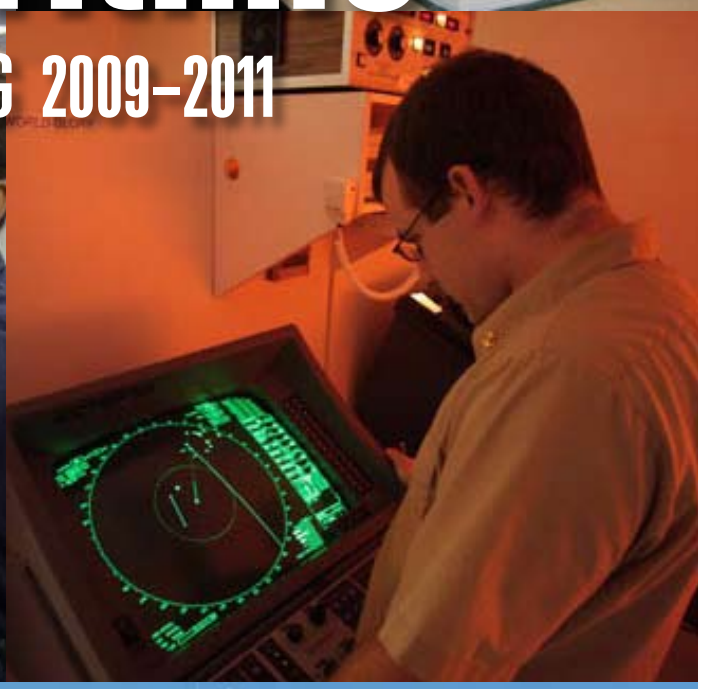
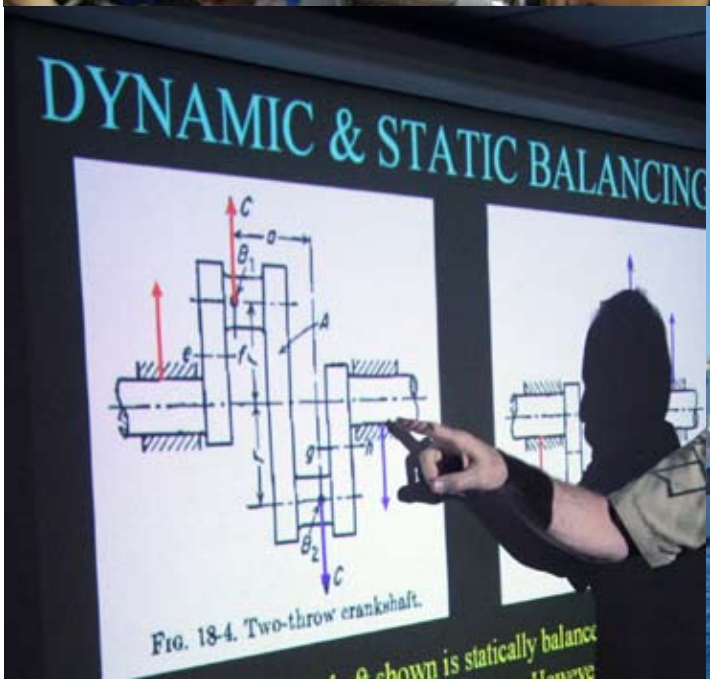
www.csum.edu

Cal Maritime

GENERAL CATALOG 2009–2011





CSU The California State University

THE CALIFORNIA MARITIME ACADEMY

General Catalog

2009-2011

CSU The California State University

THE CALIFORNIA MARITIME ACADEMY
200 MARITIME ACADEMY DRIVE
VALLEJO, CA 94590-8181
707/654-1000
707/654-1001 Fax

www.csum.edu

TABLE OF CONTENTS

How to Use this Catalog: A Reader's Guide

THIS CATALOG HAS TWELVE MAIN PARTS:

1. Introduction, including Staff and Office Directories;
2. Enrollment Services and Records;
3. Costs and Fees;
4. Financial Aid;
5. Office of Marine Programs and Leadership Development;
6. Student Support Services and Campus Life
7. Academic Regulations and Policies;
8. Baccalaureate Degree Requirements;
9. Academic Departments, including Descriptions of Majors, Minors, Curricula, and Faculty;
10. Courses;
11. Appendix;
12. Index.

HERE ARE FOUR WAYS TO FIND THE INFORMATION YOU NEED:

1. Look for the topic you want in the Table of Contents. In the online catalog, each topic is hyperlinked to the page within the catalog that contains information about that topic.

2. Check the Index at the back of the catalog. It gives you an alphabetical list of virtually everything you might want to know about Cal Maritime and the places where you can find the appropriate information in the catalog. In the online catalog, each page number is hyperlinked to the corresponding page within the catalog that contains information about that topic.

3. Pick up the phone. Entries throughout the catalog give you a phone number if you need more information, and there is also a **directory of office numbers** on page xiii. For instance, the Cal Maritime main number is 707/654-1000, and Enrollment Information is 800/561-1945.

4. Visit the campus via the World Wide Web at **http://www.csum.edu.**

CHANGES IN RULES AND POLICIES

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this catalog should note that laws, rules, and policies change from time to time and that these changes may alter the information contained in this publication.

To prepare its students to pass licensing examinations, Cal Maritime modifies its curriculum to include current changes in U.S. Coast Guard requirements. Changes may also come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the Chancellor or designee of The California State University, or by the President or designee of Cal Maritime. Furthermore, it is not possible in a publication of this size to include all of the rules, policies and other information that pertain to students, the institution, and The California State University. More current or complete information may be obtained from the appropriate department, school, or administrative office.

Nothing in this catalog shall be construed as, operate as, or have the effect of an abridgement or a limitation of any rights, powers, or privileges of the Board of Trustees of The California State University, the Chancellor of The California State University, or the President of Cal Maritime. The Trustees, the Chancellor, and the President are authorized by law to adopt, amend, or repeal rules and policies that apply to students. This catalog does not constitute a contract or the terms and conditions of a contract between the student and the institution or The California State University. The relationship of the student to the institution is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the President and their duly authorized designees.

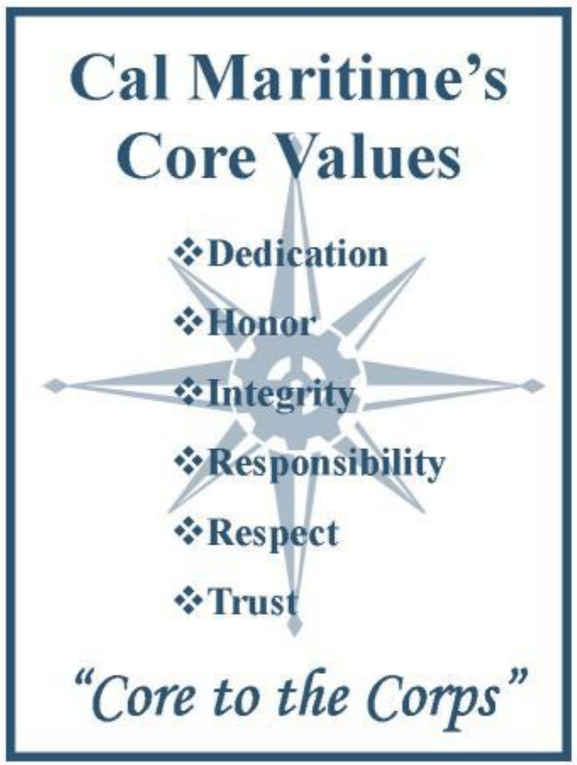
CAL MARITIME GENERAL CATALOG
2009-2011

This Catalog has been prepared by Patricia L. Harper

MISSION STATEMENT

The mission statement for The California Maritime Academy defines our purposes as an organization. Our educational community subscribes to the following statement of what we will do. Our mission is to

- Provide each student with a college education combining intellectual learning, applied technology, leadership development, and global awareness;
- Provide the highest quality licensed officers and other personnel for the merchant marine and national maritime industries;
- Provide continuing education opportunities for those in the transportation and related industries;
- Be an information and technology resource center for the transportation and related industries.



VISION AND STRATEGIES OF THE CALIFORNIA MARITIME ACADEMY

VISION

The California Maritime Academy will be a leading educational institution recognized for excellence in business, engineering, operations, and policy of the transportation and related industries for the Pacific Rim and beyond.

STRATEGIES

- Build the educational program around our rich heritage in maritime studies and learning opportunities offered by the *Training Ship GOLDEN BEAR*
- Recruit, develop, and retain excellent students, faculty, and staff
- Meet the needs of students, industry, and society through superior, up-to-date, and visionary educational programs
- Maintain a student-centered environment to enhance the ethical, personal, and professional development of our students
- Encourage diversity in a respectful environment
- Strengthen linkages between the campus and external communities within the state, the nation, and the world through public service
- Enhance the educational program through development and maintenance of modern facilities and technology
- Emphasize the integration of intellectual learning, applied technology, and leadership development
- Value and promote participation and support from alumni, friends and industry

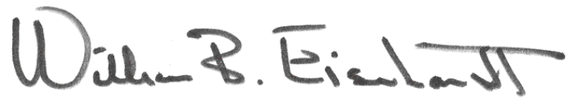
MESSAGE FROM THE PRESIDENT

For generations Californians have used their coastline to help fulfill their dreams and destinies. The Pacific and its tributaries have been used for business, as transportation to a new life, and as a focus of a preferred lifestyle. For over 80 years this proud heritage continues at The California Maritime Academy, a California State University institution of technology, engineering, international business, global studies, and transportation located on the northern fringe of San Francisco Bay. Using our waterfront location, maritime tradition, and Corps of Cadets, we offer students a unique opportunity for intellectual, professional, and personal development. Our students participate in an educational system that emphasizes active learning both in and out of the classroom. By offering this blend of intellectual exploration, applied technology, and leadership/management training, the college provides graduates with a breadth of professional skills unparalleled in most other institutions of higher education. In addition, the intimacy of a small, primarily residential institution creates a richness of shared experiences that defines and binds alumni for life.

Under the guidance and tutelage of a proud and dedicated faculty, staff and administration, we offer a curriculum that, while unique, is flexible enough that graduates can seek careers in many technical, transportation, business, international trade policy and engineering fields as well as the traditional maritime fields of shipping, port and terminal management, off-shore drilling, and the fishing industries. Proof of that flexibility lies in the fact that we traditionally have one of the highest employment rates of any undergraduate institution.

Our strategic vision is international with our students participating in the annual cruise aboard our 500-foot *Training Ship GOLDEN BEAR*, sailing on a commercial ship, or working in the summer with companies with a global outlook. These experiences often bring our students in contact with differing cultures, introduce them to a global economy, and give them an opportunity to apply their skills in a real-world setting. In addition, our location as part of the "Pacific Rim" offers students a vantage point from which to realize a horizon of enormous opportunity.

We are proud of our place in The California State University System and of our tradition of serving the state and nation as the West Coast's only maritime-oriented institution of higher education. I encourage you to explore preparing for your future through The California Maritime Academy.



Dr. William B. Eisenhardt, RADM USMS
President

CAL MARITIME

2009-2010 ACADEMIC CALENDAR

August 30, 2009	Second cruise period ends
September 3–7	Orientation period
September 7	Labor Day Holiday
September 8	Instruction begins, Fall 2009 semester
September 14	Last day to add a class
October 2	Last day to drop a course with no grade recorded
October 5	Census date (20th day of instruction)
October 16	Last day to remove incomplete grades
November 9	60% point of the semester
November 11	Veteran's Day Holiday
November 26–27	Thanksgiving Holiday recess
December 17	Last day of fall instruction
December 18–19, December 21–23	Final examination period
December 24	Deadline for faculty to submit grades
December 25 – January 1, 2010	Winter recess (Campus closed)
January 4–7	U.S. Coast Guard Examinations
January 11	Instruction begins, Spring 2010 semester
January 15	Last day to add a class
January 18	Martin Luther King, Jr. Day Holiday
February 5	Last day to drop a course with no grade recorded
February 8	Census date (20th day of instruction)
February 19	Last day to remove incomplete grades
February 25–26	Spring Break
March 15	60% point of the semester
March 20	Mini-Cruise
March 31	Cesar Chavez Day Holiday
April 22	Last day of instruction
April 23–24, April 26–28	Final examination period
April 29	First cruise period begins
April 30	Deadline for faculty to submit grades
May 1	Commencement, Class of 2010
June 29	First cruise period ends/Second cruise period begins
August 29	Second cruise period ends
September 7, 2010	Instruction begins, Fall 2010 semester

Note: Calendar dates are subject to change

CAL MARITIME

2010-2011 ACADEMIC CALENDAR

August 29, 2010	Second cruise period ends
September 2–6	Orientation period
September 6	Labor Day Holiday
September 7	Instruction begins, Fall 2010 semester
September 13	Last day to add a class
October 1	Last day to drop a course with no grade recorded
October 4	Census date (20th day of instruction)
October 15	Last day to remove incomplete grades
November 8	60% point of the semester
November 11	Veteran's Day Holiday
November 25–26	Thanksgiving Holiday recess
December 16	Last day of fall instruction
December 17–18, December 20–22	Final examination period
December 24	Deadline for faculty to submit grades
December 25 – January 1, 2011	Winter recess (Campus closed)
January 3–6	U.S. Coast Guard Examinations
January 10	Instruction begins, Spring 2011 semester
January 14	Last day to add a class
January 17	Martin Luther King, Jr. Day Holiday
February 4	Last day to drop a course with no grade recorded
February 7	Census date (20th day of instruction)
February 18	Last day to remove incomplete grades
February 24–25	Spring Break
March 14	60% point of the semester
March 19	Mini-Cruise
March 31	Cesar Chavez Day Holiday
April 21	Last day of instruction
April 22–23, April 25–27	Final examination period
April 28	First cruise period begins
April 29	Deadline for faculty to submit grades
April 30	Commencement, Class of 2011
June 28	First cruise period ends/Second cruise period begins
August 28	Second cruise period ends
September 6, 2011	Instruction begins, Fall 2011 semester

Note: Calendar dates are subject to change

The California State University
Office of the Chancellor

Chancellor, CSU System ..... Dr. Charles B. Reed
Executive Vice Chancellor and Chief Academic Officer ..... Dr. Gary Reichard
Executive Vice Chancellor and Chief Financial Officer ..... Dr. Benjamin F. Quillian
Vice Chancellor, Human Resources ..... Ms. Gail Brooks
General Counsel ..... Ms. Christine Helwick
Associate Vice Chancellor, Academic Affairs ..... Dr. Keith Boyum

The California State University
401 Golden Shore
Long Beach, CA 90802-4210
562/951-4000

The California Maritime Academy
Office of the President

President ..... Dr. William Eisenhardt
Presidential Aide ..... Ms. Susan Bigler

Office of Provost & VP Academic Affairs

Provost & Vice President, Academic Affairs ..... Dr. Gerald Jakubowski
Executive Assistant ..... Ms. Laura Layton
Director, Faculty Affairs ..... Mr. Lloyd Kitazono

Academic Dean

Academic Dean ..... Mr. Stephen Kreta
Academic Coordinator ..... Ms. Patricia Harper
Interim Associate Dean, Simulation ..... Dr. James J. Buckley
Deck Simulation Manager ..... Capt. Michael Noonan
Chair, Engineering Technology ..... Mr. Thomas Mader
Chair, Marine Transportation ..... Mr. Samuel Pecota
Chair, Maritime Operations ..... Mr. Daniel Weinstock
Chair and Director, Maritime Policy and Management ..... Dr. Donna Nincic
Chair, Mechanical Engineering ..... Dr. Stephen Pronchick
Chair and Officer In Charge, Naval Science ..... LT Joseph J. Laumann
Chair, Sciences and Mathematics ..... Mr. Lloyd Kitazono

Athletics

Director, Athletics ..... Mr. Marv Christopher

Dean of Students

Interim Dean of Students ..... Ms. Josie Alexander
Administrative Assistant ..... Ms. Kris Cranford
Interim Director, Career Center ..... Mr. James Dalske
Assistant Director, Career Center, Sailing ..... Ms. Kuulei Galatioto
Assistant Director, Career Center, Shore ..... Ms. Christina Harrison
Administrative Assistant ..... Ms. Tess Luna
Director, Health and Wellness Center ..... Ms. Suzannah Dolan
Medical Director ..... Dr. Eric Swann
Psychologist ..... Dr. Carlton Purviance
Medical Assistant ..... Ms. Joan Keane
Clinical Assistant ..... Ms. Joy Salanga

Instructional Support

Interim Director, Instructional Support ..... Dr. Vivienne McClendon
Coordinator, Center for Community Engagement and EAP ..... Position Vacant
STCW Coordinator ..... Ms. Peg Solveson
Director, Admission and Outreach ..... Mr. Marc McGee
Assistant Director, Admission and Outreach ..... Ms. Sandra Handel
Assistant Director, Admission and Outreach ..... Mr. Mike Tressel
Administrative Analyst ..... Ms. Cecilia Santos
Director, Financial Aid ..... Mr. Ken Walsh
Financial Aid Counselor ..... Ms. Debbie Dance
Director, Student Records ..... Ms. Deborah Fischer
Student Records Specialist ..... Ms. Dana Wood
Student Records Specialist ..... Ms. Leona Hebert

Library

Director, Library ..... Mr. Carl Phillips

Sponsored Projects and Extended Learning

Director, Sponsored Projects and Extended Learning ..... Ms. Veronica Boe
Director, Maritime Security ..... Capt. Bruce Clark
Program Manager, Maritime Security ..... Mr. John Ostrander
Program Assistant ..... Ms. Kathy Arnold

Office of VP Administration and Finance

Chief Financial Officer ..... Mr. Mark Nickerson
Administrative Assistant ..... Mr. Steven Sprowls
Chief of Police, Director of Public Safety ..... Dr. Rosann Richard
Controller ..... Mr. Ken Toet
Director, Facilities Management ..... Mr. Carlos Portillo
Budget Officer ..... Mr. Stephen Mastro
Executive Director, University Planner ..... Mr. Roger Jaeckel
Accounting Manager ..... Ms. Susan Foft
Director, Procurement and Risk Management ..... Ms. Vineeta Dhillon
Chief Information Officer ..... Mr. Stephen Frazier
Director, ISO ..... Ms. Jannette Corpus
Director, Human Resources ..... Ms. Kay Miller
Communications ..... Ms. Donna Lichty
Executive Director, Auxiliary Services ..... Ms. Diane Rawicz
Director, Dining Services ..... Mr. Louis Bones
Associate Director, Dining Services/Catering ..... Mr. Mark Cosca
Executive Chef ..... Mr. Alfred “Sam” Bagos
Production Manager/Dining Services ..... Mr. Anthony Mohsenzadegan
Manager, Bookstore ..... Ms. Robin Skaggs

