seminar in Strategy and Policy

Naval Science

Available to all degrees.

NVSC 101 Introduction to Naval Science

NVSC 402 Leadership and Ethics

and nine additional credits of **NVSC** courses, not required by the student's degree program, including two 3-credit courses at 200 level or above.

Graduate Degree Curricula Notes

A student is responsible for knowing when his/her required courses are offered.

General Remarks

Each degree curriculum in this document is provided as a reference showing all course requirements. All degrees leading to USCG licensure also require passing the relevant license exams.

A student's individual degree plan may divert from the published curriculum, but must take into account the following:

- A course may be offered only in certain semesters.
- Course prerequisites and corequisites must be honored.

Course prerequisites/corequisites are available in the accompanying course descriptions.

<u>Rules about Curriculum Changes</u> (Students are normally required to follow the policies below. Students may appeal in a timely fashion for waivers through the department chair and Provost.)

- 1. **Grandfather clause:** A student is expected to complete his/her major curriculum as specified at the time of matriculation. A student may choose to follow a later curriculum, but the student must complete all of the requirements of that later curriculum. Choosing a later curriculum requires submission of a *Change of Curriculum* form.
- **2. Readmission rule:** A readmitted student follows the curriculum in effect at the time the student returns to studies. The only departure from the school that does not require readmission is an official leave of absence.
- **3.** Change of major rule: When a student changes major, he/she must change to the curriculum in effect at the time of the change. Submission of a *Change of Curriculum* form is required.
- **4. Regulatory change rule:** If a regulatory body (such as the U.S. Coast Guard or ABET) institutes new requirements that change the student's curriculum, the student must complete the new requirements.

Master of Science

International Transportation Management Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
TMGT 6001	Orientation for Graduate Studies	

o Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

o 8000-Level Elective Courses (4 courses for 12 credits)

Course #	Course	Completed

 Free Elective Courses: 7000-level TMGT courses except for Core Courses or 8000-level TMGT courses except for courses chosen as 8000-Level Elective Courses (2 courses for 6 credits with Capstone Option or 1 course for 3 credits with Thesis Option)

Course #	Course	Completed
*	*	*
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program		

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	Course	Completed
TMGT 9100	Capstone Course	
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 34

Master of Science International Transportation Management Elective Courses

Course #	Course
TMGT 7200	Management Information Systems in Transportation
TMGT 7400	Logistics within the Supply Chain
Prerequisites for 80	000-level courses: Completion of the four Core Courses
TMGT 8110	Economics of Transportation
TMGT 8140	Seminar in Shipping Economics
TMGT 8150	Transportation Benefit Cost Analysis
TMGT 8210	Transportation Managerial Accounting
TMGT 8230	Ship Finance
TMGT 8250	Government Transportation/Environmental Policy (Cross-listed as MNST 8250) *
TMGT 8270	Ship Management
TMGT 8280	Fleet Management
TMGT 8310	Port Development and Environmental Issues
TMGT 8320	Port and Terminal Management
TMGT 8330	Analysis of Integrated Ocean Transportation and Ports
TMGT 8340	Dry and Wet Bulk Vessel Operations
TMGT 8360	Intermodal Freight Transportation
TMGT 8370	Shipboard Operations for Shoreside Managers
TMGT 8390	Maritime Port Security
TMGT 8420	Ocean Marine Hull & Protection & Indemnity Insurance
TMGT 8430	Ocean Marine Cargo Insurance and Loss Adjusting
TMGT 8440	Maritime Law
TMGT 8450	Advanced Charter Parties I
TMGT 8460	Advanced Charter Parties II (Prerequisite: TMGT 8450)
TMGT 8465	Advanced Topics in Shipping
TMGT 8470	Transportation Risk Management
TMGT 8480	Managing Across Cultures
TMGT 8491	The Terrorist Threat Today
TMGT 8499	Special Topics in International Transportation Management
TMGT 8501	Principles of Supply Chain Management I
TMGT 8502	Principles of Supply Chain Management II (Prerequisite: TMGT 8501)
TMGT 8505	International Trade Management Internship
TMGT 8510	Systems Design & Control
TMGT 8520	Case Studies in Supply Chain Security
* Corequisite: TMG	Γ 6001 or MNST 6001; no prerequisites

Master of Science International Transportation Management Business of Shipping Track Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

	Course #	Course	Completed
Ī	TMGT 6001	Orientation for Graduate Studies	

Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

o Track Courses (4 courses for 12 credits)

Course #	Course	Completed		

 Free Elective Courses: 7000-level TMGT courses except for Core Courses or 8000-level TMGT courses except for courses chosen as Track Courses (2 courses for 6 credits with Capstone Option; 1 course for 3 credits with Thesis Option)

Course #	Course	Completed	
*	*	*	
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program			

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	Course	Completed
TMGT 9100	Capstone Course	
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 34

Master of Science International Transportation Management Business of Shipping Track Track Courses

Prerequisites: Completion of the four Core Courses			
Course #	Course		
TMGT 8120	Topics in Managerial Economics		
TMGT 8230	Ship Finance		
TMGT 8360	Intermodal Freight Transportation		
TMGT 8420	Ocean Marine Hull & Protection & Indemnity Insurance		
TMGT 8440	Maritime Law		
TMGT 8450	Advanced Charter Parties I		
TMGT 8460	Advanced Charter Parties II (Prerequisite: TMGT 8450)		
TMGT 8465	Advanced Topics in Shipping		

Master of Science International Transportation Management Global Transportation Security Track Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
TMGT 6001	Orientation for Graduate Studies	

Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

o Track Courses (4 courses for 12 credits)

Course #	Course	Completed		

 Free Elective Courses: 7000-level TMGT courses except for Core Courses or 8000-level TMGT courses except for courses chosen as Track Courses (2 courses for 6 credits with Capstone Option; 1 course for 3 credits with Thesis Option)

Course #	Course	Completed	
* *		*	
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program			

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	Course	Completed
TMGT 9100	Capstone Course	
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 34

Master of Science International Transportation Management Global Transportation Security Track Track Courses

Prerequisites: Completion of the four Core Courses			
Course #	Course		
TMGT 8390	Maritime Port Security		
TMGT 8470	Transportation Risk Management		
TMGT 8480	Managing Across Cultures		
TMGT 8491	The Terrorist Threat Today		
TMGT 8520	Case Studies in Supply Chain Security		

Master of Science International Transportation Management International Logistics Track Curriculum Check Sheet

0	Orientation	Course ((1	course for	1	credit)

TMGT 6001	Orientation for Graduate Studies	
-----------	----------------------------------	--

o Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

o Track Courses (4 courses for 12 credits)

Course #	Course	Completed

 Free Elective Courses: 7000-level TMGT courses except for Core or Track Courses, or 8000-level TMGT courses except for courses chosen as Track Courses (2 courses for 6 credits with Capstone Option; 1 course for 3 credits with Thesis Option)

Course #	Course	Completed
*	*	*
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program		

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	Course	Completed
TMGT 9100	Capstone Course	
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 34

Master of Science International Transportation Management International Logistics Track Track Courses

Course #	Course	
TMGT 7200	Management Information Systems in Transportation	
TMGT 7400	Logistics within the Supply Chain	
Prerequisites for 8000-level Track Courses: Completion of the four Core Courses		
TMGT 8120	Topics in Managerial Economics	
TMGT 8280	Fleet Management	
TMGT 8320	Port and Terminal Management	
TMGT 8360	Intermodal Freight Transportation	
TMGT 8450	Advanced Charter Parties I	
TMGT 8460	Advanced Charter Parties II (Prerequisite: TMGT 8450)	
TMGT 8501	Principles of Supply Chain Management I	
TMGT 8502	Principles of Supply Chain Management II (Prerequisite: TMGT 8501)	
TMGT 8510	Systems Design & Control	

Master of Science International Transportation Management Marine Insurance Track Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
TMGT 6001	Orientation for Graduate Studies	

o Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

o Track Courses (4 courses for 12 credits)

Course #	Course	Completed

 Free Elective Courses: 7000-level TMGT courses except for Core Courses or 8000-level TMGT courses except for courses chosen as Track Courses (2 courses for 6 credits with Capstone Option; 1 course for 3 credits with Thesis Option)

Course #	Course	Completed
*	*	*
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program		

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	Course	Completed
TMGT 9100	Capstone Course	
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 34

Master of Science International Transportation Management Marine Insurance Track Track Courses

Prerequisites: Completion of the four Core Courses	
Course #	Course
TMGT 8140	Seminar in Shipping Economics
TMGT 8340	Dry and Wet Bulk Vessel Operations
TMGT 8420	Ocean Marine Hull & Protection & Indemnity
TMGT 8430	Ocean Marine Cargo Insurance & Loss Adjusting
TMGT 8440	Maritime Law
TMGT 8465	Advanced Topics in Shipping
TMGT 8470	Transportation Risk Management

Master of Science International Transportation Management Research in International Logistics and Shipping Track Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
TMGT 6001	Orientation for Graduate Studies	

o Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

o Track Courses (4 courses for 12 credits)

Course #	Course	Completed

o Free Elective Course: 7000-level TMGT courses except for Core Courses or 8000-level TMGT courses except for courses chosen as Track Courses (1 course for 3 credits)

Course #	Course	Completed

o Thesis Courses (2 courses for 6 credits)

Course #	Course	Completed
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 34

Master of Science International Transportation Management Research in International Logistics and Shipping Track Track Courses

Prerequisites: Completion of the four Core Courses	
Course #	Course
TMGT 8120	Topics in Managerial Economics
TMGT 8140	Seminar in Shipping Economics
TMGT 8150	Transportation Benefit Cost Analysis
TMGT 8290	Transportation Planning (in Reserve)
TMGT 8320	Port and Terminal Management
TMGT 8360	Intermodal Freight Transportation
TMGT 8520	Case Studies in Supply Chain Security

Master of Science in International Transportation Management & Advanced Certificate in Supply Chain Management Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
TMGT 6001	Orientation for Graduate Studies	

o Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

Supply Chain Management Courses (5 courses for 15 credits)

Course #	Course	Completed
TMGT 7200	Management Information Systems in Transportation	
TMGT 7400	Logistics within the Supply Chain	
TMGT 8501	Principles of Supply Chain Management I	
TMGT 8502	Principles of Supply Chain Management II (Prerequisite: TMGT 8501)	
TMGT 8510	Systems Design & Control	

o 8000-Level Elective Courses (3 courses for 9 credits with Capstone Option; 2 courses for 6 credits with Thesis Option)

Course #	Course	Completed	
*	*	*	
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program			

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	Course	Completed
TMGT 9100	Capstone Course	
TMGT 9201	Thesis I	
TMGT 9202	Thesis II	

TOTAL CREDITS: 40

Master of Science in International Transportation Management & Advanced Certificate in Supply Chain Management Elective Courses

Course #	Course	
Prerequisites for 800	00-level courses: Completion of the four Core Courses	
TMGT 8110	Economics of Transportation	
TMGT 8120	Topics in Managerial Economics	
TMGT 8140	Seminar in Shipping Economics	
TMGT 8150	Transportation Benefit Cost Analysis	
TMGT 8210	Transportation Managerial Accounting	
TMGT 8230	Ship Finance	
TMGT 8250	Government Transportation/Environmental Policy (Cross-listed as MNST 8250) *	
TMGT 8270	Ship Management	
TMGT 8280	Fleet Management	
TMGT 8310	Port Development and Environmental Issues	
TMGT 8320	Port and Terminal Management	
TMGT 8330 Analysis of Integrated Ocean Transportation and Ports		
TMGT 8340	Dry and Wet Bulk Vessel Operations	
TMGT 8360	Intermodal Freight Transportation	
TMGT 8370	Shipboard Operations for Shoreside Managers	
TMGT 8390	Maritime Port Security	
TMGT 8420	GT 8420 Ocean Marine Hull & Protection & Indemnity Insurance	
TMGT 8430	Ocean Marine Cargo Insurance and Loss Adjusting	
TMGT 8440	Maritime Law	
TMGT 8450	Advanced Charter Parties I	
TMGT 8460	Advanced Charter Parties II (Prerequisite: TMGT 8450)	
TMGT 8465	Advanced Topics in Shipping	
TMGT 8470	Transportation Risk Management	
TMGT 8480	Managing Across Cultures	
TMGT 8491	The Terrorist Threat Today	
TMGT 8499	Special Topics in International Transportation Management	
TMGT 8505	International Trade Management Internship	
TMGT 8520	Case Studies in Supply Chain Security	
* Corequisite: TMC	GT 6001 or MNST 6001; no prerequisites	

Master of Science International Transportation Management Graduate License Program Curriculum Check Sheet – Graduate Courses

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
TMGT 6001	Orientation for Graduate Studies	

o Core Courses (4 courses for 12 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7100	Economics of International Trade	
TMGT 7300	Transportation Management	
TMGT 7500	International Business and Transportation Law	

Program Course (1 course for 3 credits)

Course #	Course	Completed
TMGT 8390	Maritime Port Security (substitutes for MT 435)	

o 8000-Level Elective Courses (3 courses for 9 credits)

Course #	Course	Completed

 Free Elective Courses: 7000-level TMGT courses except for Core Courses, or 8000-level TMGT courses except for the Program Course or courses chosen as 8000-Level Elective Courses (2 courses for 6 credits with Capstone Option or 1 course for 3 credits with Thesis Option)

Course #	Course	Completed	
*	*	*	
* Not required if Thesis Option (courses 9201 & 9202) is chosen to complete the program			

o Final Course(s) (1 course Capstone Option is 3 credits, 2 course Thesis Option is 6 credits)

Course #	•	Course	Completed
TMGT 9100	Capstone Cou	irse	
TMGT 9201	Thesis I		
TMGT 9202	Thesis II		

TOTAL GRADUATE CREDITS: 34

Master of Science International Transportation Management Graduate License Program Curriculum Check Sheet – Undergraduate License Courses

Course Sequence

Course #	Course	CREDITS	SEMESTER	Completed
NAUT 102	Intro to Vessel Ops. And Seamanship	1	Fall 1	
PS 112	STCW Basic Training	2	Fall 1	
PS 103	Water Safety and Survival for Mariners	1	Fall 1	
NAVG 112	Terrestrial Navigation	4	Fall1	
MT 250	Ships Construction & Stability	2	Fall 1	
METE 201	Meteorology for Mariners	3	Spring 1	
NAVG 212	Celestial Navigation	4	Spring 1	
MT 321	Intro to Cargo Ops & Ship Stability	3	Spring 1	
MT 510	Ship Operation & Management I	6	Summer 1	
MT 520	Ship Operation & Management II	6	Summer 1	
NAUT 314	Rules of the Road	2	Fall2	
NAUT 315	Collision Avoidance	3	Fall 2	
MT 322	Marine Cargo Operations	3	Fall 2	
NAUT 308	Nautical Operations - Safety	2	Spring 2	
NAVG 312	Systems Elect Navigation & Voyage Plan	4	Spring 2	
MT 426	Maritime Communications	3	Spring 2	
MT 530	Ship Operation & Management III	5	Summer 2	
PS 412	Medical First Aid	1	Summer 2	
MT 412	Deck License Seminar	4	Fall 3	
MT 435	Maritime Security	(3)	Fall 3	TMGT 8390*
NAUT 416	Bridge Resource Management	3	Fall 3	

^{*} Graduate License students take the on-Campus course-section of TMGT 8390 instead of the undergraduate license course, MT 435. Graduate License students taking the online course-section of TMGT 8390 will not be eligible to receive the various security officer certifications. Graduate License students who take MT 435 instead of TMGT 8390 will be required to take an additional 8000-Level Elective Course.

TOTAL UNDERGRADUATE CREDITS: 62

Master of Science International Transportation Management Graduate License Program Elective Courses

Course #	Course		
TMGT 7200	Management Information Systems in Transportation		
TMGT 7400	Logistics within the Supply Chain		
Prerequisites for 80	00-level courses: Completion of the four Core Courses		
TMGT 8110	Economics of Transportation		
TMGT 8120	Topics in Managerial Economics		
TMGT 8140	Seminar in Shipping Economics		
TMGT 8150	Transportation Benefit Cost Analysis		
TMGT 8210	Transportation Managerial Accounting		
TMGT 8230	Ship Finance		
TMGT 8250	Government Transportation/Environmental Policy (Cross-listed as MNST 8250) *		
TMGT 8270	Ship Management		
TMGT 8280	Fleet Management		
TMGT 8310	Port Development and Environmental Issues		
TMGT 8320	Port and Terminal Management		
TMGT 8330	Analysis of Integrated Ocean Transportation and Ports		
TMGT 8340	Dry and Wet Bulk Vessel Operations		
TMGT 8360	Intermodal Freight Transportation		
TMGT 8370	Shipboard Operations for Shoreside Managers		
TMGT 8420	Ocean Marine Hull & Protection & Indemnity Insurance		
TMGT 8430	Ocean Marine Cargo Insurance and Loss Adjusting		
TMGT 8440	Maritime Law		
TMGT 8450	Advanced Charter Parties I		
TMGT 8460	Advanced Charter Parties II (Prerequisite: TMGT 8450)		
TMGT 8465	Advanced Topics in Shipping		
TMGT 8470	Transportation Risk Management		
TMGT 8480	Managing Across Cultures		
TMGT 8491	The Terrorist Threat Today		
TMGT 8499	Special Topics in International Transportation Management		
TMGT 8501	Principles of Supply Chain Management I		
TMGT 8502	Principles of Supply Chain Management II (Prerequisite: TMGT 8501)		
TMGT 8505	International Trade Management Internship		
TMGT 8510	Systems Design & Control		
TMGT 8520	Case Studies in Supply Chain Security		
* Corequisite: TM	* Corequisite: TMGT 6001 or MNST 6001; no prerequisites		

Master of Science Maritime and Naval Studies Curriculum Check Sheet

o Orientation Course (1 course for 1 credit)

Course #	Course	Completed
MNST 6001	Introduction to Academic Writing and Research Methods	

o Core Courses (2 courses for 6 credits)

Course #	Course	Completed
MNST 7101	American Commercial Maritime History: 1500 to the Present	
MNST 7102	The History of American Sea Power	

o Elective Courses (7 courses for 21 credits *)

Course #	Course	Completed
* Students may take up to 3 approved TMGT courses		

o Capstone Course (1 course for 3 credits)

Course #	Course	Completed
MNST 9100	Capstone	

TOTAL CREDITS: 31

Master of Science Maritime and Naval Studies Elective Courses

Corequisite: MNST 6001		
Course #	Course	
MNST 8101	Music of the Sea	
MNST 8102	Ocean Politics and Law	
MNST 8103	The History of World Sea Power	
MNST 8104	Maritime Shakespeare	
MNST 8105	Literature of the Middle Passage	
MNST 8106	Maritime Piracy and Predation	
MNST 8107	Maritime and Naval Art	
MNST 8109	The Last Great Hunt: Herman Melville, Moby-Dick, and American Culture	
MNST 8250	Government Transportation/Environmental Policy (Cross-listed as TMGT 8250)*	
MNST 8199	Special Topics in Maritime and Naval Studies I	
MNST 8299	Special Topics in Maritime and Naval Studies II	
* Corequisite: TMGT 6001 or MNST 6001; no prerequisites		

Advanced Certificate Supply Chain Management Curriculum Check Sheet

o Core Courses (3 courses for 9 credits)

Course #	Course	Completed
TMGT 7060	Systems Analysis & Operations Research	
TMGT 7200	Management Information Systems in Transportation	
TMGT 7400	Logistics within the Supply Chain	

o Supply Chain Management Courses (3 courses for 9 credits)

Course #	Course	Completed
TMGT 8501	Principles of Supply Chain Management I	
TMGT 8502	Principles of Supply Chain Management II (Prerequisite: TMGT 8501)	
TMGT 8510	Systems Design & Control	

o 8000-Level Elective Course (1 course for 3 credits)

Course #	Course	Completed

TOTAL CREDITS: 21

Advanced Certificate Supply Chain Management Elective Courses

Course #	Course	
TMGT 8110	Economics of Transportation	
TMGT 8120	Topics in Managerial Economics	
TMGT 8140	Seminar in Shipping Economics	
TMGT 8150	Transportation Benefit Cost Analysis	
TMGT 8210	Transportation Managerial Accounting	
TMGT 8230	Ship Finance	
TMGT 8250	Government Transportation/Environmental Policy (Cross-listed as MNST 8250) *	
TMGT 8270	Ship Management	
TMGT 8280	Fleet Management	
TMGT 8310	Port Development and Environmental Issues	
TMGT 8320	Port and Terminal Management	
TMGT 8330	Analysis of Integrated Ocean Transportation and Ports	
TMGT 8340	Dry and Wet Bulk Vessel Operations	
TMGT 8360	Intermodal Freight Transportation	
TMGT 8370	Shipboard Operations for Shoreside Managers	
TMGT 8390	Maritime Port Security	
TMGT 8420	Ocean Marine Hull & Protection & Indemnity Insurance	
TMGT 8430	Ocean Marine Cargo Insurance and Loss Adjusting	
TMGT 8440	Maritime Law	
TMGT 8450	Advanced Charter Parties I	
TMGT 8460	Advanced Charter Parties II (Prerequisite: TMGT 8450)	
TMGT 8465	Advanced Topics in Shipping	
TMGT 8470	Transportation Risk Management	
TMGT 8480	Managing Across Cultures	
TMGT 8491	The Terrorist Threat Today	
TMGT 8499	Special Topics in International Transportation Management	
TMGT 8505	International Trade Management Internship	
TMGT 8520	Case Studies in Supply Chain Security	
* Corequisite: TMGT 6001 or MNST 6001; no prerequisites		

Undergraduate Course Descriptions

Course Prefixes

The course numbering prefixes for all disciplines are listed below. All courses appear in alphanumeric order according to prefixes and course number.

Accounting: GBAC	Management: GBMG
Biology: BIO	Marine Technology Deck Officer: MTDO
<u>Chemistry: CHEM</u>	Marine Technology Engine Officer: MTEO
Chinese: CHIN	Marine Transportation: MT
Computer Science: CS	Mathematics: MATH
Economics: GBEC	Meteorology: METE
Engineering: ENGR	Nautical Science: NAUT
English: ENGL	Naval Science: NVSC
Environmental Science: ES	Navigation: NAVG
Finance: GBEC	Oceanography: OCEA
General Business: GBUS	Physical Education: PE
Geology: GEOL	Physics: PHYS
<u>History: HIST</u>	<u>Professional Studies: PS</u>
Humanities: HUMN	Social Science: SS
<u>Law: GBLW</u>	Spanish: SPAN
Leadership: LEAD	<u>Transportation Systems: GBTT</u>

General Note on the Scheduling of Courses:

Course descriptions include semester(s) when course is regularly offered (assuming sufficient demand and resources). If no semester indicated, course is an elective offered at discretion of the department.

Definitions of Prerequisite and Corequisite Courses:

The description for a given course will sometimes contain reference to courses that are prequisites or corequisites for that given course.

A *prerequisite* is defined as a course that *must be completed* with required minimum grade (passing grade, unless otherwise specified) *prior to* taking another course.

A *corequisite* is defined as a course that can either be *completed prior to* (as detailed above) *or* be *taken in the same semester as* another course. The published degree curricula and flow charts illustrate the preference for any given corequisite situation.

SUNY General Education Requirements:

Courses that fulfill SUNY General Education Requirements are marked with SUNY-GER at the bottom of the description, followed by the area(s) that the course fulfills. See the General Education section of the catalog for more details.

BIOLOGY

BIO 201 General Biology I

3 class hours, 2 laboratory hours, 4 credits.

Cell types and structure. Hierarchical organizations of organisms. Systematics. Cell division. Genetics. Survey of animal and plant kingdoms.

SUNY-GER: Natural Sciences.

[Fall]

BIO 202 General Biology II

3 class hours, 2 laboratory hours, 4 credits.

Morphology and physiology of viruses, bacteria, fungi, ferns, flowering plants and animals. Ecology. Animal behavior. Evolution.

Prerequisite: BIO 201.

[Spring]

BIO 210 Ecology

3 class hours, 3 credits.

Population and community structure. Intra- and inter-specific competition. Predator-prey.

Biodiversity. Mimicry. Co-evolution. Exotic species, Habitats.

Prerequisites: MATH 101 or MATH 111, BIO 202.

[Fall]

BIO 315 Marine Biology

3 class hours, 3 credits.

The marine environment. Classification of marine animals and plants. Challenges of life in the sea.

Migration, reproduction & behavior of marine life. Marine ecosystems.

Prerequisite: BIO 202.

[Fall – Even years]

BIO 320 Invertebrate Zoology

3 class hours, 2 laboratory hours, 4 credits.

The invertebrate fauna will be explored in terms of their morphology, physiology, and ecology. The evolutionary relationships among these groups will be investigated. Laboratory exercises will provide for the examination of preserved and/or live specimens of representative members of various phyla.

Prerequisite: BIO 202.

[Fall - Odd years]

BIO 340 Marine Botany

3 class hours, 3 credits.

The study of the taxonomy, evolution, physiology, distribution, ecology, and economic

importance of marine vegetation including coastal salt marshes and mangals.

Prerequisite: BIO 202. Corequisite: BIO 315.

BIO 415 Ichthyology

3 class hours, 3 credits.

An extensive study of fishes. Emphasis will be placed on their morphological and physiological characteristics and how adaptations of these help fish meet the challenges presented to them by the aquatic environment.

Prerequisite: BIO 315.

[Spring]

BIO 416 Fisheries Science

3 class hours, 3 credits.

A study of the models used for the evaluation of data relevant to the assessment and management of fish stocks. Concepts of population size, growth and mortality will be explored along with the fisheries management concepts of maximum sustainable yield, catch per unit of effort, and conservation measures and policies.

Prerequisites: MATH 251, BIO 202.

[Spring - Even years]

BIO 420 Ecotoxicology

2 class hours, 4 laboratory hours, 4 credits.

An experimental approach to ecotoxicology. Techniques to be learned include: heavy metal determination by atomic absorption spectrophotometry, tissue and cell culturing, various field-sampling techniques. Students will design and carry to completion independent research projects and will present their results orally and in the form of a scientific paper.

Prerequisite: Permission of the instructor.

CHEMISTRY

CHEM 100 Introductory Chemistry

3 class hours, 3 credits.

An introductory course focusing on measurement, structure of matter, stoichiometry, solutions, gases, electronic structure of atoms and chemical bonding. Credit will not be given for both this course and CHEM 121.

Prerequisite: MATH 080.

[Spring]

CHEM 121 General Chemistry I

3 class hours, 3 credits.

A study of the structure, composition and transformations of matter in the aqueous, gaseous and solid states. Stoichiometry, precipitation and oxidation-reduction reactions, thermochemistry, chemical bonding, gas laws, and molecular geometry. Credit will not be given for both this course and CHEM 100. Prerequisite: MATH 080.