Office of VP University Advancement

Interim Vice President, University Advancement ..... Mr. Thomas Dunworth
Advancement Database Analyst ..... Ms. Bobbie Solveson
Director, Public Relations ..... Mr. Doug Webster
Director, Development/Alumni ..... Ms. Jennifer Whitty
Coordinator of Special Events and Alumni Affairs ..... Ms. Silvia Regalado
Administrative Assistant ..... Ms. Karen Spall

Marine Programs and Leadership Development

Commanding Officer, *TSGB*, Primary ..... Capt. Harry Bolton
Commanding Officer, *TSGB*, Secondary ..... Capt. Paul Leyda
Manager, Maritime Operations/Chief Engineer, *TSGB*, Primary ..... Chief William Davidson
Chief Engineer, *TSGB*, Secondary ..... Chief Mitchell Cihomsky
Commandant of Cadets ..... Mr. Robert DeStafney
Assistant Commandant of Cadets ..... Mr. David Spadoni
Assistant Commandant of Cadets ..... Mr. Lance Watson
Administrative Coordinator ..... Ms. Susan Reynolds

DIRECTORY OF OFFICES

Cal Maritime Main Number/Receptionist 707/654-1000
Enrollment Information 800/561-1945

Academic Affairs 707/654-1021
Academic Dean 707/654-1019
Academic Senate 707/654-1162
Accounting 707/654-1026
Administration and Finance 707/654-1040
Admission and Outreach 707/654-1330
Advancement 707/654-1246
Alumni 707/654-1299
Athletics 707/654-1050
Audio Visual 707/654-1249
Barber 707/654-1069
Bookstore 707/654-1186
Budget Office 707/654-1074
Café, Morrow Cove 707/654-1187
Campus Life 707/654-1190
Career Development 707/654-1071
Cashier 707/654-1030
Communications 707/654-1087
Community Engagement & EAP 707/654-1288
Dean of Students 707/654-1182
Engineering Technology 707/654-1232
Extended Learning 707/654-1157
Facilities Management 707/654-1120
Facilities Rental 707/654-1040
Faculty Affairs 707/654-1149
Financial Aid 707/654-1275
Food Services 707/654-1212
Foundation 707/654-1246
Historical Archives 707/654-1089
Housing and Residence Life 707/654-1400
Human Resources 707/654-1137
IT Help Desk 707/654-1048
Information Technology 707/654-1725
Job Line 707/654-1140
Library 707/654-1090
Marine Programs 707/654-1211
Marine Transportation 707/654-1232
Maritime Operations 707/654-1252
Maritime Policy & Management 707/654-1232
Mechanical Engineering 707/654-1232
Merchant Marine Reserve 707/654-1266
Naval Science 707/654-1266
President’s Office 707/654-1011
Public Relations 707/654-1720
Public Safety 707/654-1176
Purchasing 707/654-1086
Receiving 707/654-1125
Risk Management 707/654-1086
Sailing Office 707/654-1257
Sciences & Mathematics 707/654-1232
Sponsored Projects 707/654-1156
Student Conduct 707/654-1181
Student Health & Wellness Center 707/654-1170
Student Leadership Development 707/654-1181
Student Records 707/654-1200
Testing (ELM & EPT) and
Transfer Evaluation 707/654-1330
Transcript Requests 707/654-1292

CSU The California State University

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became the California State University and Colleges, and in 1982 the system became The California State University. Today, the campuses of the CSU include comprehensive and polytechnic universities and, since July 1995, The California Maritime Academy, a specialized campus.

The oldest campus—San José State University—was founded in 1857 and became the first institution of public higher education in California. The newest—CSU Channel Islands—opened in fall 2002, with freshmen arriving in fall 2003.

Responsibility for The California State University is vested in the Board of Trustees, whose members are appointed by the Governor. The Trustees appoint the Chancellor, who is the Chief Executive Officer of the system, and the Presidents, who are the chief executive officers of the respective campuses.

The Trustees, the Chancellor, and the Presidents develop systemwide policy, with implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

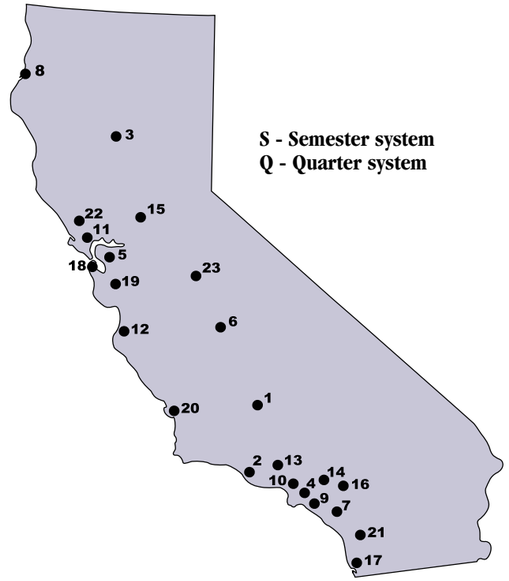
Academic excellence has been achieved by The California State University through a distinguished faculty whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as a broad liberal education. All campuses require for graduation a basic program of "General Education Requirements" regardless of the type of bachelor's degree or major field selected by the student.

The CSU offers more than 1,800 bachelor's and master's degree programs in some 357 subject areas. Many of these programs are offered so that students can complete all upper division and graduate requirements by part-time, late afternoon, and evening study. In addition, a variety of teaching and school service credential programs are available. A limited number of doctoral degrees are offered jointly with the University of California and with private institutions in California. In 2005, the CSU was authorized to independently offer educational doctorate (Ed.D.) programs, and a total of 10 CSU campuses currently have Ed.D. programs.

Enrollment in fall 2008 totaled almost 450,000 students, who were taught by some 24,000 faculty. The system awards about half of the bachelor's degrees and a third of the master's degrees granted in California. Nearly 2.5 million students have graduated from CSU campuses since 1961.

A world of information is just a click away.

Check out the website for the entire California State University: **www.csumentor.edu**. You will find helpful hints, frequently asked questions, campus tours, and general information about all 23 campuses. The phone number listed for each campus is for the Office of Admission.



1 California State University, Bakersfield • Q
9001 Stockdale Highway, Bakersfield, CA 93311-1099
(661) 654-3036 • www.csubak.edu

2 California State University, Channel Islands • S
One University Drive, Camarillo, CA 93012
(805) 437-8500 • www.csuci.edu

3 California State University, Chico • S
400 W. First Street, Chico, CA 95929-0722
(530) 898-6321 • www.csuchico.edu

4 California State University, Dominguez Hills • S
1000 East Victoria Street, Carson, CA 90747
(310) 243-3696 • www.csudh.edu

5 California State University, East Bay • Q
25800 Carlos Bee Blvd., Hayward, CA 94542-3035
(510) 885-2784 • www.csueastbay.edu

6 California State University, Fresno • S
5150 North Maple Avenue, Fresno, CA 93740-0057
(559) 278-2261 • www.csufresno.edu

7 California State University, Fullerton • S
800 N. State College Blvd., Fullerton, CA 92834-9480
(714) 278-2300 • www.fullerton.edu

8 Humboldt State University • S
1 Harpst Street, Arcata, CA 95521-4957
(707) 826-4402 • (866) 850-9556 • www.humboldt.edu

9 California State University, Long Beach • S
1250 Bellflower Blvd., Long Beach, CA 90840-0106
(562) 985-5471 • www.csulb.edu

10 California State University, Los Angeles • Q
5151 State University Drive, Los Angeles, CA 90032-8530
(323) 343-3901 • www.calstatela.edu

11 California Maritime Academy • S
200 Maritime Academy Drive, Vallejo, CA 94590
(707) 654-1105; (800) 561-1945 • www.csum.edu

12 California State University, Monterey Bay • S
100 Campus Center Drive, Seaside, CA 93955-8001
(831) 582-3738 • www.csumb.edu

13 California State University, Northridge • S
18111 Nordhoff Street, Northridge, CA 91330-8207
(818) 677-3700 • www.csun.edu

14 California State Polytechnic University, Pomona • Q
3801 West Temple Avenue, Pomona, CA 91768-4003
(909) 869-5299 • www.csupomona.edu

15 California State University, Sacramento • S
6000 J Street, Sacramento, CA 95819-6112
(916) 278-3901 • www.csus.edu

16 California State University, San Bernardino • Q
5500 University Parkway, San Bernardino, CA 92407-2397
(909) 537-5188 • www.csusb.edu

17 San Diego State University • S
5500 Campanile Drive, San Diego, CA 92182-7455
(619) 594-6336 • www.sdsu.edu

18 San Francisco State University • S
1600 Holloway Avenue, San Francisco, CA 94132-4001
(415) 338-1113 • www.sfsu.edu

19 San José State University • S
One Washington Square, San José, CA 95192-0009
(408) 283-7500 • www.sjsu.edu

20 California Polytechnic State University, San Luis Obispo • Q
San Luis Obispo, CA 93407
(805) 756-2311 • www.calpoly.edu

21 California State University, San Marcos • S
333 S. Twin Oaks Valley Road
San Marcos, CA 92096-0001
(760) 750-4848 • www.csusm.edu

22 Sonoma State University • S
1801 East Cotati Avenue, Rohnert Park, CA 94928
(707) 664-2778 • www.sonoma.edu

23 California State University, Stanislaus • 4-1-4
One University Circle, Turlock, CA 95382
(209) 667-3070 • www.csustan.edu

TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY

EX OFFICIO TRUSTEES

The Honorable Arnold Schwarzenegger
Governor of California
State Capitol
Sacramento, CA 95814

The Honorable John Garamendi
Lieutenant Governor of California
State Capitol
Sacramento, CA 95814

The Honorable Karen Bass
Speaker of the Assembly
State Capitol
Sacramento, CA 95814

The Honorable Jack O'Connell
State Superintendent of Public Instruction
721 Capitol Mall
Sacramento, CA 95814

Dr. Charles B. Reed
Chancellor of The California State University
401 Golden Shore
Long Beach, CA 90802-4210

OFFICERS OF THE TRUSTEES

The Honorable Arnold Schwarzenegger, President
Jeffrey L. Bleich, Chair
Herbert L. Carter, Vice Chair
Christine Helwick, Secretary
Richard P. West, Treasurer

APPOINTED TRUSTEES

Appointments are for a term of eight years, except student, alumni, and faculty trustees whose terms are for two years. Terms expire in the year in parentheses. Names are listed alphabetically.

Roberta Achtenberg (2015)
Jeffrey L. Bleich (2010)
Herbert L. Carter (2011)
Carol R. Chandler (2012)
Debra S. Farar (2014)
Kenneth Fong (2013)
Margaret Fortune (2016)
George G. Gowgani (2010)
Curtis Grima (2009)
Melinda Guzman (2012)
William Hauck (2017)
Raymond W. Holdsworth Jr. (2011)
Linda A. Lang (2017)
Bob Linscheid (2009)
Peter Mehas (2015)
Henry Mendoza (2016)
Lou Monville (2014)
Craig R. Smith (2009)
Russel Statham (2010)
Glen Toney (2013)

Correspondence with Trustees should be sent to:
c/o Trustees Secretariat
The California State University
401 Golden Shore
Long Beach, CA 90802-4210

CAMPUSES OF THE CALIFORNIA STATE UNIVERSITY

California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, CA 93311-1022
Dr. Horace Mitchell, President
661/654-2782
www.csub.edu

California State University, Channel Islands
One University Drive
Camarillo, CA 93012
Dr. Richard Rush, President
805/437-8400
www.csuci.edu

California State University, Chico
400 West First Street
Chico, CA 95929-0150
Dr. Paul J. Zingg, President
530/898-4636
www.csuchico.edu

California State University, Dominguez Hills
1000 East Victoria Street
Carson, CA 90747-0005
Dr. Mildred Garcia, President
310/243-3696
www.csudh.edu

California State University, East Bay
25800 Carlos Bee Boulevard
Hayward, CA 94542
Dr. Mohammad Qayoumi, President
510/885-3000
www.csueastbay.edu

California State University, Fresno
5241 North Maple Avenue
Fresno, CA 93740
Dr. John D. Welty, President
559/278-4240
www.csufresno.edu

California State University, Fullerton
800 N. State College Boulevard
Fullerton, CA 92831-3599
Dr. Milton A. Gordon, President
714/278-2011
www.fullerton.edu

Humboldt State University
One Harpst Street
Arcata, CA 95521-8299
Dr. Rollin C. Richmond, President
707/826-3011
www.humboldt.edu

California State University, Long Beach
1250 Bellflower Boulevard
Long Beach, CA 90840-0115
Dr. F. King Alexander, President
562/985-4111
www.csulb.edu

California State University, Los Angeles
5151 State University Drive
Los Angeles, CA 90032
Dr. James M. Rosser, President
323/343-3000
www.calstatela.edu

The California Maritime Academy
200 Maritime Academy Drive
Vallejo, CA 94590-8181
Dr. William B. Eisenhardt, President
707/654-1000
www.csum.edu

California State University, Monterey Bay
100 Campus Center
Seaside, CA 93955-8001
Dr. Dianne Harrison, President
831/582-3330
www.csumb.edu

California State University, Northridge
18111 Nordhoff Street
Northridge, CA 91330
Dr. Jolene Koester, President
818/677-1200
www.csun.edu

California State Polytechnic University, Pomona
3801 W. Temple Avenue
Pomona, CA 91768
Dr. J. Michael Ortiz, President
909/869-7659
www.csupomona.edu

California State University, Sacramento
6000 J Street
Sacramento, CA 95819
Dr. Alexander Gonzalez, President
916/278-6011
www.csus.edu

California State University, San Bernardino
5500 University Parkway
San Bernardino, CA 92407-2393
Dr. Albert K. Karnig, President
909/537-5000
www.csusb.edu

San Diego State University
5500 Campanile Drive
San Diego, CA 92182
Dr. Stephen L. Weber, President
619/594-5200
www.sdsu.edu

San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132
Dr. Robert A. Corrigan, President
415/338-1111
www.sfsu.edu

San José State University
One Washington Square
San José, CA 95192-0001
Dr. Jon Whitmore, President
408/924-1000
www.sjsu.edu

California Polytechnic State University, San Luis Obispo
One Grand Avenue
San Luis Obispo, CA 93407
Dr. Warren J. Baker, President
805/756-1111
www.calpoly.edu

California State University, San Marcos
333 S. Twin Oaks Valley Road
San Marcos, CA 92096-0001
Dr. Karen S. Haynes, President
760/750-4000
www.csusm.edu

California State University, Stanislaus
One University Circle
Turlock, CA 95382-0299
Dr. Hamid Shirvani, President
209/667-3122
www.csustan.edu

Sonoma State University
1801 East Cotati Avenue
Rohnert Park, CA 94928-3609
Dr. Ruben Amiñana, President
707/664-2880
www.sonoma.edu

HISTORY OF THE CALIFORNIA MARITIME ACADEMY

The California Maritime Academy marks its 80th anniversary in 2009. Cal Maritime is a four-year state college of engineering, business, technology, global studies and maritime affairs, and transportation. It is often described as the "best-kept secret" in higher education. It has an excellent reputation for its direct, hands-on approach. The California Maritime Academy is one of 23 campuses in The California State University system yet is unique because of its rich maritime history.

School—1929 to 1939

In 1929 the California State Legislature founded the "California Nautical School," which was then located in Tiburon. In 1936 the U.S. Congress passed the Merchant Marine Act, drastically changing the future of the institution.

The Act of 1936 directed the creation and maintenance of an adequate merchant marine to support U.S. international and domestic commerce and to meet the needs for national defense. Both state and federal governments began to contribute matching funds to support the school. In the early days only three-year deck and engineering programs were offered.

Academy—1939 to 1943

In 1939 the school changed its name to "The California Maritime Academy."

In 1940, with war looming, the Academy was relocated to the Ferry Building in San Francisco. During World War II, the course of study was accelerated to only 17 months, with many graduating cadets serving in the war.

Campus—1943 to 1973

A new permanent site for Cal Maritime was found on a 67-acre site at Morrow Cove in Vallejo, 30 miles northeast of San Francisco. In 1943 campus construction was completed and the training ship relocated, making Vallejo the Academy's permanent home. In subsequent years, many larger, more permanent buildings were added to the site. In 1973 the first women were enrolled.

College—1974 to 1994

In the early 1970s, Cal Maritime became a four-year college with majors in Nautical Industrial Technology and Marine Engineering Technology.

The first four-year students graduated in 1978. The academy gained accreditation by the Western Association of Schools and Colleges (WASC). In the late 80s, two new majors in Mechanical Engineering and Business Administration were added, and the Nautical Industrial Technology program was replaced by Marine Transportation.

University System—1995 and Beyond

In July 1995, Cal Maritime became the 22nd campus of The California State University (CSU) system. In 1996 Cal Maritime expanded its curriculum, introducing a major in Facilities Engineering Technology. A new science and engineering lab building was completed in 1999.

The curriculum further expanded in 2003, when Cal Maritime introduced a major in Global Studies and Maritime Affairs – the first new major to be accepted after the Academy's full transition into the CSU system. Also in the fall of 2003, Cal Maritime dedicated its new Technology Laboratory and Classroom Building.

In the fall of 2008, Cal Maritime opened a new state-of-the-art Marine Simulation Center – one of the world's most advanced facilities for maritime teaching, training, and research.

Enrollment at Cal Maritime has grown steadily in recent years in response to the industry demand for skilled, motivated and well trained mariners. Today enrollment stands at about 1,100 full-time equivalent (FTE) students.

Future

A new 132-bed residence hall, which will be named McAllister Hall, will open in fall 2009. Planning is underway for construction of a new $35 million Physical Education and Water Survival Training Center, to be located on recently acquired land north of the current campus gate on Maritime Academy Drive. When completed, the Center will include advanced resources to train cadets in maritime survival skills under realistic conditions of wind, wave and weather.

A new Master of Science degree in Transportation and Engineering Management is in the planning stages. Pending full approvals, courses will begin in fall 2010.

DIVERSE HISTORY OF FIRSTS

In 1973 Cal Maritime became the first maritime academy in the U.S. to admit women. In addition, the campus had the first women to graduate from a U.S. academy (1976); the first woman to earn a chief engineer's license in the U.S.; the first woman to sail as captain of an U. S. flag merchant vessel (1988); and the first woman president of a U.S. academy (1990-1996). In the fall of 1994, the first African American corps commander led the cadets. In 1996, Cal Maritime founded the first chapter of Mexican American Engineering Society (MAES) at a U.S. maritime academy. Today, students from many national and cultural backgrounds, as well as first-generation college students and women, continue to excel at Cal Maritime.