SUNY-GER: Natural Sciences (with CHEM 122).

[Fall and Spring]

CHEM 122 General Chemistry I Laboratory

2 laboratory hours, 1 credit. Corequisite: CHEM 121.

SUNY-GER: Natural Sciences (with CHEM 121).

[Fall and Spring]

CHEM 123 General Chemistry II

3 class hours, 3 credits.

This class is the continuation of CHEM 121. Kinetics, acid-base and solubilty equilibria, buffers, pH, chemical thermodynamics, solution properties, electrochemistry, nuclear chemistry and coordination chemistry.

Prerequisite: CHEM 100 or CHEM 121.

[Spring]

CHEM 124 General Chemistry II Laboratory

2 laboratory hours, 1 credit. Prerequisite: CHEM 122. Corequisite: CHEM 123.

[Spring]

CHEM 212 Materials Science I

3 class hours, 3 credits.

A course detailing the structures and properties of solid materials. Bonding mechanisms, crystalline structures and imperfections, solidification. Mechanical properties and their dependence on atomic-scale structure. Electrochemical corrosion. Thermal aspects: phase diagrams, isothermal transformation diagrams, heat treatments. Engineering alloys, polymers and ceramics.

Prerequisite: CHEM 100 or CHEM 121. Corequisite: MATH 101 or MATH 111.

[Fall and Spring]

CHEM 213 Materials Science II

3 class hours, 3 credits.

Comparison of mechanical properties of metals, ceramics, polymers, glasses and composites with emphasis on failure of materials. Modern theory of electrons and atoms. Electrical conduction. Band theory and the classification of materials as conductors, semiconductors and insulators. Dielectrics and capacitors. Optical properties and the laser. Magnetism and magnetic materials.

Prerequisite: CHEM 212.

CHEM 220 Environmental Chemistry

3 class hours, 3 credits.

Natural and pollution-related atmospheric, aquatic and soil chemistry. Mechanisms of smog formation, ozone depletion and global warming; fresh and salt water chemistry and biochemistry, water pollution and ground water contamination. Chemical monitoring techniques and pollution-control technology.

Prerequisite: CHEM 100 or CHEM 121.

[Fall - Even years]

CHEM 221 Organic Chemistry

3 class hours, 3 credits.

A first semester course in Organic Chemistry. Nomenclature, structure, synthesis, and reactions of aliphatic organic compounds emphasizing reaction mechanisms and stereochemistry.

Prerequisite: CHEM 123.

CHEM 222 Organic Chemistry Laboratory

3 laboratory hours, 1 credit.

Organic Chemistry Lab is intended to be taken simultaneously with the lecture class. The majority of laboratory experiments cover the same content as the Organic Chemistry lecture class however spectroscopic techniques are also included.

Prerequisite: CHEM 124. Corequisite: CHEM 221.

[Spring]

CHINESE

CHIN 101 Mandarin I

3 class hours, 3 credits.

An introduction to the language and culture of China. Intensive conversational Chinese spoken here!

CHIN 102 Mandarin II

3 class hours, 3 credits.

An introduction to the language and culture of China; a continuation of CHIN 101, Mandarin I.

Prerequisite: CHIN 101.

COMPUTER SCIENCE

CS 100 Introduction to Business Computing

2 class hours, 2 credits.

General computer literacy, with emphasis on computers in the business environment. Major concepts and recent developments in hardware, operating systems, applications software, database management, and the internet are presented. Societal and ethical concerns, including issues such as cyber security and software piracy, are also considered.

[Fall and Spring]

CS 101 Computer Laboratory

2 laboratory hours, 1 credit.

A laboratory course covering word processing, spreadsheets, presentations and graphics using Microsoft Office applications.

[Fall and Spring]

ENGLISH

ENGL 090-095 Practice in Writing and Reading I-II

3 class hours, 3 credits each.

Intensive preparation for college level writing and reading. This course may not be used to satisfy any degree requirement.

[Fall (ENGL 090)]

ENGL 101 Freshman English I

3 class hours, 3 credits.

Expository writing and analytic reading of selected texts: ENGL 101 emphasizes writing.

Prerequisite: Satisfactory grade on the freshman English placement examination or satisfactory completion of ENGL 090 or 095.

SUNY-GER: Basic Communication.

[Fall and Spring]

ENGL 102 Freshman English II

3 class hours, 3 credits.

Expository writing and analytic reading of selected texts: ENGL 102 emphasizes reading.

Prerequisite: ENGL 101.

SUNY-GER: Basic Communication.

[Fall and Spring]

ENGL 103 Freshman English II for Engineers

3 class hours, 3 credits.

Expository writing and analytic reading of selected texts: ENGL 103 emphasizes styles and formats needed for students and practitioners of engineering.

Prerequisite: ENGL 101.

SUNY-GER: Basic Communication.

[Fall and Spring]

ENGL 407 Poetry

3 class hours, 3 credits.

Reading and discussion of several major poets. Consideration of poetry as a genre.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

ENGL 409 Drama

3 class hours, 3 credits.

Reading and discussion of several major playwrights. Consideration of the drama as a genre.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

ENGL 414 Irish Literature

3 class hours, 3 credits.

After a detailed survey of Irish history from ancient myths to contemporary political, economic, and literary developments/realities, students delve into classics of Irish Literature by writers such as Yeats, Synge, O'Casey, Joyce, Friel, and Heaney. Readings for the course are supplemented with a variety of films dealing with Irish history and trips for Irish cultural enrichment.

Prerequisite: HUMN 201 or HUMN 202.

ENGL 415 Literature of Colonialism

3 class hours, 3 credits.

How does colonialism affect those who have been colonized, and those who are doing the colonizing? This course studies colonialism, as it is expressed in two sets of literary works: those written from the viewpoint of colonizers, and those written from the viewpoint of corresponding colonized peoples. Areas focused on include Africa, India, and Southeast Asia.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

ENGL 416 Literature of the Sea

3 class hours, 3 credits.

Reading and discussion of works by important European and American authors dealing with maritime

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

ENGL 423 Shakespeare

3 class hours, 3 credits.

Reading and discussion of a representative selection of Shakespeare's plays.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

ENGL 426 Science and Literature

3 class hours, 3 credits.

A discussion of works of several major scientists and the effects of their work and thought on our culture. Special emphasis on developments which have most influenced modern life. Scientists studied are Galileo, Newton, Darwin, Freud, and Einstein.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

[Spring]

ENGL 450 Speech

3 class hours, 3 credits.

A course combining theoretical study of speech communication with practical study of public speaking, conferences, and meetings. The class meets in the Television Studio.

Prerequisite: HUMN 201 or HUMN 202.

[Spring]

ENGL 452 Technical Writing and Studies in Technology and Civilization

3 class hours, 3 credits.

Practice in report writing, research and conference techniques. Reading and discussion of material on the influence of technology on modern civilization.

Prerequisite: ENGL 102 or ENGL 103.

[Fall and Spring]

ENGL 453 Creative Writing

3 class hours, 3 credits.

Writing and marketing prose fiction, with an emphasis on the short story. Students' works are read and discussed, as are works by professional authors.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

ENGL 454 Journalism

3 class hours, 3 credits.

An introduction to the principles and practices of journalism, this course will explore the role of media, focusing and print and on-line outlets. It will examine what constitutes various types of news stories, how they're conceived, developed, published and received. Students will draft and evaluate various news formats. The course also will examine the legal, ethical and business aspects of media, using print as the basis of comparison.

Prerequisite: HUMN 201 or HUMN 202.

[Spring - Odd Years]

ENGL 456 Web Literacy and Design

3 class hours, 3 credits.

A course combining technical writing with rigorous study of Web design and administration. Applications to both marketing and engineering are explored.

Prerequisite: HUMN 201 or HUMN 202.

[Fall]

ENGL 468 Biography/Autobiography

3 class hours, 3 credits.

An examination of biographies and autobiographies, the most popular genre in America. Students will study the difference between a life told from the outside, and one told by the person who lived it; they will also study two major developments of the Twentieth Century: changing expectations of readers, and a dramatic change in the balance between sincerity and authenticity.

Prerequisite: HUMN 201 or HUMN 202.

ENGL 470 Major British Authors

3 class hours, 3 credits.

Intensive reading of selected works by representative British authors.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

ENGL 471 Major American Authors

3 class hours, 3 credits.

Intensive reading of selected works by representative American authors.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

ENGL 472 Major American Writers: 19th Century

3 class hours, 3 credits.

This course will study the writers of the "American Renaissance," and trace the different paths pursued by those who followed them. Readings include selections from the Transcendentalists, the Romantics, the Realists, and the first Modernists.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

ENGL 474-475 Film I-II

3 class hours, 3 credits each.

Studies in the history of film, in film as an art form, and in the relationship between film and literature.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

ENGL 477 Film and Fiction Studies

3 class hours, 3 credits.

Studies in the transformation of print texts into visual narrative form. Also, study of the phenomenon known as "novelization." The tensions between traditional linear narrative form and post-modern complexity will also be analyzed.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

ENGL 478 Asian Cinema

3 class hours, 3 credits.

The study of major Asian filmmakers, with an emphasis on their inter-relations with Western culture. Examination of the historical and cultural backgrounds of films from Japan, China, Hong Kong, and Korea. Directors studied include Kurosawa, Ozu, Kobayashi, Yimou Zhang, John Woo, Tsui Hark, Wong Kar Wai, and Chan-wook Park.

Prerequisite: HUMN 201 or HUMN 202.

ENGINEERING

ENGR 100 Engineering Graphics

1 class hour, 1 credit.

Interpret and create basic engineering drawings following the standard conventions of engineering graphical communication. Course includes use of computer-aided drafting and basic drafting techniques such as orthographic and axonometric projection with a focus on the concepts of descriptive geometry and improvement of spatial ability.

[Fall and Spring]

ENGR 110 Introduction to Engineering Practice

1 class hour, 2 recitation hours, 2 credits.

Students will learn the practical techniques needed to practice engineering effectively, including (1) the presentation of calculations, data, and graphs; (2) communication by email, memoranda, drawings, and specifications; (3) effective documentation of work product; (4) use of and conversions between systems of units; and (5) proper exercise of professional responsibilities in reviewing calculations and written documentation. A simple group design exercise will be conducted as part of the class.

Corequisite: MATH 101 or MATH 111

[Fall and Spring]

ENGR 120 Programming for Engineers

1 class hour, 2 laboratory hours, 2 credits.

The students will learn to use modern computational tools to analyze engineering problems. This course is an introduction to computer programming for engineering tasks.

[Fall and Spring]

ENGR 242 Statics

3 class hours, 3 credits.

Statics and introduction to strength of materials. Principles of statics and static equilibrium with vector and classical applications. Includes coverage of frames, trusses, three dimensional structures, friction, and moments of inertia.

Prerequisite: PHYS 102 or PHYS 211.

Corequisites: ENGR 110, MATH 102 or MATH 112.

[Fall and Spring]

ENGR 243 Transport Processes

3 class hours, 3 credits.

An introduction to the properties, terminology, concepts and basic laws of fluid statics and dynamics, thermodynamics and heat transfer.

Prerequisite: PHYS 102 or PHYS 211.

[Fall]

ENGR 244 Dynamics

3 class hours, 3 credits.

Principles governing motion resulting from applied forces. Provides a background in solid dynamics for use in areas such as robotics, vibration, and design from a vector formulation perspective. Topics include particle and rigid body kinematics, force and energy methods applied to particles and rigid bodies in plane motion, and the effects of friction.

Prerequisites: ENGR 242, MATH 102.

[Fall and Spring]

ENGR 290 Electrical Engineering I

3 class hours, 2 laboratory hours, 3 credits.

A general introduction to elementary electrical rules, theorems, and laws, applicable to DC and AC circuits. Topics include: Ohm's Law, KCL, KVL, Node Voltage, Mesh Current, Thevenin's and Norton's theorems, series circuits, and parallel circuits. Laboratory work stresses concepts of electrical measurement and presentation of data to compare predicted and observed values, and an introduction of circuit simulation. Laboratories are structured.

Prerequisite: PHYS 201 or PHYS 214. Corequisite: MATH 102 or MATH 112.

[Fall and Spring]

ENGR 292 Digital Electronics

3 class hours, 3 laboratory hours, 4 credits.

Digital electronics; Boolean algebra; arithmetic operations and circuits; analog and digital converters, and data acquisition circuits; three-bus architecture CPU; decoders and multiplexers.

Prerequisite: MATH 102. Corequisite: ENGR 290.

[Spring]

Course previously numbered ENGR 388.

ENGR 302 Introduction to Renewable Energy Concepts

3 class hours, 3 credits.

A study of the effects of carbon based fuel on environment and an introduction to basics of renewable sources of energy such as solar-thermal, solar direct, wind, wave, hydrogen fuel cell, bio-fuel, bio-mass and nuclear.

Prerequisites: MATH 211, PHYS 201.

ENGR 311 Kinematics

3 class hours, 3 credits.

Introduction to kinematic analysis of mechanisms with a goal toward understanding of the properties of motion, relative motion, velocities, accelerations and the relationships to mechanisms in industry. Knowledge of these concepts lead to design of robot manipulators, gears, linkages and transmissions used in mechanical systems.

Prerequisite: ENGR 244.

ENGR 312 Machine Design

3 class hours, 3 credits.

Application of solid mechanics, dynamic system analysis and strength of materials leading to the selection and design of machine elements as components of a mechanical system. Screws, fasteners, joints, springs, bearings, gears, shafts and power transmission systems components are some of the elements considered.

Prerequisite: ENGR 347.

[Spring]

ENGR 314 Engineering Economics

3 class hours, 3 credits.

Economic principles are studied which include compound interest, time value of money, equipment replacement and equipment retirement decisions. The course concludes with a discussion of various methods of calculating depreciation. Calculations are performed by formula and by tabulated values.

Prerequisite: MATH 101.

[Fall and Spring]

Course previously numbered ENGR 443.

ENGR 341 Fluid Mechanics

3 class hours, 3 credits.

Covers the fundamentals of fluid mechanics, including fluid statics and fluid dynamics, and prepares students for the solution of engineering or naval architecture problems.

Prerequisites: ENGR 242, MATH 211.

[Fall and Spring]

ENGR 343 Engineering Analysis

3 class hours, 3 credits.

An introduction to mathematical and physical modeling of engineering differential systems. Analysis leading to solution of ordinary and partial differential equations by analytical and numerical techniques. Probability and statistics. The use of digital computers is stressed.

Prerequisite: MATH 212.

ENGR 344 Thermodynamics

3 class hours, 3 credits.

The study of problems for the following topics: First and Second Law of Thermodynamics; entropy, reversible and irreversible processes; irreversibility and availability; ideal gas processes, steady state, steady flow processes; power and refrigeration cycles; real gases and equations of state, gas mixtures, psychometrics; combustion processes and heat of reaction.

Prerequisites: MATH 211, PHYS 102.

[Fall and Spring]

ENGR 345 Engineering Statistical Analysis

3 class hours, 3 credits.

The students will learn the use of basic discrete and continuous probability models, simple functions of random variables, statistical inference, construction of statistical models, and basic experimental design techniques including the use of modern statistical computational tools. This course is an introduction to the probabilistic and statistical methods that are part of the modern engineer's repertoire. Students cannot receive credit for this course and also for Statistics (MATH 251).

Prerequisite: MATH 102.

[Fall and Spring]

ENGR 347 Strength of Materials

3 class hours, 3 credits.

Material stress-strain relationships under axial, biaxial, torsional and flexural loadings, Principal stress analysis. Statically indeterminate flexural stresses and deflection by integration, superposition and energy methods. Combines static modes of loading, dynamic loading and column stresses.

Prerequisites: ENGR 242, MATH 102.

[Fall and Spring]

ENGR 348 Strength of Materials Lab

2 laboratory hours, 1 credit.

Materials testing techniques: tension, compression shear, torsion, flexure, fatigue and impact test on structural materials. Engineering report of tests required. Analysis of data is emphasized. All students must complete a term project.

Prerequisite: ENGR 347.

[Fall and Spring]

ENGR 349 Transport Processes Laboratory

2 laboratory hours, 1 credit.

Principles of transport processes and fundamental laboratory techniques demonstrated through formal laboratory experiments and lectures. Experiments may include diesel engine, gas turbine, conduction and convection heat transfer; pumps, dual-pipe heat exchanger, and flow devices.

Prerequisite: ENGR 344.

Corequisites: ENGR 341, ENGR 351.

[Spring]

ENGR 350 Analog Controls

2 class hours, 2 laboratory hours, 3 credits.

Students will be introduced to analog control systems. Students will learn the modeling and dynamic response of physical systems, and the application of feedback control techniques to these systems. Students will learn analysis techniques including transfer function models, stability analysis, root locus design techniques, and frequency-response design methods. Analysis will include the use of simulation tools. Students will be introduced to both state space models and state space design. Student work will include class projects.

Prerequisite: MATH 212.

[Fall and Spring]

ENGR 351 Heat Transfer

3 class hours, 3 credits.

Analysis of steady state and transient conduction through plane walls and cylinders. Conduction with and without heat generation (applicable nuclear materials). Analysis and design of fins. Analysis of free and forced convection processes. Analysis of radiation processes for black and gray bodies. Introduction to heat exchanger design. Introduction to numerical methods.

Prerequisites: ENGR 344, MATH 212.

ENGR 354 Marine Engineering Design I

2 class hours, 2 laboratory hours, 3 credits.

Interrelationship between naval architectural and marine engineering design. Diesel, steam, and gas turbine propulsion system design, including thermal, mechanical and electrical considerations of system components. Laboratory study includes use of CAD system for ship machinery systems, arrangement drawings and projects associated with ship design and the ocean as an environment. Term design project required. Students cannot receive credit for this course and for ENGR 446 Marine Engineering Theory and Application.

Prerequisite: ENGR 344.

[Spring]

ENGR 363 Ship Statics

3 class hours, 3 credits.

Theory and calculation of transverse and longitudinal stability, trim, flooding, subdivision and damaged stability. Applications to surface ships, submersibles, and other special vehicle types. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: ENGR 120, ENGR 242, MATH 102.

Corequisite: ENGR 365.

[Fall]

ENGR 365 Ship Form and Graphics

2 class hours, 2 laboratory hours, 3 credits.

Principles of orthographic projection and descriptive geometry are applied to the special problems of naval architectural graphics, particularly the ship lines drawing. Computer-aided drafting and ship form (hydrostatic) calculations.

Prerequisites: ENGR 100, ENGR 120, ENGR 242, MATH 102.

[Fall]

ENGR 366 Ship Structure

3 class hours, 2 laboratory hours, 4 credits.

Longitudinal and local strength of ship structures. Analysis of framing, bulkheads, and decks. Role of Regulatory Agencies in establishing structural requirements. Projects include calculation of ship's bending moment, midship section modulus, deck and bulkhead design. Introduction to the finite element method.

Prerequisite: ENGR 347.

[Spring]

ENGR 368 Ship Design I

2 class hours, 4 laboratory hours, 4 credits.

Techniques of conceptual and preliminary ship design based on economic profitability discussed and applied to a specific type of ship. Trade route analysis, principal dimensions, form, power requirement and stability are determined. Capital (building) costs, operating costs and economic measures of merit are estimated. Each student lays out preliminary lines of a ship to satisfy owner's requirement.

Prerequisite: ENGR 363. Corequisite: ENGR 314.

ENGR 371 Applied Naval Architecture

3 class hours, 3 credits.

Covers the principles of intact and damaged stability and trim, longitudinal strength of ship structures. Also, introduces ship resistance and ship powering calculations. Covers basic ship stability requirements under STCW-95. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: ENGR 242.

(Open only to students not majoring in Naval Architecture.)

[Fall and Spring]

ENGR 380 Electrical Engineering II

2 class hours, 2 laboratory hours, 3 credits.

Introduction to electrical power systems: generation, transmission, distribution and utilization of electric power; DC and AC rotating machinery; laboratory emphasizes operating characteristics of rotating machines and transformers. Students cannot receive credit for this course and also for Electric Machines (ENGR 395).

Prerequisite: ENGR 290.

[Fall and Spring]

ENGR 383 Network Analysis

2 class hours, 2 laboratory hours, 3 credits.

Follow up to ENGR 290 for EE majors. Polyphase circuits; complex frequency; network function and circuit synthesis; resonance; magnetically coupled circuits; two-port networks; Fourier analysis and Fourier transforms; Laplace transform techniques. Laboratory work emphasizes frequency response, circuit synthesis, and computer modeling and solution of network problems.

Prerequisites: ENGR 290, MATH 212.

[Fall]

ENGR 384 Power Electronics

2 class hours, 2 laboratory hours, 3 credits.

Principles of power electronics, operating characteristics of bipolar junction transistors, IGBTs, MOSFETs and thyristors, power converters, basic switching circuits, AC/DC, DC/DC, DC/AC converters and their applications. A laboratory component requiring students to design, construct, diagnose and test power electronics converters is included.

Prerequisite: ENGR 387.

[Spring]

ENGR 387 Analog Electronics

3 class hours, 3 laboratory hours, 4 credits.

In depth coverage of ENGR 390 material for students concentrating in electrical- electronic systems, controls and instrumentation: electronic devices and systems, device characteristics and their applications in signal processing, controls and computing. Laboratory emphasizes applications of analog devices and IC's. Credit will not be given for both this course and ENGR 390.

Prerequisite: ENGR 290.

[Fall]

ENGR 390 Electrical Engineering III

3 class hours, 3 credits.

Introduction to electronic devices and systems: device characteristics and their applications in signal processing, controls, and computing; laboratory emphasizes applications of analog and digital devices and IC's. Lab assignments are self-paced. Credit will not be given for both this course and ENGR 387.

Prerequisite: ENGR 290.

[Fall and Spring]

ENGR 394 Electromagnetic Fields

3 class hours, 3 credits.

Scalar and vector wave functions; transmission lines; Maxwell's equations; electromagnetic waves; waveguides; electrostatics and magnetostatics. Magnetic circuit design required.

Prerequisites: PHYS 201, MATH 212.

[Fall]

ENGR 395 Electric Machines

2 class hours, 2 laboratory hours, 3 credits.

Introduction to electromechanical energy conversion. Analysis and performance characteristics of single phase and polyphase transformers, DC machines, three phase asynchronous machines, synchronous machines, single phase motors, and special purpose electric machines. Students cannot receive credit for this course and also for Electrical Engineering II (ENGR 380).

Prerequisite: ENGR 290.

[Spring]

ENGR 412 Ocean Engineering

3 class hours, 3 credits.

Survey of subjects important to engineers dealing with the ocean environment including soil mechanics, marine structures, corrosion, underwater acoustics, under water life support systems, power plants, and pollution. Selected design problems will be reviewed. Prerequisites: CHEM 212, ENGR 347.

ENGR 418 Mechanical Engineering Design I

3 class hours, 2 laboratory hours, 4 credits.

Introduction of the phases of the design process. Projects will include structural, mechanical, thermo-fluid and electrical considerations of systems and their components. Use of CAD/software as well as economic, environmental, social, ethical, legal aspects, safety and other factors.

Prerequisites: ENGR 312, ENGR 380, ENGR 503.

Corequisites: ENGR 341, ENGR 351.

[Fall]

ENGR 419 Mechanical Engineering Design II

3 class hours, 2 laboratory hours, 4 credits.

Continuation of ENGR 418 (Mechanical Engineering Design I).

Prerequisite: ENGR 418.

ENGR 423 HVAC System Design

3 class hours, 3 credits.

Principles of heating, ventilating and air conditioning are applied and utilized in the design of HVAC (environmental control) systems. Concepts include thermodynamics, psychrometrics, system calculations, heating and cooling load estimating, duct, pipe and fan sizing, air conditioning system concepts and configuration, hydronic heating, cooling, heating and air process equipment.

Prerequisite: ENGR 344. Corequisite: ENGR 341.

[Fall]

ENGR 424 HVAC Systems Operation and Management

3 class hours, 3 credits.

Introduction to commercial HVAC facility systems utilizing vapor compression, absorption and related machinery. Course material includes preparation for urban refrigeration licensing exams, design of building HVAC system machinery, cooling tower and energy management utilizing standard commercial refrigerants. Urban Code used in design of air balancing systems.

Prerequisite: ENGR 243 or ENGR 344.

ENGR 425 Facilities Engineering Design I

4 class hours, 4 credits.

An introduction to the design, construction, operation, maintenance and management of major facilities. The principles of transport processes, electrical theory and strength of materials are used to understand the function and determine the design requirements of the various engineering subsystems present in modern facilities, such as large medical centers, building complexes and other infrastructure.

Prerequisites: ENGR 347, ENGR 354, open only to Facilities Engineering majors.

Corequisites: ENGR 380, ENGR 423.

[Fall]

ENGR 426 Facilities Engineering Design II

4 class hours, 4 credits.

Continuation of ENGR 425 (Facilities Engineering Design I). The techniques of engineering project management are applied to the planning, design, construction and commissioning of new facilities as well as the systematic operation, management, maintenance and modification of existing facilities.

Prerequisite: ENGR 425. Corequisite: ENGR 444.

[Spring]

ENGR 428 Computerized Control Systems

2 class hours, 2 laboratory hours, 3 credits.

This course has the dual goal of introducing students to computerized control systems and C programming. Students will use C to program single-board computers to monitor physical phenomena. In turn, the operations of the computer will be used to verify the correctness of the C programs. Students will be exposed to all fundamental aspects of C programming including: language syntax; sequence, selection, and repetition structures; procedures and functions; program design techniques, debugging, and maintenance.

Prerequisites: ENGR 120, ENGR 345 or ENGR 383.

ENGR 430 Data Networks

2 class hours, 2 laboratory hours, 3 credits.

This course is a survey of hardware, software, and protocols commonly used in constructing computer networks, with an emphasis on data transfer over TCP/IP networks. The objectives of this course are to (1) enable to student to design and implement small scale computer networks, (2) enable the student to troubleshoot and add units to existing networks, and (3) enable the student to write requirements and specifications for large scale networks. Lab periods will require students to use computers running a variety of operating systems.

Prerequisites: ENGR 120, MATH 102.

ENGR 432 Information Assurance

2 class hours, 2 laboratory hours, 3 credits.

This course further develops networking protocols from ENGR 430 Data Networks with an emphasis on information assurance and security. The objectives of this course are (1) gain a basic understanding of the various types of network exploits that must be prevented, (2) gain an understanding of the software and network tools available for evaluating information assurance, and (3) gain experience in hardening networks and systems against intrusion, denial of service, and other security lapses. Lab periods will require students to use computers running a variety of operating systems.

Prerequisite: ENGR 430.

ENGR 440 Marine Engineering Design II

2 class hours, 2 laboratory hours, 3 credits.

Continuation of ENGR 354 (Marine Engineering Design I). Term project involving the design of a mechanical device or system.

Prerequisites: ENGR 120, ENGR 244, ENGR 345, ENGR 347, ENGR 354.

[Fall]

ENGR 444 Engineering Project Management

3 class hours, 3 credits.

The objectives of this course are to (1) develop knowledge of the uncertain environment of project management, which is especially challenging because of the uniqueness and magnitude of technological projects, and the use of tools such as multiple regression and basic decision theory to deal with these uncertainties, (2) gain knowledge of network analysis tools (i.e., PERT/CPM) for project resource allocation and time management, while remaining aware of the pitfalls and limitations of these tools, and (3) develop a sense of the interpersonal and organizational components of project management, especially the group dynamics of teams engaged in a complex technological effort.

Prerequisite: ENGR 314.

[Spring]

ENGR 446 Marine Engine Theory and Application

3 class hours, 3 credits.

The application of thermodynamics, fluid dynamics, and heat transfer to the design of marine engineering systems, including steam power plants, diesel power plants, waste heat recovery, refrigeration and other auxiliary systems. Students cannot receive credit for this course and for ENGR 354 Marine Engineering Design.

Prerequisite: ENGR 243 or ENGR 344.

ENGR 450 Marine Engineering Design III

4 class hours, 4 credits.

Continuation of ENGR 354 (Marine Engineering Design I), it includes a semester project involving the engineering design of multiple shipboard system components.

Prerequisites: ENGR 341, ENGR 351, ENGR 354.

[Spring]

ENGR 452 Digital Controls

2 class hours, 2 laboratory hours, 3 credits.

Students will learn digital control techniques for dynamic systems of discrete elements using systems for data sampling. Data sampling systems will include the mathematical representations of analog/digital and digital/analog conversions. Control techniques will be applied to open-loop and closed-loop systems and include the relationships between inputs and outputs. Dynamic analyses will include state-space and stability analyses, and time-domain and frequency-domain analyses. Design of digital controllers will be covered using simulation tools. Class projects will be included.

Prerequisite: ENGR 350.

ENGR 453 Modern Concepts

3 class hours, 3 credits.

Current approaches to developing power generation projects, including traditional large-scale steam plants (nuclear and fossil fueled), combined cycle technologies, and cogeneration facilities; various types of design documents, including engineering drawings and specifications, that form the basis of a final design. Students learn the comprehensive engineering design process, from preliminary engineering study through final design and construction. Design project, report, and presentation.

Prerequisite: ENGR 344.

[Fall]

ENGR 454 Vibrations

3 class hours, 3 credits.

Students will gain a fundamental understanding of vibration in mechanical systems. Topics include free vibration of mechanical systems, damping, forced harmonic vibration, support motion, vibration isolation, systems with multiple degrees of freedom, normal modes, free and forced vibrations, vibration absorbers, application of matrix methods, numerical techniques and computer applications. Demonstrations and practical exercises will be used throughout the course.

Prerequisites: ENGR 244, MATH 212.

[Fall]

ENGR 455 Engineering Approximation

3 class hours, 3 credits.

This course teaches simple reasoning techniques for analyzing complex phenomena. Basic tools include: unit systems and unit conversions, back-of-the-envelope calculations and order-of-magnitude estimation techniques. Analysis methods include: divide-and-conquer hierarchies, dimensional analysis, extreme cases, continuity and scaling laws, successive approximations, balance equations, cheap calculus, and symmetry methods. Applications are drawn from the physical and biological sciences, mathematics, and engineering.

Prerequisite: PHYS 102.

ENGR 461 Ship Design II

2 class hours, 4 laboratory hours, 4 credits.

Continuation of ENGR 368 (Ship Design I). Preliminary characteristics of a ship of the type examined in Ship Design I are determined to meet owner's requirements. General arrangements, hydrostatics, structural design, speed-power estimate, weights and centers, stability and trim. Extensive use of CAD and computer facilities is required.

Prerequisites: ENGR 366, ENGR 368.

Corequisite: ENGR 345.

[Fall]

ENGR 462 Ship Resistance and Propulsion

2 class hours, 2 laboratory hours, 3 credits.

Study of resistance and powering of ships. Principle of model testing and similitude for ship hulls and propellers. Standard series calculations. Use of the college's model towing tank for performance of ship resistance and powering tests.

Prerequisite: ENGR 341.

[Fall]

ENGR 471 Ship Design III

2 class hours, 4 laboratory hours, 4 credits.

Continuation of ENGR 461 (Ship Design II). Course requires students to enter SNAME sponsored ship design competition and meet requirements of the competition. Other design competitions may be substituted with instructor's approval.

Prerequisites: ENGR 461, ENGR 462.

[Spring]

ENGR 472 Sail Boat Principles and Design

2 class hours, 2 laboratory hours, 3 credits.

Preliminary design techniques for small sail powered craft. Principal dimensions, form, stability, structural design, and speed calculations. Preliminary characteristics to meet owner's requirements. Practical use of CAD and computer facilities.

Prerequisites: ENGR 363, ENGR 366;

Corequisite: ENGR 462

or

Prerequisites: ENGR 347, ENGR 371.

[Fall]

ENGR 473 Ship Dynamics

3 class hours, 3 credits.

Theory of ship motions in response to ocean waves, and methods of reducing motions. Statistical nature of ship response to waves. Uses ship designed in ENGR 461 and 471.

Prerequisites: ENGR 244, ENGR 345, ENGR 363, MATH 212.

ENGR 476 Power Boat Principles and Design

2 class hours, 2 laboratory hours, 3 credits.

Preliminary design techniques, motor powered small craft. Principal dimensions, hull form and stability, structural design, speed and/or power requirements. Preliminary characteristics to meet owner's requirements. Practical use of CAD and computer facilities.

Prerequisites: ENGR 363, ENGR 366, ENGR 462

or

Prerequisites: ENGR 347, ENGR 371.

[Spring]

ENGR 481 Communications Theory

3 class hours, 3 credits.

Principles of communications systems: system and signal theory; analog modulation schemes; A/D and D/A conversion; introduction to digital communications.

Prerequisite: ENGR 387.

[Fall]

ENGR 483 Control Systems Theory

2 class hours, 2 laboratory Hours, 3 credits.

Analysis and control of feedback systems: transducers and their transfer functions; time domain and frequency response; stability criteria; classification of control equipment; performance specification and compensating networks.

Prerequisites: ENGR 120, ENGR 383.

[Spring]

ENGR 484 Electric Drives

2 class hours, 2 laboratory hours, 3 credits.

Students will learn a systematic design approach to motor drives using MATLAB and SIMULINK analysis simulation tools. Students will learn the fundamental principles of the subject, and extensive modeling, simulation, and analysis will be emphasized. Typical motor drives will be demonstrated for detailed industrial applications.

Prerequisite: ENGR 384.

[Fall]

ENGR 485 Electrical Power Systems

3 class hours, 3 credits.

Analysis and design aspects of large power systems: system representation; symmetrical components load flow analysis; system protection computer solution methods emphasized.

Prerequisite: ENGR 380.

ENGR 488 Electrical Design I

2 class hours, 4 (2x2) laboratory hours, 4 credits.

Fundamentals of industrial control, instrumentation and automation: applications of control systems theory; sensors, analyzers, transducers, transmitters and final control elements; analog and digital control devices; distributed control systems and programmable controllers; ergonomics, human factors and safety aspects; design focus on systems applications and engineering practices.

Prerequisites: ENGR 345, ENGR 384, ENGR 388, ENGR 395.

[Fall]

ENGR 489 Electrical Design II

2 class hours, 4 (2x2) laboratory hours, 4 credits.

Continuation of ENGR 488 (Electrical Design I). Additional topics as per student interest including: multivariable, adaptive, supervisory and optimal control; power electronics and solid state motor control. Prerequisite: ENGR 488.

[Spring]

ENGR 495 Marine Electrical Systems

3 class hours, 3 credits.

Governing rules, regulations and design requirements for shipboard electrical systems; sizing ship power equipment; load analysis and system layout; cable sizing; short circuit analysis, system protection and coordination; recent technical developments in marine electrical machinery.

Prerequisite: ENGR 380 or ENGR 484.

[Spring]

PROFESSIONAL STUDIES (ENGR 500 – 599)

ENGR 503 Manufacturing Processes I

1 class hour, 3 laboratory hours, 1 credit.

Fundamentals of metal cutting, measuring systems, hand tools and machine tools with major emphasis on basic engine lathe operation. Also includes the use of milling machines, grinders, and drill presses. Safe operation and use of safety equipment is emphasized. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair. [Fall]

ENGR 504 Manufacturing Processes II

1 class hour, 3 laboratory hours, 1 credit.

Manufacturing Processes II offers oxy-acetylene cutting and welding, brazing, arc welding, pipe fitting, and sheet metal fabrication. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair.

[Spring]

ENGR 510 Summer Sea Term I

6 credits.

Understanding of the ship's organization. Interrelationship of the components of an operating engine room. Safety of person and ship. Watchstanding, maintenance and repair, and lectures. Responsibility is delegated on the basis of experience and demonstrated ability. In compliance with international STCW requirements, there will be no D or D+ grades in this course. This course also includes required STCW training for Vessel Personnel With Designated Security Duties (VPDSD).

Prerequisites: ENGR 540, PE 103, PS 112.

[Summer]

ENGR 516 Engineering License Seminar

0 credits.

Lectures, discussion, and study of subjects required by U.S. Coast Guard for federal licensure as an officer in U.S. Merchant Marine. Course is graded Pass/Fail. Examinations are administered to replicate conditions under which Federal exams are given.

Prerequisites: ENGR 503, ENGR 504, ENGR 520 or ENGR 521, ENGR 543, ENGR 544, NAUT 308. [Summer]

ENGR 520 Summer Sea Term II

6 credits.

Areas of responsibility and depth of knowledge are increased in the overall operations of the vessel under the supervision of the Chief Engineer and the Senior Engineering Training Officer. Safety of person and ship is emphasized. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: ENGR 510, ENGR 541, ENGR 542.

[Summer]

ENGR 521 Cadet Commercial Vessel Shipping (in Lieu of Summer Sea Term II)

6 credits.

Exceptionally qualified candidates may, upon application to the Engineering Department, be selected to sail on a commercial ship in lieu of ENGR520. Cadets will be assigned to vessels for approximately 60 days, as required to satisfy the USCG license requirements for sea service, if berths are available. Cadets will be selected based upon academic performance and conduct. An extensive sea project is required. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: ENGR 510, ENGR 541, ENGR 542.

[Summer]

ENGR 525 Industrial Internship I

6 credits.

An internship with a sponsoring industrial firm, requiring the intern to be assigned to duties requiring the practical application of engineering knowledge. These could include such tasks as inspection of existing equipment or systems, inspection of newly completed work, preparation of specifications for renovation or repair work, or development of maintenance plans and programs. The intern will keep a daily work log, and will retain work samples subject to the approval of his/her supervisor, as agreed with the intern's faculty advisor. The intern will receive a formal performance review upon completion of the internship, and must complete a substantial internship report to receive credit.

Prerequisites: Permission of the department chairman and completion of sophomore year in a relevant engineering discipline.

[Summer]

ENGR 526 Industrial Internship I

3 credits.

An internship with a sponsoring industrial firm, requiring the intern to be assigned to duties requiring the practical application of engineering knowledge. These could include such tasks as inspection of existing equipment or systems, inspection of newly completed work, preparation of specifications for renovation or repair work, or development of maintenance plans and programs. The intern will keep a daily work log, and will retain work samples subject to the approval of his/her supervisor, as agreed with the intern's faculty advisor. The intern will receive a formal performance review upon completion of the internship, and must complete a substantial internship report to receive credit.

Prerequisites: Permission of the department chairman and completion of sophomore year in a relevant engineering discipline.

[Summer]

ENGR 530 Summer Sea Term III

5 credits.

Operational responsibilities by the student engineer of all phases of ship work under the supervision of the Chief Engineer and the Senior ENGR Training Officer. Safety of person and ship is emphasized. Each student must take and pass intensive oral and written examinations. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Students cannot receive credit for this course and for ENGR 551 DDE I or for ENGR 552 DDE II.

Prerequisites: ENGR 503, ENGR 504, ENGR 520 or ENGR 521, ENGR 543, ENGR 544, NAUT 308.

Corequisites: ENGR 516, PE 411.

[Summer]

ENGR 535 Industrial Internship II

6 credits.

An internship with a sponsoring industrial firm, requiring the intern to be assigned to duties requiring the practical application of engineering analysis and design techniques, which could include such tasks as review and application of relevant codes to proposed renovation and repair work, completion of calculations pertaining to performance or sizing of equipment, completion of design specifications, estimates, and drawings, or preparation of reports and presentation materials. The intern will keep a daily work log, and will retain work samples subject to the approval of his/her supervisor, as agreed with the intern's faculty advisor. The intern will receive a formal performance review upon completion of the internship, and must complete a substantial internship report to receive credit.

Prerequisites: ENGR 525, permission of the department chairman, and completion of the junior year in a relevant engineering discipline.

[Summer]

ENGR 536 Industrial Internship II

3 credits.

An internship with a sponsoring industrial firm, requiring the intern to be assigned to duties requiring the practical application of engineering analysis and design techniques, which could include such tasks as review and application of relevant codes to proposed renovation and repair work, completion of calculations pertaining to performance or sizing of equipment, completion of design specifications, estimates, and drawings, or preparation of reports and presentation materials. The intern will keep a daily work log, and will retain work samples subject to the approval of his/her supervisor, as agreed with the intern's faculty advisor. The intern will receive a formal performance review upon completion of the internship, and must complete a substantial internship report to receive credit.

Prerequisites: ENGR 525, permission of the department chairman, and completion of the junior year in a relevant engineering discipline.

[Summer]

ENGR 540 Introduction to Ship Systems

3 class hours, 1 laboratory hour, 3 credits.

An introduction to ship auxiliary and main propulsion machinery and systems, as well as engine room operation and management. Students are also required to undergo shipboard familiarization and engine room familiarization in preparation for Summer Sea Term I. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair. Corequisites: PS 112.

[Spring]

ENGR 541 Ship Systems I

2 class hours, 2 credits.

Design principles, characteristics and classification of marine refrigeration and air conditioning systems. Design principles, characteristics and classification of marine electric systems, including DC and AC circuits, motors and generators. Course covers construction and specification of systems and components, as well as correct operation and maintenance procedures. U.S. Coast Guard design requirements pertaining to each system and its component equipment are covered. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair. Prerequisite: ENGR 540.

[Spring]

ENGR 542 Ship Systems II

2 class hours, 2 credits.

A continuation of the study of design principles and operating characteristics of marine auxiliary systems. Maintenance procedures, laws and regulations applicable to marine engineering systems are covered. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair.

Prerequisite: ENGR 100, ENGR 540.

[Fall]

ENGR 543 Ship Systems III

3 class hours, 2 laboratory hour, 3 credits.

Study of design principles, characteristics and classification suffocation of marine diesel engines. Construction specifications as indicated in the U.S. Coast Guard and ABS ENGR Regulations. Correct procedures for operation and maintenance of auxiliary and main engine diesels, fuels, and combustion. Diesel operation using diesel simulator, miscellaneous systems. A diesel lab is integrated into the course structure to facilitate hands on learning and demonstration of proper engineering practices. The lab will expose students to the practical aspects of diesel engines. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair.

Prerequisite: ENGR 542.

[Fall]

ENGR 544 Ship Systems IV

4 class hours, 4 credits.

Principles, types, construction and description of ship main propulsion engines and their support components. Brief description of steam reciprocating engines; a comprehensive treatment of steam turbines, gas turbines, and electric drive systems together with the auxiliary components which comprise a complete propulsion plant. In compliance with international STCW requirements, there will be no D or D+ grades in this course. Open only to students for whom this course is a requirement for their degree program or minor, or by permission of the department chair.

Prerequisite: ENGR 542.

[Spring]

ENGR 561 Small Vessel Engineer I

2 class hours, 6 laboratory hours, 4 credits.

Small Vessel Engineer I will be an STCW course that is the first in a two semester sequence in the comprehensive study of numerous designs and features of high- and medium-speed diesel engines including aspects of operation, maintenance and repair. Topics include: Main and auxiliary engines, propulsion and drive systems, lubrication systems, bearings, starting systems, fuel and combustion systems, intake and exhaust systems, cooling and charge-air systems, and casualty control methods. Laboratory hours consist of operation, maintenance, repair and management of the campus diesel fleet (minimum 6 hrs/week) and a journal kept. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: ENGR 510.

[Fall]

ENGR 562 Small Vessel Engineer II

2 class hours, 6 laboratory hours, 4 credits.

Small Vessel Engineer II will be an STCW course that is the second in a two semester sequence in the comprehensive study of numerous designs and features of high- and medium-speed diesel engines including aspects of operation, maintenance and repair. Topics include: Governors and speed control systems, engine automation and control systems, electronic systems, communications, ventilation systems, turbines, and diesel safety. Laboratory hours consist of operation, maintenance, repair and management of the campus diesel fleet (minimum 6 hrs/week) and a journal kept. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: ENGR 561.

[Spring]

ENGR 563 Small Vessel Electrical Machinery and Systems

2 class hours, 2 laboratory hours, 3 credit.

This course is designed to provide Assistant Engineer Limited License (AELL) students with the basic knowledge and skills necessary to safely and effectively work with the electrical systems and equipment found aboard commercial towing vessels. The course of study will include a lecture portion to discuss the theory, design and operation of electrical circuits and machinery. A lab will supplement the lecture discussions and provide a setting for hands-on training and a venue to conduct assessments in the safe use of electrical instruments, methods for troubleshooting, and performing maintenance of electrical machinery/ equipment. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: ENGR 542, ENGR 561.

ENGR 601 Independent Study in Engineering I-II

1, 2, 3, or 4 credits each.

Theoretical or experimental independent investigation of special topics in engineering. Student work will be under the direct supervision of a mentor assigned by the Engineering Department.

Prerequisite: Permission of the chair.

ENGR 602 Independent Study in Engineering I-II

1, 2, 3, or 4 credits each.

Theoretical or experimental independent investigation of special topics in engineering. Student work will be under the direct supervision of a mentor assigned by the Engineering Department.

Prerequisites: ENGR 601, permission of the chair.

ENGR 610 Special Topics in Engineering

1, 2, 3, or 4 credits.

Theoretical and/or experimental investigation of special problems in engineering.

Prerequisite: As specified by the instructor.

ENGR 631 Undergraduate Research I

3 credits.

This course offers honors undergraduate engineering students the opportunity to help expand the body of human knowledge by researching a topic on the edge of current engineering understanding. This research experience is a valuable gateway to the personal development of knowledge creation skills which distinguish the best in their fields. Students may take an additional semester of undergraduate research (ENGR 632) but may not apply more than a total of 6 credit hours of undergraduate research to their program of study. This course is intended for honors students who are capable of advanced studies. Registration for Honors Undergraduate Research I requires the express consent of the faculty member who is serving as the research advisor for the student's research.

Prerequisite: Permission of the chair.

ENGR 632 Undergraduate Research II

3 credits.

This course offers honors undergraduate engineering students the opportunity to help expand the body of human knowledge by researching a topic on the edge of current engineering understanding. This research experience is a valuable gateway to the personal development of knowledge creation skills which distinguish the best in their fields. Students may not apply more than a total of 6 credit hours of undergraduate research to their program of study. This course is intended for honors students who are capable of advanced studies. Registration for Honors Undergraduate Research II requires the express consent of the faculty member who is serving as the research advisor for the student's research.

Prerequisites: ENGR 631, permission of the chair.

ENVIRONMENTAL SCIENCE

ES 101 Introduction to Environmental Science

2 class hours, 2 laboratory hours, 3 credits.

An introduction to the science of the environment. Includes lecture and labs designed to introduce students to concepts and analysis of environmental issues.

[Fall (MES Majors Only) and Spring]

SUNY-GER: Natural Sciences.

ES 305 Remote Sensing

2 class hours, 2 laboratory hours, 3 credits.

Principles of remote sensing: electromagnetic and sound energy, and remote sensing systems. Photogrammetry. Radiometry. Orbital dynamics. Electro-optical sensors. Satellite systems. Blackbody radiation. Radar and sonar. Meteorological, oceanographic and biological applications.

Prerequisites: OCEA 101, METE 201, PHYS 214.

[Spring]

ES 410 Marine Microbiology

3 class hours, 3 credits.

A survey of microbes and their role in nutrient cycles, disease, and oil spill remediation. Methodologies for collecting and identifying marine microorganisms.

Prerequisites: BIO 201, CHEM 121.

ES 420 Environmental Pollution

3 class hours, 3 credits.

Sources and fates of common selected environmental pollutants; remediation, clean-up and disposal of pollutants; acute and chronic effects of pollutants; case studies of aquatic, terrestrial and atmospheric pollution.

Prerequisite: CHEM 100 or CHEM 121.

[Spring]

ES 430 Environmental Impact Assessment

3 class hours, 3 credits.

The value and role of environmental impact statements. Materials, structural designs, site locations and habitat impact.

Prerequisites: ES 420, CHEM 220.

ES 451 Field Methods in Environmental Science

3 class hours, 3 laboratory hours, 4 credits.

A capstone course emphasizing the hands-on lab and field investigative techniques that are used to study the physical, biological, geological, and chemical parameters of the marine environment.

Prerequisites: CHEM 121, OCEA 101, BIO 210.

Corequisite: GEOL 301.

[Fall]

ES 505/515 Environmental Science Internship I/II

3 credits each.

Supervised field experience which allows the students to apply and extend their scientific academic abilities in a professional working environment. The hands-on experience may be in environmental science, marine biology, meteorology, or oceanography. Projects can be conducted under the supervision of a researcher not associated with Maritime College; however, a Science faculty member must serve as an internal sponsor and overseer of the project. Two internships may span two academic semesters or may be taken concurrently as a single internship in the summer. The intern will be required to submit a proposal prior to commencement of each internship and a written report along with an evaluation letter from the internship supervisor upon completion.

Prerequisites: Permission of department chair and completion of sophomore year.

[Summer]

ES 610 Special Topics in MES

3 class hours, 3 credits.

Contemporary topics or problems in Marine Biology, Environmental Science, Meteorology or Oceanography.

ACCOUNTING

GBAC 311 Financial Accounting

3 class hours, 3 credits.

An introduction to accounting from the point of view of the investor and manager, GBAC 311 covers procedures for recording, summarizing and reporting business transactions, as well as asset valuation, costing and revenue analysis. Emphasis is on an analytical and interpretive approach to generally accept accounting principles that apply to the treatment of assets, liabilities, and capital transactions. The course includes an in-depth examination of corporate financial statements.

Prerequisite: GBUS 100.

[Fall and Spring]

GBAC 315 Managerial Accounting

3 class hours, 3 credits.

Topics of study include forms of business organization, corporation accounting, marketable securities, inventories, cash flows, income tax, and cost accounting for retail, service and manufacturing enterprises. Prerequisite: GBAC 311.

[Fall and Spring]

ECONOMICS and FINANCE

GBEC 121 Essentials of Macroeconomics

3 class hours, 3 credits.

An analysis of the forces that affect national economies including aggregate levels of production, employment and prices. Particular emphasis on the impact of government spending, taxation and monetary policy. Topics include GDP accounting, business cycles, inflation and unemployment, fiscal policy, national debt, monetary theory, and the framework of international economics.

Prerequisite: GBUS 100.

[Fall and Spring]

SUNY-GER: Social Sciences.

GBEC 122 Essentials of Microeconomics

3 class hours, 3 credits.

An analysis of the economic forces that influence the behavior of firms. Topics include basic demand and supply, price and demand elasticities, costs of production, and the behavior of enterprises under competitive and monopolistic conditions. Resource and labor markets as well as environmental constraints also are studied.

Prerequisite: GBEC 121.

[Fall and Spring]

SUNY-GER: Social Sciences.

GBEC 424 International Economics and Finance

3 class hours, 3 credits.

A study of the patterns of international trade from historical, theoretical and empirical perspectives. Analysis of the economics and policy issues involved in tariffs, bilateral and multilateral trade agreements, and economic unions. International finance from the enterprise and national perspectives. Analysis of trade with developing, middle income and industrial countries and the role played by multinational firms.

Prerequisite: GBEC 122.

[Fall and Spring]

GBEC 427 Financial Management

3 class hours, 3 credits.

An introduction to the financial management of corporations, including statements, ratio analysis, current assets and liability management, capital budgeting, stock and debt financing.

Prerequisite: GBAC 311.

[Fall and Spring]

GBEC 428 Economic Geography

3 class hours, 3 credits.

This course continues the overview begun in GBTT 251 of the global transportation systems that integrate our world as mechanisms that facilitate international trade, from the sourcing of raw materials to the final delivery of products and services to the end customer. Topics include the economic clusters and patterns linked to the geography of our world that affect both supply and demand, and the relationship of these clusters and patterns to cultural, political, and ethical contexts of transportation in globally extended supply chains.

Prerequisite: GBTT 251.

[Fall and Spring]

GBEC 429 Seminar in Transportation Economics

3 class hours, 3 credits.

Economic and managerial analysis of characteristic problems in the transportation industry. Examination of issues such as regulation and deregulation, freight rate setting, service quality, pollution, security and safety, congestion, port management structures, location and land value, social considerations, technology and innovation.

Prerequisite: Senior standing.

[Fall and Spring]

LAW

GBLW 431 Business Law

3 class hours, 3 credits.

Topics include contracts, business torts, agency, white collar crime, the Uniform Commercial Code, product liability, consumer rights, negotiable instruments, real and personal property, bankruptcy and business ethics.

Prerequisite: GBUS 100.

GBLW 433 Admiralty Law

3 class hours, 3 credits.

Topics include jurisdiction of admiralty courts, rights of seamen, bills of lading, charter parties, cargo claims, maritime liens, insurance, general average, salvage, collisions, limitation of liability, sovereign immunity, pollution and United States Coast Guard proceedings against merchant mariners' licenses.

Prerequisite: GBLW 431.

[Fall and Spring]

GBLW 435 Environmental Law and Policy

3 class hours, 3 credits.

An introduction to the role of administrative agencies and legal institutions in controlling all forms of pollution. Topics include government's environmental responsibilities, energy policy, regulation of air and water pollution, toxic substances, and restrictions on the development of public and private lands. The course considers economic, scientific and technological aspects of administrative and legislative approaches to environmental problems. The evolving role of international law affecting the environment also is discussed.

Prerequisite: Junior standing.

[Fall and Spring]

SUNY-GER: Social Sciences.

GBLW 437 International Law

3 class hours, 3 credits.