ACCREDITATION

The California Maritime Academy is accredited by the Western Association of Schools and Colleges (WASC), 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510/748-9001, **www.wascweb.org/**. Additionally, the Marine Engineering Technology and Facilities Engineering Technology programs are accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202, 410/347-7700, **www.abet.org/**; the Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202, 410/347-7700, **www.abet.org/**; and the Business Administration program is accredited by the International Assembly for Collegiate Business Education (IACBE), P.O. Box 25217, Overland Park, KS, 66225, 913/631-3009, **www.iacbe.org/**.

STANDARDS OF TRAINING, CERTIFICATION, AND WATCHKEEPING FOR SEAFARERS (STCW)

The California Maritime Academy is in full compliance with the requirements of the International Convention of the Standards for Training, Certification, and Watchkeeping for Seafarers 1995 (STCW) as administered by the U.S. Coast Guard.

INTERNATIONAL AND NATIONAL EDUCATIONAL EXCHANGE PROGRAMS

Cal Maritime has established programs of exchange and collaboration in areas of mutual interest with the following national and international Maritime Academies/Universities:

- Dalian Maritime University, Dalian, China;
- Far Eastern State Maritime Academy, Vladivostok, Russia;
- Kobe University of Mercantile Marine, Kobe, Japan;
- Korea Maritime University, Pusan, Korea;
- Maine Maritime Academy, Castine, Maine, USA;
- Mexican Maritime Academy, Mexico City, Mexico;
- Mokpo Maritime University, Mokpo, Korea;
- Shanghai Maritime University, Shanghai, China;
- Singapore Maritime Academy, Republic of Singapore;
- Tokyo University of Merchantile Marine, Tokyo, Japan

Students enrolled at Cal Maritime will have the possibility of participating in exchange programs established at these institutions.

PROGRAMS OF STUDY

Degree:
Bachelor of Science

Majors
- Business Administration/IBL
- Facilities Engineering Technology
- Marine Engineering Technology
- Marine Transportation
- Mechanical Engineering

Degree:
Bachelor of Arts

Major
- Global Studies and Maritime Affairs

Minors (Optional):
- Business Administration
- Global Studies and Maritime Affairs
- Law
- Marine Science
- Naval Science
- Power Generation
- Qualified Member of the Engine Department (QMED)

License/Certificate:
- Engineer–in Training Certification, California
- Third Assistant Engineer, U.S. Coast Guard
- Third Mate, U.S. Coast Guard

Military Training (Optional):
United States Coast Guard
- California Maritime Academy Pre-Commissioning Pilot Program (CMAPPP)
- Maritime Academy Graduate Program (MARGRAD)

United States Navy
- Merchant Marine Reserve (MMR)

The Maritime Industry

In today's global economy the maritime industry is of vital importance. The men and women who work at the ports, in the companies, and on the ships are vital in the transportation of goods and commodities throughout the world. These merchant mariners manage the cargo and route it to its destination, navigate the ships, manage the ports and terminals, and oversee the engine rooms. They are also versed in environmental issues, such as oil spill recovery. Some work to improve engines and energy systems. Others work in maritime law, safety, ship brokering and insurance, towing, piloting, and many other facets of maritime trade and transportation. Graduates in Global Studies are prepared to work in U.S. federal, state, and local governments; agencies specializing in maritime security; international organizations such as the IMO and IMB; and insurance and underwriting firms specializing in shipping and maritime issues. They are also prepared to pursue graduate study in maritime law, international relations, public policy, maritime affairs, and international business and trade.

A License to Sail

Cal Maritime prepares students for the Third Mate and Third Assistant Engineer licenses, issued upon graduation by the United States Coast Guard. This license, recognized and respected by other countries, enables graduates to sail as officers on U.S. ships on any ocean, regardless of tonnage, horsepower, and size. For information about license requirements, see **BACCALAUREATE DEGREE REQUIREMENTS**.

History of the Training Ship

In 1931 the steamship *HENRY COUNTY*, a Great Lakes freighter, served as the first training vessel at Cal Maritime. Renamed the *CALIFORNIA STATE*, it covered 21,000 miles in its first training cruise to New York through the Straits of Magellan. In the early 1940s, the ship was again renamed the *GOLDEN STATE* and berthed in Vallejo. *Training Ship GOLDEN BEAR I* sailed 1947-1971. *Training Ship GOLDEN BEAR II,* a.k.a. *USS CRESCENT CITY*, arrived in 1971. Built in 1940 in Maryland, she was a steamship and originally served as a cargo and passenger ship to Central and South America. In 1996 the third and current *Training Ship GOLDEN BEAR III* embarked on her maiden voyage. Formerly the *USNS MAURY*, she was a Navy oceanographic vessel built in 1989.

Annual Cruises/Cooperative Education (Co-Ops)

Students in maritime licensing programs, under licensed faculty supervision, learn and train aboard the *Training Ship GOLDEN BEAR* during a two-month summer training cruise during their first year at Cal Maritime. All second-year students participate in a land-based co-op or sail on a commercial cruise or the *Training Ship GOLDEN BEAR,* depending on their major. Third-year maritime licensing program students take a final cruise on the training ship while other students participate in their first or second land-based co-op. In their senior year, students in most programs take license/certification exams to complete graduation requirements.

DEPARTMENT OF CAREER SERVICES

Highlights
The Career Center is responsible for assisting with Graduate Recruiting, Commercial Cruise Coordination, Cooperative Internships, On-Campus Jobs and Alumni support. Staff are available to assist in Resume Building, Interview Skills, Career Development Workshops and Career Counseling.

Mission
Through partnerships with employers and Career Services, Cal Maritime assures all students are provided the opportunity to realize their career goals.

Career Fair
Each year the Department of Career Services hosts an annual Career Fair. The Career Fair is held the Tuesday following the Martin Luther King, Jr. holiday. The Career Fair attracts companies from all across the country. The exhibitors range from shipping companies to engineering firms, to government agencies, to graduate schools and beyond. All students and alumni are invited and encouraged to attend.

Company Presentations & Interviews
Each year companies come to campus to recruit our graduating seniors. Companies hold presentation followed with interviews. Graduating seniors are able to sign up ahead of time to secure an interview time. Companies also come to campus to recruit for co-op positions and part time jobs. All students regardless of class standing should attend company presentations. These companies come directly to our campus because of our outstanding reputation.

Career Counseling
The Career Center provides confidential and professional career counseling to those students who are unsure about their next step. The Career Center uses several different forms of career assessments and provides individual counseling.

Workshops
The Career Center prepares students for the job market by providing the following training:

- Job-preparedness workshops
- One-on-one job search counseling
- Resumé preparation and business letter writing
- Interviewing and job search strategies
- Mock video-taped interviews
- Dress-for-success seminars

Commercial Cruise
License program cadets participate in Commercial Cruise on commercial vessels. The Career Center provides administrative support in implementing the Commercial Cruise program. Students select their commercial vessel based on their conduct and academic progress. Tanker applicants are required to accept a 90-day assignment; otherwise, 60-day assignments are the minimum on all other vessels. The Commercial Cruise Coordinator works under direction from the academic department chairs. As this is an academic program, please look under the specific course for other details such as prerequisites.

Cooperative Education (Co-Ops)
All cadets must participate in Co-Op as required for their major. Co-Ops last at least 60 days and provide a great opportunity to develop the skills that they have learned in the classroom, culminating in a relationship with a company that may lead to a job offer upon graduation. All Co-Op placements must be approved by the appropriate academic department. As this is an academic program, please look under the specific course for other details such as prerequisites.

Job Board/Web Site
The Career Center has a free online job board which companies may post jobs directly. There are positions available from internships all the way up to CEO's. The web site is also a powerful networking tool. All students and alumni are encouraged to take advantage of this free tool at **www.alumni.csum.edu/jobpost.**

MILITARY OPPORTUNITIES

There is no armed service obligation attached to graduation from The California Maritime Academy. However, financial aid and additional career opportunities exist for those students who choose to participate in one of the following military programs.

Coast Guard—California Maritime Academy Pre-Commissioning Pilot Program

The California Maritime Academy Pre-Commissioning Pilot Program (CMAPPP) prepares individuals to become active duty commissioned officers in the United States Coast Guard, with its missions of defense preparedness, search and rescue, aids to navigation, merchant marine safety, environmental protection, maritime law enforcement, and boating safety.

College Commitment
CMAPPP students enlist as reserve seamen and participate in a training program one weekend a month. They also complete a two-week indoctrination and sail approximately eight weeks on a Coast Guard cutter the summer after their sophomore year, along with two weeks of training the following summer.

Eligibility
To participate, a student must meet the following requirements:

- be at least 18 but not 26 by August 31 of the year he/she enters,
- have no more than two dependents,
- be a U.S. citizen,
- be enrolled as a full-time 3rd class cadet at California Maritime Academy,
- maintain a 2.5 GPA on a 4.0 scale,
- have met all California Maritime Academy requirements for summer cruise eligibility by the end of the sophomore academic year,
- be enrolled in a degree program with a U.S. Coast Guard license option,
- meet the Coast Guard's physical requirements,
- score a 1000 on the SAT, 1100 on the SAT I, 23 on the ACT, or ASVAB GT of 109 or higher,
- not be a conscientious objector.

Benefits
CMAPPP cadets receive pay for their weekend training drills and also for their active duty training time. In addition, they qualify and receive Coast Guard tuition assistance, Montgomery GI Bill benefits, and are eligible for Coast Guard Mutual Assistance for book expenses.

Obligation
Graduates successfully completing all program requirements will be commissioned as Ensigns and serve on active duty for three years. CMAPPP cadets incur an eight (8) year military service obligation. The first two (2) years will be served as reservists while in full-time attendance at Cal Maritime. Graduates successfully completing all program requirements will be commissioned as Ensigns and serve on active duty for three (3) years. The remaining three (3) years of service obligation may be performed on active duty, in the Selected Reserves (SELRES), in the Inactive Ready Reserve (IRR), or a combination of the three (3).

Information
LT John W. Velasco
Coast Guard Liaison Officer
707/654-1722

Coast Guard–Maritime Academy Graduate Program

Program
The Maritime Academy Graduate Program (MARGRAD) is a program of the United States Coast Guard. Its mission is to enlist as Coast Guard officers individuals who have graduated from or will soon graduate from a maritime college or university.

Eligibility
To qualify for MARGRAD, one must meet the following qualifications:

- for the grade of Ensign, be at least 21 and less than 27; for the grade of Lieutenant Junior Grade, be at least 21 and less than 28 and also have served one or more years on board vessels of the United States in the capacity of a licensed officer;
- have graduated from an accredited maritime college or university with at least a bachelor's degree with a Coast Guard license option;

- not be on active duty in any other U.S. Armed Service (one can apply while on active duty, provided he or she submits a discharge statement. Applicants in an Inactive Reserve program must submit a conditional release);
- pass a Coast Guard physical exam; and
- be a U.S. citizen.

Obligation
Individuals who are selected attend a five-week Direct Commission Officer training course and serve on active duty for three years.

Information
MARGRAD information sessions take place every academic year at Cal Maritime. Interested students can inquire at that time or can contact their local recruiter. Information is also available at **http://www.gocoastguard.com/find-your-fit/officer-opportunities/programs/maritime-academy-graduate**

U.S. Navy–Merchant Marine Reserve Program

The Naval Science Department prepares students to participate in the Merchant Marine Reserve (MMR), a joint program established in 1925 between the U.S. Navy and the U.S. Merchant Marine. This is a program unique to the maritime schools that allows students earning Coast Guard licenses as Merchant Marine Deck or Engine Officers to be commissioned as Ensigns in the Navy Reserve upon graduation. Merchant Marine Reservists normally serve on inactive duty in the Merchant Marine Individual Ready Reserve Group, allowing them to work as civilians in the maritime industry without the monthly drill requirement. They are called to serve on active duty when required to support major military sealift operations that call for the training and experience of licensed merchant marine officers. The program also offers the option to pursue an active duty commission upon graduation as a line or staff corps officer in the U.S. Navy.

Eligibility
To participate in the MMR, students must meet the following qualifications:
- Be under the age of 34;
- Pass a physical examination;
- Pass a semi-annual Physical Readiness Test;
- Be enrolled in a degree program with a U.S. Coast Guard license option; and
- Be in good academic standing, with a GPA of 2.0 or better.

Students will be offered the opportunity to join the MMR their first year at Cal Maritime. Applications will be reviewed by the Officer in Charge of the Department of Naval Science; successful applicants will receive appointments as Midshipmen, U.S. Navy Reserve.

Benefits
Midshipmen between the ages of 17 and 24 are eligible to receive a Student Incentive Payment of $4,000 annually ($16,000 total distributed over four years) from the Federal Maritime Administration.

Program Requirements
Midshipmen (MMR students) meet for weekly training sessions at Cal Maritime and take additional Naval Science classes. Specifically, midshipmen must complete the following courses:

- NSC 100. Naval Science for the Merchant Marine Officer
- NSC 200. Naval Science for the Merchant Marine Reservist I
- NSC 400. Leadership, Ethics, and Naval Science for the Merchant Marine Reservist II

Obligation
Upon graduation, midshipmen are commissioned as Ensigns in the U.S. Navy Reserve. They are obligated to maintain their Coast Guard license and participate in the Navy Reserve for eight years, during which time they will perform two weeks of active duty per year. In addition, they are required to maintain employment in the maritime industry for six years.

Information
For additional information, contact the Department of Naval Science at 707/654-1266.

ENROLLMENT SERVICES AND RECORDS

WELCOME TO CAL MARITIME

Located in Vallejo, California, The California Maritime Academy (Cal Maritime) is a unique and specialized campus of The California State University that offers bachelor's degrees in international business and logistics, facilities engineering technology, global studies and maritime affairs, marine engineering technology, marine transportation, and mechanical engineering. Cal Maritime is one of only seven degree-granting maritime academies in the United States—and the only one on the West Coast.

With a specialized education combining classroom instruction, experiential learning, and professional development, Cal Maritime prepares students for successful careers in business and logistics, maritime policy, engineering, technology, or in the maritime and transportation industries. International travel, training, and experiences—including a two-month international training cruise onboard the *Training Ship GOLDEN BEAR*—prepare students in fields that are increasingly global in nature.

Cal Maritime is committed to being a leading educational institution recognized for excellence in business, engineering, operations, and policy in transportation and related industries of the Pacific Rim and beyond.

GUIDED CAMPUS TOURS FOR PROSPECTIVE STUDENTS

The Office of Admission hosts walking tours of the campus Monday through Friday, except holidays. Prospective students and their families are encouraged to make arrangements at least one day in advance. Sign up online at **www.csum.edu**.

INFORMATION REQUESTS

Mail: Office of Admission
The California Maritime Academy
200 Maritime Academy Drive
Vallejo, CA 94590-8181

Phone: 707/654-1330
800/561-1945

Fax: 707/654-1336

Email: admission@csum.edu

Web: **www.csum.edu**

ADMISSION REQUIREMENTS

Cal Maritime is fully committed to enrolling a diverse student body. Requirements for admission are in accordance with Title 5, Chapter 1, Subchapter 3 of the California Code of Regulations. If you are unsure of these requirements, consult a high school or community college counselor or the Office of Admission. Complete information is also available at **www.csumentor.edu/planning/**.

Cal Maritime accepts new students only for the fall semester. It is best to apply for admission during the priority CSU filing dates of October 1 through November 30 prior to the year in which you choose to enroll. (**See Appendix** for additional CSU Admission information.) Traditionally, Cal Maritime will continue to accept applications in specific degree programs after November 30 until programs are full. New students must declare a major upon application for admission.

As an institution with a specialized mission, Cal Maritime abides by special provisions of the United States Maritime Administration, endorsed by The California State University. The selective criteria may include high school GPA and coursework, extracurricular activities, leadership, character, and college entrance examination scores.

Admission criteria will also include factors required by the U.S. Coast Guard for maritime academies: health, a record free of criminal offense and, for students seeking licenses, U.S. citizenship. All students must be able to obtain a passport, either from the United States or from their home country with a U.S. student visa.

If you need assistance in determining your eligibility, ask your high school or community college transfer counselor, visit **www.csumentor.edu**, or consult the Cal Maritime Office of Admission.

ADMISSION PROCEDURES AND POLICIES

All applicants must apply online at **www.csumentor.edu**. The CSU Mentor system enables students to browse through general information about the twenty-three CSU campuses, view multimedia campus presentations, send and receive electronic responses to specific questions, and apply for admission and financial aid.

UNDERGRADUATE APPLICATION PROCEDURES

To apply for enrollment at Cal Maritime, you must file a complete undergraduate application on-line, submit a $55 nonrefundable application fee. This fee can be paid electronically.

ACKNOWLEDGEMENT OF APPLICATION

Cal Maritime will acknowledge all applications and notify the applicant of any missing documents within three weeks of receiving the application. Admission decision notices are mailed in mid to late January and continue on a rolling basis.

UNDERGRADUATE ADMISSION REQUIREMENTS

Freshman Requirements
A student will qualify for admission as a first-time freshman if he/she (1) is a high school graduate, has earned a Certificate of General Education Development (GED) or has passed the California High School Proficiency Examination, (2) meets scholarship and test requirements with a qualifiable eligibility index (see Eligibility Index), and (3) has completed, with grades of "C" or better, each of the courses in the college preparatory subject requirements (see required and enhanced courses).

Test Requirements
Freshman and transfer applicants who have fewer than 60 semester or 90 quarter units of transferable college credit must submit scores, unless exempt (see "Eligibility Index Table," pp. 10), from either the ACT or the SAT of the College Board. Registration forms and dates are available from high school or college counselors or from a CSU campus testing office. Students may also write to or call the following:

The College Board (SAT)	ACT Registration Unit
Registration Unit, Box 6200	P.O. Box 414
Princeton, NJ 08541-6200	Iowa City, IA 52240
609/771-7588	319/337-1270
www.collegeboard.com	**www.act.org**
School Code: 4035	School Code: 0184

Eligibility Index
The eligibility index is the combination of a high school grade point average and a score on either the ACT or the SAT. A grade point average (GPA) is based on grades earned in a pattern of required college preparatory "a–g" courses taken during the final three years of high school, with bonus points for approved honors courses (excluding physical education and military science).

Up to eight semesters of honors courses taken in the last three years of high school, including up to two approved courses taken in the tenth grade can be accepted. Each unit of A in an honors course will receive a total of 5 points; B, 4 points; and C, 3 points.