Topics covered include the sources of international law, sovereignty, the jurisdiction of the nation state and the community of nations, and the status of diplomatic representatives. The law of the sea is examined extensively, including territorial seas, contiguous zones, exclusive economic zones, innocent passage, hot pursuit, freedom of navigation, fishing rights, scientific research and mineral exploitation.

Prerequisite: GBUS 100.

[Fall]

MANAGEMENT

GBMG 341 Organizational Management

3 class hours, 3 credits.

An examination of the fundamentals of organization and administration including planning, organizing, directing, coordinating, evaluating and controlling. Topics include the structure and processes for managing the organization as a system in a dynamic environment, corporate social responsibility and international dimensions.

Prerequisite: GBUS 100.

[Fall and Spring]

GBMG 345 Fundamentals of Marketing

3 class hours 3 credits.

This course considers the functions performed by marketing intermediaries and the distribution of goods and services from producers to customers.. Topics include the nature and scope of marketing problems, the behavior of consumers and industrial buyers, product design and development, channels of distribution, promotional and pricing strategies, social responsibility and ethics, governmental regulation and international dimensions of marketing.

Prerequisite: GBUS 100.

GBMG 348 Business Ethics

3 class hours, 3 credits.

The course examines ethical issues, moral principles, values, duties, obligations, and etiquette in the context of business theory and practice. A philosophical framework (e.g. Aristotle) for ethical and moral thinking is set. Ethics as a set of values going beyond the law is studied. Ethical relationships which businesses, and business people, encounter with stakeholders and others are examined and defined. The course text and other readings draw on a wide body of literature, including the humanities, management theory and the social sciences. Actual cases (e.g. Bhopal, *Exxon Valdez*, Enron, Arthur Andersen, WorldCom) are studied for ethical implications. Special issues of ethical conduct within the workplace (e.g. sexual harassment; equal opportunity; whistleblowers; nepotism) are studied and discussed.

Prerequisite: GBUS 100.

[Fall]

GBMG 440 Seminar in Strategy and Policy

3 class hours, 3 credits.

An integrative learning experience that relates business knowledge to managerial decision-making. Readings and case analyses test skills in applying management, marketing, financial and other business techniques in competitive situations. Emphasis is on successful performance in a complex and dynamic global business environment.

Prerequisite: Senior standing.

[Fall and Spring]

GBMG 442 International Marketing Management

3 class hours, 3 credits.

An in-depth analysis of the issues involved in developing international marketing programs from the determination of objectives and evaluation of opportunities to the implementation of global strategies. Cases and exercises emphasize how marketing principles are applied and different marketing mixes are developed by multinational providers of goods and services.

Prerequisite: GBMG 345.

GBMG 443 Cross-Cultural Management

3 class hours, 3 credits.

This course considers the challenges of doing business across different national cultures. Topics include identifying cultural differences and their impacts on relationships with customers, suppliers, subordinates, superiors and co-workers. The effect of language, religion, value systems and social structure are considered, as are the implications of differences in attitudes toward performance, uncertainty, assertiveness, individualism, gender, leadership and expectations about the future.

Prerequisite: GBMG 341.

[Spring]

TRANSPORTATION SYSTEMS

GBTT 251 Transportation Systems

3 class hours, 3 credits.

This course presents an overview of the global transportation systems that help integrate our world, including their operation, design, and the economic factors that help drive and influence the supply chains of which they are a part. This course is the first in a sequence of two courses, the other being GBEC 428 Economic Geography, that integrates the presentation and learning of three elements primary to contemporary transportation: 1) system design, organization, and control; 2) global environments and factors, including culture and ethics, that influence transportation processes and activities; and 3) the economics of transportation, including the effects of demand and supply, private sector costing and pricing strategies, and government regulation at all levels.

Prerequisite: GBUS 100.

[Fall and Spring]

GBTT 252 The Business of Shipping

3 class hours, 3 credits.

This course surveys the various aspects of the business of water-borne transport of goods and passengers. Topics include private versus common carriage; organization and management of liner and tramp shipping companies; freight rates; the roles of ship managers, ship brokers; bunker brokers, stevedores, port agencies, terminals and warehouses. These subjects are examined from operational, financial, regulatory and risk- management perspectives.

Prerequisite: GBUS 100.

[Fall and Spring]

GBTT 351 International Logistics

3 class hours, 3 credits.

This course applies a total systems approach to the management of activities involved in the physical movement of raw materials, in-process inventory and finished goods from point of origin to point of use or consumption. Topics include supply chain management, inbound and outbound logistics systems, customer service, inventory and warehousing, transportation management, information systems, global logistics and logistics strategy.

Prerequisite: GBUS 100.

[Fall and Spring]

GBTT 451 Marine Insurance

3 class hours, 3 credits.

An introduction to the fundamentals of cargo, hull, and protection and indemnity insurance. Topics include insurance markets, brokers, agents, underwriters, forms of policies, valuation, total losses, particular average, general average, insured perils, war risks, subrogation, reinsurance and insurance of pollution liabilities.

Prerequisite: GBLW 431.

GBTT 453 Import/Export and Traffic Management

3 class hours, 3 credits.

A survey of the fundamentals of foreign trade from a transactional perspective. Topics include negotiating the international sales contract, U.S. customs practice, entry of goods, tariffs, foreign trade zones, bonded warehousing, duty drawbacks, export controls, reducing the risk of nonpayment, the letter of credit, letters of undertaking and guarantees, arranging for the transportation of the goods, freight forwarding, nonvessel operating common carriers, negotiating and entering into contracts of affreightment, service contracts, charter parties, bills of lading, insuring the goods, and engaging stevedoring and terminal services.

Prerequisite: GBUS 100.

[Fall and Spring]

GBTT 457 Port and Terminal Operations

3 class hours, 3 credits.

An introduction to the diversified operations within ports, both U.S and international. Topics include the role of port authorities and other governmental agencies, interorganizational relationships, port development, security and law enforcement, traffic control, harbor maintenance, and the operation of container, bulk and petroleum terminals.

Prerequisite: GBUS 100.

[Fall and Spring]

GBTT 460 Principles of Global Supply Chain Security

3 class hours, 3 credits.

The course depicts security as a control mechanism in several major channels in the supply chain; e.g. in human resources confidentiality of employee records; in logistics cargo and passenger security; in communications encrypted email and hacker-free databases; in finance sanctity of credit cards and identity; and in marketing protection of intellectual property. Students will engage in a team research project as a practicum for learning how to develop and conduct vulnerability assessments and security planning. A major underlying course theme is that security can only be successfully developed and implemented in context of the cultural, economic, and political contexts of the supply chain processes for which it serves as a control mechanism.

Prerequisites: GBUS 100 and Junior standing.

[Fall and Spring]

GBTT 462 Science and Technology Issues of Security

3 class hours, 3 credits.

This course explores the social and political contexts, the implications and consequences of the scientific and technological issues in the security arena. For example, containers now coming out of a port terminal are scanned for radiation; what can the scanners detect and if radiation is detected, what does that mean? How would a city be evacuated in the event a nuclear device was detected? Another example of technology with far-reaching implications is that of biometrics; suppose everybody had their retina patterns in a national database? When is personal information too intrusive for government access?

Prerequisites: GBUS 100 and Junior standing.

GBTT 465 Lectures in Contemporary Security Issues

3 class hours, 3 credits.

The capstone course of a minor in intermodal and maritime security jointly offered by the Department of Global Business and Transportation (GBAT), and the Department of Marine Transportation (MT). In addition to lectures by the professor supervising the course, from time to time prominent experts in maritime and intermodal security, from both public and private sectors, will address the students on topical issues of the day in their field of security. Students will be required to do a term paper that integrates the information from the different speakers as well as both primary and secondary research performed by the student.

Prerequisites: GBUS 100 and Junior standing.

[Fall and Spring]

GENERAL BUSINESS

GBUS 100 Introduction to Business and Economics

3 class hours, 3 credits.

This foundation course introduces students to basic concepts of economics and to the structure, functions, and objectives of the business enterprise.

[Fall and Spring]

GBUS 300 International Business

3 class hours, 3 credits.

An introduction to international business examining the environment in which multinational firms operate and the distinctive ways in which global enterprises perform business functions. Topics include the impact of cultural and political-legal differences, trade theory, regional and global economic integration, foreign exchange, country selection, exporting and importing, supply chain management, marketing globally and international human resource management.

Prerequisite: GBUS 100.

[Fall and Spring]

GBUS 525 ITT Internship/Work Experience

6 credits.

Candidates for the Bachelor of Science in International Transportation and Trade are required to perform an internship in an organization in international transportation, trade or another aspect of global business or to complete a summer work experience aboard a SUNY Maritime training vessel. The activities are intended to familiarize ITT candidates with profesional work environments and expose them to career opportunities.

Prerequisite: GBUS 100.

[Summer]

GBUS 526 ITT Study Abroad

6 class hours, 6 credits.

This intensive study abroad course is designed to provide undergraduate students with the opportunity to put their academic coursework, theory and concepts learned in the classroom into real time practices as found in the international and global commercial venues. Students in this study abroad program will have the opportunity to discuss critical 21st century topics and issues pertinent to global trade, commerce and transportation with academics, and practitioners in both the public and private sectors in each country visited. Among the issues and topics to be covered include: supply chain management, ports & terminals operations, importing & exporting, intermodal transportation, manufacturing, security, managing risk, fraud and ethics.

Note: This course is to be an alternative to GBUS 525 ITT Internship.

Prerequisites: GBUS 100 and permission of the instructor.

[Summer]

GBUS 610 Special Topics in Business and Transportation

3 credits.

Significant topics in business and transportation are examined that reflect the interest of both the students and the instructor. Activities typically involve review of the current and historical literature on the topic and the design, implementation and presentation of a substantial analytic or developmental project.

Prerequisites: GBMG 341 and permission of the instructor.

GEOLOGY

GEOL 301 General Geology

3 class hours, 3 credits.

Physical geology, rocks and minerals, plate tectonics, geologic time, evolution of the Earth, processes at Earth's surface, hydrologic cycle, Earth resources.

SUNY-GER: Natural Sciences.

[Fall - Odd Years]

HISTORY

HIST 101 American Civilization I

3 class hours, 3 credits.

A survey of American civilization from its beginning in Europe to the U.S. Civil War, including a consideration of maritime history.

Prerequisite: ENGL 101.

[Fall and Spring]

SUNY-GER: American History.

HIST 102 American Civilization II

3 class hours, 3 credits.

A survey of American history from the Civil War and Reconstruction to the present, including a consideration of the U.S. in the context of global history and an introduction to cliometrics.

Prerequisite: ENGL 101.

[Fall and Spring]

SUNY-GER: American History, Social Sciences.

HIST 401-402 Topics in European Civilization I-II

3 class hours, 3 credits each.

Survey of European civilization from the Middle Ages to the end of World War II.

Prerequisite: HIST 101 or HIST 102.

HIST 416 U.S. Maritime History to the Civil War

3 class hours, 3 credits.

An investigation into the ways that maritime commerce provided the foundation for the growth of the United States from pre-Columbian times through the Civil War. The focus of the course will be on the growth of America as a sea power, and the influence of the

U. S. Navy and its role in promoting American merchant shipping.

Prerequisite: HIST 101.

[Fall]

HIST 417 U.S. Maritime History since 1865

3 class hours, 3 credits.

An investigation into the major developments in American maritime history from the Civil War to the present. The course will focus on pivotal naval battles, as well as the growth of maritime commerce, as the twin catalysts of national expansion and cultural exchange.

Prerequisite: HIST 102.

[Spring]

HIST 418 History of American Foreign Policy

3 class hours, 3 credits.

A survey of the major developments in American foreign policy.

Prerequisites: HIST 101, HIST 102.

HIST 421 Vietnam and America

3 class hours, 3 credits.

Vietnam in the Twentieth Century. Focus on America's direct involvement and a consideration of its legacy for the U.S. and for Southeast Asia.

Prerequisite: HIST 102.

HIST 425 History of Technology

3 class hours, 3 credits.

A survey of selected major developments in Western technology, and their effects on society. Analysis of the process of technological innovation, and the application of modern technology in resource-limited societies. Special emphasis on those developments which bear on modern life and work.

Prerequisite: HIST 101 or HIST 102.

HIST 426 Twentieth Century Technology

3 class hours, 3 credits.

A detailed survey of the major technological developments of the twentieth century. Students will analyze in-depth advances in fields including communication, medicine, transportation, and warfare.

Prerequisite: HIST 101 or HIST 102.

HIST 432 America in the 1950s and 1960s

3 class hours, 3 credits.

A course that explores social, cultural, economic, and political developments from the end of World War II to the resignation of President Nixon in 1974. Significant military aspects of the Cold War and the two Asian conflicts of the period will also be studied, along with their consequences for American society and America's relations with the world.

Prerequisite: HIST 102.

HIST 436 Sports and American Society

3 class hours, 3 credits.

An examination of the evolution of American society, through the prism of sports. Sports will be utilized as a means to analyze social and economic change, race relations, labor-management conflict and the emergence of player unions, the impact of war on sport, gender issues, and the impact of print and electronic media.

Prerequisite: HIST 101 or HIST 102.

HIST 440 History of American Enterprise I

3 class hours, 3 credits.

This course will explore the lives and critical business decisions of the pioneering entrepreneurs who used the accumulation of capital, acquired through astute investments, to create this nation's largest companies and corporations. Students will examine the role of these business pioneers in the growth of commerce as the engine of cultural exchange and, therefore, American expansion. This course covers the period from the first colonists to 1865.

Prerequisite: HIST 101. SUNY-GER: Humanities.

HIST 441 History of American Enterprise II

3 class hours, 3 credits

This course will explore the lives and critical business decisions of the pioneering entrepreneurs who used the accumulation of capital, acquired through astute investments, to create this nation's largest companies and corporations. Students will examine the role of these business pioneers in the growth of commerce as the engine of cultural exchange and, therefore, American expansion. This course covers the period from the end of the Civil War to the present.

Prerequisite: HIST 102. SUNY-GER: Humanities.

HIST 465 History of Science

3 class hours, 3 credits.

This is a course in the role science played in the development of our modern technologically-based society, and the corresponding role that industrial society has played in the development of contemporary scientific inquiry. The first half of this course will examine major personalities and breakthroughs in the subject matter and processes of science, from the ancient world through the nineteenth century. The second half of the course will focus on selected controversial topics in contemporary science.

Prerequisite: HUMN 201 or HUMN 202.

[Spring]

HIST 471 China and the World I

3 class hours, 3 credits

This survey course covers ancient Chinese history and culture, from pre-history to the mid-19th century, and aims to provide a deeper framework for understanding contemporary China and China's relationship to the world.

Prerequisite: HUMN 201 or HUMN 202.

HIST 472 China and the World II

3 class hours, 3 credits

This survey course covers Chinese history and culture from the mid-19th century to the present. The course will examine the critical events that shaped modern China and aim to provide a framework for understanding contemporary Chinese politics and China's relationship to the world.

Prerequisite: HUMN 201 or HUMN 202.

HUMANITIES

HUMN 201 World Literature and Culture I

3 class hours, 3 credits.

An introduction to Western and other world cultures from the first civilizations through the Middle Ages. Course includes readings of primary works from the arts and sciences, literature and philosophy. Prerequisite: ENGL 102 or ENGL 103.

[Fall and Spring]

SUNY-GER: Other World Civilizations, Western Civilization.

HUMN 202 World Literature and Culture II

3 class hours, 3 credits.

An introduction to Western and other world cultures from the Renaissance to the present. Course includes readings of primary works from the arts and sciences, literature and philosophy.

Prerequisite: ENGL 102 or ENGL 103.

[Fall and Spring]

SUNY-GER: Other World Civilizations, Western Civilization.

HUMN 300 World Literature and Culture III

3 class hours, 3 credits.

A study of the ideas treated in Humanities I & II as they are developed in modern works of fiction and non-fiction.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

HUMN 400 History of Art

3 class hours, 3 credits.

A study of painting, sculpture, and architecture from prehistoric times to the present. Fundamental concepts of art analysis will also be introduced.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities, The Arts.

HUMN 401 Studio Drawing and Painting

2 class hours, 2 studio hours, 3 credits.

Two class hours a week introduce basic techniques of drawing and painting, two classes weekly of lecture and discussion on the visual elements and major styles in art history. No previous art experience is necessary.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

HUMN 402 Images of Men, Women, and Machines

3 class hours, 3 credits.

Looking at art, film, fiction, drama, advertising, and photography over the past hundred years, this course focuses on the social and cultural impact of modern machines, and the ways these machines including automobiles, airplanes, home appliances, and consumer electronics have transformed the lives of both men and women.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

HUMN 403 A History of Western Music

3 class hours, 3 credits or 2 class hours, 2 rehearsal/performance hours, 3 credits.

A historical survey of Western music from the medieval to the present, emphasis on stylistic characteristics and representative composers and works. Students who will complete two years of satisfactory service in the College band before graduation need attend only two class hours each week. Others will attend a third class hour or work on an appropriate project.

Prerequisite: HUMN 201 or HUMN 202. SUNY-GER: Humanities, The Arts.

HUMN 404 Art and Technology

3 class hours, 3 credits.

An introduction to the interrelationships between art, technology, science and engineering.

Prerequisite: HUMN 201 or HUMN 202. SUNY-GER: Humanities, The Arts.

HUMN 405 World Music

3 class hours, 3 credits.

While most societies in the world have specific musical traditions, their meanings vary widely. In World Music we will consider these different meanings in traditional and contemporary musical styles of Africa, the Americas, Asia, and Europe. Emphasis will be placed on considering the sacred and secular contexts in which musical cultures exist. Questions to be addressed include: How does the field of ethnomusicology combine elements of the arts, humanities, and social sciences? How have musical cultures evolved through each culture's unique conditions? How do they continue to develop and transform in the contemporary world?

Prerequisite: HUMN 201 or HUMN 202.

HUMN 430 Case Studies in Constitutional Law

3 class hours, 3 credits.

This course will examine the role of the Supreme Court in the American system of government, focusing on particular cases and legal principles in depth. Students will read Constitutional Law cases and other materials, and will prepare oral presentations and written materials analyzing cases and legal principles.

Prerequisite: HIST 101 or HIST 102.

[Spring]

HUMN 454 The Words and Images of War

3 class hours, 3 credits.

An in-depth investigation of the experience of war from ancient times until today through the stories, novels and poems of combatants, complemented by fiction and non-fiction films and photographic essays. These readings are underscored by theoretical studies of human aggression, violence and killing.

Prerequisite: HUMN 201 or HUMN 202.

HUMN 460 The Bible as/in Literature

3 class hours, 3 credits.

Discussion of literary dimensions of passages from the Bible and the relationships of a variety of other stories, poems, and plays to the Bible.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

HUMN 461 Religion

3 class hours, 3 credits.

An introduction to the philosophy of religion. Principal topics of discussion include immortality; the problem of evil; and the principle of inerrant scripture.

Prerequisite: HUMN 201 or HUMN 202.

HUMN 465 Humanities Research Methods

3 class hours, 3 credits.

An elective for students seeking to enhance their skills in research, analysis, and writing. This course is aimed at introducing the student to the skills involved in historical, literary, or aesthetic research. Emphasis is on the ability to locate, evaluate, and synthesize data, as well as the technical aspects of academic investigation, research methods and tools, and expository writing.

Prerequisite: HUMN 201 or HUMN 202.

[Fall - Odd Years]

HUMN 467 Science Fiction

3 class hours, 3 credits.

In this class we will critically examine a broad range of genre literature on themes such as race, religion, ecological peril, artificial intelligence, exploration and colonization. Students will consider these concepts in light of historical context and theoretical concepts (such as symbolist/allegorical texts, simulacra, ergodicity, and the hermeneutic/proairetic code) and complete a significant work of independent research in which they link fiction with real-world application.

Prerequisite: HUMN 201 or HUMN 202

HUMN 490 Studies in Maritime Policy

3 class hours, 3 credits.

Analysis of the technological, legal, environmental, and ethical aspects of policy decisions in the maritime sphere. Readings range from polemical arguments by interest groups to international treaties. Students prepare case studies and argue positions as both advocates and arbiters.

Prerequisites: HUMN 201, 202 and Senior standing.

[Spring]

HUMN 505/515 Internship I/II

3 credits each term.

Student placement in maritime-related publishing, marketing, legal, and museum sites. Students will devote six hours per week (typically one full day) to their internship, keep a journal of activities, and file an end-of-term report with their faculty mentor.

Prerequisite: HUMN 201 or HUMN 202. [Fall (HUMN 505)/Spring (HUMN 515)]

HUMN 610-611 Special Topics in Humanities I-II

3 class hours, 3 credits each.

Special topics and issues for qualified students interested in acquiring a broader knowledge of our linguistic, literary, or artistic heritage.

Prerequisite: HUMN 201 or HUMN 202.

LEADERSHIP

LEAD 101 Leadership and the Maritime Experience

1 class hour, 1 credit.

A required course for all freshmen (first-time college or < 32 transfer credits). This course is aimed at introducing the student to college life with emphasis on the unique history and goals of Maritime College, helping the student manage the difficult transitional first-year of college via the formulation of a plan for academic success, and fostering the student's potential for leadership via the development of self-awareness and interaction with other students from diverse backgrounds. [Fall and Spring]

LEAD 201 Exploring Leadership

1 class hour, 1 credit.

This integrative course offers students an opportunity to connect the study of leadership theory with opportunities to practice leadership. Students will explore the concept and practice of "citizen leadership" as a framework for civic and professional leadership roles throughout life. LEAD 201 introduces "leadership" and "citizenship" as social constructs, i.e. ideas and values that vary across cultural and historical contexts.

Prerequisite: LEAD 101.

LEAD 401 Leadership Seminar

1 class hour, 1 credit.

The course is designed to be a blended nontraditional seminar class focused as a culminating leadership experience. Considerable introspection and exploration of your time both at Maritime College and within the SAIL Program is expected. The underlying theme is that every person can become a leader and that the ability to lead begins with the process of self-discovery (LEAD 101) and ends with self-actualization (LEAD 401). LEAD 401 has an experiential component where students are expected to assess past and present leadership experiences to identify their leadership style.

Prerequisite: LEAD 201.

MATHEMATICS

The Science Department administers a placement test in mathematics to all undergraduate students admitted to the college. An evaluation of each student's mathematics preparation will be based on the performance on this test and admissions credentials. First-semester students, including transfer students, will be registered in the appropriate mathematics course in accordance with the results of this evaluation and their choice of curriculum.

MATH 080 Elementary Algebra

3 class hours, 3 credits.

Arithmetic review; scientific notation; algebraic operations; factoring; solving linear and quadratic relations; absolute value; Pythagorean theorem; coordinate geometry; graphing lines and parabolas; relevant word problems. Course offered on a pass/fail basis. This course may not be used to satisfy any degree requirement.

[Fall and Spring]

MATH 090 Introduction to College Mathematics

4 class hours, 4 credits.

Algebra review; basic function concepts; lines, systems of linear equations, and linear functions; quadratic functions; polynomial and rational functions; exponential functions and logarithms; trigonometry and trigonometric functions; applications to problems in business and the sciences. This course may not be taken for elective credit.

Prerequisite: MATH 080. SUNY-GER: Mathematics.

[Fall and Spring]

MATH 101 Calculus I

4 class hours, 4 credits.

A first course in the calculus of one-variable functions with emphasis on preparing students for bachelor of engineering majors. Topics include: the limit of a function; continuity and differentiability; average and instantaneous rates of change; differentiation of algebraic, trigonometric, exponential, and inverse functions; algebraic and geometric interpretation of a function and its derivatives; optimization; related rate applications; and an introduction to antidifferentiation including the definite integral.

Credit will not be given for both this course and MATH 111.

Prerequisite: A grade of B- or better in MATH 090.

SUNY-GER: Mathematics.

[Fall and Spring]

MATH 102 Calculus II

4 class hours, 4 credits.

A second course in the calculus of one-variable functions with emphasis on preparing students for bachelor of engineering majors. Topics include: Antiderivatives; the definite integral; Fundamental Theorem of Calculus; techniques of integration; l'Hôpital's rule; improper integrals; geometric applications of integration; numerical sequences and series; power series; Taylor polynomials and Taylor series.

Prerequisite: A grade of C- or better in MATH 101.

SUNY-GER: Mathematics.

MATH 111 Applied Calculus I

4 class hours, 4 credits.

A first course in the calculus of one-variable functions with applications to business and science. Topics include: The limit of a function; continuity and differentiability; average and instantaneous rates of change; differentiation of algebraic, exponential, and logarithmic functions; algebraic and geometric interpretation of a function and its derivatives; optimization; related rate applications; and an introduction to antidifferentiation including the definite integral. Credit will not be given for both this course and MATH 101.

Prerequisite: MATH 090. SUNY-GER: Mathematics.

[Fall and Spring]

MATH 112 Applied Calculus II

3 class hours, 3 credits.

A survey of calculus topics beyond the differentiation of one-variable functions, with emphasis on applications of interest to Marine Environmental Science and Marine Operations majors. Topics include: Integration and the Fundamental Theorem of Calculus; multidimensional structures, including vectors, complex numbers, and matrices; differentiation, optimization, and integration of functions of several variables; introduction to ordinary differential equations.

Prerequisite: MATH 101 or MATH 111.

SUNY-GER: Mathematics.

[Spring]

MATH 211 Calculus III

4 class hours, 4 credits.

A first course in multivariable calculus. Topics include: Multidimensional structures, including vectors, complex numbers, and matrices; geometry of lines and planes; the calculus of vector-valued functions and its applications; differentiation and optimization of functions of several variables; double and triple integrals; polar, cylindrical, and spherical coordinate systems; vector fields; line and surface integrals, including use of Green's Theorem.

Prerequisite: MATH 102.

[Fall and Spring]

MATH 212 Differential Equations

4 hours, 4 credits.

First order equations and applications; linear differential equations of higher order; applications of 2^{nd} order linear differential equations; power series solutions; Laplace transforms; systems of linear equations; elements of linear algebra, matrices and determinants; Fourier series; solutions of partial differential equations by the method of separation of variables.

Prerequisite: MATH 211.

MATH 251 Statistics

3 class hours, 3 credits.

An introductory course in statistical methods. Topics include: frequency distributions; measures of central tendency, variability, and relative standing; normal and binomial probability distributions; confidence intervals and hypothesis testing for mean and proportion; one-way analysis of variance and contingency tables; bivariate and multiple regression analysis; with use of calculators and Excel to describe and analyze data. Students cannot receive credit for this course and also for Engineering Statistical Analysis (ENGR 345).

Prerequisite: MATH 090. SUNY-GER: Mathematics.

[Fall and Spring]

MATH 446 Operations Research

3 class hours, 3 credits.

Quantitative methods for business-oriented decision and optimization problems. Topics chosen from among: linear programming and related sensitivity analysis; transportation problem; network and project-scheduling algorithms; queues; simulation; Markov processes; decision analysis. Use of software packages.

Prerequisite: ENGR 345 or MATH 251.

[Fall and Spring]

MATH 610 Special Topics in Mathematics

1, 2, or 3 credits.

METEOROLOGY

METE 201 Meteorology for Mariners

2 class hours, 2 laboratory hours, 3 credits.

Structure and composition of the atmosphere; atmospheric radiation; forces and winds; general circulation; moisture; atmospheric stability; polar front and wave cyclone theory; marine weather observations; elements of weather forecasting and ship routing. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

SUNY-GER: Natural Sciences.

[Fall and Spring]

METE 350 Synoptic Meteorology

3 class hours, 3 laboratory hours, 4 credits.

Surface and upper-air circulation systems, vorticity and divergence, thickness and hydrostatics, air masses and fronts, moisture and stability, theory of weather forecasting. Plotting and analysis of surface and upper-air charts, use of thermodynamic diagrams, dynamic and non-dynamic forecast techniques, scales of motion, weather analysis and forecasting using NMC charts operationally available.

Prerequisite: METE 201.

[Fall - Odd Years]

METE 402 Tropical Cyclones

2 class hours, 2 laboratory hours, 3 credits

Tropical circulation; stream function and analysis; trade wind features; the ITCZ; tropical disturbances; easterly waves; tropical vortices; the monsoon; the hurricane problem; man and the hurricane; damage; recent research.

Prerequisite: METE 201.

METE 408 Dynamic Meteorology

3 class hours, 3 credits.

Thermodynamics of gases and applications to meteorology; atmospheric hydrostatics and thickness; thermodynamics of water vapor and moist air; elements of cloud physics. Hydrodynamics of fluids and applications to meteorology; The Equation of Motion; continuity; divergence and vertical motion; The Vorticity Equation; elements of quasi-geostrophic theory

Prerequisites: MATH 102 or MATH 112, PHYS 211, METE 350.

[Spring - Even Years]

METE 411 Marine Climatology

2 class hours, 2 laboratory hours, 3 credits.

History of modern climatology; temperature & moisture controls; planetary winds & ocean currents; local winds; monsoonal weather, El Nino & La Nina; tropical climates; mid-latitude climates; polar climates; climatic change & global warming, fog & sea ice; acid rain & ozone depletion; climatic impact of extreme atmospheric events.

Prerequisite: METE 201.

METE 422 Weather Forecasting

2 class hours, 2 laboratory hours, 3 credits.

Quasi-geostrophic forecast theory, elements of numerical weather prediction; short range forecasting and nowcasting; operational forecasting using NMC charts, radar, and satellite pictures.

Prerequisite: METE 350.

METE 610 Special Topics in Meteorology

1, 2, or 3 credits.

Research in meteorology and technical writing.

Prerequisite: METE 350.

MARINE TECHNOLOGY DECK OFFICER

MTDO 524 Cadet Commercial Vessel Shipping Limited Tonnage I

2 credits.

MTDO 524 is an introduction to the towing industry. Cadets are required to complete an assigned seaproject and document a minimum of 30 and maximum 60 sea-days on a tug or towboat. Cadets must coordinate vessel assignments with the Maritime College Cadet Observer Coordinator. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 510.

[Summer]

MTDO 525 Cadet Commercial Vessel Shipping Limited Tonnage II

6 credits.

MTDO 525 is designed as a capstone class for MTSVO-D majors. Successful completion of the course includes: minimum of 60 sea-days on a tug, preferably an Articulated Tug Barge (ATB) with a participating company arranged by Maritime College Cadet Observer Coordinator. Cadets must document 360 total sea-days garnered within the program from Indoctrination and submit satisfactory sea-project, Standards for Training, Certification and Watchkeeping (STCW) assessments, and if applicable Person in Charge (PIC) documentation. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: METE 201, MT 321, MT 322, NAUT 308, NAUT 416 or PS 414, NAVG 312, PS 410, PS 411. NAVG 212 for Ocean option.

[Summer]

MTDO 601 Independent Study in Marine Technology Small Vessel Operations I

1, 2, 3, or 4 credits.

Independent investigation of special topics in the field of Marine Technology Small Vessel Operations. Cadets will be assigned a mentor by the Professional, Education, and Training Department. In the event that the course earns 1 credit, the department has the option of assigning a Pass/Fail grade.

Prerequisite: Permission of the department.

MTDO 602 Independent Study in Marine Technology Small Vessel Operations II

1, 2, 3, or 4 credits.

Independent investigation of special topics in the field of Marine Technology Small Vessel Operations. Cadets will be assigned a mentor by the Professional, Education, and Training Department. In the event that the course earns 1 credit, the department has the option of assigning a Pass/Fail grade.

Prerequisites: MTDO 601 and Permission of the department.

MARINE TECHNOLOGY ENGINE OFFICER

MTEO 201 Small Vessel Resource Management

2 class hours, 2 laboratory hours, 3 credits.

A comprehensive review of all of the equipment, materials, tools, and personnel, onboard and remote information sources, communications, contacts and other resources available and at the disposal of the engineer of the watch aboard a tug or a tow boat; recognizing what they each are and are not and what they each can/cannot do; how they inter-relate and might substitute for something else as an emergency back-up during various routine, non-routine, crisis and/or catastrophic events or situations.... To create and maintain or restore power, electricity, safety, and other critical services ... thereby minimizing problems, casualties, injuries, pollution events, and premature equipment failures. Self-discipline, responsibility and, accountability will be emphasized together with the other characteristics and skills of leadership and sensitivity to personnel, cultures, society, and the environment.

Prerequisite: ENGR 510.

[Spring]

MTEO 521 Cadet Commercial Vessel Shipping Assistant Engineer I

2 credits.

This course is Part I of the three part series of the MTAELL Engine Cadet sea project. This course subjects the students seeking engineering certification for limited horsepower vessels operating on "Inland and Near Coastal Waters" to an intense practical professional learning experience aboard a working tug or tow boat. The intent is that the student will encounter and address situations where his or her technical knowledge is relevant and applicable, but at the same time encountering situations where that will be placed in a recognizable applied context. An extensive Sea Project is required to satisfy applicable USCG STCW requirements for AELL (Assistant Engineer Limited License). In compliance with international STCW requirements, there will be no D or D+ grade in this course.

Prerequisites: ENGR 541, ENGR 561.

[Summer]

MTEO 522 Cadet Commercial Vessel Shipping Assistant Engineer II

2 credits.

This course is Part II of the three part series of the MTAELL Engine Cadet sea project. This course subjects the students seeking engineering certification for limited horsepower vessels operating on "Inland and Near Coastal Waters" to an intense practical professional learning experience aboard a working tug or tow boat. The intent is that the student will encounter and address situations where his or her technical knowledge is relevant and applicable, but at the same time encountering situations where that will be placed in a recognizable applied context. An extensive Sea Project is required to satisfy applicable USCG STCW requirements for AELL (Assistant Engineer Limited License). In compliance with international STCW requirements, there will be no D or D+ grade in this course.

Prerequisite: MTEO 521.

[Summer]

MTEO 523 Cadet Commercial Vessel Shipping Assistant Engineer III

2 credits.

This course is Part III of the three part series of the MTAELL Engine Cadet sea project. This course subjects the students seeking engineering certification for limited horsepower vessels operating on "Inland and Near Coastal Waters" to an intense practical professional learning experience aboard a working tug or tow boat. The intent is that the student will encounter and address situations where his or her technical knowledge is relevant and applicable, but at the same time encountering situations where that will be placed in a recognizable applied context. An extensive Sea Project is required to satisfy applicable USCG STCW requirements for AELL (Assistant Engineer Limited License). In compliance with international STCW requirements, there will be no D or D+ grade in this course.

Prerequisite: MTEO 522.

[Summer]

MARINE TRANSPORTATION

MT 212 Ship Management

3 class hours, 3 credits.

The student will learn fundamental concepts and principles required to manage an international shipping company from the shoreside perspective. Subjects will include the various types of charter agreements, voyage trading data, cargo booking and trading, Bills of Lading, Insurance and the customer/owner relationship.

MT 250 Ship Construction and Stability for Unlimited License

2 class hours, 2 credits.

Description of structural components, types of construction, materials and methods of shipbuilding. Principles of ship form, flotation, transverse and longitudinal stability. Application of stability, trim, and stress tables, and stress calculating equipment and software. Merchant marine methodology in stability and trim calculations for intact and damaged vessels. This course satisfies STCW requirements in the areas of ships construction and stability. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Corequisites: MATH 090.

[Fall and Spring]

MT 321 Introduction to Cargo Operations and Ship Stability

3 class hours, 3 credits.

The course is in two sections. The first section is a review of basic ship's construction; structural components, types of construction, materials and methods of shipbuilding. This section will also study the principles of transverse and longitudinal stability, general stability and trim calculations for both intact and damaged vessels as appropriate to the licensed deck officer. The second section of the course focuses on a study of vessel cargo and the role of the ship in integrated transportation systems. Specific topics include a survey of cargo gear, principles and problems of stowage and carriage of general, bulk, refrigerated, dangerous cargo, grain, special cargoes and containers, and the role of the ship's officer related to various types of vessels and cargo operations. A complete project is required dealing with the actual loading and stowage of a vessel, utilizing industry soft- ware and actual ship specifications. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: MATH 090, ENGR 363 or ENGR 371 or MT 250.

[Fall and Spring]

MT 322 Marine Cargo Operations

2 class hours, 2 laboratory hours, 3 credits.

A study of the tanker industry, and the operational aspects of the tanker; including basic safety and pollution prevention precautions and procedures, layouts of different types of oil tankers, types of cargo, their hazards and their handling equipment, general operations sequence and oil tanker construction and terminology. Pertinent U.S. Coast Guard and OPA '90 regulations will be covered, as well as how they relate to specific duties and responsibilities. Operational exposure to loading/discharging and auxiliary tanker systems will be gained through exercises structured around the school's tanker in a weekly two-hour laboratory. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 250 or MT 321.

[Fall and Spring]

MT 350 Hazardous Materials and Oil Spill Response

3 class hours, 3 credits.

This course will introduce the student to current methods and strategies used to combat oil and hazardous materials spills. The course will review legislation pertaining to facility and vessel response plans, carriage of hazardous materials, and worker safety. The course will familiarize the student with various types of spill response equipment and strategies through both classroom lectures and practical demonstrations.

[Spring]

MT 404 Environmental Management

3 class hours, 3 credits.

This class will provide an overview of current international environmental regulations as they pertain to the shipping industry. The discussion will include the place of environmental compliance in the company and the compliance process. Sections of the following Laws pertaining specifically to Vessel Operations will be used: MARPOL, Resource Conservation and Recovery Act, Clean Water Act, Clean Air Act, Montreal Protocol, State Statutes. Public health statutes applicable to shipping and vessel sanitation will also be covered. (USPHS – CDC Reporting Criteria). Case studies will be used throughout the course. [Fall and Spring]

MT 408 International Safety Management

3 class hours, 3 credits.

This course will introduce students to the ship management requirements found in the IMO's International Safety Management Code and how those requirements and principles are applied in the international shipping industry. Students will become familiar with the various aspects of the code and how the Code is implemented through such programs as safety management programs. Extensive use of case studies will be made.

[Fall and Spring]

MT 412 Deck License Seminar

8 class hours, 4 credits.

Lecture, discussions and problems dealing with subjects required by the U.S. Coast Guard for federal license as an officer in the merchant marine. In order to complete this course satisfactorily each candidate for license is required to demonstrate, by qualifying examinations in all areas, his ability to become a fully qualified merchant marine officer. Topic areas include: Chart Plot, Oceans, Navigation Problems, Rules of the Road, Deck General, Deck Safety, Navigation General. Examinations are administered to replicate conditions under which Federal exams are given. Students must pass this course before they will be allowed to sit for the Coast Guard license. Course is graded Pass/Fail.

Prerequisites: MT 322, MT 520 or MT 521, NAVG 312, NAUT 308, NAUT 314, NAUT 315 [Fall and Spring]

MT 426 Maritime Communications

2 class hours, 2 laboratory hours, 3 credits.

A Simulator-based training course designed to satisfy the International Maritime Organization (IMO) requirements for training in Global Maritime Distress and Safety Systems. The course provides the student with a good working knowledge of modern marine communications. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 510.

[Fall and Spring]

MT 430 Principles of Emergency Management Systems

3 class hours, 3 credits.

This course uses established guidelines set by FEMA and widely used in business to introduce students to the emergency management system in theory and practice. Discussion will include general topics in emergency management systems with an emphasis on how corporations are including these principles into business continuity planning. The course will include such topics as risk analysis, communications, planning and mitigation.

MT 435 Maritime Security

3 class hours, 3 credits.

Perform Federal Level 1 Anti-Terrorism Training. Instruct in Chemical, Biological and Radiological Defense (CBR-D). Obtain certification as a Company and Vessel Security Officer. Instruction and discussion on current security issues and technology. The purpose of this course is to provide the student with a fundamental knowledge in Maritime Security and prepare them to be a Company or Vessel Security Officer. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

[Fall and Spring]

MT 450 Liquefied Gas Tanker Operations

2 class hours, 2 laboratory hours, 3 credits.

The purpose of this course is to meet the training requirements for Liquefied Gas Vessel Person in Charge. The 42 hour course provides individuals with a thorough working knowledge of liquid gas tank ship operations and enables them to conduct safe, pollution free cargo operations. The emphasis of the course is placed on safety and operational aspects of cargo operations in accordance with accepted industry practice and legal requirements. This course covers the mandatory minimum training requirements of a Liquefied Gas Tanker Training Program as listed in Section A-V/1 paragraph 22-34 in the STCW 95 Code and 46 CFR Part 13 Table 13.121(F). In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: PS 112, MT 250, MT 322.

SUMMER SEA TERM (DECK)

MT 510 Ship Operation and Management I (Summer Sea Term I)

6 credits.

Communications: Visual communications used in the merchant marine; Morse Code, blinker light and International Code Flags; merchant ship communications systems; use of lifeboat radio apparatus.

Navigation: Use of shipboard aids available to the navigator; elementary chart work plotting position, courses and distances; practical supervised piloting; introduction to instruments used in celestial navigation.

Operations: Ship activation; boat handling; davit operation; man-overboard drills; hull construction; numbering of carpments, deck doors, firehouse stations and extinguishers; ventilation; drainage; fire and flushing mains; loading marking; deck fittings; preservation, sanitation and maintenance; safety practices; ship deactivation, Basic Rules of Nautical Road. In compliance with international STCW requirements, there will be no D or D+ grades in this course. This course also includes required STCW training for Vessel Personnel With Designated Security Duties (VPDSD).

Prerequisites: PE 103, PS 112, NAUT 102, NAVG 112.

[Summer]

MT 520 Ship Operation and Management II, Intermediate (Summer Sea Term II)

6 credits.

Communications: Ship's visual communication apparatus; signal practice to obtain a speed of eight words per minute with the blinker light: International code, H.O. 102. Introduction to radio telephone. Navigation: Sextant-review of adjustments and altitude measurements; celestial observations; computing and plotting of hnes of position; azimuths and compass error; practical adjustments of the magnetic compass; chart work in conjunction with all phases of piloting and sailing; correction of charts and publications from Notices to mariners. Introduction to electronic aids to navigation. Day's work. Operations: Care of lifeboats and equipment; fire detection and extinguishing systems; use of portable fire extinguishers, emergency lifesaving appliances, cargo booms and winches, grand tackle, line throwing apparatus; tours of foreign port facilities, ships and shipyards. Intermediate Rules of Nautical Road. Meteorology: Plotting and making the weather map; synoptic observations and weather forecasting at sea. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: MT 510, METE 201, NAVG 212.

[Summer]

MT 521 Cadet Commercial Vessel Shipping (In Lieu of Summer Sea Term II) 6 Credits.

Cadets with exceptional academic status may, upon application to the Department of Marine Transportation, be selected to sail on a commercial ship in lieu of Summer Sea Term II. Cadets will be assigned to vessels exceeding tonnage specified by the U.S. Coast Guard for Unlimited Tonnage, Deep Sea or for a minimum of 90 days, vice the 60 days required for the College's Summer Sea Term. Candidates are selected by the Department of Marine Transportation, based upon academic and regimental performance. An extensive sea project is required. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: MT 510, METE 201, NAVG 212.

[Fall, Spring and Summer]

MT 530 Ship Operation and Management III, Advanced (Summer Sea Term III)

5 credits.

Communications: Review of visual signaling and practical work to obtain a speed of six words per minute in blinker; radio auto-alarm; VHF/UHF radiotelephone operations; GMDSS Operators Certificate.

Navigation: Practical work in celestial navigation, electronic navigation, relative motion and piloting; analysis of dead-reckoning, running fixes and estimated positions supervising the correction of charts and publications; practical use of the tide and tidal current tables; duties and responsibilities of the navigator.

Operations: Steering gear drill, individual ship handling, use of distress signals, preparation of ship for U.S. Coast Guard annual inspection; foreign ports and port facilities; assumption of deck officer's duties and responsibilities. Advanced Rules of the Road. Each cadet on his/her first class Sea Term must take and pass the written qualifying examination. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: NAUT 308, NAVG 312.

Corequisite: PE 411.

[Summer]

MT 533 Ship Operation and Management III for International Students

This is a 45 day training term at sea. This course is only for international students to enable completion of their sea time requirements.

Prerequisite: MT 520 or MT 521.

[Summer]

MT 601-602 Independent Study in Marine Transportation I-II

1, 2, 3, or 4 credits each.

Independent investigation of special topics in Marine Transportation. Student work will be under the direct supervision of a mentor assigned by the Marine Transportation Department. In the event that the course earns 1 credit, the department has the option of assigning a Pass/Fail grade.

Prerequisite: Permission of the department.

MT 610-611 Special Topics in Marine Transportation I-II

3 credits each.

Significant/varied topics in marine transportation of specialized interest are covered. Topics will be chosen to reflect the interest of both students and instructor.

Prerequisite: All required MT courses.

NAUTICAL SCIENCE

NAUT 102 Introduction to Vessel Operations and Seamanship

3 laboratory hours, 1 credit.

This course will introduce the student to the current practice of seamanship and safe work practices afloat and in the maritime environment. Students will be introduced to industry safety protocol and concurrent OSHA requirements for a safe workplace. This course contains required subjects for Ratings Forming Part of a Navigation Watch as incorporated in the current STCW regulations. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

[Fall and Spring]

NAUT 308 Nautical Operations: Safety

2 class hours, 2 credits.

This course is designed to meet two specific licensing requirements: Advanced Firefighting and Survival Craft Crewman. Each of these subjects is an endorsement on the Third Mate and Third Assistant engineer's license. The first seven weeks of this class (14 hours) will be devoted to Advanced Fire Fighting. An additional eight hours of practical training is held at the fire field.

The second portion of this class, an additional 14 hours, will concentrate on survival craft operations and shipboard evacuation procedures. Students will learn to plan and implement evacuation plans, conduct drills and gain familiarity with survival craft operations and deployment. The practical assessment for this class will be held during the Pre-cruise period for all cadets. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 510 or ENGR 510.

[Fall and Spring]

NAUT 314 Rules of the Road

2 class hours, 2 credits.

Laws and rules for prevention of collision at sea, pertinent U. S. court decisions, practical application of rules to actual situations. Exposure to visual aspects of rules of the road, through use of the College's bridge simulator. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 510. [Fall and Spring]

NAUT 315 Collision Avoidance

3 class hours, 3 credits.

Relative motion as a tool for collision assessment, radar transfer plotting techniques, direct plotting techniques, single and multiple contact situations, resolution of primary, secondary, and tertiary threats. Use will be made of the College's Radar/ARPA simulator. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 510. Corequisite: NAUT 314. [Fall and Spring]

NAUT 416 Bridge Resource Management (Unlimited License)

1 class hour, 2 simulator hours, 3 credits.

This simulator-based course is designed to enhance the potential Third Mate's decision-making skills as it applies to traffic and voyage planning situations. Practical application of Rules of the Road and development of correct bridge procedures will be emphasized. Open sea and harbor conditions will be simulated for day as well as night using the simulator. Each watch team has 2 simulator hours and 1 class hour per week. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: NAUT 314, NAUT 315, MT 520 or MT 521 or MTDO 524.

[Fall and Spring]

NAUT 420 Piloting & Ship Handling for the Mariner

1 class hour, 3 laboratory hours, 3 credits.

Piloting and ship handling for the mariner will serve two vital areas for the mariner. In piloting, the cadet will garner the skills required to pilot, safely and professionally, for a particular waterway. In ship handling, previously learned ship handling characteristics will be reinforced and improved using old and new methods.

Prerequisite: PS 112.

NAUT 476 Fast Rescue Boat Operations and Small Boat Handling

1 class hour, 3 laboratory hours, 3 credits.

Course provides a Coast Guard approved certification in Fast Rescue Boat operations meeting STCW requirements, Table A-VI/2-2 and as described in NAVIC 3-00. The course of instruction will: allow students to experience small vessel handling techniques and safe operational practices used in both rescue craft and commercial operations; introduce students to mechanical systems found on small vessels; introduce students to small vessel design and commercial types; introduce students to small vessel management considerations such as passenger vessel security and emergency preparedness. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MT 520 or MT 521.

NAVIGATION

NAVG 112 Terrestrial Navigation

4 class hours, 4 credits.

Advance piloting techniques and practices including: voyage planning, use of pertinent publications in the determination of the voyage plan, effects of tide and current and their calculations, set and drift problems, visibility of lights, and the Pilot Chart. Analysis and determination of the terrestrial fix. Sailings and their applications, including mid-latitude and great circle sailing problems. Estimated time of arrival and fuel consumption problems. Introduction to time and nautical astronomy. Laboratory hours will continue with practical chart work including basic piloting problems using bearings and ranges, use of, identification and aids to navigation, factors affecting vessel's course and speed. Extensive exposure to bridge simulation and college tug for practical application of piloting and boat handling. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Corequisites: MATH 090, PS 112.

[Fall and Spring]

NAVG 212 Celestial Navigation

4 class hours, 4 credits.

Topics include: The theory of celestial navigation; the celestial sphere; the navigational spherical triangle; time and its application; Development of the celestial line of position. Celestial sight reduction: spherical trigonometry formulas and sight reduction tables: the use of the Nautical Almanac; determination of latitude; determination of time of celestial phenomena; compass error from azimuths and amplitudes of celestial bodies. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisite: MATH 090, NAVG 112.

[Spring]

NAVG 312 Electronic Navigation and Voyage Planning

4 class hours, 4 credits.

Theory and operation of electronic navigation systems including ECDIS, Loran C, GPS and Radar as found in an integrated bridge environment; piloting and navigation using radar, ECDIS simulators. Elements of voyage planning and implementation of both a chart based and ECDIS based voyage plan showing waypoints and other appropriate information. A course project will include a complete transoceanic voyage plan. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: NAUT 314, NAUT 315, MT 520 or MT 521 or MTDO 524.

NAVAL SCIENCE

Naval Science courses may be required for NROTC and Merchant Marine Reserve Program Midshipmen, Seaman-to-Admiral 21 (STA-21) Officer Candidates and Marine Enlisted Commissioning and Education Program (MECEP) students.

NVSC 150-151

NVSC 250-251

NVSC 350-351

NVSC 450-451

NVSC 550-551 NVSC Laboratory

2 class hours, 1 credit, each.

Required of all NROTC (MMR midshipmen, STA-21, and MECEP) students. Midshipmen are provided the opportunity in laboratory to develop personally while participating in activities as a team leader or team member. Naval Science Laboratories are a blend of academic lectures on naval theory and naval administration and practical training in physical readiness, military discipline and an appreciation of the customs and traditions of the Naval Service. This class is only open to NROTC students. Pass/Fail. [Fall (NVSC x50) – Spring (NVSC x51)]

NVSC 101 Introduction to Naval Science

3 class hours, 3 credits.

This course offers an introduction to the U.S. Navy and Marine Corps, emphasizing each branch's mission, capabilities and organization. It will cover naval courtesy, customs, leadership, officer and enlisted rank structure, and professional nomenclature. Required for all Strategic Sealift Officer (SSO), NROTC scholarship, College Program, and dual-track midshipmen. [Fall]

NVSC 102 Sea Power and Maritime Affairs

3 class hours, 3 credits.

A historical survey of the U.S. Navy and Marine Corps that focuses on the influence of sea power upon world history. This course explores the major events, significant figures, and circumstances that have imbued the U.S. Navy with its proud history and rich tradition. It focuses on the varying maritime philosophies which were interpreted into naval strategies/doctrines, the budgetary concerns that shaped force realities, and the pursuit of American diplomatic objectives. Required for all NROTC scholarship, College Program, and dual-track midshipmen. [Spring]

NVSC 201 Leadership and Management

3 class hours, 3 credits.

Advanced organizational behavior and management in the context of the naval organization. Major behavioral theories are explored in detail. Practical applications are explored by the use of experimental exercises, case studies, and laboratory discussions. Required for all NROTC scholarship, College Program, STA-21, and dual-track midshipmen. [Spring]

NVSC 204 Naval Science for the Strategic Sealift Officer

2 class hours, 2 credits.

Introduction to the functional coordination of the Merchant fleet with the Navy in peacetime, during international tension, or during formally declared war. Naval control of shipping, operations, communications, offensive and defensive procedures and weaponry for merchant ships are covered in detail. Required for all students applying for the SSO program.

Prerequisite: NVSC 101.

[Spring]

NVSC 211 Navigation

3 class hours, 3 credits.

Piloting and celestial navigation including theory, principles, procedures, the use of charts, visual and electronic aids, and the theory and operation of magnetic and gyro compasses. Celestial navigation is covered in depth. Practical skills are developed. Topics include tides, currents, effects of wind and weather, plotting, use of navigation systems, and a day's work in navigation. Required of all Navy option NROTC midshipmen who are not in a deck license program; free elective for other engine license students.

[Fall]

NVSC 303 Naval Ship Systems II (Weapons)

3 class hours, 3 credits.

Modern naval weapons from a systems approach, with examples from today's fleet. Attention is given to airborne, surface and sub-surface platforms. This course outlines the theory and employment of weapons systems. The facets of command, control, and communications are explored as a means of weapons system integration. Required of all Navy option NROTC midshipmen; free elective for all other students. [Spring]

NVSC 304 Naval Ship Systems I (Engineering)

3 class hours, 3 credits.

A study of ship characteristics and types including ship design, hydrodynamic forces, stability, compartmentation, propulsion, electrical and auxiliary systems, interior communications, ship control, and damage control; theory and design of steam, gas turbine, and nuclear propulsion; shipboard safety and firefighting. Required of all Navy option NROTC midshipmen who are not in an engine license program.