A CSU Eligibility Index (EI) can be calculated in either of two ways: multiplying a grade point average by 800 and adding it to the mathematics and critical reading scores on the SAT or multiplying the grade point average by 200 and adding ten times the ACT composite score. California high school graduates (residents of California) and residents of WICHE (Western Interstate Commission for Higher Education) states need a minimum index of 2900 using the SAT or 694 using the ACT. The Eligibility Index Table illustrates several combinations of required test scores and averages.

If SAT taken:
SAT (scores in mathematics and critical reading) + (800 x high school grade point average) = Index

If ACT taken:
(10 x ACT composite score without the writing score) + (200 x high school grade point average) = Index

Persons who neither graduated from a California high school nor are California residents for tuition purposes need a minimum index of 3502 (SAT) or 842 (ACT). Graduates of secondary schools in foreign countries must be judged to have academic preparation and abilities equivalent to applicants eligible under this section.

When the grade point average is 3.00 or above (3.61 for nonresidents), applicants are not required to submit test scores. However, all applicants for admission are encouraged to take the SAT or ACT and provide the scores of such tests to each CSU to which they seek admission. Cal Maritime and other campuses use these test results for advising and placement purposes. Additionally, given the academic rigor of our curriculum, ACT or SAT scores may be required for some majors.

Provisional Admission
Cal Maritime may provisionally admit first-time freshman applicants based on their academic preparation through the junior year of high school and planned program for the senior year. The campus will monitor the senior year of study to ensure that those so admitted do satisfactorily complete their final year of studies, including the required college preparatory subjects and graduation from high school. **Students are required to submit an official transcript after graduation to certify that all coursework has been satisfactorily completed. Official high school transcripts must be received prior to the deadline set by Cal Maritime.**

In no case may documentation of high school graduation be received any later than the census date for a student's first term of CSU enrollment.

Cal Maritime may rescind admission decisions, cancel financial aid awards, withdraw housing contracts and cancel any university registration for students who are found not to be eligible after the final transcript has been evaluated.

Applicants will qualify for regular (non-provisional) admission when Cal Maritime verifies that they have graduated and received a diploma from high school, have a qualifiable minimum eligibility index, have completed the comprehensive pattern of college preparatory "a-g" subjects, and, if applying to an impacted program, have met all supplementary criteria.

Reservation
Cal Maritime reserves the right and sole discretion to select its students and deny admission to any applicant based on his or her suitability and the best interests of the college.

Eligibility Index Table for California High School Graduates or Residents of California & WICHE States

GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score
3.00 and above qualifies with any score			2.81	14	660	2.60	18	820	2.39	22	990	2.18	26	1160
			2.80	14	660	2.59	18	830	2.38	22	1000	2.17	26	1170
			2.79	14	670	2.58	18	840	2.37	22	1010	2.16	27	1180
2.99	10	510	2.78	14	680	2.57	18	850	2.36	23	1020	2.15	27	1180
2.98	10	520	2.77	14	690	2.56	19	860	2.35	23	1020	2.14	27	1190
2.97	10	530	2.76	15	700	2.55	19	860	2.34	23	1030	2.13	27	1200
2.96	11	540	2.75	15	700	2.54	19	870	2.33	23	1040	2.12	27	1210
2.95	11	540	2.74	15	710	2.53	19	880	2.32	23	1050	2.11	28	1220
2.94	11	550	2.73	15	720	2.52	19	890	2.31	24	1060	2.10	28	1220
2.93	11	560	2.72	15	730	2.51	20	900	2.30	24	1060	2.09	28	1230
2.92	11	570	2.71	16	740	2.50	20	900	2.29	24	1070	2.08	28	1240
2.91	12	580	2.70	16	740	2.49	20	910	2.28	24	1080	2.07	28	1250
2.90	12	580	2.69	16	750	2.48	20	920	2.27	24	1090	2.06	29	1260
2.89	12	590	2.68	16	760	2.47	20	930	2.26	25	1100	2.05	29	1260
2.88	12	600	2.67	16	770	2.46	21	940	2.25	25	1100	2.04	29	1270
2.87	12	610	2.66	17	780	2.45	21	940	2.24	25	1110	2.03	29	1280
2.86	13	620	2.65	17	780	2.44	21	950	2.23	25	1120	2.02	29	1290
2.85	13	620	2.64	17	790	2.43	21	960	2.22	25	1130	2.01	30	1300
2.84	13	630	2.63	17	800	2.42	21	970	2.21	26	1140	2.00	30	1300
2.83	13	640	2.62	17	810	2.41	22	980	2.20	26	1140	**Below 2.00 does not qualify for regular admission.**		
2.82	13	650	2.61	18	820	2.40	22	980	2.19	26	1150			

The CSU uses only the SAT mathematics and critical reading scores in its admission eligibility equation.
The SAT or ACT writing scores are not currently used by CSU campuses.

Enhanced Requirements for Non-Residents of California and Non-WICHE States

GPA	2.00	2.20	2.40	2.60	2.80	3.61+
SAT-I	1540	1420	1100	940	780	**Any score**
ACT	35	32	22	20	16	**Any score**

Enhanced Requirements for Mechanical Engineering Applicants

Course	Years	Notes:
Math Analysis or Pre-calculus	1	The fourth year of math is required in addition to the three years of math for all majors
Math SAT or Math ACT		Minimum Score 550 Minimum Score 23

SPECIAL ADMISSION CRITERIA FOR WICHE STATES

Cal Maritime, under its special mission as a West Coast maritime academy, will consider out-of-state applicants from the western U.S. (defined by WICHE) by using the California resident eligibility index.

WICHE states are Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

SUBJECT REQUIREMENTS

The California State University requires that first-time freshman applicants complete, with grades of C or better, a comprehensive pattern of college preparatory study totaling 15 units (with a "unit" consisting of one year of study in high school):

- 2 years of social science, including 1 year of U.S. history or U.S. history and government;
- 4 years of English;
- 3 years of math (algebra, geometry, and intermediate algebra);
- 2 years of laboratory science (l biological and 1 physical, both with labs);
- 2 years of the same foreign language (subject to waiver for applicants demonstrating equivalent competence);
- 1 year of visual and performing arts: art, dance, drama/theater, or music;
- 1 year of electives selected from English, advanced mathematics, social science, history, laboratory science, foreign language, visual and performing arts or other courses approved and included on the UC/CSU "a–g" list.

ENHANCED CRITERIA

For admission to CSU as first-time freshmen, students who have pursued an education through home schooling must further demonstrate that they meet the following high school college preparatory requirements:

A. Graduation from high school or proficiency:
   - Graduation date posted to the transcript of record or
   - California High School Proficiency Examination or
   - General Education Development (GED) Credential;

B. A GPA of at least 3.0 or a qualifying eligibility index:
   - At least a semester of grades available from a transcript that would allow calculation of a partial GPA, to determine the eligibility index, or
   - Where there are only assessments of credit for courses, a GPA to be estimated as 2.0;

C. Satisfactory completion of the 15 units (1 year = 1 unit) of college preparatory courses required of all high school graduates can be documented (as outlined in CSU Executive Order 521) through any of the following:
   - AP Exams
   - CEEB
   - Achievement tests
   - College credit

INTERNATIONAL (FOREIGN) STUDENTS ADMISSION REQUIREMENTS

The CSU must assess the academic preparation of foreign students. For this purpose, "foreign students" include those who hold U.S. temporary visas as students, exchange visitors, or in other non immigrant classifications.

The CSU uses separate requirements and application filing dates in the admission of "foreign students." Verification of English proficiency, financial resources, and academic performance are each important considerations for admission.

International students must apply by March 1 prior to the fall semester in which they plan to enroll. (Cal Maritime does not accept applications for any other term.) Priority admission is given to residents of California, U.S.A. International students are not eligible for U.S. Coast Guard licenses without U.S. citizenship; however, they will receive letters of completion for presentation to their international licensing organizations.

TOEFL Requirement
The TOEFL (Test of English as a Foreign Language) is required of all applicants with fewer than three years of full-time study (70 semester units or 105 quarter units) where English was the primary language of instruction. The SAT or ACT math and verbal/English test scores may be substituted for the TOEFL using the CSU eligibility index for non-residents.

CSU minimum TOEFL standards are:

	Internet	Computer	Paper
Undergraduate	61	173	500
Graduate	80	213	550

Academic records from foreign institutions must be on file by June 1; and, if not in English, must be accompanied by certified English translations.

International applicants are also required to compose an essay and provide an affidavit of financial support.

International students must demonstrate the ability to pay all educational expenses including books, room and board: approximately $120,000 in U.S. currency, the approximate amount required to attend Cal Maritime for a four-year period.

This must be done with a certified document either from a governmental agency or organization or from a financial institution handling the individual account of person(s) assuming responsibility for payment. FINANCIAL AID IS NOT AVAILABLE FOR INTERNATIONAL STUDENTS. International students are assessed fees at the non-California resident rate.

International students are required to obtain a Mariners Document from their country of origin or other appropriate maritime nation.

As a condition of enrollment, all F-1 and J-1 visa applicants must agree to obtain and maintain health insurance as a condition of registration and continued enrollment at The California Maritime Academy. Such insurance must be in amounts as specified by the United States Information Agency (USIA) and NAFSA: Association of International Educators. The campus president or designee shall determine which insurance policies meet these criteria. Further information may be obtained by writing the Admission Office.

RESIDENT ALIENS

U.S. permanent residents may use an ELP (English Language Proficiency Test) with a minimum score of 965 or higher in lieu of the Test of English as a Foreign Language (TOEFL).

Resident aliens may submit a certified alien registration Immigrant I-551 ("green card") in lieu of a birth certificate for admissions. The Immigration and Customs Enforcement Agency requires a passport or other legal travel documents to sail on the training cruise, so students are advised to apply for those documents as soon as possible.

ADULT STUDENTS AND VETERANS

As an alternative to regular admission criteria, an applicant who is 25+ years of age or an eligible veteran of the U.S. armed forces is considered for special admission. An adult student or veteran must meet the following conditions (in addition to supplementary criteria of Cal Maritime for admission or Coast Guard license):

1) Possess a high school diploma or its equivalent (G.E.D. or California High School Proficiency Examination);

2) No prior enrollment in college as a full-time college student (12+ units per semester) for more than one term during the past five years;

3) An average GPA of 2.0 ("C" or better) on all college coursework in the past five years;

4) Satisfaction of the English and mathematics requirements for either first-time freshmen or transfer students with grades of "C" or better;

5) Good standing at the last educational institution attended;

Recommended:
6) Successful completion, with a grade of "C" or better, a college-level algebra/trigonometry course in the past five years or work in a related technical field within the last two years;

7) Successful completion, with a grade of "C" or better, a college-level composition course.

PLACEMENT AND REMEDIATION

Systemwide Placement Test Requirements
The California State University requires each entering undergraduate, except those who qualify for an exemption, to take the CSU Entry Level Mathematics (ELM) examination and the CSU English Placement Test (EPT) prior to enrollment. These placement tests are not a condition for admission to the CSU, but they are a condition of enrollment. These examinations are designed to identify entering students who may need additional support in acquiring college entry-level English and mathematics skills necessary to succeed in CSU baccalaureate-level courses. Undergraduate students who do not demonstrate college-level skills both in English and in mathematics will be placed in appropriate remedial programs and activities during the first term of their enrollment. Students placed in remedial programs in either English or mathematics must complete all remediation in their first year of enrollment. Failure to do so may result in denial of enrollment for future terms.

Students may register for the EPT and/or ELM at their local CSU campus. Questions about test dates and registration materials at Cal Maritime may be addressed to Office of Admission, 707/654-1300.

English Placement Test (EPT)
The CSU English Placement Test (EPT) is designed to assess the level of reading and writing skills of entering undergraduate students so that they can be placed in appropriate baccalaureate-level courses. The CSU EPT must be completed by all entering undergraduates, with the exception of those who present proof of one of the following:

- A score of "Exempt" on the augmented English CST, i.e., the CSU Early Assessment Program (EAP), taken in grade 11 as part of the California Standards Test;
- A score of 550 or above on the verbal section of the College Board SAT taken April 1995 or later;
- A score of 24 or above on the enhanced ACT English Test taken October 1989 or later;
- A score of 680 or above on the re-centered and adjusted College Board SAT II: Writing Test taken May 1998 or later;
- A score of 3, 4, or 5 on either the Language and Composition or the Composition and Literature examination of the College Board Advanced Placement (AP) program;
- Completion and transfer of a course that satisfies the General Education-Breadth or Intersegmental General Education Transfer Curriculum (IGETC) written communication requirement, provided such a course was completed with a grade of C or better.

Entry Level Mathematics (ELM) Placement Examination
The Entry Level Mathematics (ELM) Placement Examination is designed to assess the skill levels of entering CSU students in the areas of mathematics typically covered in three years of rigorous college preparatory mathematics courses in high school (Algebra I, Algebra II, and Geometry). The CSU ELM must be completed by all entering undergraduates, with the exception of those who present proof of one of the following:

- A score of "Exempt" on the augmented mathematics California Standards Test, i.e., the CSU Early Assessment Program (EAP), taken in grade 11;

- A score of "Conditionally Exempt" on the augmented California Standards Test, i.e., the CSU Early Assessment Program (EAP) plus successful completion of a Senior-Year Mathematics Experience (SYME);

- A score of 550 or above on the mathematics section of the College Board SAT or on the College Board SAT Subject Tests-Mathematics Tests Level I, IC (Calculator), II, or IIC (Calculator);

- A score of 23 or above on the American College Testing (ACT) Mathematics Test;

- A score of 3 or above on the College Board Advanced Placement (AP) Calculus examination (AB or BC) or Statistics examination;

- Completion and transfer of a course that satisfies the General Education-Breadth or Intersegmental General Education Transfer Curriculum (IGETC) quantitative reasoning requirement provided such a course was completed with a grade of "C" or better.

PROFICIENCY

Cal Maritime may offer courses in remedial English (Introduction to English Composition) and mathematics (Intermediate Algebra). Entering students who are required to take either of these courses should complete them prior to enrollment as this will help them stay on track academically. Students must be proficient in both math and English by the end of the first academic year (by the end of the second semester). Students failing to do so may be disqualified for further enrollment at Cal Maritime. Contact the Center for Engagement, Teaching and Learning, **www.csum.edu/academics/cetl/index.asp**, for more information.

GRADUATE AND POSTBACCALAUREATE ADMISSION REQUIREMENTS

At present, Cal Maritime awards no graduate or post-baccalaureate degrees. For information about such programs elsewhere in the CSU, see **Appendix, "Graduate and Post-Baccalaureate Application Procedures."**

TRANSFER STUDENTS

Transfer Admissions

Transfer students may require four years of academic residence at Cal Maritime in order to complete the bachelor's degree and license requirements.

The reasons are as follows:

1) By federal law a student has to attend Cal Maritime no fewer than three years to receive a United States Coast Guard license.

2) Degrees at Cal Maritime require up to 165 semester units. Most of the courses are specialized because of license requirements and are not available at other colleges.

3) Students are allowed few open electives, and not every type of general education class is transferable to the degree program at Cal Maritime.

4) As a small college, Cal Maritime cannot offer all courses every semester. The courses are scheduled sequentially according to a set curriculum.

For admission, a Lower Division Transfer student must have a minimum GPA of 2.0, and an Upper Division Transfer student (more than 60 semester or 90 quarter units of college credit) must have a minimum GPA of 2.0.

Lower Division Transfer

To transfer with fewer than 60 transferable units (90 quarter units), you must do the following:

1) Submit your high school transcript;

2) Submit SAT or ACT scores, unless your high school GPA was above 3.00;

3) Make up any high school deficiencies on a course-by-course basis, usually by completing General Education courses;

4) Earn at least a 2.00 grade point average in all college work (2.40 for non-residents);

5) Have met the GPA/test score eligibility index in your high school courses;

6) Earn a "C" or better in each General Education course;

7) Be in good standing at the last educational institution attended.

All Lower Division Transfer students should complete two subject areas prior to admission at Cal Maritime:

1) A college **English Composition** course (CSU General Education requirement A2);

2) A college **Algebra** course (CSU General Education requirement B4).

Students are highly recommended, but not required, to take a college Trigonometry course.

Students may also take elective courses applicable to their Cal Maritime major. Visit **www.csum.edu/studentrecords/curriculum_sheets.asp** to view the course curriculum for every major.

Upper Division Transfer

To transfer with more than 60 transferable semester units (90 quarter units), you must do the following:

1) Earn at least a 2.0 grade point average in all college work (2.4 for non residents);

2) Be in good standing at the last educational institution attended.

All Upper Division Transfer students should complete three subject areas prior to admission at Cal Maritime:

1) A college **English Composition** course (CSU General Education requirement A2);

2) A college **Algebra** course (CSU General Education requirement B4);

3) A **Critical Thinking/English Literature** course (CSU General Education requirement A3).

4) A Speech Communication course (CSU General Education area A1).

Students are also expected to take academic elective courses applicable to their Cal Maritime major. Visit **www.csum.edu/studentrecords/curriculum_sheets.asp** to view the course curriculum for every Cal Maritime major.

Transfer Credit

Types of college credit given prior to enrollment for courses that meet degree requirements are as follows:

1) College work from regionally accredited institutions as listed in the AACRAO (American Association of Collegiate Registrars and Admissions Officers) "Transfer Credit Practices of Designated Educational Institutions" information exchange report;

2) Non-collegiate-sponsored instruction listed in the American Council on Education (ACE) "The National Guide to Education Credit for Training Program";

3) Applicable Advanced Placement (AP) course work completed with a score of 3, 4, or 5 on the AP test for that course, see **Advanced Placement (AP) Equivalency at Cal Maritime**;

4) Military educational experiences in the armed services as listed in the American Council on Education "Guide to Evaluation of Educational Experiences in the Armed Services";

5) College Level Examination Program (CLEP) exams in the areas of natural science, humanities (not to include English), and social science/history. To earn credit,

   a) The score must be 500 or above;

   b) The exam must not have been taken more than once within the past term;

   c) College credit must not have been previously earned in the course(s) in question.

College credit will not be given prior to enrollment for the following:

1) Transfer courses graded as "credit" if not verified as equivalent to a grade of "C" or better;

2) Transfer courses older than 10 years. The time period may be shorter for some courses that are technical or have requirements by licensing agencies.