[Fall]

NVSC 311 Evolution of Warfare

3 class hours, 3 credits.

History of warfare, focusing on the impact of major military theorists, strategies, tacticians, and technological development. Required of all Marine Option NROTC Midshipmen and MECEP students. [Fall]

NVSC 312 Amphibious Warfare

3 class hours, 3 credits.

History of amphibious doctrine and the conduct of amphibious operations. Emphasis is on the Twentieth Century, especially World War II. Present day potential and limitations of amphibious operations, including the rapid deployment force concept, are explored. Required of all Marine option NROTC midshipmen and MECEP students.

[Spring]

NVSC 402 Leadership and Ethics

3 class hours, 3 credits.

The study of naval junior officer responsibilities in naval administration. This capstone course in the NROTC curriculum builds on and integrates the professional competencies developed in prior course work and professional training. Required of all NROTC and MMR midshipmen, STA-21, and MECEP students. Free elective for all other students.

[Spring]

NVSC 403 Naval Operations and Seamanship

3 class hours, 3 credits.

A study of the international and inland rules of the nautical road, relative-motion vector analysis theory, relative motion problems, formation tactics, and ship employment. Also included are an introduction to naval operations analysis, ship behavior and characteristics in maneuvering, applied aspects of ship handling, and afloat communications. Required of all Navy option NROTC midshipmen; free elective for all other students.

[Fall]

OCEANOGRAPHY

OCEA 101 General Oceanography

3 class hours, 3 credits.

Topics include: Earth structure, plate tectonics, marine provinces, marine sediment, seawater chemistry and density structure, atmospheric circulation, oceanic circulation, waves, tides, coasts, marine productivity and energy.

SUNY-GER: Natural Sciences (with OCEA 102).

[Spring]

OCEA 102 General Oceanography Laboratory

2 laboratory hours, 1 credit.

This is the laboratory course that accompanies OCEA 101 General Oceanography. This hands-on laboratory course is designed to familiarize students with the concepts and techniques associated/introduced in the lecture.

Corequisite: OCEA 101.

SUNY-GER: Natural Sciences (with OCEA 101).

[Spring]

OCEA 308 Dynamic Oceanography

3 class hours, 3 credits.

Topics include: Heat budget of earth and ocean, wind-driven surface ocean circulation, hydrostatics, equation of state of seawater, equations of motion, geostrophic flow, Ekman transport, vorticity, major current systems, regional oceanography, thermohaline circulation and water masses, waves, tides.

Prerequisites: MATH 102 or MATH 112, PHYS 214, OCEA 101.

OCEA 402 Estuaries and Coastal Processes

3 class hours, 3 credits.

Topics include: Physical, chemical, biological and geological processes in estuaries and the coastal ocean, classification of estuaries, sea level change, waves, sediment transport, rocky coasts, deltas, beaches, coastal erosion, biological communities in coastal and estuarine environments.

Prerequisite: OCEA 101.

[Spring]

OCEA 415 Marine Biogeochemistry

3 class hours, 3 credits.

Chemical oceanography, chemical and biological processes affecting gases, nutrients and trace metals in seawater, seawater composition, oceanic distribution of chemical species, carbon an nutrient cycling, redox reactions on seawater, diagenesis, hydrothermal vents, marine organic chemistry

Prerequisites: CHEM 121, OCEA 101.

[Spring - Odd Years]

OCEA 416 Marine Biogeochemistry Lab

3 laboratory hours, 1 credit.

Introduction to analytical chemistry of seawater; analyses of salinity, dissolved oxygen, dissolved nutrients in seawater; applications of seawater analyses to gas solubility, primary productivity and air/sea exchange of gases in a variety of marine environments.

Prerequisites: CHEM 121, OCEA 101.

[Spring – Odd Years]

OCEA 425 Marine Environmental Issues

3 class hours, 3 credits.

Focus will be on selected anthropogenic non-pollution-related impacts on the ocean environment including exploitation of marine energy resources.

Prerequisites: CHEM 100 or CHEM 121, OCEA 101.

[Fall – Even Years]

OCEA 610 Special Topics in Oceanography

3 class hours, 3 credits.

Investigation of problems in oceanography of special interest to the merchant marine.

PHYSICAL EDUCATION

PE 100 Swimming and Lifetime Fitness

2 class hours, 1 credit

This is a swimming and wellness course that combines academic work with lab exercises in the swimming pool. This course includes stroke development, conditioning, water safety training and lifetime fitness.

[Fall and Spring]

PE 101 Lifetime Fitness and Conditioning

2 class hours, 1 credit.

The study of Exercise Physiology in an academic, as well as an activity mode. Exams from classroom work and activity labs and fitness testing would be required.

PE 2xx Lifetime Sports

2 class hours, 1 credit.

The 200-level courses involve specific sports training, and skills development unique to that particular individual or team sport. This could include such activities as Basketball, Soccer Volleyball Tennis, Rowing, Sailing. The course numbering will be sport-specific (PE 201 Basketball, etc.). For PE 219 (Learn to Sail), PE 220 (Safe Powerboat Handling), and PE 260 (Kayaking): students must successfully complete a swimming assessment on the first day of class to confirm they are able to swim 50 yards and don a personal flotation device in the water.

PE 301 Nutrition for Health, Exercise, and Sports

3 credits, 3 class hours.

This is a course about food, fitness, and physiology. The course will explore the relationship between nutrition, exercise and health and wellness.

PE 350 Intercollegiate Athletic Participation

One full season, 1 credit.

Requires being an active member on any of the College's Varsity Sport teams. Pass/Fail

PE 360 USMC Bulldog Preparation

2 class hours, 1 credit.

Required of all MECEP and Marine Option Midshipmen. Bulldog Prep is a course designed to prepare individuals for the rigors of Marine Corps Officer Candidates School. Marines and Midshipmen are provided the opportunity to develop leadership, team spirit, and physical fitness, while participating in physical training. The training includes, but is not limited to: conditioning runs, weight training, calisthenics, and cross-training. This class is only open to NROTC students. Pass/Fail.

PHYSICS

PHYS 102 Engineering Physics I

4 class hours, 4 credits.

Topics include: basic standards and unit conversions, vector algebra, translational kinematics, particle dynamics, work and energy, rotational kinematics and dynamics, simple harmonic motion, temperature, and calorimetry. Credit will not be given for both this course and PHYS 211.

Prerequisite: MATH 101.

SUNY-GER: Natural Sciences (with PHYS 104).

[Fall and Spring]

PHYS 104 Engineering Physics I Lab

2 laboratory hours fortnightly, 0.5 credits.

Measurements with error analysis, experiments in mechanics and heat.

Corequisite: PHYS 102.

SUNY-GER: Natural Sciences (with PHYS 102).

[Fall and Spring]

PHYS 201 Engineering Physics II

4 class hours, 4 credits.

Electric field and potential, D.C. circuits, Magnetic fields, Faraday's Law, inductance and capacitance, AC circuits, wave motion, EM waves and spectrum. Credit will not be given for both this course and PHYS 214.

Prerequisite: A grade of C- or better in PHYS 102. SUNY-GER: Natural Sciences (with PHYS 203).

[Fall and Spring]

PHYS 202 Engineering Physics Lab

2 laboratory hours every week, 1 credit.

Measurements and error analysis, mechanics, heat, electricity and magnetism experiments.

Corequisite: PHYS 201.

[Fall and Spring]

PHYS 203 Engineering Physics II Lab

2 laboratory hours fortnightly, 0.5 credits.

Measurements with error analysis, experiments in electricity and magnetism, waves.

Corequisite: PHYS 201.

SUNY-GER: Natural Sciences (with PHYS 201).

[Fall and Spring]

PHYS 211 General Physics I

3 class hours, 3 credits.

Topics include: unit conversions, vector algebra, translational kinematics, particle dynamics, work and energy, momentum, rotational kinematics and dynamics, fluid statics, heat, and calorimetry. Credit will not be given for both this course and

PHYS 102.

Prerequisite: MATH 090.

SUNY-GER: Natural Sciences (with PHYS 213).

[Fall and Spring]

PHYS 213 General Physics I Lab

2 laboratory hours fortnightly, 0.5 credit.

Measurements and errors, experiments in mechanics and heat.

Corequisite: PHYS 211.

SUNY-GER: Natural Sciences (with PHYS 211).

[Fall and Spring]

PHYS 214 General Physics II

4 class hours, 4 credits.

Thermodynamics, electric field and potential, DC circuits, magnetic fields, Faraday's Law, AC circuits, waves (sound and electromagnetic radiation), interference and diffraction of waves, optics (mirror and lenses). Credit will not be given for both this course and PHYS 201.

Prerequisite: PHYS 211 or PHYS 102. Corequisite: MATH 101 or MATH 111.

SUNY-GER: Natural Sciences (with PHYS 216).

[Spring]

PHYS 216 General Physics II Lab

2 laboratory hours fortnightly, 0.5 credit.

Measurements and errors, experiments in electricity and magnetism, spectroscopy.

Corequisite: PHYS 214.

SUNY-GER: Natural Sciences (with PHYS 214).

[Spring]

PROFESSIONAL STUDIES

PS 103 Water Safety and Survival for Mariners

2 class hours, 1 credit

A water safety and survival course that includes swimming, stroke development, conditioning, fitness and wellness. This course includes all required USCG STCW practical assessments and is a required course for students in any of the USCG licensing programs. In compliance with international STCW requirements, there will be no D or D+ grades in this course [Fall and Spring]

PS 111 Professional Studies

2 class hours, 2 credits.

An introduction to the shipping industry, ships, and ship systems. Basic Transportation module: the shipping industry, ship nomenclature, organization, and construction. Basic Engineering module: propulsion plant nomenclature, components arrangements, and characteristics.

[Fall and Spring]

PS 112 STCW Basic Training

1 class hour, 2 laboratory hours, 2 credits

Successful completion of this course and PE 103 satisfies the four elements of STCW Basic Training requirements for all shipboard personnel. Elements include Personal Survival Techniques, Fire Prevention and Fire Fighting, Elementary First Aid, and Personal Safety and Social Responsibility training requirements. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

[Fall and Spring]

PS 120 Primer of Towing

1 class hour, 3 laboratory hours, 3 credits.

This hands-on, on-the-water course is for anyone who wants to learn how to safely operate a powerboat, improve their on-the-water boat handling skills and earn a 4-hour Assistance Towing course completion certificate. The USCG and the National Association of State Boating Law Administrators (NASBLA) has approved the course which also meets New York State's boating safety education requirements for those over 18 years old to receive a "boating safety certificate" to operate a personal water craft.

This course covers safe boat operation, docking, anchoring, mooring, safety equipment, emergency procedures, rendering assistance, and incorporates a 4-hour standalone USCG approved course for Assistance Towing (SUNY DP-42). The topics are covered using a variety of techniques in the classroom, dockside demonstrations, and on-the-water drills with an emphasis on hands-on, practical application of all skills. Students must successfully complete a swimming assessment on the first day of class to confirm they are able to swim 50 yards and don a personal flotation device in the water.

[Fall]

PS 210 ECDIS – Limited Deck License

3 laboratory hours, 1 credit.

Continuing Education USCG approved short course, number SUNYDP-179, to meet 2010 STCW Amendments ECDIS (Electronic Chart Display and Information Systems) requirements.

Prerequisites: NAVG 112, MT 510.

PS 410 The Business of Towing

1.5 class hours, 2 weekend internships, 3 credits.

The course examines the basic concepts of tug and towboat definitions, construction and design; deck seamanship; vessel and managerial operations; and communications. The course is designed to help the student understand the topics and regulations he/she will utilize in greater detail in Towing Operations. A report on the internship related to the towing industry is required.

Prerequisite: MT 510 or ENGR 510.

[Fall]

PS 411 Towing Operations

1 ½ class hours, 2 weekend internships, 3 credits.

A course to introduce and prepare interested students in towing and docking operations, push-gear, alongside towing, astern towing, ship docking, and barge docking. The course examines the basic concepts of tug and towboat evolutions. The course is designed to help the student understand the topics and regulations he/she will utilize in greater detail in advanced integrated marine transportations. A report on the internship related to the towing industry is required.

Prerequisite: MT 510.

[Spring]

PS 412 Medical First Aid

2 class hours, 1 credit.

Study and practice in: the contents of a standard first aid kit, the anatomy and physiology of human body systems, toxicological shipboard hazards, identification of hazardous substances and hazards of exposure, patient assessment, standard isolation techniques, CPR and use of AED, treatment of burns and scalds, heat and cold emergencies, symptoms and treatment of hyperthermia/hypothermia/dehydration, radio medical services, medications, sterilization techniques, prevention of disease transmission, treatment for shock, broken bones, dislocations, splinting, and patient movement and transportation. The student will be certified by the American Red Cross by means of a written exam and practical skills performance. This course meets the STCW competencies as well. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

[Summer and Spring]

PS 414 Bridge Resource Management (Limited License)

1 class hour, 3 simulator hours, 3 credits.

This simulator-based course is designed to enhance the potential Officer in Charge of a Navigation Watch (OICNW) decision- making skills as it applies to traffic and voyage planning situations. Practical application of Rules of the Road and development of correct bridge procedures will be emphasized. Open sea and harbor conditions will be simulated for day as well as night using the simulator. Each watch team has 3 simulator hours and 1 class hour per week. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: NAUT 314, NAUT 315, MT 520 or MT 521 or MTDO 524.

SPANISH

SPAN 101 Spanish I

3 class hours, 3 credits.

Spanish I is an introductory course. It is designed to develop the basic skills of listening, speaking, reading, and writing in Spanish at an elementary level. Native speakers, bilingual speakers, and students with more than one year of high school Spanish are not eligible for this course.

SUNY-GER: Foreign Language.

SPAN 102 Spanish II

3 class hours, 3 credits.

Spanish II is a second semester, introductory course. It is designed to further develop the skills of listening, speaking, reading, and writing in Spanish at an elementary level.

Prerequisite: SPAN 101 or consent of instructor.

SUNY-GER: Foreign Language.

SOCIAL SCIENCE

SS 400 Fundamentals of International Relations

3 class hours, 3 credits.

An examination of major factors which determine the nature of international relations. Topics to be discussed include the origins of the nation-state system, the role of military power, the economic element of international relations, the nature of diplomacy, and the role of international law.

SS 610-611 Special Topics in History and the Social Sciences I-II

3 class hours, 3 credits each.

Special topics for qualified students interested in acquiring a broader knowledge of the social sciences.

COURSES IN RESERVE

Courses not offered in the last five years may be offered in the future if a department determines a need for the course.

ASTR 202 Descriptive Astronomy

3 class hours, 3 credits.

Celestial sphere; solar system; theories of the evolution of the solar system: star identification; physics of the stars; star clusters and nebulae; galactic systems; evolution of the universe.

Placed in Courses in Reserve 3/27/13.

CHEM 420 Chemistry of Hazardous Materials

3 class hours, 3 credits.

Physical and chemical properties of hazardous materials; flammability principles; compressed gases; cryogens; chemistry of combustion; chemistry of fire extinguishment; common substances; corrosives; water reactive materials; toxic materials; radioactive materials; radiation hazards.

Placed in Courses in Reserve 3/27/13.

CS 131 Introduction to Computer Programming

4 hours, 3 credits.

An introduction to computer programming in an object-oriented language (such as Java). Topics include: an overview of computer organization; program compilation and execution; primitive data types and operations; branching and looping; static methods; introduction to objects via strings; user-written object-oriented methods and encapsulation; arrays and basic searching/sorting algorithms. Other possible topics include exception handling and introduction to graphical user interfaces.

Prerequisites: MATH 101 or 111, CS 101.

Placed in Courses in Reserve 3/27/13.

CS 301 Data Structures

4 hours, 3 credits.

Techniques and algorithms for organizing and processing data. Data structures considered may include: text and binary files; contiguous and linked lists; stacks and queues; linked lists; trees; graphs. For each data structure, relevant processing algorithms (e.g., for traversing, searching, and sorting) will be considered, including recursive methods. Throughout the course, an object-oriented viewpoint via the concepts of encapsulation, inheritance, and polymorphism will be emphasized.

Prerequisite: CS 131.

Placed in Courses in Reserve 10/2/13.

CS 401 Database Systems

4 hours, 3 credits.

Survey of standard file organizations; introductory database concepts; the relational model and normalization; use of a relational database management system; object- oriented model; transaction management; distributed databases; database security. Prerequisite: CS 131.

Placed in Courses in Reserve 10/2/13.

CS 480 Computer Engineering I

2 class hours, 2 laboratory hours, 3 credits.

An introduction to the design, construction, programming and operation of a micro- computer system; topics include: overall computer organization, CPU group, memory interfacing, assembly language programming, testing and debugging techniques; the initial phases of the design and construction of a microcomputer are included. Prerequisite: ENGR 388.

Placed in Courses in Reserve 10/2/13.

CS 490 Computer Engineering II

2 class hours, 2 laboratory hours, 3 credits.

Continuation of Computer Science 480. The input/output sections of a computer; types of I/0 devices; interfacing and programming; design projects including the design and construction of the I/0 portion of the computer, the interfacing of the display, keyboard and robot arm.

Prerequisite: CS 480.

Placed in Courses in Reserve 10/2/13.

ENGL 408 Modern Poetry

3 class hours, 3 credits.

A study of modern poetry. This course traces the development of English and American poetry since World War I, from the formalism of the early 20th-century through the emergence of free-verse, and including recent developments in post-modern poetry. Prerequisite: HUMN 201 or HUMN 202.

Placed in Courses in Reserve 10/16/13.

ENGL 410 Greek Drama

3 class hours, 3 credits.

Reading and discussion of plays from the Athenian Golden Age. Works to be studied include the two classic tragic trilogies, plus several comedies. Includes re-enactments of scenes and plays.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: The Arts.

Placed in Courses in Reserve 10/16/13.

ENGL 411-412 The Novel I-II

3 class hours, 3 credits each.

Reading and discussion of major novelists. Consideration of the novel as a genre.

Prerequisite: HUMN 201 or HUMN 202. SUNY-GER: The Arts (ENGL 411 only). *Placed in Courses in Reserve 10/16/13*.

ENGL 418 Contemporary Literature

3 class hours, 3 credits.

A study of literature written during the past eighty years, leading to the many styles of today. The movement from modernism to post-modernism will be traced through novels and short stories from around the world. Emphasis is placed on introducing new voices, from a diversity of cultures.

Prerequisite: HUMN 201 or HUMN 202.

Placed in Courses in Reserve 10/16/13.

ENGL 420 Comedy

3 class hours, 3 credits.

Reading of comic works by several major authors. Consideration of the range and nature of comedy and of comedy as a genre.

Prerequisite: HUMN 201 or HUMN 202. *Placed in Courses in Reserve 10/16/13.*

ENGR 102 Introduction to Engineering

1 class hour, 1 credit.

Introduces students to the engineering profession, ethics, problem-solving techniques and tools. Engineering communications techniques are stressed. Design methodology is introduced.

Placed in Courses in Reserve 4/6/11.

ENGR 523 Cadet Observer in Limited Horsepower Operations

6 credits.

This course subjects the student seeking engineering certification for limited horsepower vessels to an intense practical, professional learning experience aboard a working tug or supply vessel. The intent is that the student will encounter and address situations where his or her technical knowledge is relevant and applicable, but at the same time encountering situations where that knowledge that will be placed in a recognizable, applied context. Cadet Observer status should comprise a work experience of no less than sixty sea days. An extensive sea project is required to satisfy applicable USCG and STCW requirements and prepare candidate for DDE license exam.

Prerequisite: ENGR 551.

Placed in Courses in Reserve 4/6/11.

ENGR 551 DDE I (Designated Duty Engineer)

2 class hours, 6 laboratory hours, 4 credits.

The first of a two semester sequence in the comprehensive study of numerous designs and features of medium and high speed marine diesel engines including aspects of operation, maintenance and repair. Topics include: basic engine types and applications, engine construction and the details of engine parts, fuels, fuel analysis and handling, fuel and air systems. Laboratory hours consist of operation, maintenance, repair and management of the campus diesel fleet under the supervision of the Tug Engineer and Director of Small Vessel Operations, will be individually arranged (minimum 6 hrs/week) and a journal kept. Students cannot receive credit for this course and for ENGR 530 Summer Sea Term III.

Prerequisites: PS 112, ENGR 540. *Placed in Courses in Reserve 2/27/13.*

ENGR 552 DDE II (Designated Duty Engineer)

2 class hours, 6 laboratory hours, 4 credits.

The second of a two semester sequence in the comprehensive study of numerous designs and features of medium and high speed marine diesel engines including aspects of operation, maintenance and repair. Topics include: exhaust and cooling systems, filters, starting and control systems, governors, reconditioning diesel engines, tune-up and trouble shooting. Laboratory hours consist of operation, maintenance, repair and management of the campus diesel fleet under the supervision of the Tug Engineer and Director of Small Vessel Operations, will be individually arranged (minimum 6 hrs/week) and a journal kept. Students cannot receive credit for this course and for

ENGR 530 Summer Sea Term III.

Prerequisite: ENGR 551.

Placed in Courses in Reserve 2/27/13.

ES 450 Field Work in Marine Environmental Science

2 laboratory hours, 1 credit.

Gathering and analysis of oceanographic and atmospheric data. Students, accompanied by several MES faculty, will spend 3 days and 2 nights (one weekend) aboard one of the college's vessels collecting samples and gathering data. Time will be arranged beforehand for preparatory work and afterward for the analysis of samples and data, and the presentation of write-ups.

Prerequisites: BIO 315, CHEM 220, METE 350, OCEA101.

Placed in Courses in Reserve 3/27/13.

GBEC 323 Banking and Financial Markets

3 class hours, 3 credits.

An examination of U.S. monetary and banking systems. Topics covered include the functioning of financial intermediaries, the role of the Federal Reserve System, the Securities and Exchange Commission and other regulators, and the structure and performance of domestic and global financial markets.

Prerequisite: GBEC 122.

Placed in Courses in Reserve 11/6/13.

GBEC 426 Labor Economics and Industrial Relations

3 class hours, 3 credits.

A study of the structure and economics of labor markets including determinants of wages and levels of employment, the practice of collective bargaining, labor legislation and maritime labor issues.

Prerequisite: GBEC 122.

Placed in Courses in Reserve 11/6/13.

GBMG 343 Organizational Behavior and Development

3 class hours, 3 credits.

This course examines individual and small group dynamics within the corporate structure. It applies behavioral science theory and research to issues such as management style, leadership, motivation, decision-making and problem solving. Goal-setting, power and conflict in organizations, and organizational change and development also are considered.

Prerequisite: GBMG 341.

Placed in Courses in Reserve 11/6/13.

GBMG 347 Entrepreneurship in International Transportation and Trade

3 class hours, 3 credits.

This course is designed to provide the student with an overview of entrepreneurship in international transportation and trade, including the critical features of starting and maintaining a new business venture or marketing a new product. The course takes the student entrepreneur from the product concept to making it a reality. Topics to be covered include: entrepreneurial ideas, innovation, and behavior, the role of entrepreneurs in business, financing and financial planning, legal aspects of new venture formation, organization of the venture, managerial functions pertaining to strategies, planning and human resource management, marketing the firm's products to potential customers and the ethical and social responsibilities of entrepreneurs. Class discussions and team activities will focus on the development of a suitable new entrepreneurial business and marketing plan.

Prerequisite: GBMG 345.

Placed in Courses in Reserve 11/6/13.

GBMG 444 Business, Government and Society

3 class hours, 3 credits.

A study of changes in the social, political and legal environment of business and their impact on management. The course reviews the regulatory obligations of corporations and analyzes current issues and proposals concerning technology, social change and business ideology. Emphasis is given to managing the corporation's actions in these and other areas through case analyses.

Prerequisite: GBUS 100.

Placed in Courses in Reserve 11/6/13.

GBMG 445 Public Administration in Transportation

3 class hours, 3 credits.

Topics include principles of administrative organization, methods of leadership and control, intergovernmental relations and public sector human resources management as well as budgeting, policy making and decision making in government organizations that manage or regulate transportation systems. Attention also is given to interactions with elected and appointed officials, legislative bodies, industry organizations and other interests groups.

Prerequisite: GBUS 100.

Placed in Courses in Reserve 11/6/13.

GBTT 359 Urban Transportation

3 class hours, 3 credits.

Public sector development, management and operations of people-moving systems. Transportation modes studied include subways, commuter rail, ferries and hydrofoils, cable traction and buses. Major cities' systems are examined, and employment opportunities in the field are discussed.

Prerequisite: GBUS 100.

Placed in Courses in Reserve 11/6/13.

GBTT 455 Advanced Transportation Management

3 class hours, 3 credits.

An advanced course in carrier organization and management. Topics include transportation operations, marketing, finance, purchasing, information systems and maintenance as well as human resources management and labor relations. The class examines national transportation policy, regulation and the changing environment of transportation. Activities include original research on problems in transportation management with emphasis on marine transportation.

Prerequisite: GBUS 100.

Placed in Courses in Reserve 11/6/13.

HIST 403-404 Topics in Recent History I-II

3 class hours, 3 credits each.

Consideration of selected topics in American or World History, 1945 to the present.

Prerequisite: HIST 102.

Placed in Courses in Reserve 10/16/13.

HUMN 407 Literature of Leadership

3 class hours, 3 credits.

This course analyzes the various positions taken throughout history regarding the responsibilities of the leader. Topics to be covered include: the rise to power, theory versus practice in the use of authority, "right authority" versus its abuse, and how societies deal with leaders who have gone astray.

Prerequisite: HUMN 201 or HUMN 202.

SUNY-GER: Humanities.

Placed in Courses in Reserve 10/16/13.

HUMN 458 Moral Choices in Literature

3 class hours, 3 credits.

We are taught to "do the right thing," but how do we recognize the right thing in order to choose properly? This course is organized in two parts: defining the right and the good; then, having the courage to act rightly in the face of social apathy or disapproval.

Prerequisite: HUMN 201 or HUMN 202.

Placed in Courses in Reserve 10/16/13.

MATH 301 Advanced Calculus

3 class hours, 3 credits.

Functions of several variables; vectors; differentials; Implicit Function Theorem; Inverse Function Theorem; extrema; line and surface integrals; Fourier series; partial differential equations.

Prerequisite: MATH 212.

Placed in Courses in Reserve 3/27/13.

MATH 302 Complex Variables

3 class hours, 3 credits.

Complex numbers, analytic functions; contour integration; Taylor and Laurent series; poles and residues; conformal mapping; applications.

Prerequisite: MATH 212.

Placed in Courses in Reserve 3/27/13.

OCEA 414 Marine Geology

3 class hours, 3 credits.

Matter & Minerals. Rock types. Igneous, Sedimentary, Metamorphic. Geologic Time. Shorelines. Earthquakes, Seismology and Earth's Interior. Sea Floor Spreading,

Continental Drift, and Plate Tectonics.