Provisional Admission
Cal Maritime may provisionally or conditionally admit transfer applicants based on their academic preparation and courses planned for completion. The campus will monitor the final terms to ensure that those admitted complete all required courses satisfactorily. All accepted applicants are required to submit an official transcript of all college level work completed. Cal Maritime will rescind admission for all students who are found not to be eligible after the final transcript has been evaluated. In no case may such documents be received and validated by the university any later than a student's registration for their second term of CSU enrollment.

ADVANCED PLACEMENT (AP) EQUIVALENCY AT CAL MARITIME

College Board Advanced Placement Scores of 3, 4, 5 are Required

Exam	Cal Maritime Equivalency
Art History	Humanities Elective (Lower Division)
Biology	Life Science Elective
Calculus AB	Math 210
Calculus BC	Math 210 & Math 211
Chemistry	Chemistry 100 & 100L
Computer Science A	None
Computer Science AB	None
Economics - Macro	Economics 100 or Social Science Elective (Lower Division)
Economics - Micro	Economics 101 or Social Science Elective (Lower Division)
English Language/Composition	English 100
English Literature/Composition	English 100 or English 200
Environmental Science	Life Science or Physical Science Elective
European History	Social Science Elective (Lower Division)
French Language	Foreign Language or Humanities Elective (Lower Division)
French Literature	Humanities Elective (Lower Division)
German Language	Foreign Language or Humanities Elective (Lower Division)
German Literature	Humanities Elective (Lower Division)
Government & Politics Comp	Social Science Elective (Lower Division)
Government & Politics US	American Institutions Elective (Government)
Human Geography	None
Latin Literature	Humanities Elective (Lower Division)
Latin Vergil	Humanities Elective (Lower Division)
Music Theory	Humanities Elective (Lower Division)
Physics B	Physics 100 & 100L
Physics C - E & M	Physics 200 & 200L
Physics C - Mechanical	Physics 200 & 200L
Psychology	Social Science Elective (Lower Division)
Spanish Language	Foreign Language or Humanities Elective (Lower Division)
Spanish Literature	Humanities Elective (Lower Division)
Statistics	Business 205
Studio Art Drawing	None
Studio Art 2D Design	None
Studio Art 3D Design	None
US History	American Institutions Elective (US History)
World History	Social Science Elective (Lower Division)

AFTER ADMISSION

Deposit
To guarantee a space in the freshman class, you should submit a non-refundable deposit of $500. The deadline for submitting the deposit is May 1. Failure to submit the deposit by the deadline might cancel your admission and any financial aid award that you have received. The $500 deposit will be applied to your account as $150 for housing and $350 for uniforms.

Health Screening
Entering CSU students are required to present proof of the following immunizations to the CSU campus they will be attending before the beginning of their first term of enrollment. Health reports are mailed after admission and are due May 1.

Measles and Rubella: All new and readmitted students born after January 1, 1957, must provide proof of full immunization against measles and rubella prior to enrollment.

Hepatitis B: All new students who will be 18 years of age or younger at the start of their first term at a CSU campus must provide proof of full immunization against Hepatitis B before enrolling. Full immunization against Hepatitis B consists of three timed doses of vaccine over a minimum period of 4 to 6 months. If you need further details or have special circumstances, please consult the Cal Maritime Student Health and Wellness Center.

All incoming freshmen who will be residing in on-campus housing will be required to return a form indicating that they have received information about meningococcal disease, including the availability of a vaccine to prevent them from contracting it and a statement indicating whether or not they have chosen to receive the vaccination. These are **not** admission requirements, but are required of students as conditions of enrollment in CSU.

There are additional health requirements for all Cal Maritime programs as every student is required to participate in at least one training cruise. Certain degree programs in which a maritime license is a graduation requirement have physical, perceptual, and psychological qualifications determined by the U.S. Coast Guard.

A health report form must be completed and signed by a physician, then returned as soon as possible (before May 1). Upon review of this form, the Student Health and Wellness Center will determine whether the student is eligible for the specialized program and training cruises at Cal Maritime.

The actual physical examination must have been conducted within one year prior to enrollment. Immunization timelines vary, with a Tuberculin Skin Test required within 6 months. All spaces on the health report form must be completed; otherwise the form will be returned, and the student will not be allowed to enroll.

Health Criteria
The following health criteria* are required by U.S. Department of Homeland Security, U.S. Coast Guard for licenses/credentials in the programs stipulated:

1. Eyesight and color vision—
   a. Deck license or qualified deck rating should demonstrate that they have correctable vision to at least 20/40 in each eye and uncorrected vision of at least 20/200 in each eye. The U.S. Coast Guard (USCG) may grant a waiver for uncorrected vision up to 20/800 if other specific criteria is met. Applicants for STCW endorsements should meet the same standards. In all cases, the horizontal field of vision should not be less than 100 degrees in each eye. Deck license students must pass a color vision test approved by the USCG. The use of color sensing lenses to assist applicants with passing the color vision test is prohibited.

   b. Engineering license or qualified engineering rating should demonstrate that they have correctable vision of at least 20/50 in each eye and uncorrected vision of at least 20/200 in each eye: minimum 20/800 in each eye, correctable to at least 20/50 in each eye. The U.S. Coast Guard may grant a waiver for uncorrected vision up to 20/800 if other specific criteria is met. In all cases, the horizontal field of vision should not be less than 100 degrees in each eye. Marine engineering candidates must be able to identify the colors of red, green, blue, and yellow.

2. General health—All candidates should be able meet USCG/CMA physical agility standards, have a body mass index (BMI) of less than 40%, be of sound health medically and mentally*. Any significant functional impairment, medical condition, or physical impairment, including some learning disabilities that might prevent a candidate from performing ordinary duties or sudden incapacitation of a cadet or officer at sea, could preclude enrollment to Cal Maritime and/or maritime licensing programs.

*Specific medical/physical/psychological conditions may be subject to an additional in depth review. The recommended data necessary for the evaluation of each condition can be referenced: U.S. Department of Homeland Security, USCG Navigation and Vessel Inspection NVIC No. 04-08, Medical and Physical Evaluation Guidelines for Merchant Mariners credentials at: **http://www.uscg.mil/hq/cg5/nvic/2000s.asp#2008**, encl 1,2,3,3a, 3b,4,5 and 6.

Orientation
Before the beginning of each fall semester, the Office of Student Life conducts a mandatory orientation, a program that introduces new students to the Academy.

Registration for Courses
First-time students may register for fall semester classes at Cal Maritime after they are accepted and have cleared their health form, have paid their required deposit, and submitted any additional documents requested.

Passport
All incoming students must obtain a valid passport prior to enrollment. For more information, visit **www.travel.state.gov**.

Transportation Worker Identification Credential (TWIC)
All incoming students will be required to obtain a TWIC prior to enrollment for the spring semester. For those students who do not arrive on campus with a document, the campus will assist students to acquire this document in the fall of their first year. For more information, visit **www.tsa.gov/twic**

Uniforms
At Cal Maritime, students learn to meet grooming and dress standards which prepares them to "dress for success" in the real world. The requirement of wearing uniforms is one component of our Leadership Development program.

You must complete and return a uniform sizing sheet by May 1. However, we encourage you to return them earlier. Your measurements can be taken by a professional tailor or at our campus bookstore. After your measurements have been submitted, you will need to schedule a fitting with the bookstore. To schedule an appointment with the bookstore, call 707/654-1186.

Conduct By Applicants For Admission
Admission or readmission may be qualified or denied to any person who, while not enrolled as a student, commits acts which, were he enrolled as a student, would be the basis for disciplinary action, pursuant to Section 41301 or Section 41302. Qualified or denied admission in such cases shall be determined under procedures adopted pursuant to Section 41304.

Importance of Filing Complete, Accurate, and Authentic Application Documents
Cal Maritime advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire, and financial aid forms. Further, applicants must, when requested, submit authentic and official transcripts of all previous academic work attempted. Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301, Article 1.1, Title 5, California Code of Regulations).

Use of Social Security Number
Applicants are required to include their correct social security numbers in designated places on applications for admission, pursuant to the authority contained in Section 41201, Title 5, California Code of Regulations, and Section 6109 of the Internal Revenue Code (26 U.S.C. 6109). Cal Maritime uses the social security number to identify students and their records, including identification, for financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution.

Also, the Internal Revenue Service requires Cal Maritime to file information returns that include students' social security numbers and other information, such as the amount paid for qualified tuition, related expenses, and interest on educational loans. This information is used by the IRS to determine whether a student, or a person claiming a student as a dependent, may take a credit or deduction to reduce federal income taxes.

Denial of Acceptance
Cal Maritime will notify a denied applicant of the reason(s) for not meeting admission requirements. Applicants who are not admissible should satisfy missing requirements prior to making application again. An applicant with extenuating circumstances can petition the Director of Enrollment Services, 800/561-1945 or 707/654-1330.

Making up Missing Requirements
Undergraduate applicants who did not complete subject requirements while in high school may make up missing subjects in any of the following ways:

1) Complete appropriate courses with a grade of "C" or better prior to high school graduation;

2) Complete appropriate college courses with a grade of "C" or better, with one college course, which earns at least 3 semester (4 quarter) units, considered equivalent to one year of high school study;

3) Earn acceptable scores on specified examinations.

Non-Transfer of Acceptance
Admission is not transferable to another term at Cal Maritime or to another CSU campus. Applicants who do not enroll must reapply for admission and must resubmit the application fee and documents.

Document Rights
Cal Maritime reserves the right to determine whether a transcript from another educational institution can be accepted as official. All transcripts and records submitted for admission to Cal Maritime become property of the Academy and cannot be returned. Applicants do not have the right to access or review files during the admission process.

The documents of applicants who enroll are forwarded to the Records Office and are then accessible for review by the enrolled student, in compliance with the Family Educational Rights and Privacy Act. (See **Appendix**, for details.) Otherwise, when a student withdraws from enrolling, the documents supporting an application for admission, such as transcripts and entrance examination scores, will be held at least one year prior to their destruction.

CANCELLATION OF REGISTRATION OR WITHDRAWAL FROM THE INSTITUTION

Students who find it necessary to cancel their registration or to withdraw from all classes after enrolling for any academic term are required to follow Cal Maritime's official withdrawal procedures. Failure to do so may result in an obligation to pay fees as well as the assignment of failing grades in all courses and the need to apply for readmission before being permitted to enroll in another academic term.

Prior to withdrawing, students who receive financial aid must consult with the Financial Aid Office, 707/654-1275, regarding any required repayment of grant or loan assistance received for that academic term or payment period.

RESIDENCY FOR TUITION PURPOSES

For information concerning residency, see **Appendix, "Determination of Residence for Nonresident Tuition Purpose."**

SUPPLEMENTAL ENROLLMENT OPTIONS

Intrasystem and Intersystem Enrollment Programs
Enrolled students who have completed at least one term and 12 units on a campus of the California State University as matriculated students and who are in good standing at their home campus (with a 2.00 GPA) may elect to take courses at another CSU host campus, on a space available basis, without formal admittance. Although courses taken on any CSU campus will transfer to the student's home CSU campus as elective credit, students should consult their home campus academic advisors to determine how such courses may apply to their degree programs before enrolling at the host campus.

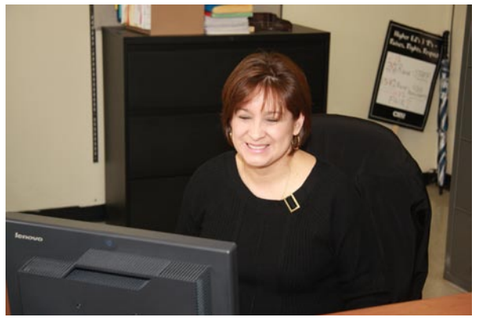
There are two programs for enrollment within the CSU and one for enrollment between CSU and the University of California or California Community Colleges. A special application detailing policies and procedures may be obtained from the Student Records Office.

CSU Concurrent Enrollment allows matriculated CSU students in good standing to enroll concurrently at another CSU campus for a specific term, subject to space availability and registration priority policies at the host campus.

Credit earned at the host campus is reported at the student's request to the home campus to be included on the student's transcript at the home campus.

CSU Visitor Enrollment allows matriculated CSU students in good standing to enroll at another CSU campus for one term and is subject to space availability and enrollment priority policies at the host campus. Enrollment as a visitor may be repeated after re-enrollment at the home campus. Credit earned at the host campus is reported at the student's request to the home campus to be included on the student's transcript at the home campus.

Intersystem Cross Enrollment at University of California or California Community College
Undergraduate students enrolled in the California State University may enroll without formal admission and without payment of additional state university fees in one course each academic term at a campus of the University of California or participating campuses of California community colleges on a "space available" basis. Students may request that a transcript of record be sent to the home campus. Cross enrollment is available to California residents only. Students must have completed one regular term at their home campus as matriculated students with a 2.00 GPA. Further details on enrollment conditions and procedures are available from the Student Records Office.



OPEN UNIVERSITY

The Open University program allows non-matriculated students the opportunity to enroll in one or more courses each academic term without formal admittance to Cal Maritime. Students pay for courses through the Extended Learning department on a per-unit basis and are subject to space availability and enrollment priority policies. STUDENTS TAKING OPEN UNIVERSITY COURSES ARE NOT ELIGIBLE FOR FINANCIAL AID. Open University participants can receive credit in lower and/or upper division coursework, for a maximum of 24 semester units. Applications are available from the Student Records Office.

READMISSION REQUIREMENTS

All students seeking readmission must apply to the Student Records Office not less than six weeks prior to the start of the semester. Students on leave who did not return when expected, or students who resigned or were disqualified, must submit a new CSU Undergraduate Application, along with the appropriate application fee.

Other documentation required for readmission includes college transcripts of work completed during leave, and a health statement or physical exam. The Student Records Office will inform each student of the required readmission items through written notification.

Readmission acceptance is based not only completion of the requirements for readmissions and the reason the applicant left the academy, but also upon space availability. The Academic Board will consider the appeals of students denied readmission.

For assistance, call the Student Records Office at 707/654-1200.

COSTS AND FEES

Photo by Bruce Damonte for NBBJ

FEE POLICY
ACADEMIC YEAR
2009/2011

In the following section, the University means The California Maritime Academy.

FEE LIABILITY

Students are charged and liable for registration fees and tuition for all classes in which they are enrolled. In addition, there may be other fees charged by third party licensors for licenses and exams required to fulfill requirements for degree programs.

It is the policy of the University that students enrolled in its baccalaureate degree programs maintain residence on campus and participate in a meal plan. Enrollment obligates students to pay charges for campus housing and food service unless the student has submitted and received written approval of their Petition for Off-Campus Housing.

In addition to registration and other mandatory fees, certain departments may make assessments of varying amounts for loss, damage, breakage, waste of materials, equipment and facilities and for late payments or late registration.

Failure to cancel registration in any course or to officially withdraw from the University for an academic term prior to the first day of the academic term gives rise to an obligation to pay student fees, including any fees for the reservation of space in the course or facility.

SCHEDULE OF FEES

The CSU makes every effort to keep student costs to a minimum. Fees listed in published schedules or student accounts may need to be increased when public funding is inadequate. Therefore, CSU must reserve the right, even after initial fee payments are made, to increase or modify any listed fees, without notice, until the date when instruction for a particular semester or quarter has begun. All CSU listed fees should be regarded as **estimates** that are subject to change upon approval by The Board of Trustees.

Legal residents of California are not charged tuition. The following reflects applicable systemwide fees and nonresident tuition. Fees and tuition are subject to change without notice due to Trustee, Legislative, or University action. Updated fee information, payment deadlines, and procedures are provided each semester at the Schedule of Fees document posted at **www.csum.edu/FiscalServices/forms.asp**.

Fees charged to all students are:

Application Fee (nonrefundable), payable by credit card, check or money order at time application is made: $55

State University Fee: Authorized fees as of 2009/2010:

Undergraduate	Semester	Annual
6.1 or more units	$2,013	$4,026
0 to 6.0 units	$1,167	$2,334

Post-Baccalaureate	Semester	Annual
6.1 or more units	$2,481	$4,962
0 to 6.0 units	$1,440	$2,880

Nonresident Tuition (in addition to other fees charged all students) is charged at $372 per unit for 2009/2010. The total nonresident tuition paid per term will be determined by the number of units taken. The maximum nonresident tuition per academic year (not including Summer sessions) is $11,160.

Campus-based fees charged to all students enrolled in a degree program at The California Maritime Academy are: Health Services, Health Facility, Associated Student Body, Instructionally Related Activity, Campus Document and specific course and laboratory fees determined by registration. Other campus-based fees are housing, food service and parking permits. Current charges for all fees can be viewed each year in the Schedule of Fees document posted at **www.csum.edu/FiscalServices/forms.asp.**

Medical Insurance is a requirement for all students enrolled in a degree program at The California Maritime Academy. All students meeting the enrollment eligibility requirements are charged for medical insurance. Please see the Medical Insurance Handbook for more information.

Students who have private medical insurance with sufficient coverage to meet the minimum requirements established by the University may request a fee waiver by completing a Medical Insurance Fee Waiver Form available online and at the Student Health Center. The form must be submitted to the Director of the Student Health Center by the term due date. Credit to the student's account will be made for approved waivers and for students who withdraw from The University by the policy's deadline and who have not used the policy prior to withdrawal.

Students who request a refund or withdraw after the policy deadline will be referred to Student Health Services at 707/654-1170 or **www.csum.edu/Health/Index.asp**.

Students are required to purchase approved uniforms. Please contact the University Bookstore at 707/654-1186 or visit **www.cma.bkstr.com** for information regarding cost and availability.

FEE WAIVERS

The California Education Code includes provisions for the waiver of mandatory systemwide fees as follows:

Section 68120 – Qualifying children and surviving spouses/registered domestic partners of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of active law enforcement or fire suppression duties (referred to as Alan Pattee Scholarships);

Section 66025.3 – Qualifying children, spouses/registered domestic partners, or unmarried surviving spouses/registered domestic partners of a war period veteran of the U.S. military who is totally service-connected disabled or who died as a result of service-related causes; children of any veteran of the U.S. military who has a service-connected disability, was killed in action, or died of a service-connected disability and meets specified income provisions; any dependents or surviving spouse/registered domestic partner who has not remarried of a member of the California National Guard who in the line of duty and in active service of the state was killed or became permanently disabled or died of a disability as a result of an event while in active service of the state; and undergraduate students who are the recipient of or the child of a recipient of a Congressional Medal of Honor and meet certain age and income restrictions; and

Section 68121 – Qualifying students enrolled in an undergraduate program who are the surviving dependent of any individual killed in the September 11, 2001 terrorist attacks on the World Trade Center in New York City, the Pentagon building in Washington, D.C., or the crash of United Airlines Flight 93 in southwestern Pennsylvania, if the student meets the financial need requirements set forth in Section 69432.7 for the Cal Grant A Program and either the surviving dependent or the individual killed in the attacks was a resident of California on September 11, 2001.

Students who may qualify for these benefits should contact the Record's Office for further information and/or an eligibility determination.

PAYMENT FOR FEES AND OTHER UNIVERSITY CHARGES

Students may view their account balance and details of all charges through Online Services at **www.csum.edu/os/** or by logging into the online payment site from the **www.csum.edu** web site. Students will receive an email notification at their official campus email address when a fee statement is posted to their account. The email provides a link to the login screen where a student can view his/her electronic statements. No fee bills, statements or reminders will be mailed. It is the student's responsibility to monitor his/her campus email and to view his/her account status at Online Services or through the online payment site.

One of the **Payment Options** below must be submitted to Accounting **by the fee due date**. Semester fee due dates are posted on the **www.csum.edu/FiscalServices/forms.asp** web site under Pay Student Fees. After the semester due date, new fees and other charges posted to the student account are due within 5 days after assessment.

Students adding courses with fees (Cruise, Co-Op, Firefighting, etc.) after the semester's posted "Last Day to Add" must submit a completed Late Add form and remit payment before registering for the course.

Payment Options

1. E-check (electronic check) payments are made online by following the link on our web site or through Online Services. There is no fee to make a payment online by e-check.

2. Credit/Debit Card payments are accepted online by following the link on our web site or through Online Services. All credit and debit card payments must be processed online. A convenience fee is assessed by the third party vendor who processes credit/debit card payments. Accepted cards include MasterCard, American Express and Discover. VISA cards are not accepted.

3. Check or money order payments mailed should be addressed to:

   The California Maritime Academy
   Attn: Cashier
   200 Maritime Academy Drive
   Vallejo, CA 94590-8181

   In order to ensure payments are received and posted to your account by the fee due date, please mail payments at least 10 business days prior to the due date.

4. Check, money order or cash payments are accepted at the campus Cashier's office.

5. You may submit an approved **Installment Payment Plan** with required deposit and administrative fee by the fee due date. An application form and eligibility requirements are available from our web site at **www.csum.edu/paymentfees/index.asp**.

6. You may defer payment for the amount of fees equal to your Financial Aid award for the semester. To be eligible, a student must apply for financial aid and complete all paperwork (applications, promissory notes, tax records, pre-loan counseling, fee waiver forms, third party sponsor authorizations, etc.), clear all holds and be enrolled in the units necessary to qualify for the aid award prior to the fee due date. If the award is not sufficient to cover all fees, the student must remit payment for the balance by the fee due date.

   A student requesting deferment for financial aid and not certified by Financial Aid by the first day of classes will be subject to disenrollment. Upon completion of Financial Aid certification, the student may re-enroll, subject to class availability, during the first week of class. A late registration fee may be assessed and included in the amount to be paid prior to registration. If a financial aid award or other third party sponsorship is changed or disallowed, the student is immediately responsible for payment in full.

7. Payments returned by the bank for any reason are subject to an administrative fee. A returned payment will be considered the same as no payment. Students who have a payment returned by the bank are required to pay by cash, certified check, money order or credit card.

CONSEQUENCES OF NON-COMPLIANCE

One of the **Payment Options** must be submitted to Accounting **by the fee due date**. After the due date, the student is subject to late payment fees and may be dropped from all courses. The student may re-enroll during the first week of classes, subject to availability, after payment arrangements have been made, including a late registration fee. Meal plans may be deactivated until the account is no longer delinquent. In the event of deactivation due to non-payment of fees, the plan charge will not be prorated for the time meal service was suspended.

If a student misses a scheduled payment on an installment payment plan, the student is subject to a late payment fee and may be subject to disenrollment. Also, the student will not be eligible for future installment payment plans.

Should a student fail to pay a fee or a debt owed, the University may "withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise or any combination of the above from any person owing a debt" until the debt is paid (Title 5, *California Code of Regulations*, Section 42380 and 42381).

In accordance with this regulation, it is the policy of The California Maritime Academy that any student with a balance due will not be allowed to register for classes, take final exams, receive grades, receive official transcripts of grades, participate in any cruise, undergo the selection process for commercial cruise or benefit from the other services offered by the institution. In addition, the University may offset refunds to financial aid recipients in order to return the funds to the aid programs if required due to dropping units or withdrawing from the University.

If a student leaves the institution with unpaid fees or fines due the University, those amounts will automatically convert to a student loan on the last day of the semester the student last attended. The loan is due and payable to the University no later than June 30th of the academic year the student last attended.

In addition, the University may petition the California Franchise Tax Board to obtain amounts due from former students.

If a person believes he or she does not owe all or part of an asserted unpaid obligation, that person may contact the Accounting Office, 707/654-1026. The Accounting Office will review all pertinent information provided by the person and available to the campus and advise the person of its conclusions. In all cases, it is important to act timely when requesting a review of debts and possible refunds.

CANCELLATION OF REGISTRATION OR WITHDRAWAL FROM THE INSTITUTION

Students who find it necessary to cancel their registration or to withdraw from all classes after enrolling for any academic term are required to follow the University's official withdrawal procedures. Failure to follow these formal procedures may result in an obligation to pay fees, as well as the assignment of failing grades in all courses and the need to apply for readmission before being permitted to enroll in another academic term.

Information on canceling registration and withdrawal procedures is available from the Student Records Office, 707/654-1200.

Students who receive financial aid funds must consult with the Financial Aid Office prior to withdrawing regarding any required return or repayment of grants, loan assistance or third party payments received for that academic term or payment period. If a recipient of student financial aid funds or third party sponsor payments drops his/her registration from courses or withdraws from the University during an academic term or a payment period, the amount of grant or loan assistance received may be subject to return and/or repayment provisions. This includes amounts in excess of fees which were passed through to the student by way of student refunds. For additional information about returns of financial aid, please contact the Financial Aid Office at 707/654-1275.

REFUND POLICY

Registration, Mandatory Fees and Nonresident Tuition

When a student requests a refund or withdraws from the University, an audit is made on the account to verify the actual amount that should be returned.

Any refund due a student is applied first toward any required return of student financial aid funds from federal, state, institutional, or external sources, then towards any outstanding fees or debts to the University.

Any remaining balance may be returned to the student or to the parents if the balance is the result of a Parent Plus Loan. Credit balances of less than $10.00 will not be refunded. Information concerning any aspect of the refund of fees may be obtained from the Accounting Office. Refund of fees does not constitute formal withdrawal from the University. To withdraw formally, a student must contact the Student Records Office in writing with their intent to withdraw.

Regulations governing the refund of mandatory fees, including nonresident tuition, for students enrolling at the California State University are included in Section 41802 in Title 5 of the *California Code of Regulations*. For purposes of the refund policy, mandatory fees are defined as those systemwide fees and campus fees that are required to be paid in order to enroll in state-supported academic programs at the California State University. Refund of fees and tuition charges for self-support programs at the California State University (courses offered through Extended Learning/Continuing Education) are governed by a separate policy established by the University.

In order to receive a full refund of mandatory fees, including non-resident tuition, a student must cancel registration or drop all courses *prior* to the first day of instruction for the term. Information on the procedures and deadlines for canceling registration and dropping classes is available on the online Class Schedule and from the Student Records Office. If a student is withdrawing from the University after classes have begun, it is his/her responsibility to submit written notification to the Student Records Office.

For state-supported semesters, quarters, and non-standard terms or courses of four (4) weeks or more, a student who withdraws during the term in accordance with the University's established procedures will receive a refund of mandatory fees, including non-resident tuition, based on the portion of the term during which the student was enrolled up to the date of formal withdrawal from the University. **A student who fails to drop registration prior to the 60% point in the semester, or fails to officially withdraw from the University, shall not be entitled to any refund of registration, non-resident tuition, mandatory or user fees.**

For state-supported semesters, quarters, and non-standard terms or courses of less than four (4) weeks, no refunds of mandatory fees and nonresident tuition will be made unless a student cancels registration or drops all classes prior to the first day in accordance with the University's established procedures and deadlines.

Students officially dropping from the higher fee category (> 6.0 semester units) to the lower fee category (< 6.0 semester units) by the end of the drop period will automatically receive financial credit on their accounts for the difference in fee rate. Please consult the Schedule of Fees for the current rates. Refunds will be made after the end of the official Add period through the end of the official Drop period.
Students dropping to zero units prior to the 60% point of the semester will automatically receive prorated financial credit on their account for registration fees charged. Prorata refunds are determined on the basis of the date of the student's formal withdrawal and the length of the academic period. The length of the academic period is calculated from the first day of instruction through the final exam day of the period and excludes any breaks of five (5) days or more.

Refunds for course fees for Cruise, Co-Op, Firefighting and Lab fees are covered by separate policies detailed under Course Fee Refunds.

Some course fees and the Medical Insurance fee may not be refundable based on the drop date. Students who request a refund for Medical Insurance and withdraw after the policy deadline will be referred to Student Health Services at 707/654-1170 or **www.csum.edu/Health/Index.asp.**

Uniform Deposits are collected on behalf of the University Bookstore and forwarded to credit the student's account at the Bookstore. The Bookstore is responsible for all uniform refunds according to its policy.

Students will also receive a refund of mandatory fees, including nonresident tuition, under the following circumstances:

1. The tuition and mandatory fees were assessed or collected in error;

2. The course for which the tuition and mandatory fees were assessed or collected was cancelled by the University;

3. The University makes a delayed decision that the student was not eligible to enroll in the term for which mandatory fees were assessed and collected and the delayed decision was not due to incomplete or inaccurate information provided by the student; or

4. The student was activated for compulsory military service.

Students who are not entitled to a refund as described above may petition for a refund demonstrating exceptional circumstances, and the Chief Financial Officer of the University or a designee may authorize a refund if it is determined that the fees and tuition were not earned by the University. Information concerning any aspect of the fees may be obtained by visiting our web site or from the Cashier's Office at 707/654-1030.

COURSE FEE REFUNDS

All course refunds require the student to officially drop the course either through Online Services or Student Records. Any fees owed to the University or returns to financial aid will be deducted first from the credit balance. Any remaining credit balance on the student's account will be refunded unless the student requests that the credit remain on account for future registration.

Firefighting

Refunds for Firefighting will be made as follows:

A. Up to 7 calendar days before the start of the class—full refund
B. Less than 7 days before the start of the class—less an administrative charge of $25
C. After the start of the class—no refund

Cruise

Refunding cruise fees are made in accordance with the following principles:

A. Refunds are made only for students who did not attend cruise and who officially drop the course. Refunds are not made when a student leaves the ship after the cruise has started. Requests for refunds for unforeseeable circumstances beyond the control of the student should be made to the Chief Financial Officer of the University.

B. The Student Records Office must certify that the student did not attend cruise.

C. Refunds will be made as follows:

1. ***Training Ship GOLDEN BEAR* Cruise**
The California Maritime Academy students who officially dropped the course and did not attend cruise:
   a) Up to 30 calendar days before the start of cruise—full refund
   b) From 30 to 15 calendar days before start of cruise—less an administrative charge of $50
   c) Less than 15 days before the start of cruise—less an administrative charge of $100
   d) After the start of cruise during the following 60-day period—less an administrative charge of $250
   e) More than 60 days after the start of cruise—no refund

2. ***Training Ship GOLDEN BEAR* Cruise**
Visiting students enrolled through Extended Learning and Concurrent Enrollment who officially dropped the course and did not attend cruise:
   a) Non-refundable fees include drug testing and document fee
   b) All other fees are refunded as in Section 1 above

Commercial Cruise and Co-Op Course Fee Refunds

A. Up to 30 calendar days before the start of the class session—full refund
B. From 30 to 15 calendar days before the start of class session—less an administrative charge of $25
C. Less than 15 days before the start of class session—less an administrative charge of $50
D. After the start of the class session during the following 60-day period—less an administrative charge of $75
E. More than 60 days after the start of the class session—no refund

Welding and Manufacturing Lab Fee Refunds

Full refund is issued for those students who officially drop the class no later than the 3rd class meeting. After the 3rd class meeting, no refunds will be made.

MT Lab Fee Refund

Refunds are made only for students who did not attend cruise and who officially dropped the course. Refunds are not made when a student leaves the ship after the cruise has started.

Refunds of Other University Fees

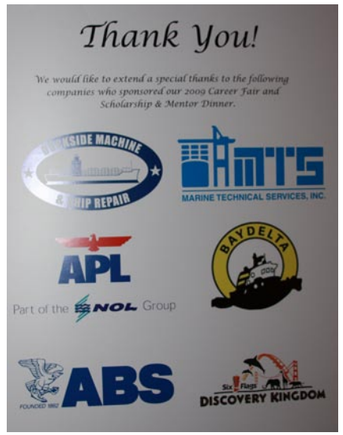
Parking Permit Refunds

Parking on campus is by permit only. Requests for refunds must be submitted in the same semester as the permit was issued. Refunds are prorated from the start of the semester to the date the permit is returned based on the schedule provided by The CSU Chancellor's Office Parking Fee and Refund Schedule. Additional information may be obtained from the Public Safety Office at 707/654-1176.

Housing and Food Service Refunds

Housing and Food service refunds are processed according to the terms of the Housing License Agreement. After the 60% point of the semester, no refunds are made. Students desiring to live off-campus must submit a Petition for Off-Campus Housing to the Director of Housing and Residence Life for approval by the published due date. Additional information may be obtained from Housing at 707/654-1400.

FINANCIAL AID



FINANCIAL AID

Regardless of family income, financial aid is available to all students to assist with the cost of education. Cal Maritime encourages all students to apply for financial aid; however, **it is the student's responsibility to apply for and complete all requirements for financial aid.** Additional information is available online at **www.csum.edu/FinancialAid/** or at the Financial Aid Office, Cal Maritime, 200 Maritime Academy Drive, Vallejo, CA 94590-8181, 707/654-1275, finaid@csum.edu.

Cal Maritime offers a variety of financial aid programs to students needing assistance in financing their education. Funds are made available by the U.S. Department of Education, the State of California, private lending institutions, and The California Maritime Academy, with support from our philanthropic donors. Kinds of financial assistance include scholarships, grants, loans, and employment opportunities. Assistance can be in the form of need-based or non-need-based sources of financial aid. Need at Cal Maritime is defined through the Federal Methodology (FM) by the Free Application for Federal Student Aid (FAFSA).

APPLYING FOR FINANCIAL AID

The Free Application for Federal Student Aid (FAFSA) is the basic application required for most state and federal financial assistance. Applications are available online and can be submitted beginning January 1 before the start of the academic year (i.e., January 1, 2010, for the 2010-2011 school year). The web site is **www.fafsa.ed.gov**. A pin is necessary to sign the FAFSA. Pins can be applied for at **www.pin.ed.gov**. If the FAFSA is filed before the parent or student files taxes, that person may fill out the FAFSA and submit corrections upon completion of the taxes. Priority for grants is given to those FAFSAs submitted by March 2.

SCHOLARSHIPS for Continuing Students

Continuing students may apply for the California Maritime Academy Foundation Scholarships as soon as they receive an e-mail in January. The applications are due in approximately one month. Applicants are chosen based on merit (cumulative GPA), need (Expected Family Contribution from FAFSA application), leadership and community service, and essays.

Other determining factors may be home state or the student's major, depending upon the donor's wishes. The Scholarship Committee spends a month or more evaluating and awarding the students. Students are notified before the end of spring semester of their scholarship for the next academic year.

Cal Maritime receives annual scholarship funds from individuals, corporations, foundations, and professional associations. The California Maritime Academy Foundation manages a number of scholarship endowments, many of them named in memory of distinguished individuals associated with The California Maritime Academy.

SCHOLARSHIPS for New Students

Future Scholars

These scholarships are awarded to California high school graduates who meets regular CSU admissions requirements and are economically, environmentally, or educationally disadvantaged. A low Expected Family Contribution (EFC) from the FAFSA is needed for consideration for this award. These scholarships are awarded thanks to the California lottery proceeds which are given to Cal Maritime.

Athletic Scholarships

Athletic Scholarships are awarded to incoming students who show athletic prowess in certain areas of Cal Maritime's Athletic Program. Due to budgetary constraints, there are very few of these scholarships. These awards are initiated by the Department of Athletics.

WUE (Western Undergraduate Exchange) Scholarships

Cal Maritime participates in the Western Undergraduate Exchange (WUE) program administered by the Western Interstate Commission of Higher Education (WICHE). Through this program, a limited number of out-of-state students are awarded the WUE scholarship and pay 150% of the resident state university fee, $5031 in 2009-10, instead of the out-of-state rate, $13,524 in 2009-10. Students from the states of Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming are eligible. The tuition reduction for those awarded in 2009-2010 is $8,493.

To be eligible for consideration, a student must meet the following requirements: (a) be accepted as a full-time student at The California Maritime Academy, and (b) be a resident of a WICHE member state. Inquiries for WUE should be directed to the Office of Admission. To apply, please complete the application for undergraduate admission through CSU Mentor at **www.csumentor.edu** between October 1 and November 30 prior to fall enrollment. Applications after the priority date will be considered on a case-by-case basis.

To remain in Cal Maritime's WUE program in succeeding years, students must complete a minimum of 12 graded credit hours per semester and maintain a 3.0 cumulative grade point average. Students may participate in the program for a maximum of eight (8) consecutive semesters. If a student needs to petition due to lower GPA or more time needed to complete their program, petitions should be sent to the Director of Financial Aid and Scholarships.

FEE WAIVERS

The California Education Code includes provisions for the waiver of State University Fees as follows:

Section 68120—Qualifying children and surviving spouses/registered domestic partners of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of active law enforcement or fire suppression duties (referred to as Alan Pattee Scholarships);

Section 66025.3—Qualifying children, spouses/registered domestic partners, or unmarried surviving spouses/registered domestic partners of a war period veteran of the U.S. military who is totally service-connected disabled or who died as a result of service-related causes; children of any veteran of the U.S. military who has a service-connected disability, was killed in action, or died of a service-connected disability and meets specified income provisions; any dependents or an unmarried surviving spouse/registered domestic partner of a member of the California National Guard who in the line of duty and in active service of the state was killed or became permanently disabled or died of a disability as a result of an event while in active service of the state; and undergraduate students who are the recipient of or the child of a recipient of a Congressional Medal of Honor and meet certain age and income restrictions; and

Section 68121—Qualifying students enrolled in an undergraduate program who are the surviving dependents of any individual killed in the September 11, 2001 terrorist attacks on the World Trade Center in New York City, the Pentagon building in Washington, D.C., or the crash of United Airlines Flight 93 in southwestern Pennsylvania, if the student meets the financial need requirements set forth in Section 69432.7 for the Cal Grant A Program and either the surviving dependent or the individual killed in the attacks was a resident of California on September 11, 2001.