Prerequisites: GEOL 301, OCEA 101.

Placed in Courses in Reserve 3/27/13.

PHYS 332 Modern Physics

3 class hours, 3 credits.

Electromagnetic radiation, quantum theory of radiation and matter, lasers, x rays, solid state devices, special relativity, nuclear radioactivity, nuclear reactions, nuclear fission and fusion.

Prerequisite: PHYS 201 or PHYS 214.

Placed in Courses in Reserve 3/27/13.

PHYS 363 Physics of Fluids

3 class hours, 3 credits.

Physics of fluids; structure of matter; hydrostatics: buoyancy, surface tension; hydrodynamics: Bernoulli's principle, laminar and turbulent flow; heat and thermodynamics: expansion of liquids and heat capacity; transfer processes: conduction, convection, radiation, ideal gas laws, phase equilibria, thermodynamic processes and cycles, first and second laws, entropy.

Prerequisite: PHYS 214.

Placed in Courses in Reserve 3/27/13.

COURSES DELETED FROM COURSE CATALOG

CHEM 610-611 Special Topics in Chemistry I-II

1, 2, or 3 credits each.

Theoretical or experimental investigation of special problems in either chemistry or metallurgy. Credits vary with problems.

Deleted 11/13/13.

ENGL 413 Novels of Latin America

3 class hours, 3 credits.

Latin America has produced several recent Nobel Prize winners in literature. The writing of the region reflects both the extreme political conflicts of today and the lingering effects of the region's historical and cultural past. Reading and discussion focus on both the historical and the magic realist schools of prose fiction.

Prerequisite: HUMN 201 or HUMN 202.

Deleted 2/12/14.

ENGR 299 Upper Division Qualification

0 credits.

A Passing grade in this course indicates successful completion of the Engineering Lower Division Subset Competencies for the Bachelor of Engineering degree programs, and is a prerequisite for upper division courses in engineering. Pass/Fail.

Deleted 11/13/13.

ENGR 421 Plant Facilities Design and Management I

4 class hours, 4 credits.

A basic introduction into the management, operation, design, construction and maintenance of large facilities and building complexes. Typical facilities studied are large medical centers and office complexes. Applications will demonstrate how the principles of transport processes, electrical theory and strength of materials apply to the under-standing of the basic construction concepts and operations of large facilities. Special emphasis is given to current co-generation techniques with utility rate structure analysis. This course, together with ENGR 422 are designed to give the engineering graduate a working knowledge required to enter the facilities field.

Prerequisites: ENGR 200, ENGR 242, ENGR 344, ENGR 345, ENGR 380.

Renumbered/replaced with ENGR 425 4/6/11.

ENGR 422 Plant Facilities Design and Management II

4 class hours, 4 credits.

Continuation of ENGR 421 (Plant Facilities Design and Management I).

Prerequisite: ENGR 421.

Renumbered/replaced with ENGR 426 4/6/11.

GBMG/MATH 446 Operations Research

3 class hours, 3 credits.

Quantitative methods for business-oriented decision and optimization problems. Topics chosen from among: linear programming and related sensitivity analysis; transportation problem; network and project-scheduling algorithms; queues; simulation; Markov processes; decision analysis. Use of software packages.

Prerequisite: ENGR 345 or MATH 251.

GBMG 446 Cross-reference deleted 3/28/12. MATH 446 course unchanged.

HIST 415 Topics in American Social History

3 class hours, 3 credits.

A consideration of several major social institutions and social phenomena in their American settings. Topics may include: the family, schools, sports, cities, immigration, and/or slavery.

Prerequisite: HIST 101 or HIST 102.

Deleted 2/12/14.

HIST 420 / NVSC 102 Sea Power and Maritime Affairs

Same as NVSC 102.

Prerequisite: HIST 101 or HIST 102.

HIST 420 Cross-reference deleted 4/6/11. NVSC 102 course unchanged.

HIST 422 Turning Points in American History

3 class hours, 3 credits.

The causes and consequences of the American Revolution, Civil War, and World War II. Attention is given to critical battles and the political, social, and economic influence of each war upon the development of American society.

Prerequisites: HIST 101, HIST 102.

Deleted 2/12/14.

HUMN 412 Models for Decision Making

3 class hours, 3 credits.

The principles of effective decision making. Topics range from such basic notions as "rationality" to such technical areas as Delphi forecasting.

Prerequisite: HUMN 201 or HUMN 202.

Deleted 2/12/14.

NAUT 408 License Seminar

4 class hours, 2 credits.

Lecture, discussions and problems dealing with subjects required by the U.S. Coast Guard for federal license as an officer in the merchant marine. In order to complete this course satisfactorily, each candidate for license is required to demonstrate, by qualifying examinations in all areas, his ability to become a fully qualified merchant marine officer. Examinations are administered to replicate conditions under which Federal exams are given.

Prerequisite: MT 530.

Replaced by MT 412 11/28/12.

NAVG 402 Advanced Marine Navigation

1 class hour, 2 laboratory hours, 2 credits.

The transition from navigation as an art to the science of problem solving, in preparation for the Federal License Exam for Third Mate in the US Merchant Marine. Additionally, an intensive review of all general subject matter related to shipboard navigation is accomplished. Examinations are administered to replicate conditions under which Federal exams are given.

Prerequisite: MT 530.

Replaced by MT 412 11/28/12.

NVSC 103 Basic Naval Science

1 class hour, 1 credit.

Introduction to Navy policies and Maritime affairs as they relate to the Merchant Marine Officer. The course covers Naval and Maritime evolutions, functions, missions, and strategy. Course is required for all freshman students except for MMR/NROTC scholarship and college program midshipmen and foreign students; freshman students may take NVSC 101 in lieu of NVSC 103. *Deleted 11/17/10*.

PHYS 610-611 Special Topics in Physics I-II

1, 2, or 3 credits each.

Theoretical or experimental investigation of special problems in either classical or modern physics. *Deleted 11/13/13*.

Graduate Course Descriptions

Course Prefixes

The course numbering prefixes for all disciplines are listed below. All courses appear in alphanumeric order according to prefixes and course number.

Maritime and Naval Studies: MNST

Transportation Management: TMGT

General Note on the Scheduling of Courses:

Course descriptions include semester(s) when course is regularly offered (assuming sufficient demand and resources). If no semester indicated, course is an elective offered at discretion of the department.

Definitions of Prerequisite and Corequisite Courses:

The description for a given course will sometimes contain reference to courses that are prerequisites or corequisites for that given course.

A *prerequisite* is defined as a course that *must be completed* with required minimum grade (passing grade, unless otherwise specified) *prior to* taking another course.

A *corequisite* is defined as a course that can either be *completed prior to* (as detailed above) *or* be *taken in the same semester as* another course. The published degree curricula and flow charts illustrate the preference for any given corequisite situation.

MARITIME AND NAVAL STUDIES

MNST 6001 Introduction to Academic Writing and Research Methods

1 class hour, 1 credit.

This course focuses on writing, research, critical, and other analytical skills necessary for graduate-level work in the Maritime and Naval Studies program. Students learn the appropriate form, style, and etiquette for academic writing, investigate library research tools, and become acquainted with software applications that support academic writing and research.

Prerequisite: Undergraduate writing or composition.

[Fall and Spring]

MNST 7101 American Commercial Maritime History: 1500 to Present

3 class hours, 3 credits.

This course examines the history and growth of American commercial shipping and its influence on foreign policy and economic development. The course also will examine how the American merchant marine industry helped shape the nation's emergence as a world power. Commercial shipping's role in the development of the American colonies, the effects of commercial shipping (including privateering) on the American Revolution and subsequent wars, relevant admiralty and salvage law, marine insurance, continued challenges faced by American shipbuilders and the critical role of organized labor in the American shipping industry will be examined.

Corequisite: MNST 6001.

[Spring]

MNST 7102 The History of American Sea Power

3 class hours, 3 credits.

A course exploring the major sea battles that have affected American history and culture, from 1500 to the present. The evolution and innovation of naval weapons, new types of warships and novel tactics of the opposing ships' commanders will be examined, as well as the military, commercial and diplomatic context that brought about each battle, and its effect on America's rise as a world power.

Corequisite: MNST 6001.

[Fall]

MNST 8101 Music of the Sea

3 class hours, 3 credits.

Maritime music traditions exist in most of the world's cultures, and their meanings vary widely. In Music of the Sea we will investigate maritime music from North America, the Caribbean, Europe, and Asia. We will examine shantying traditions, maritime work songs, water legends, boatmen's, fishermen's, whalers' and sailors' songs, making connections across cultures in musical and lyric content.

Corequisite: MNST 6001.

MNST 8102 Ocean Politics and Law

3 class hours, 3 credits.

The course will investigate political, legal, economic, environmental and other issues related to the oceans. It will identify how the need for resources has motivated the formation of national and international organization policy. The course will also include the study of the law of the sea as well as case studies of particular flashpoints, such as disputes concerning straits, the continental shelf and fisheries management.

Corequisite: MNST 6001.

MNST 8103 The History of World Sea Power

3 class hours, 3 credits.

The rise of Greece and the dominance of Rome as major powers, the virtual control of world commerce by the British Navy in the 19th century, and the outcomes of the major wars of the 20th century have all pivoted on decisive military and naval battles. This course will explore military and political context as well as the ships, sailors, weapons, and tactics involved in the major sea battles that dramatically altered world history, from ancient times to the present. Corequisite: MNST 6001.

MNST 8104 Maritime Shakespeare

3 class hours, 3 credits.

This course studies 6 plays of Shakespeare, emphasizing their reflection of and contributions to European and global cultural perceptions of the sea. Each play will be read alongside maritime cultural and literary theoretical models. Topics may include: Shakespeare's sources and influences; exploration literature; cartography; historicism and presentism; Atlantic Studies; Blue Cultural Studies; and, the New Thalassology.

Corequisite: MNST 6001.

MNST 8105 Literature of the Middle Passage

3 class hours, 3 credits.

Between the sixteenth and nineteenth centuries, eleven million Africans were enslaved and forced to cross the Atlantic Ocean. This course is an investigation of the cultural, commercial and literary history of that journey, which came to be known as the Middle Passage. Reading a wide range of works, we will think about the role of the archive in the study of history, and the limitations of evidence-based methods of historiography in the special case of the Middle Passage. In turning to literature as a legitimate source of historical knowledge, we will also ask how we know and what we cannot know.

Corequisite: MNST 6001.

MNST 8106 Maritime Piracy and Predation

3 Class Hours, 3 Credits

This course is an intensive study of the early modern pirates, privateers and wreckers of Western Europe; however, attention is also given to additional eras and similar struggles in the Middle East and Asia, allowing students to gain an understanding of a timeless, global phenomenon. An investigation into these archetypal outlaws and their practices (both in fact and in fiction) reveals central tensions in the economic, naval, political and ethical debates of the 16th, 17th and 18th centuries, and their influence on our own contemporary systems.

Corequisite: MNST 6001.

MNST 8107 Maritime and Naval Art

3 class hours, 3 credits

Engineers, admirals, traders, statesmen, and propagandists all make use of visual representations of ships, but for different reasons and in different ways. This course will consider how these motives intersect with the pictorial and graphic conventions of different major maritime cultures, surveying the history of marine and nautical art from ancient times up through the 20th century, concentrating chiefly on the modern period of global trade and conquest and the heyday of maritime art in the 17th-19th centuries.

Corequisite: MNST 6001

MNST 8109 The Last Great Hunt: Herman Melville, Moby-Dick, and American Culture 3 class hours, 3 credits.

This course concentrates on Herman Melville's place in the American literary canon and the impact of Moby-Dick on American culture from the Abstract Expressionists to pop music and science-fiction films. We will also be concerned with the genre of sea fiction, the American whaling industry, and Melville as a precursor to modernist and postmodernist experimentation. This is a multi-media examination of the greatest novel in American literature and how Melville's "last great hunt" changed the world.

Corequisite: MNST 6001.

MNST 8199-8299 Special Topics in Maritime and Naval Studies I-II

3 class hours, 3 credits.

Special topics and issues for qualified students interested in acquiring a broader knowledge of Maritime and Naval Studies.

Corequisite: MNST 6001.

MNST 8250 Government Transportation/Environmental Policy

3 class hours, 3 credits.

An introduction to the overall structure and design of environmental law in the United States and in the international community. Closer examination of specific cases, statutes and treaties affecting marine transportation, marine natural resources, pollution and development.

Consideration of environmental policy impact in a cross-cultural context is also examined.

Corequisite: MNST 6001or TMGT 6001.

Completion of the four Core Courses.

Cross-Listed as TMGT 8250

MNST 9100 Capstone

3 class hours, 3 credits.

The capstone course is required of all MNST students. Successful completion will require both appropriate contributions to the course activities and assignments and satisfactory completion of the capstone project. The capstone course activities and assignments will consist of discussion areas, addressing topical issues in Maritime and Naval Studies; readings selected to introduce issues of professional preparation (including preparation for doctoral studies); and assignments designed to initiate the capstone project.

Prerequisites: MNST 6001, MNST 7001 and MNST 7002.

TRANSPORTATION MANAGEMENT

TMGT 6001 Orientation to Graduate Studies

1 class hour, 1 credit.

This course introduces all new graduate students to the full range of academic, administrative, and social expectations on graduate students, and the environment in which they must meet those expectations.

[Fall and Spring]

TMGT 7060 Systems Analysis & Operations Research

3 class hours, 3 credits.

Exploration of quantitative and systems methods in business and transportation. Topics include problem solving, optimization—both linear and non-linear, network models, deterministic and probabilistic models, the systems life spiral, principles and practices for developing, managing and enhancing systems. Computers are an integral part of the course. Mathematics topics will be reviewed as necessary.

Corequisite: TMGT 6001.

[Fall and Spring]

TMGT 7100 Economics of International Trade

3 class hours, 3 credits.

A systematic analysis of the underlying determinants of international trade, including classical, Ricardian, neoclassical and current theories of international trade, commercial policy, and customs unions. Monetary topics include balance of payments; accounting and adjustment process; foreign exchange markets; and the role of the dollar in international trade and international finance.

Corequisite: TMGT 6001.

[Fall and Spring]

TMGT 7200 Management Information Systems in Transportation

3 class hours, 3 credits.

This course introduces the student of transportation and logistics to the theory and practice of how information systems align with and support freight transportation and logistics processes. Focus is placed on the strategic processes of operations control, decision support, and customer in multimodal environments. Process models for these environments are presented and discussed, as are the techniques for data collection and capture, processing, communication, and presentation. The ultimate objective of the course is to provide the student with a working development to deliver usable and effective information systems.

Corequisite: TMGT 6001.

TMGT 7300 Transportation Management

3 class hours, 3 credits.

The study of upper level management and the decision making process within the context of the transportation firm. Case studies and computer simulations concerning internal operations and profitable responses to changing industry trends are studied.

Corequisite: TMGT 6001. [Fall and Spring]

TMGT 7400 Logistics within the Supply Chain

3 class hours, 3 credits.

This course focuses on and explicates the logistics channel of the supply chain. "Channels" are identifiable sets within a supply chain of interdependent business processes and activities that help to impart a distinct economic value or utility to the product as it moves through the supply chain or to the service as being provided. The purpose of the course is to prepare students to be logistic managers, to control efficiently the movement of goods, materials and other resources using processes that instill time and place utility in the moved product or the developing service, from beginning of supply chain (sourcing of raw materials) to its end (the ultimate destination of the delivered product or service).

Corequisite: TMGT 6001.

[Fall and Spring]

TMGT 7500 International Business & Transportation Law

3 class hours, 3 credits.

Introduction to the issues and problems that face the individual/company engaged in international transportation and business, while exploring the rights and duties of participants, and the legal and practical issues that arise in international business transactions.

Corequisite: TMGT 6001.

[Fall and Spring]

TMGT 8110 Economics of Transportation

3 class hours, 3 credits.

Economic analysis of transportation decision-making. Topics include: demand, cost, analysis of rate determination, taxes and subsidies, government regulation and resource allocation, study of competitive and noncompetitive forces in a regulated and deregulated environment.

Prerequisites: Completion of the four Core Courses.

TMGT 8120 Topics in Managerial Economics

3 class hours, 3 credits.

Application of quantitative methods to economic decision-making. Topics include: optimization techniques, demand theory; cost theory, econometric estimation, market structure, pricing practices, antitrust, capital budgeting, and forecasting.

Prerequisites: Completion of the four Core Courses.

TMGT 8140 Seminar in Shipping Economics

3 class hours, 3 credits.

Application of economic analysis to issues of major concern to shipping firms, and to the shipping industry as a whole. Topics covered include: analysis of the market structure of the shipping industry, the supply of shipping services, the costs to the firm, pricing shipping services, determination of freight rates, shipping and the balance of payments, government policies affecting shipping, subsidies, cabotage, and tariffs.

TMGT 8150 Transportation Benefit-Cost Analysis

3 class hours, 3 credits.

Techniques for the profitable evaluation of a project's merit and cost, whether in the public or private sector. These include business and asset acquisitions, transportation projects, proposed or existing government regulation, taxes, subsidies, grants, among others.

Prerequisites: Completion of the four Core Courses.

TMGT 8210 Transportation Managerial Accounting

3 class hours, 3 credits.

Application of accounting principles to managerial decisions in various transportation modes, including vessels, air carriers and motor freight operations. Includes the treatment of revenue and expense; agency; branch and ship accounting; subsidy treatment; governmental uniform system of accounting and reporting; foreign exchange; and other financial aspects of international and domestic transportation. The role of computers in integrating the accounting systems with management, planning and operating information systems.

Prerequisites: Completion of the four Core Courses.

TMGT 8230 Ship Finance

3 class hours, 3 credits.

Application of financial tools to ship and fleet financing. Topics include: economic analysis of the sale and purchase, new building and second hand markets, sources of financing, bareboat and sale / leaseback arrangements, mortgage requirements, estimating profitability of charter party time and spot transactions, valuation of prospective purchases, evaluating shipping enterprises, among others.

Prerequisites: -Completion of the four Core Courses.

TMGT 8250 Government Transportation/Environmental Policy

3 class hours, 3 credits.

An introduction to the overall structure and design of environmental law in the United States and in the international community. Closer examination of specific cases, statutes and treaties affecting marine transportation, marine natural resources, pollution and development. Consideration of environmental policy impact in a cross-cultural context is also examined.

Corequisite: MNST 6001or TMGT 6001.

Cross-Listed as MNST 8250

TMGT 8270 Ship Management

3 class hours, 3 credits.

This elective course is a study of the many functions performed by shore side management while operating merchant vessels. Topics include: the evolving role of the ship's manager, ship management agreements, crewing agencies, crewing problems and agreements, bunker procurement, quality and control, sale and purchase of vessels, demolition, vessel agencies, managing operating and running costs, voyage estimating, vessel maintenance issues, risk management, ISM compliance, classification societies, working within the regulatory environment, among others.

TMGT 8280 Fleet Management

3 class hours, 3 credits.

A comprehensive analysis of the principles of fleet operations and maintenance to obtain a higher degree of productivity and cost effectiveness. The course includes: forecast fleet requirements, vehicle maintenance, vehicle operations, fleet economics, budget organization, safety and fleet security, energy efficiency, data processing, and labor relations.

Prerequisites: Completion of the four Core Courses.

TMGT 8310 Port Development and Environmental Issues

3 class hours, 3 credits.

The transportation industry and ports are facing new challenges as a result of increased environmental regulations and enforcement, all of which affect intermodal transportation initiatives. International agreements, treaties and conventions have modified the way international and even domestic commerce and trade is conducted. The course will deal with domestic and international laws and regulations, which impact port operations. The course will also focus on new approaches and solutions to many of the environmental problems encountered in port operations and development

Prerequisites: Completion of the four Core Courses.

TMGT 8320 Port & Terminal Management

3 class hours, 3 credits.

This course consists of an inquiry into the basic concepts and principles of seaport management. It stresses U.S. public ports, while providing an insight into the port problems of developing nations. Included topics are: operations; organizational structure; powers; public policy; economics; planning; marketing; technology and regulation.

Prerequisites: Completion of the four Core Courses.

TMGT 8330 Analysis of Integrated Ocean Transport

3 class hours, 3 credits.

Topics studied include: ocean routes, terminals, free ports, cargo handling & stowage, charter parties, theory of rate-making, rate practice and control, pools; agreements, economic aspects of selected ports, the relation of facility to its hinterland, costs of shipping through the facility, competitive position, labor costs and productivity, construction and rental costs, governmental agencies, port authorities and commissions.

Prerequisites: Completion of the four Core Courses.

TMGT 8340 Dry & Wet Bulk Vessel Operations

3 class hours, 3 credits.

Analysis of dry bulk and tanker vessel operations in the tramp market from both the shore side and shipboard perspective. Discusses development in dry bulk and tanker markets, the supply and demand of vessels and evolving shipboard technology.

TMGT 8360 Intermodal Freight Transportation

3 class hours, 3 credits.

Learn the basics of intermodal freight transportation, including documents and equipments, freight operations, intermodal information technology, and rules and laws that apply in this type of transportation. Students can also find answers to the questions of how intermodal freight transportation developed, what is happening today, and where it might be going in the future. Prerequisites: Completion of the four Core Courses.

TMGT 8370 Shipboard Operations for Shoreside Managers

3 class hours, 3 credits.

This very specialized course is held at sea onboard the College's Training Vessel, Empire State VI. The student is introduced to shipboard operations, navigation, vessel safety, bridge watch standing, marine engineering and related topics. The student can expect to spend approximately one week at sea during the month of May or June and the balance of his / her time in a traditional classroom environment.

Prerequisites: Completion of the four Core Courses. [Summer]

TMGT 8390 Maritime Port Security

3 class hours, 3 credits.

Objective is to prepare the student to become aware of the new threats to the Maritime Industry and protect their assets of Ports, Terminals and Ships. To enable the student to prepare for a position as Company Security Officer or Port Facility Security Officer. Three certificates can be obtained with competition of this course. In compliance with international STCW requirements, there will be no D or D+ grades in this course.

Prerequisites: Completion of the four Core Courses.

TMGT 8420 Ocean Marine Hull & Protection & Indemnity Insurance

3 class hours, 3 credits.

Ocean marine hull and protection and indemnity policies, clauses and interpretation are studied. Topics include: hull markets, total losses, averages, perils insured against, running down liabilities, sue and labor, general average, hull valuations, war risks, P and I clubs, covered risks, charterers' and bailees' legal liability, reinsurance, functions and problems of brokers, agents and underwriters, hull and P and I underwriting, among other topics.

Prerequisites: Completion of the four Core Courses.

TMGT 8430 Ocean Marine Cargo Insurance & Loss Adjusting

3 class hours, 3 credits.

This course is designed to brokers, underwriters, claims handlers and insured's a better understanding of how to manage risk and how a claim meets the final test of coverage and loss adjustment. Topics include: major classes of cargo, policy interpretation, premiums, cargo valuation, packing handling and susceptibility to damage, perils insured against, general average/salvage, role of the adjuster, and more.

TMGT 8440 Maritime Law

3 class hours, 3 credits.

The course seeks to satisfy the need to understand the general maritime principles needed by ship officers and ones working in the maritime industry ashore. American admiralty and maritime laws and practices as they apply to ship owners, seamen and ship officers, ship insurers and charterers will be discussed.

Prerequisites: Completion of the four Core Courses.

TMGT 8450 Advanced Charter Parties I

3 class hours, 3 credits.

Topics include: ship brokerage and commissions, negotiating charter parties. Application of contract and agency law to charter parties, time charter party forms and clauses, payment of hire, off-hire clauses, overlap and under lap, withdrawal, speed and fuel oil consumption warranties, seaworthiness, bills of lading under charter parties, the Inter-Club Agreement, maritime liens and prohibition of liens, demise charter party terms, conditions, consequences, among others. A professional chartering certificate is issued upon successful completion of both TMGT 8450 & 8460.

Prerequisites: Completion of the four Core Courses.

TMGT 8460 Advanced Charter Parties II

3 class hours, 3 credits.

Objectives include a detailed understanding of the practices and law governing voyage chartering of ocean going and other vessels, as well as ship brokering and dry and wet chartered vessel operations. A professional chartering certificate is issued upon successful completion of both TMGT 8450 & 8460.

Prerequisites: TMGT 8450.

TMGT 8465 Advanced Topics in Shipping

3 class hours, 3 credits.

Provides a detailed examination of major issues of concern to shipping, export, import, seaport, risk management, and logistics students and executives. It examines the business of international shipping and trade from operational, regulatory, economic, policy, risk management and legal perspectives.

Prerequisites: Completion of the four Core Courses.

TMGT 8470 Transportation Risk Management

3 class hours, 3 credits.

The overall objective for this course is to demonstrate professional competence in handling transportation risks. After successful completion of the course students should be able to identify and analyze transportation loss exposure, analyze different types of transport coverage, recommend appropriate insurance provisions and loss control measures in order to properly manage risk associated with marine transportation. Areas covered include marine terminal, freight forwarding, shipbuilding, and cargo risk management.

TMGT 8480 Managing Across Cultures

3 class hours, 3 credits.

This course deals with the identifying and understanding the cultural issues that impact senior and middle management of a global transportation business. Alternative actions and implementation details rising from this understanding are discussed. Cultural Acumen for the Global Manager - Lessons from Project GLOBE, forms the basis for this class.

Prerequisites: Completion of the four Core Courses.

TMGT 8491 The Terrorist Threat Today

3 class hours, 3 credits.

Understand typical terrorist mindsets and psychologies, their threat to U.S. interests and supply chains, as well as understanding the counter terrorist apparatus set up in the U.S. to deal with the terrorist threat.

Prerequisites: Completion of the four Core Courses.

TMGT 8499 Special Topics in International Transportation Management

3 class hours, 3 credits.

This course examines issues of current or emerging significance in international transportation management through the lens of contextual analysis. Clear identification of the issues, an assessment of their importance within the global context, and recommendations of resolution are important capabilities for the global executive. This course provides the opportunity to learn the essential and relevant underlying skills. An understanding of the socio political economic realities of the world, and the development of ethical, critical thinking and communication skills are features of this course.

Prerequisites: Completion of the four Core Courses.

TMGT 8501 Principles of Supply Chain Management I

3 class hours, 3 credits.

Introduction into the concept of supply chain management, and focuses on the issues of integrating the channel functions of extended supply chains. The course explicates the major channels of the supply chain, delineates functional areas wherein products and services are transformed incrementally to final form as they form as they move through the supply chain, surveys the major technologies in use today, and surveys both qualitative and quantitative managerial techniques.

Prerequisites: Completion of the four Core Courses.

[Fall]

TMGT 8502 Principles of Supply Chain Management II

3 class hours, 3 credits.

The management functions of planning, organizing, and controlling; explores the logic of collaboration in today's business environments, domestic and global; examines globalization issues deriving from cultural, economic, and political contexts, and examines and models the strategic planning hierarchy of vision, mission, strategic goals, and tactical objectives. Prerequisites: TMGT 8501.

[Spring]

TMGT 8505 International Trade Management Internship

3 class hours, 3 credits.

The Internship in ITM will provide practical, hands on experience that will facilitate a student's segue into a professional position. There are many different career tacks possible in international transportation management; however, the main criterion for approving an internship is whether the work performed, mentoring given, and lessons learned can, in the judgment of the supervising faculty member and GBAT Department Chair, be applied directly to International Transportation Management. A successfully completed ITM internship will satisfy one of the program's 3-credit elective requirements. The internship may be either paid or unpaid, and credit is granted for both.

Prerequisites: Completion of the four Core Courses.

TMGT 8510 Systems Design & Control

3 class hours, 3 credits.

This course examines the consequences of global markets, specifically, successful competition in an uneven cultural, economic, political and social playing fields that requires deriving cost efficiencies from constantly re-engineering extended supply chains. The best of the reengineering takes a total cost analysis approach, viewing all parts of the supply chain as an integrated whole and leaving nothing in isolation. Students are introduced to the design and control techniques that derive from a systems approach.

Prerequisites: Completion of the four Core Courses.

[Spring]

TMGT 8520 Case Studies in Supply Chain Security

3 class hours, 3 credits.

This course is an elective in the SCM emphasis in the ITM degree program. The course explores the applications of security within the global supply chain extending from the sourcing of raw materials to the ultimate destination of the product or service. Students will evaluate the multiple perspectives of security that impact the strategic, operational, tactical, personal, informational, and physical aspects of the supply chain and examine the interplay of security & efficiency in the business decision making construct. The case study format allows for detailed analysis of the particulars of supply chain vulnerability and the formulation of plans to address the issues uncovered. Practical application of security concepts, clear and concise communication of possible mitigation strategies to decision makers will be highlighted.

TMGT 9100 Capstone

3 class hours, 3 credits.

This course is the culmination of your program in ITM and is designed to draw upon the knowledge that you have acquired in all of the other courses that have preceded it. Students perform directed team research and make a presentation to faculty and outside evaluators. Prerequisites: Completion of the four Core Courses, 25 TMGT Credits, 3.0 GPA.

TMGT 9201 Thesis I

3 class hours, 3 credits.

A graduate student works with a supervising faculty member as an alternative to a (3 credit) capstone course. The thesis is individual study and research, over two semesters, and is worth 6 credits.

Prerequisites: Completion of the four Core Courses.

TMGT 9202 Thesis II

3 class hours, 3 credits.

A graduate student works with a supervising faculty member as an alternative to a (3 credit) capstone course. The thesis is individual study and research, over two semesters, and is worth 6 credits.

Prerequisites: TMGT 9201

COURSES IN RESERVE

Courses not offered in the last five years may be offered in the future if a department determines a need for the course.

TMGT 8130 Economics of Ocean Transportation

3 class hours, 3 credits.

Topics include: transportation planning: vessel suitability: capital, operating and voyage costs. Development of financial models for comparing movements using cost per delivered unit of cargo. Examines movement planning and the valuation and acquisition of vessels.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8240 International Trade Transactions

3 class hours, 3 credits.

Contemporary trends in transportation industrial relations, the dilemmas, conflicts, and challenges associated with the employment relationship. Topics include: union organizations and structure; labor legislation, the theory of negotiation and strategic approaches to collective bargaining, and the limitations on the freedom to strike. An assessment of the unions' impact on wages, prices, profits, technological change, and management actions will be made.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8260 Industrial Relations in Transportation

3 class hours, 3 credits.

Contemporary trends in transportation industrial relations, the dilemmas, conflicts, and challenges associated with the employment relationship. Topics include: union organizations and structure; labor legislation, the theory of negotiation and strategic approaches to collective bargaining, and the limitations on the freedom to strike. An assessment of the unions' impact on wages, prices, profits, technological change, and management actions will be made.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8290 Transportation Planning

3 class hours, 3 credits.

Transportation systems are compared within the context of the shipper/carrier relationship. Distribution patterns are investigated in ocean, inland waterways, rail, trucking, air, and pipeline modes. Topics covered include: carrier organization and operation, competition and operation, competition and cooperation, intermodal transportation, ratemaking negotiations and practices, carrier liability and government regulations.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8350 Analysis of Air Transportation & Airports

3 class hours, 3 credits.

A comprehensive analysis and evaluation of air transportation and airport organization and practices. Consideration is given to the changes in management and marketing in international trade, as influenced by the progress of commercial air transportation. Special emphasis is placed on the relationship between the various components of the air transportation system, physical planning, the role of government in air transportation, environmental concerns, forecasting, economic aspects of selected airports, competitive position, construction and rental costs, and airport authorities and commissions.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8355 Selected Topics in International Aviation Transportation Management

3 class hours, 3 credits.

Covers changing, discrete aviation transportation issues in an "issue management" approach. Issues include privatization, aircraft technology, security, facilitation, technology applications. Students do a term paper and oral presentation on an issue they select.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8380 Bunker & Aviation Fuel Markets

3 class hours, 3 credits.

Topics include: marine fuel, lube and aviation fuel oil markets, contracting, pricing, hedging tools, quality issues, risk management; environmental concerns, role of brokers, among others.

Prerequisites: All TMGT 7000 level courses.

Placed in Courses in Reserve

TMGT 8490 International Marketing

3 class hours, 3 credits.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

TMGT 8500 Business Ethics

3 class hours, 3 credits.

Prerequisites: All TMGT 7000-level courses.

Placed in Courses in Reserve

COURSES DELETED FROM COURSE CATALOG

TMGT 8160 Systems Analysis & Operations Research

3 class hours, 3 credits.

Exploration of quantitative and systems methods in business and transportation. Topics include problem solving, optimization—both linear and non-linear, network models, deterministic and probabilistic models, the systems life spiral, principles and practices for developing, managing and enhancing systems. Computers are an integral part of the course. Mathematics topics will be reviewed as necessary.

Prerequisites: All TMGT 7000-level courses.

Renumbered as TMGT 7060

TMGT 8220 Financial Decision Making in Transportation

3 class hours, 3 credits.

Topics include: required rate of return, capital assets, pricing models, capital budgeting

techniques, and sources of long term capital. Prerequisites: All TMGT 7000-level courses.

Deleted

TMGT 8310 Organizational Management

3 class hours, 3 credits.

This course concentrates on managerial strategy formulation, i.e., creation of goals, objectives and plans along with the organizational implementation factors of organizing, directing(motivating & leading), and controlling. The course also focuses on ethical decision making and organizational social responsibility. Students enrolled in this course will develop "strategizing and executing skills" that will enable them to provide competitive advantages, value and successful leadership to their respective organizations in the 21st century global economy.

Prerequisites: All TMGT 7000-level courses.

Replaced with TMGT 8310 Port Development and Environmental Issues

TMGT 9200 Thesis Seminar

3 class hours, 3 credits.

Each candidate will prepare a comprehensive thesis under the guidance of a faculty mentor. Required of all candidates for the Master of Science Degree who do not elect course 9100 (International Business Policy).

Prerequisites: Candidates must have at least 18 masters level credits completed with a minimum 3.0 GPA.

Deleted

Faculty Directory

First	Last	Title
	State Univer	sity Distinguished Professors
Joseph	Hoffman	Distinguished Teaching Professor
Karen	Markoe	Distinguished Service Professor
Hartley	Spatt	Distinguished Teaching Professor, Emeritus
Barbara	Warkentine	Distinguished Service Professor
Shmuel	Yahalom	Distinguished Service Professor
		Engineering
Yaqub	Amani	Visiting Professor
Roland	Aragon	Instructional Support Technologist
Joseph	Breglia	Lecturer
Richard	Burke	Professor
Sean	Carswell	Lecturer
Carl	Delo	Professor, Chair
Nicholas	Dizinno	Assistant Professor
Peter	Domalavage	Associate Professor
Daniel	Fridline	Assistant Professor
Thomas	Gyves	Associate Professor
Robert	Kidd	Assistant Professor
Paul	Kump	Assistant Professor
Christopher	Laurita	Lecturer
Ziqian	Liu	Associate Professor
Kevin	Macaluso	Visiting Instructor
Alberto	Martinez	Instructional Support Associate
John	Mathieson	Professor
Ian	Mccurdy	Lecturer
Charles	Munsch	Professor
Cezary	Recko	Lecturer
Catherine	Strez	Assistant Professor
Andrew	Turtora	Lecturer
	Global Bu	siness and Transportation
Christopher	Clott	Visiting Instructor
Dennis	Cooney	Associate Professor
James	Drogan	Lecturer
Robert	Edmonds	Assistant Professor, Chair
Virginia	Ferritto	Assistant Professor
Cornelia	Mccarthy	Assistant Professor
Francis	Pelkowski	Assistant Professor
Riccardo	Pellicciaro	Professor

Alison	Romain	Assistant Professor		
Nina	Timonina	Staff Assistant		
Jeffrey	Weiss	Professor		
Shmuel	Yahalom	Distinguished Service Professor		
Simuel	1 unuiom	Humanities		
David	Allen	Lecturer		
Ira	Breskin	Lecturer		
Elissa	Defalco	Associate Professor		
Anthony	Dipiazza	Visiting Instructor		
Harris	Eisenstadt	Visiting Instructor		
Christopher	Holmes	Associate Professor		
Lawrence	Howard	Professor		
Maryellen	Keefe	Associate Professor		
Lynch	Timothy	Professor		
Karen	Markoe	Distinguished Service Professor, Chair		
Christopher	Mcmillan	Lecturer		
Mark	Meirowitz	Assistant Professor		
John	Rocco	Professor		
Hartley	Spatt	Distinguished Teaching Professor, Emeritus		
Amanda	Springs	Assistant Professor		
Edward	Tassinari	Associate Professor		
Library				
Ian	August	Educational Technologist		
Katherine	Bram	Assistant Librarian		
Kristin	Hart	Librarian, Chair		
Rebecca	Hyams	Sr Assistant Librarian		
Mona	Ramonetti	Assistant Librarian		
Annie	Tummino	Assistant Librarian		
	Ma	rine Transportation		
Joseph	Ahlstrom	Professor		
William	Ducey	Assistant Professor		
Richard	Fitzgerald	Lecturer		
Dennis	Frederick	Associate Professor		
Matthew	Germann	Instructional Support Specialist		
Thomas	Litowinsky	Lecturer		
Elizabeth	Mccarthy	Lecturer		
James	Mckoy	Lecturer		
James Walter	Mckoy Nadolny	Lecturer Lecturer		
	†			
Walter	Nadolny	Lecturer		

Michael	Sobkow	Lecturer
Jeffrey	Spillane	Lecturer
Christopher	Stehn	Assistant Professor
Hugh	Stephens	Lecturer
Peter	Vecchio	Assistant Professor
		Naval Science
Heedong	Choi	Professor, Chair
Jason	Latta	Assistant Professor
	Profes	sional Education and Training
Ayman	Alakkawi	Lecturer
Ernest	Fink	Professor, Chair
Eric	Johansson	Professor
Robert	Mccarthy	Lecturer
Margaret	Poppiti	Staff Associate
James	Rogin	Staff Associate
		Science
Michael	Alfultis	Professor, President
Daniel	An	Associate Professor
Oganes	Bogaryan	Professor
Danielle	Cole	Associate Professor
Marie	De Angelis	Professor
Audrey	Gillant	Lecturer
Joseph	Hoffman	Distinguished Teaching Professor
Conrad	Linton	Lecturer
William	Losonsky	Professor
Ioana	Malureanu	Associate Professor
Anthony	Manzi	Assistant Professor
William	Massano	Professor
Ashana	Nandram	Instructional Support Associate
Kathy	Olszewski	Professor, Chair
Caterina	Panzeca	Assistant Professor
Linda	Sturges	Professor
Gilbert	Traub	Professor
Ronald	Vallejo	Lecturer
Barbara	Warkentine	Distinguished Service Professor
David	Wickham	Lecturer
Debbie	Yuster	Associate Professor

SUNY MARITIME COLLEGE ACADEMIC CALENDAR SUMMER 2016

EVENT	DAY	MONTH	DATE
SUMMER SEMESTERS - 2016			
SST: SST "B" 3/C Report for VPDSD training (0800)	Sat	April	30
SST: 1/C and 90-day Underclass Report for Pre-Cruise (1000)	Sun	May	1
Summer Ashore Graduate Term I (Summer Ashore Grad I) Classes Begin	Mon	May	2
SST: SST "A" Underclass Cadets Report for Pre-Cruise: 3/C (0800); 2/C (1200)	Tues	May	3
SST: Training Ship Departs (1000)	Mon	May	9
Summer Ashore Undergraduate Term I (Summer Ashore UG I) Classes Begin	Mon	May	9
Summer Ashore Grad I: Last Day to Add Course / Drop Course and Not be on Record	Mon	May	9
Summer Ashore Grad I: Withdrawal from Course W on Record	Tues	May	10
Summer Ashore Grad I: Permission and Late Fee Needed to Add a Course	Tues	May	10
Summer Ashore Grad I: Instructors Submit Attendance Reports	Tues	May	10
Summer Ashore UG I: Last Day to Add Course / Drop Course and Not be on Record	Thurs	May	12
Summer Ashore UG I: Withdrawal from Course W on Record	Fri	May	13
Summer Ashore UG I: Permission and Late Fee Needed to Add a Course	Fri	May	13
Summer Ashore UG I: Instructors Submit Attendance Reports	Fri	May	13
Memorial Day HOLIDAY - NO CLASSES	Mon	May	30
Summer Ashore UG I: Last Day to Withdraw from Course with W	Tues	May	31
Summer Ashore UG I: Withdrawal from Course WF and Late Fee	Wed	June	1
June Placement Testing	Thurs	June	2
Summer Ashore UG I / Grad I: Hold Monday Classes on Friday	Fri	June	3
Summer Ashore Grad I: Last Day to Withdraw from Course with W	Fri	June	3
June Placement Testing	Fri	June	3
June Placement Testing	Sat	June	4
Summer Ashore Grad I: Withdrawal from Course WF and Late Fee	Mon	June	6
Summer Ashore UG I Ends	Fri	June	10
Summer Ashore UG I Grades Due at Noon	Mon	June	13
SST: SST Change-Out (Dublin, Ireland; further details to be announced)	Wed	June	22
Summer Ashore Grad I Ends	Fri	June	24
Summer Ashore Grad I Grades Due at Noon	Mon	June	27

SUNY MARITIME COLLEGE ACADEMIC CALENDAR SUMMER 2016

EVENT	DAY	MONTH	DATE
Summer Ashore Graduate Term II (Summer Ashore Grad II) Classes Begin	Mon	June	27
July Graduation Degree Date	Fri	July	1
Summer Ashore Undergraduate Term II (Summer Ashore UG II) Classes Begin	Tues	July	5
Summer Ashore Grad II: Last Day to Add Course / Drop Course and Not be on Record	Tues	July	5
Summer Ashore Grad II: Withdrawal from Course W on Record	Wed	July	6
Summer Ashore Grad II: Permission and Late Fee Needed to Add a Course	Wed	July	6
Summer Ashore Grad II: Instructors Submit Attendance Reports	Wed	July	6
Summer Ashore UG II / Grad II: Hold Monday Classes on Friday	Fri	July	8
Summer Ashore UG II: Last Day to Add Course / Drop Course and Not be on Record	Fri	July	8
Summer Ashore UG II: Withdrawal from Course W on Record	Mon	July	11
Summer Ashore UG II: Permission and Late Fee Needed to Add a Course	Mon	July	11
Summer Ashore UG II: Instructors Submit Attendance Reports	Mon	July	11
Freshman Orientation Cohort 1	Mon	July	11
Freshman Orientation Cohort 2	Tues	July	12
Freshman Orientation Cohort 3	Wed	July	13
Freshman Orientation Cohort 4	Thurs	July	14
Transfer Student Orientation	Fri	July	15
Last Day to Apply for Readmission for Fall 2016 Semester	Fri	July	15
Summer Ashore UG II: Last Day to Withdraw from Course with W	Mon	July	25
Summer Ashore UG II: Withdrawal from Course WF and Late Fee	Tues	July	26
Summer Ashore Grad II: Last Day to Withdraw from Course with W	Fri	July	29
Summer Ashore Grad II: Withdrawal from Course WF and Late Fee	Mon	August	1
Summer Ashore UG II Ends	Fri	August	5
SST: Training Ship Returns (1000)	Mon	August	8
Summer Ashore UG II Grades Due at Noon	Mon	August	8
SST: 1/C Cadets Released (1200)	Tues	August	9
SST: Post-Cruise Ends - All Underclass Cadets Released (1600)	Wed	August	10
Summer Ashore Grad II Ends	Fri	August	19
Summer Ashore Grad II Grades Due at Noon	Mon	August	

EVENT	DAY	MONTH	DATE
FALL SEMESTER 2016			
IDOs, Squad Leaders, and Corpsmen Report for INDOC Training (1200 - 1600)	Mon	August	8
Faculty Academic Year Obligation Begins	Mon	August	8
Fourth Class Cadets Report INDOCtrination Begins (0800-1100)	Wed	August	10
Mandatory Briefing for USCG License Examinations	Sun	August	14
Adjunct Faculty Fall Semester Obligation Begins	Mon	August	15
USCG License Examinations	Mon	August	15
USCG License Examinations	Tues	August	16
USCG License Examinations	Wed	August	17
INDOC Academic Session (0900 - 1200)	Wed	August	17
USCG License Examinations	Thurs	August	18
All Hands Convocation	Thurs	August	18
Select 1/C Rates Report for Check-In (1200 - 1600)	Thurs	August	18
1/C Rate Training	Fri/Sat	August	19/20
Cadet Indoctrination Graduation (1000)	Sat	August	20
Housing Check-in for All Students	Sun	August	21
Classes Begin 8:00 AM	Mon	August	22
Graduate Student Orientation (10:00 AM - 1:30 PM)	Mon	August	22
Online 8-Week Session I (Online I) Begins	Mon	August	22
Last day to Add a Course	Sun	August	28
Online I: Last day to Add a Course	Sun	August	28
Permission and Late Fee Needed to Add a Course	Mon	August	29
Online I: Permission and Late Fee Needed to Add a Course	Mon	August	29
Online I: Last Day to Drop Course and Not be on Record (W not recorded)	Tues	August	30
Online I: Withdrawal from Course W on Record	Wed	August	31
Last Day for Grade Change (including from Incompletes) for Spring/Summer 2016	Fri	September	2
Last Day to Drop Course and Not be on Record (W not recorded)	Sun	September	4
Labor Day HOLIDAY NO CLASSES	Mon	September	5
Incomplete grades have been changed to F	Tues	September	6
Withdrawal from Course W on Record	Tues	September	6
Online I: Instructors Submit Attendance Reports	Tues	September	6
Instructors Submit Attendance Reports	Mon	September	12
Last Day to Submit Outside Documents for September Graduation	Fri	September	16

EVENT	DAY	MONTH	DATE
Faculty Meeting 3:00 PM	Wed	September	21
Spring 2016 Admiral's List and Dean's List Recognition	Fri	September	23
Online I: Last Day to Withdraw from Course with W	Fri	September	23
Online I: Withdrawal from Course WF and Late Fee	Mon	September	26
September Graduation Degree Date	Fri	September	30
Spring 2016 Admiral's List and Dean's List Recognition	Fri	October	7
Columbus Day HOLIDAY NO CLASSES	Mon	October	10
Hold Monday Classes on Tuesday	Tues	October	11
Mid-Semester Grade Reports Due	Tues	October	11
Online I Ends	Fri	October	14
Online I Grades Due at Noon	Mon	October	17
Online 8-Week Session II (Online II) Begins	Mon	October	17
Online II: Last Day to Add Course	Sun	October	23
Advisement for Spring 2017 Registration Begins	Mon	October	24
Online II: Permission and Late Fee Needed to Add a Course	Mon	October	24
Online II: Last Day to Drop Course and Not be on Record (W not recorded)	Tues	October	25
Online II: Withdrawal from Course W on Record	Wed	October	26
Online II: Instructors Submit Attendance Reports	Mon	October	31
Last Day to Withdraw from Course with W	Tues	November	1
Withdrawal from Course WF and Late Fee	Wed	November	2
Spring 2017 Registration Open for Grad Students and Freshmen (6:00 AM)	Mon	November	7
Spring 2017 Registration Open for Sophomores (6:00 AM)	Thurs	November	10
Veteran's Day Classes in Session	Fri	November	11
Last Day to Apply for January Graduation	Fri	November	11
Last Day to Apply for Readmission for Spring 2017 Semester	Fri	November	11
Spring 2017 Registration Open for Juniors (6:00 AM)	Mon	November	14
Faculty Meeting 3:00 PM	Wed	November	16
Spring 2017 Registration Open for Seniors (6:00 AM)	Thurs	November	17
Online II: Last Day to Withdraw from Course with W	Fri	November	18
Online II: Withdrawal from Course WF and Late Fee	Mon	November	21
Thanksgiving Break Begins After Last Class	Tues	November	22
Last Day to Register for Spring 2017 without Late Fee	Sun	November	27
Thanksgiving Break Ends 7:00 AM	Mon	November	28
Classes End	Fri	December	2

EVENT	DAY	MONTH	DATE
Final Exams Begin	Mon		
Online II Ends	Fri	December	9
Final Exams End	Sat	December	10
Dormitory Halls Close	Sat	December	10
Final Fall 2016 Grades Due no later than Noon	Mon	December	12
Academic Board Meets – 9:00 AM	Wed	December	14
Adjunct Faculty Fall Semester Obligation Ends	Wed	December	14
USCG LICENSE EXAMINATION PERIOD			
Mandatory Briefing for USCG License Examinations	Sun	December	11
USCG License Examinations	Mon	December	12
USCG License Examinations	Tues	December	13
USCG License Examinations	Wed	December	14
USCG License Examinations	Thurs	December	15
WINTER SEMESTER 2016/2017			
Classes Begin	Mon	December	12
Classes End	Fri	January	6

EVENT	DAY	MONTH	DATE
SPRING SEMESTER - 2017			
Adjunct Faculty Spring Semester Obligation Begins	Mon	January	3
Faculty Assessment Day	Thurs	January	5
Undergraduate Student Orientation	Fri	January	6
Housing Check-in for All Students	Sun	January	8
Classes Begin 8:00 AM	Mon	January	9
Graduate Student Orientation (10:00 AM - 1:30 PM)	Mon	January	9
Online 8-Week Session I (Online I) Begins	Mon	January	9
Last Day to Satisfy Incompletes / Submit Outside Documents for January Graduation	Fri	January	13
Last day to Add a Course	Sun	January	15
Online I: Last day to Add a Course	Sun	January	15
Martin Luther King, Jr. Day HOLIDAY NO CLASSES	Mon	January	16
Permission and Late Fee Needed to Add a Course	Tues	January	17
Online I: Permission and Late Fee Needed to Add a Course	Tues	January	17
Online I: Last Day to Drop Course and Not be on Record (W not Recorded)	Wed	January	18
Online I: Withdrawal from Course W on Record	Thurs	January	19
Last Day for Grade Change (including from Incompletes) for Fall 2016	Mon	January	23
Last Day to Drop Course and Not be on Record (W not recorded)	Mon	January	23
Incomplete grades have been changed to F	Tues	January	24
Withdrawal from Course W on Record	Tues	January	24
Online I: Instructors Submit Attendance Reports	Tues	January	24
January Graduation Degree Date	Fri	January	27
Instructors Submit Attendance Reports	Mon	January	30
Fall 2016 Admiral's List and Dean's List Recognition	Fri	February	10
Last Day to Apply for May Graduation	Fri	February	10

EVENT	DAY	MONTH	DATE
Online I: Last Day to Withdraw from Course with W	Fri	February	10
Online I: Withdrawal from Course WF and Late Fee	Mon	February	13
Summer 2017 (Sea Term and all Sessions) Registration Open for All Students	Mon	February	13
Faculty Meeting 3:00 PM	Wed	February	15
President's Day HOLIDAY NO CLASSES	Mon	February	20
Hold Monday Classes on Tuesday	Tues	February	21
Mid-Semester Grade Reports Due	Wed	March	1
Online I Ends	Fri	March	3
Online I Grades Due at Noon	Mon	March	6
Online 8-Week Session II (Online II) Begins	Mon	March	6
Spring Break Begins After Last Class	Tues	March	7
Spring Break Ends at 7:00 AM	Mon	March	13
Online II: Last Day to Add Course	Mon	March	13
Online II: Permission and Late Fee Needed to Add a Course	Tues	March	14
Online II: Last Day to Drop Course and Not be on Record (W not recorded)	Wed	March	15
Online II: Withdrawal from Course W on Record	Thurs	March	16
Advisement for Fall 2017 Registration Begins	Mon	March	20
Online II: Instructors Submit Attendance Reports	Mon	March	20
Last Day to Withdraw from Course with W	Fri	March	24
Withdrawal from Course WF and Late Fee	Mon	March	27
Fall 2017 Registration Open for Grad Students and Freshmen (6:00 AM)	Mon	April	3
Faculty Meeting 3:00 PM	Wed	April	5
Fall 2017 Registration Open for Sophomores (6:00 AM)	Thurs	April	6
Online II: Last Day to Withdraw from Course with W	Fri	April	7
Fall 2017 Registration Open for Juniors (6:00 AM)	Mon	April	10
Online II: Withdrawal from Course WF and Late Fee	Mon	April	10
Fall 2017 Registration Open for Seniors (6:00 AM)	Thurs	April	13
Classes End	Fri	April	21

EVENT	DAY	MONTH	DATE
Last Day to Submit any Outside Documents for May Graduation	Fri	April	21
Last Day to Apply for July / September Graduation	Fri	April	21
Final Exams Begin	Mon	April	24
Last Day to Register for Summer / Fall 2017 without Late Fee	Fri	April	28
Online II Ends	Fri	April	28
Final Exams End	Sat	April	29
Dormitory Halls Close for all those Not Doing Summer Sea Term	Sat	April	29
Last Day to Satisfy Incompletes for May Graduation	Mon	May	1
Final Spring 2017 Grades Due no later than Noon	Mon	May	1
Academic Board Meets 9:00 AM	Wed	May	3
Adjunct Faculty Spring Semester Obligation Ends	Wed	May	3
Faculty Assessment Day	Thurs	May	4
Spring Graduation Awards Reception (evening)	Thurs	May	4
Spring Graduation Ceremony (morning)	Fri	May	5
Faculty Academic Year Obligation Ends	Fri	May	5