Students who may qualify for these benefits should apply through CSU Mentor.

The most prominent fee waiver at CMA is the CSU Veterans' Fee Waiver. To receive this waiver, please make sure the Financial Aid Office receives a letter stating the student's eligibility from the student's local VA office by the end of July for the academic year.

GRANTS

Federal Pell Grant Program

Pell Grants are federally-funded need-based grants. A FAFSA is required to qualify for Pell Grants. This grant program is targeted to students who have the least ability to finance their education. This grant is not available to students who have already received a baccalaureate degree.

Pell Grants are awarded based on full-time, three-quarter time, half-time or quarter-time status. Students are awarded based on the number of units enrolled. The award may be adjusted based on units at census date.

Full time	12 or more units
3/4 time	9 to 11.9 units
1/2 time	6 to 8.99 units
1/4 time	3 to 5.99 units

Academic Competitiveness Grants

Academic Competitiveness Grants are awarded to students who are Pell-eligible who also have a number of other criteria. If students are eligible, they may be awarded up to $750 in freshman year and $1300 in sophomore year.

National SMART Grants

Pell-eligible juniors and seniors may be awarded this grant, depending upon their majors, their Cumulative GPA and other legislated requirements. If students are eligible, they may receive up to $4,000 per year.

Federal Supplemental Educational Opportunity Grant Program (FSEOG)

This federal grant program is targeted to undergraduate students with high financial need. Priority is given to Federal Pell Grant recipients. These funds are awarded directly by Cal Maritime and are limited to the total amount allocated to the college by the U.S. Department of Education. Priority is given to those who have completed their FAFSA by March 2. This grant is not available to students who have already received a baccalaureate degree.

Cal Grant A & B

The California Student Aid Commission awards these grants to California residents who have displayed academic achievement and financial need. Cal Grant A helps low- and middle-income students with college tuition and fees. Cal Grant B provides a living allowance (and sometimes tuition/fee assistance) for very low-income, entering first-year students. Students must apply for the Cal Grant by completing their FAFSA by the March 2 deadline and, if necessary, the GPA Verification Form. This grant is not available to students who have already received a baccalaureate degree.

State University Grants

This grant, awarded by the State, is offered to eligible California residents who pay the State University Fee. Preference is given to high-need students who have filed their FAFSA by March 2. Students who have their State University Fee paid with a Cal Grant or by another outside agency are not eligible to receive this award.

LOANS

Student loans play a significant role in financing the education of Cal Maritime students. Perkins, Stafford and PLUS Loans are the best loans that students and their families can receive for education because they are federally regulated. Please remember that they are loans that must be repaid. Failure to repay these loans can result in loan default, resulting in many years without the use of credit.

Federal Perkins Loan

The Federal Perkins Loan is awarded on the basis of financial need as determined by the EFC, the amount of funds the Financial Aid Office has to award and the FAFSA's completed by the March 2nd priority date. This loan has a fixed 5% interest rate. No interest accrues while you are in school and during a 9-month grace period after you either leave school, or cease to be enrolled at least half-time.

The amount of the loan is adjusted annually depending upon the Perkins Loan funds available for disbursement.

Federal Stafford Loan

The Subsidized Federal Stafford Loan is a need-based, deferred payment loan (principal and interest). Repayment begins six months after the student ceases to be enrolled at Cal Maritime as at least a half-time student (six units). Students must complete a FAFSA to determine eligibility for loans. Students should apply online at **www.fafsa.ed.gov**. A pin is required for signature for both student and parent, if the student is dependent according to the U.S. Department of Education regulations. Paper copies of the FAFSA and FAFSA on the Web are available from the Financial Aid Office. Stafford Subsidized Loans have an interest rate of 5.6% in 2009-10, 4.5% in 2010-11, 3.4% in 2011-12, and 6.8% in 2012-13.

An Unsubsidized Federal Stafford Loan is similar to the Subsidized Federal Stafford Loan, except interest payments are not being paid by the federal government and while the student is enrolled and the interest rate is 6.8%. The student can either pay the interest as it comes due or may have the interest capitalized. Students must complete a FAFSA to determine eligibility for loans. Students should apply online at **www.fafsa.ed.gov**.

Stafford Subsidized Loans*

0 to 30 units	$3,500
30.1 to 60 units	$4,500
59.9 to 90 units	$5,500
90.1 units +	$5,500

* Subsidized Loans are need-based. If the student has no need, this amount is offered in Unsubsidized Loans.

Stafford Unsubsidized Loans

	Dependent Students	**Independent Students**
0 to 30 units	$2,000	$6,000
30.1 to 60 units	$2,000	$6,000
59.9 to 90 units	$2,000	$7,000
90.1 units +	$2,000	$7,000

Federal PLUS Loan

The Federal PLUS (Parent Loan for Undergraduate Students) helps parent borrowers pay college expenses for dependent students. Parents of dependent undergraduate students may borrow up to the cost of education minus any financial aid received by the student.

The interest rate for this loan is 7.9% for Direct Loans, 8.5% for FFEL Loans. Payments on this loan begin immediately, although payment can be deferred by the lender for up to six months after the student is at least half time enrolled.

To qualify for a PLUS loan, parents must be a U.S. citizen or an eligible non-citizen, have a valid social security number and pass a credit check. For the credit check, parents generally must not have any outstanding tax liens, unpaid judgments, delinquent or defaulted loans, extensive credit card debt, bankruptcy, foreclosure or wage garnishment within the past five years. Parents who cannot pass the credit check may still be able to receive a PLUS loan if they know someone who can pass the credit check and is willing to co-sign their loan.

Dependent students whose parents have been denied a PLUS loan may want to apply for an Unsubsidized Stafford Loan and should e-mail a request to the Financial Aid Office if the student would like an additional Unsubsidized Stafford Loan.

Alternative Loans
In addition to the federal loan program, many lenders offer alternative educational loans. At Cal Maritime, alternative or private loans are discouraged. These loans have variable rates and are not federally regulated. We recommend that students use alternative loans only as a last resort, since interest rates are higher for these loans and are based on credit ratings. If students would like an alternative loan, they will be asked to complete a FAFSA and will be asked to use the federal options first.

STUDENT EMPLOYMENT

For many students, employment is a supplement to borrowing. Students should attempt to establish a reasonable balance between their academic efforts and work schedules. Consequently, student employees may not work more than 20 hours per week except during periods when classes are not in session.

Cal Maritime is an Equal Opportunity Employer. The Financial Aid Office reaffirms the State's and Cal Maritime's commitment to equal opportunity to all regardless of race, color, creed, national origin, ancestry, gender, marital status, disability, religious or political affiliation, age, or sexual orientation.

Federal Work Study Program
Federal Work-Study (FWS) students receive priority placement in student employment on campus. FWS is a need-based financial aid program which provides part-time employment for students. Work-Study jobs assist students financially and may provide career related work experience. Pay rates vary depending on job requirements and student skills. To receive priority consideration, complete the FAFSA by March 2 for the upcoming year.

If you are interested in a FWS position, make sure that you have been awarded FWS. If not, please contact the Financial Aid Office to see if you are eligible. Career Services will take your resumé, and if you are eligible for a position, you will be interviewed for it in the department where the job is located. Human Resources will need to have you complete paperwork before you start your position.

ELIGIBILITY REQUIREMENTS FOR FEDERAL FINANCIAL AID

Each Federal program has its own set of requirements governing the administration and receipt of funds from the program. These requirements are subject to change at any time.

Listed below are common student eligibility requirements for all of the programs. A student must be a U.S. citizen or an eligible non-citizen as well as meeting the following criteria:

- must not be in default on an educational loan,
- must not owe a refund on a federal grant,
- may be ineligible if convicted of drug distribution or possession,
- must be registered with Selective Service (if required),
- must agree to use the funds only for expenses related to attending Cal Maritime,
- must be enrolled in a degree granting program,
- must have a high school diploma or have completed high school equivalency, and
- must be maintaining financial aid satisfactory academic progress toward a degree.

FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS

It is the policy of The California Maritime Academy that all students receiving Title IV assistance meet Satisfactory Academic Progress (SAP) standards as defined by the Academy in accordance with Subpart C part 668, Student Assistance General Provisions, of the Student Financial Aid Regulations.

This policy has been established to ensure that Title IV recipients meet the criteria indicated below regardless of whether or not they previously received aid. The programs governed by these regulations are as follows:

1) Federal Pell Grant
2) Academic Competitiveness Grant
3) National SMART Grant
4) Federal Supplemental Educational Opportunity Grant (SEOG)
5) Cal Grants (A & B)
6) Federal Work Study
7) Federal Perkins Loan
8) Federal Stafford Loan
9) Federal PLUS Loan
10) State University Grant

Satisfactory Academic Progress Standards
The federal government mandates that every student be subject to Satisfactory Academic Progress (SAP) guidelines in order to receive financial aid. When initiating the financial aid process, all transfer credit history and past performance are subject to SAP guidelines. Students must demonstrate proper SAP in order to receive financial aid.

Satisfactory Academic Progress (SAP) standards are measured both qualitatively and quantitatively. In order to maintain qualitative standards, students must maintain at least a 2.0 cumulative grade point average. To be maintaining quantitative standards, students must satisfactorily complete at least 2/3 of all units attempted (cumulatively) and must complete their program within 150% of the published length of the program, measured in academic terms and credit hours attempted. The determination of a student's academic progress will be made following the spring semester.

Examples: Cal Maritime's degrees are meant to be completed in 8 terms of full-time enrollment. 150% of 8 terms is 12 terms. Therefore, students attending Cal Maritime on a full-time basis must complete their degree in no more than 12 terms or 6 full years.

If a major contains 120 units to be completed, students in that program may take no more than 180 units (150% of 120 units) to complete the degree.

If a student has attempted 90 units, 60 (2/3 of 90) must be completed satisfactorily.

Minimum Cumulative Grade Point Average
Students must maintain a cumulative grade point average of at least 2. 00.

Incomplete courses do not earn credit or influence the grade point in the semester that the course is incomplete. The courses will earn credit and influence the grade point average once they are completed. Incomplete courses, however, are considered as units attempted.

Minimum Completion Ratio (Credit Hours Completed/Attempted)
To be considered making satisfactory academic progress, a student must successfully complete 67% (or 2/3) of the units attempted cumulatively.

Letter grades of A, B, C, D, W, WU, CR, NC, I, IC and RD are all considered towards units attempted. Only the letter grades of A, B, C, D, F and CR are considered towards units completed.

Courses validated by special examination (V) and courses accepted from another college (T) are not included in the determination of minimum credit hours earned per academic year, but are included in the determination of the maximum time frame.

Maximum Terms of Enrollment to Earn a Baccalaureate Degree
Maximum Terms of Enrollment is defined as the maximum number of full-time terms that a student may take to complete a degree program or certificate before losing financial aid eligibility. For students to remain eligible for Title IV aid, they must complete their Baccalaureate Degree within 12 terms (150% of the 8 total full-time terms normally required to complete their degree).

Maximum Credits Attempted to Earn a Baccalaureate Degree
Maximum Credits Attempted is defined as the maximum number of units that a student may attempt to complete a degree program or certificate before losing financial aid eligibility. For students to remain eligible for Title IV aid, they must complete their Baccalaureate Degree prior to attempting 150% of the total units required to complete their degree.

Major	Avg. Total Units	x 150%	Maximum Attempted
Business Administration/ International Business & Logistics	120	x 150%	180
Facilities Engineering Technology	163	x 150%	245
Global Studies & Maritime Affairs	120	x 150%	180
Marine Engineering Technology	161	x 150%	242
Marine Transportation	159	x 150%	239
Mechanical Engineering ME Option	164	x 150%	246
Mechanical Engineering 3rd Asst. Engr's License Option	183	x 150%	275

Since the total units vary slightly between classes, an average total is used for calculating maximum time frame.

For example, a Business Administration/International Business Logistics major who has attempted 180 units and still not completed his/her baccalaureate degree would be ineligible for financial aid.

Transfer units accepted by The California Maritime Academy will be included as part of the maximum credits attempted toward the completion of a degree.

For a course that has been repeated, only the final hours count towards the completion of a degree. However, each time a student enrolls in a course, the course is counted as part of the units attempted.

NOTICE OF FINANCIAL AID PROBATION/SUSPENSION

All students being placed on financial aid SAP probation or who are disqualified for aid due to SAP will be notified in writing of their status by the Financial Aid Office. Students who are on financial aid SAP probation are eligible to receive financial aid. Students who are disqualified for aid due to SAP must bring their cumulative GPA and/or units completed/attempted percentage up to SAP levels at their own expense prior to any new aid being made available.

The first time a student does not maintain a cumulative 2.0 Grade Point Average (GPA), he or she will be placed on probation for one term.

At the end of the probationary term, if the student's cumulative GPA is still below 2.00, the student will become ineligible for financial aid until his/her cumulative GPA is 2.0 or above. If, however, at the end of the probationary term, the student's cumulative GPA is 2.0 or higher, he/she will be off financial aid SAP probation and will continue to be eligible for financial aid. The second year a student's cumulative GPA drops below 2.0, he/she will become ineligible for financial aid immediately.

A student who does not satisfactorily complete the required percentage of units will be placed on financial aid SAP probation for one term. At the end of the probationary term, if the student's ratio of completed/attempted units is still below 2/3, the student will become ineligible for financial aid until his/her cumulative completion ratio is 2/3 or better. If, however, at the end of the probationary term, the student's completion ratio is 2/3 or better, he/she will be off financial aid SAP probation, and will continue to be eligible for financial aid. The second year a student's completion ratio drops below 2/3, he/she will become ineligible for financial aid immediately.

Right to Appeal Procedures

All Title IV recipients have the right to appeal a financial aid suspension decision by submitting an appeal to the Financial Aid Office. The appeal should consist of a written explanation of the mitigating circumstances that affected their academic performance, and how the student will ensure academic success in the future. Students are notified of the appeal decision.

Eligibility for Reinstatement

A student who has been deemed ineligible for financial aid due to SAP may be reinstated for federal financial assistance after one or more of the following:

- approval of an appeal to the Financial Aid SAP Committee and/or
- successful completion of the academic deficiencies at his or her own expense.

In cases of suspensions and/or denied appeals, the student will be required to notify the Financial Aid Office with the proper documentation when he/she is eligible for reinstatement. After eligibility has been established, any award will depend upon the student meeting all other eligibility requirements and the availability of financial aid funds.

WITHDRAWAL FROM THE CALIFORNIA MARITIME ACADEMY

Courses from which a student withdraws prior to "last day to drop with no grade reported" do not count against attempted or completed. Courses dropped after "last day to drop with no grade reported" are counted as uncompleted units attempted.

Financial aid recipients are obligated to remain enrolled and pass a certain number of units. Upon a financial recipient's withdrawal from school prior to the end of the term, Cal Maritime is required by the Federal government to calculate whether a return of financial aid funds is required. Students should refer to **RETURN OF TITLE IV FUNDS** section below.

All financial aid recipients should speak to a financial aid counselor to discuss the impact of any proposed changes in enrollment such as dropping a course, repeating a course, or withdrawing from the University.

Any of these changes may affect his/her satisfactory academic progress and future eligibility for financial aid.

RETURN OF TITLE IV FUNDS (FEDERAL REQUIREMENT)

Policy: Financial aid recipients are obligated to remain enrolled and pass a certain number of units. Upon a financial aid recipient's withdrawal from school, Cal Maritime is required by the federal government to calculate if any return of funds is mandated and, if the funds should be returned, return them to the Department of Education, the lender or Cal Maritime. The reason for this policy is to ensure that students are not overcharged by the school.

At Cal Maritime, in accordance with California State University procedures, a proration is also performed on the charges the student has incurred to ensure even greater equity for the student.

Calculations: The portion of financial aid to be returned is determined by the percentage of financial aid not earned by the student. The percentage of unearned aid is calculated using the following formula:

Total Number of Calendar Days in the Semester Not Completed by the Student
Divided by the Total Number of Calendar Days in the Semester

During the first 60% of the enrollment period, a student "earns" Title IV funds in direct proportion to the length of time he or she remains enrolled. A student who remains enrolled beyond the 60% point earns all aid for the period.

A student who withdraws from the university before the 60% period (approximately before the 10th week of classes) may be required to return all or a portion of the federal financial aid funds. The amount to be returned will be based on the formula stated above by calculating the financial aid funds that were used to pay the student's registration fees and campus housing obligations as well as the portion directly disbursed to the student.

Note: When a student withdraws without notifying the Records Office, the withdrawal date is the midpoint of the semester .

PRIORITY ORDER OF UNEARNED FUNDS RETURNED

Unearned funds returned are credited to outstanding federal loan balances and grant programs received by the student in the following priority order:

Unsubsidized FFELP Federal Stafford Loans
Subsidized FFELP Federal Stafford Loans
Federal Perkins Loans
PLUS Loans
Federal Pell Grant
Academic Competitiveness Grant
National SMART Grant
Federal SEOG
Other Title IV assistance for which a return of funds is required.

The student's portion of the calculated amount attributable to a Title IV loan program may be repaid by the student according to the loan's terms. The student's portion of unearned aid attributed to a grant is reduced to 50%. The student has 45 days to enter into a repayment arrangement with Cal Maritime or with the U.S. Department of Education.

CONSEQUENCES OF OUTSTANDING REPAYMENT OBLIGATION

Cal Maritime does not have the authority to waive or write off the repayment requirement regardless of the reason for the withdrawal, including extenuating circumstances such as illness, accident, or grievous personal loss.

A student who fails to return the unearned Federal Financial Aid funds will be referred to the U.S. Department of Education for collection, and the university may withhold permission to register to use facilities, or to render services. Until the repayment issue is resolved, the student's record will be "flagged" every time a student files a Free Application for Federal Student Aid (FAFSA). A student in repayment is ineligible for federal financial aid at any institution in the nation.

RETURN OF TITLE IV FUNDS– CALCULATION EXAMPLE

Joe Smith withdrew on September 22nd. The semester began on August 30th, ends on December 15th, and is 108 calendar days long. For that semester, Joe received $1500 in Pell, $250 in SEOG, $1500 in Subsidized Stafford Loan and $300 in Federal Perkins loan. Registration and fees were $786, and the amount was deducted from his financial aid.

Total Financial Aid Received $3550
Total Fees Paid Using Financial Aid Funds $786

Percentage of Semester Completed:
08/30—semester begin date
09/22—withdrawal date
12/15—semester end date
24 Days Attended/108 Days in Semester =
22% Semester Completed

Percent of Unearned Aid
100%-22% of Semester Completed =
78% Unearned Aid = $3550
Total Title IV Aid Disbursed x 78% Unearned Aid =
$2769 Unearned Aid

Amount of Aid Cal Maritime Must Return to Title IV Program
$786 Registration Fees x 78% Unearned Aid = $613

Cal Maritime Must Return Federal Financial Aid Funds
The student, in turn, will be responsible for paying the university the amount of $613.

Note: A student may be responsible for all or a portion of the institutional fees–registration and housing–returned to the federal financial aid funds based on the University's refund and withdrawal deadlines.

BREAKDOWN OF RETURN OF TITLE IV REFUND

Cal Maritime Returns:
$613 to Stafford Loan program.
The student loan obligation for the semester is reduced by this amount.

Amount of Financial Aid the Student Must Return:

$2769	Unearned Aid Amount
- $ 613	Cal Maritime Returns to FFELP Stafford Loan
$2156 =	Amount Student Must Return

Student Returns:
$887 to Federal FFELP Stafford Loan*
$300 to Federal Perkins Loan* Program
$485** = 50% of $969 Pell Grant

*Student may repay the Stafford Loan and Federal Perkins Loan according to the original terms of both loans.

**Student repays only 50% of the unearned aid attributable to a grant and has 45 days to enter into a satisfactory repayment arrangement with Cal Maritime or the Department of Education.

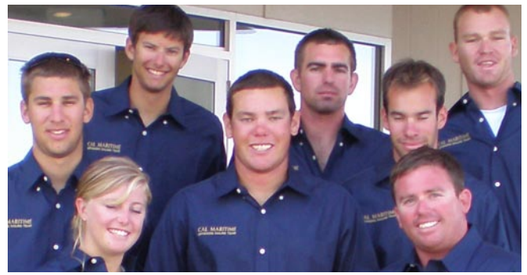
OTHER SOURCES OF ASSISTANCE

Bureau of Indian Affairs Grants

The Bureau of Indian Affairs has scholarship money available to students who are enrolled members of a federally recognized tribe. Students must be enrolled full-time (12 units) and have at least a 2.0 cumulative grade point average. Interested students will need to contact the Office of Indian Education 916/978-4680. Applications for fall enrollment must be received by the preceding June 15.

Law Enforcement Personnel Dependents Grant (LEPD)

The California Student Aid Commission provides subsistence payments to dependents of law enforcement and firefighter personnel who have become permanently disabled or are killed in the line of duty. The grant is based upon need. Additional information and application materials are available from the California Student Aid Commission.



OFFICE OF MARINE PROGRAMS AND STUDENT DEVELOPMENT

OFFICE OF MARINE PROGRAMS AND STUDENT DEVELOPMENT

The Office of Marine Programs and Student Development oversees much of what makes Cal Maritime a unique learning environment. This department manages all shipboard and waterfront training and the professional development of students. It manages the summer cruise taken by students in their first and third years and arranges the training during the second year, when most cadets embark on a commercial ship, the *Training Ship GOLDEN BEAR*, Navy or Coast Guard vessels; or participate in industry co-ops.

During the fall and spring, specialized training occurs on our fleet of workboats, tug boats, and T-boats. Under the aegis of the Maritime Operations department, classes in water safety, shipboard maintenance, operations, management, and small boat handling are taught throughout the year. Every maritime cadet also participates in classes aboard our 500-foot floating laboratory, the *Training Ship GOLDEN BEAR*. In addition, cadets participating in the summer training cruise take a U.S. Coast Guard Lifeboatman exam and must pass both written and practical tests.

TRAINING SHIP GOLDEN BEAR

The *Training Ship GOLDEN BEAR* serves as the primary training platform on which cadets apply technological skills introduced in the classroom and leadership skills acquired from their work assignments and responsibilities with the Corps of Cadets. Each summer, cadets in their first and third years depart with licensed faculty officers for two months during the Annual Training Cruise. During these periods at sea, intellectual learning, applied technology, and leadership development blend daily as cadets apply what they have learned in the classroom, in the lab, in the Corps, and on the waterfront. Those working toward a license can feel the responsibility of command, demonstrate their effectiveness as leaders, and refine their technical skills and leadership styles.

All students, whether in the license programs or not, can interact with other cultures and learn about the peoples who are their hosts. They can also experience connections to the larger world and develop an understanding of how their selected vocations will function in the context of an international setting. In this way the cruises enhance the global awareness of students as they apply the intellectual and practical training they have received during the school year. [1]

DEPARTMENT OF LEADERSHIP DEVELOPMENT

The Department of Leadership Development is involved in many day-to-day activities of the Corps of Cadets, training new Corps officers, overseeing watch standing on the campus and *Training Ship GOLDEN BEAR*, and offering leadership instruction for all cadets. A four-year voluntary leadership program, including weekend seminars and retreats is available to all students.

CORPS OF CADETS

Essential to the leadership training program at Cal Maritime is the Corps of Cadets, to which every student belongs. Through participation in the Corps, cadets develop the self-discipline, self-esteem, and character helping them succeed in their chosen careers. Being a cadet means being responsible, reliable, punctual, patient, professional, and attentive to detail. Ultimately every cadet understands how to follow directions, work as a member of a team, and lead others at the Academy and on the training ship. This leadership development, the ultimate goal of the Corps of Cadets, enables every graduate to excel whether at sea or shoreside.

[1] Students aboard the annual training cruises are required to hold valid passports, TWIC, and appropriate merchant mariner documents.

The Corps of Cadets is directed by approximately 40 cadet officers appointed by the President from senior class. The Corps Commander is the highest ranking cadet and works closely with his/her Corps Executive Officers, Corps Training and Academics Officer, Corps Administrative Officer and two Company Commanders. Every cadet is placed in a division at the beginning of Fall Orientation. The Division Commanders work closely with all cadets in developing professional, watch standing, and leadership skills. These officers also work to ensure high morale, camaraderie, and fellowship within their division.

It is an honor to be a cadet at Cal Maritime, and that honor carries with it pride and responsibility that exceeds that of the normal college student. A Cal Maritime cadet is asked to do more, is held to higher standards of personal conduct and professionalism, and is given more responsibility than the traditional college student.

WATCHSTANDING

Watchstanding is an essential element of the Corps of Cadets' leadership training program. While standing watch, either on the *Training Ship GOLDEN BEAR* or on the campus, cadets are placed in positions of ever-increasing responsibility. As their technical knowledge grows, they oversee and direct the actions of others during periods of watch.

Watches are scheduled in 4-hour blocks, from 4:30 PM until 7:30 AM daily, and 24 hours a day on weekends.

Watches not only provide important learning and experience for the cadet, but also assist the campus in providing a high level of security and safety, both on the campus and on the ship.

The watch program, a valuable part of the cadet leadership training program at Cal Maritime, is essential for each cadet's future success, whether at sea or ashore.

STANDARDS OF CONDUCT

All Cal Maritime students are subject to rules and regulations that characterize the objectives set forth in the development of their leadership skills and professionalism. The Academy's conduct and discipline system is a vehicle for assessing a cadet's aptitude for becoming a working professional.

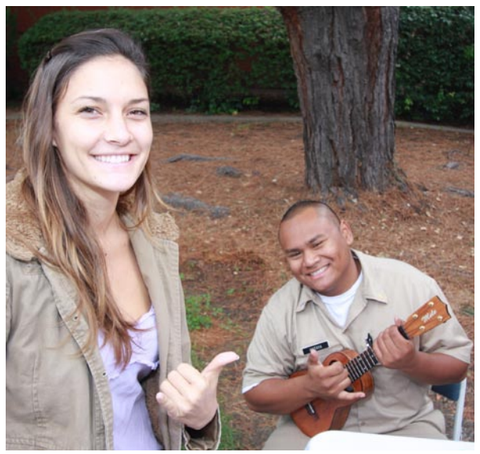
The ultimate goal of the conduct system is to modify incorrect behavior and to develop positive character traits. Cadets who make too many conduct mistakes may be required to serve extra duty on Saturday. Cadets who violate the more serious regulations and other cadets who have consistent conduct problems may be subject to extra duty, probation, suspension, or dismissal.

All cadets are required to wear a uniform to all academic functions and formation and to stand watch on the *Training Ship GOLDEN BEAR* and on the campus. Grooming standards for both men and women are also enforced. Regulations exist that forbid cheating, plagiarism, alcohol consumption, theft, hazing, and other unbecoming conduct.

DRUG TESTING

The California Maritime Academy, as prescribed by 49 CFR Part 40 and amendments thereto, randomly administers drug tests to all cadets. Testing may also occur for reasonable cause, pre-employment or USCG licensing physical exams, follow-up testing, and for any marine casualty, accident, or serious incident. Additional testing for alcohol may also be undertaken during the training cruise.

STUDENT SUPPORT SERVICES AND CAMPUS LIFE



STUDENT SUPPORT SERVICES AND CAMPUS LIFE

Cal Maritime provides a wide range of purposeful out of the classroom experiences and services that encourage student learning and foster a sense of community. Students are challenged to think critically and support community standards within and environment where the principles of freedom of expression, civility, diversity, fairness and caring are valued and affirmed. The student support services and developmental programs that supplement and enrich the academic and training goals of the institution. Services and programs consist of new student orientation, housing and residence life, dining services, student health, counseling services, and Associated Students of California Maritime Academy (ASCMA). Special programs and tutorial services are available to support students in need of academic assistance. See **Center for Engagement, Teaching and Learning**.

In the broadest terms, the purpose of student services and programs is to do the following:

- Assist students with identifying, clarifying and achieving personal education goals;
- Improve the quality of student life;
- Enhance the campus learning environment; and
- Improve student access and retention.

STUDENT CENTER

The Student Center serves as a focal point for campus life. The Morrow Cove Café, Student Health and Wellness Center, Counseling Services, Office of the Dean of Students, Office of Campus Life, Career Planning and Placement Center, student mail services, and the ASCMA Office are located in this facility, along with a bank of computers overlooking the grassy waterfront. A TV lounge and common area are available for studying, watching a video, having lunch, accessing the Internet, or just taking a break.

ASSOCIATED STUDENTS OF CALIFORNIA MARITIME ACADEMY (ASCMA)

Associated Students, Inc. (ASI), a non-profit corporation chartered with the California Secretary of State, utilizes student funds to create and operate programs to benefit the student community. It functions as a non-profit, student-run corporation. The Associated Student Body fee is paid by all students, making the Associated Students members eligible to vote in the annual elections for AS leadership.

A student Board of Directors, elected each year, governs ASCMA. The Board is comprised of a president, vice president of finance, executive vice president, chief of staff and officers from each class. The Board meets throughout the fall and spring semesters.

The Associated Students' services and programs are designed to enrich campus life and to help support many campus organizations. The ASCMA officers also serve as the elected representatives of students and function to protect students' rights.

The ASCMA sponsors a very active social calendar on campus under the direction of the Activities, Camaraderie, and Adventure (ACE) coordinators and Adventure & Recreational Coordinators (ARC) for the outdoor enthusiast. ACE events have included comedy nights, coffee houses, hypnotist shows, casino nights, faculty/staff appreciation day, trips to see plays in San Francisco, social events with local area colleges, and other Bay Area sporting events and concerts. For the outdoor enthusiast, ARC provides day & weekend hiking and camping trips, day ski trips, kayaking trips, free rental of outdoor equipment, monthly Friday night rock climbing nights at local gyms, and much more. Most of these events are provided to students for a minimal fee or no charge at all.

The ASCMA also oversees and appropriates money to active campus clubs and organizations. Past clubs have included the Auto Club, German Club, Guitar Club, Bible Club, Salsa Club, Propeller Club, BBQ Club, Fencing Club, Caribbean Student Club, Lacrosse Club, Asian Pacific Islander Club, Master Swim Club, Snowboarding/Ski Club, Sailing Club, Surf Club, Blue & Gold Club & Association of Mechanical Engineer Club along with other professional engineering clubs. While on the TSGB you will find that ASCMA supports activities on board the ship with all kinds of fantastic prizes and events.

DEPARTMENT OF HOUSING AND RESIDENCE LIFE

The three campus residence halls can accommodate 580 students. The residence halls are comfortable and convenient for students, with most rooms having a commanding view of the Carquinez Straits. *Training Ship GOLDEN BEAR* is home to over 120 students during the academic year.

Study lounges, meeting rooms, recreational areas, a barbershop and vending center, and laundry are located in the halls.

Most students share a double occupancy room. All are required to maintain residency on campus unless granted an exception per the terms of the off-campus housing policy (see below).

Professional and paraprofessional staff live in the residence halls and are available to students 24 hours a day. The Housing and Residence Life staff coordinates an exciting program of educational seminars, social events, and recreational activities for residential students each semester.

Each student room is wired for Internet access, cable television, and telephone services, which are included in the housing fee. The campus offers voicemail and email for each student. Please refer to the Student Handbook for additional information on services provided through Housing and Residence Life.

OFF-CAMPUS HOUSING REQUESTS

Policy Statement 215.4

It is the policy of The California Maritime Academy that students enrolled in its baccalaureate degree programs maintain residence on campus and participate in a meal plan.

Off-Campus Housing

All completed Off-Campus Housing Petition Forms and required documentation must be submitted to the Department of Housing and Residence Life Office **by February 20th**. All requests to live off campus must include appropriate documentation to verify circumstances. The petitioning student must be in good standing: i.e., not on academic probation or possessing any outstanding alcohol violations. A final condition of approval is that all CMA accounts must be paid in full or accounts must be in good standing as verified by the Accounting Office. Any abuse of the off-campus process will result in immediate revocation of off-campus privileges.

Principles

Generally, exceptions will be considered for the following circumstances:

1. Age - Students who are 24 years of age or older prior to start of fall semester only. Please submit a copy of a driver's license or government ID.

2. Medical - A student who provides a written statement from the Director of The California Maritime Academy Student Health and Wellness Center indicating that a condition exists that supports a recommendation for off-campus housing.

3 Military Service - Students who have served at least two years of continuous active military duty.

4. Other
   a. License: Students holding a Third Mate or Third Assistant Engineer Coast Guard license

   b. Marital Status: Students who are married or head of household as defined by the Internal Revenue Service; students who are domestic partners and can qualify according to Academy policy.

NOTE: All completed Off-Campus Housing Petition Forms and required documentation must be submitted to the Department of Housing and Residence Life Office by March 1. Requests for exceptions to the policy are not considered after August 1. Off-campus approval cancels all room reservations and wait list priority standings.

DEPARTMENT OF DINING SERVICES

Cal Maritime Dining Services is a hospitality organization dedicated to providing the community and guests with high quality foods and services in a variety of settings. The Dining Hall and the Morrow Cove Café are conveniently located on campus and offer a well-balanced diet cafeteria style. Cal Maritime policy states that all campus resident students enrolled in its academic degree programs must participate in a meal plan available through Cal Maritime Dining Services.

The Department of Dining Services offers three meal plans for resident students and one for off-campus students.

1. The 19-Meal Plan provides the maximum number of meals available - breakfast, lunch, and dinner on Monday through Friday in the Dining Hall or Café, and brunch and dinner on Saturday and Sunday in the Dining Hall.

2. The 15-Meal Plan provides a choice of 15 meals including breakfast, lunch, and dinner on Monday through Friday in the Dining Hall or the Café, and brunch and dinner on Saturday and Sunday in the Dining Hall.

3. The 15-Flex Meal Plan is available to Seniors in 2009/10. The Plan includes 15 meals per week to be used in the Dining Hall or the Morrow Cove Café for breakfast, lunch, dinner, or brunch. Flex Dollars can be used to purchase beverages, snacks, or even a full meal in the Dining Hall or the Café for the student or a guest. Details of the 15-Flex Plan are provided to enrolled participants.

4. The 5-Meal Plan is available only to students not living on campus, and faculty and staff. The 5-Meal Plan provides a choice of 5 meals each week: choices are breakfast, lunch, and dinner on Monday through Friday, and brunch and dinner on Saturday and Sunday.

Meal service is not provided on holidays or weekends secured from watch or during winter and spring breaks.

During the *Training Ship GOLDEN BEAR* cruise, Cal Maritime Dining Services provides meals and services for all shipboard functions.

Morrow Cove Café offers meal service Monday through Friday from 10 AM to 4 PM. On Sunday through Thursday nights a special menu is featured. Located inside the comfortable Student Center, students, faculty, and staff enjoy a meal or snack indoors, maybe catching up on email at one of the free computers or dining al fresco along the waterfront.

STUDENT HEALTH AND WELLNESS CENTER

Physical well-being has a tremendous impact on a student's academic performance. Our mission is to promote and maintain the optimal health of our students by modifying or removing health-related barriers to learning. This goal can be met by helping students obtain the skills to remain healthy throughout life, enhancing their lives as members of the academy and of the wider community. The Student Health and Wellness Center provides confidential, high quality and easily accessible health care in the campus environment, offering clinic-based primary care services to all matriculated students.

Services are available:
Monday–Friday, 9:00 AM to 5:00 PM
(closed 1:00-2:30 PM)

The Academy encourages students to utilize the Health and Wellness Center services for their medical needs such as urgent care (drop-in), scheduled appointments, physicals, basic lab and drug tests, specialty clinics, medications prescribed by our healthcare providers, and referrals to off-campus providers.

During the annual training cruise the Cal Maritime Health and Wellness Center relocates to the Medical Treatment Facility onboard the *Training Ship GOLDEN BEAR*. This facility is staffed with a Chief Medical Officer (Physician) and a Medical Officer (Physician Assistant, Nurse Practitioner, Registered Nurse or Medical Assistant) 24 hours a day for medical care. In addition to this 24-hours on-call service, the medical team provides a daily drop-in clinic twice a day while at sea and once a day while in port for students to access health care. The training ship is equipped with basic lab, x-ray, medical commodities and pharmaceuticals to support most of the health care needs presented by students. Cal Maritime embraces an approach involving health education, acute and sub-acute care, health maintenance, and referral assistance to achieve our goals. The result will be students who understand how to make informed decisions about their health, and are self-directed towards optimal wellness.

While on campus or at sea, the care of certain illnesses, injuries, and conditions may require hospitalization or services beyond our scope of authorized care. In this instance, a student will be referred to local community medical services, where utilization of his/her medical insurance will be essential.

NEW REQUIREMENT:
MANDATORY HEALTH INSURANCE**
Due to the special nature of the educational experience at Cal Maritime, which includes a training cruise often involving international travel, **students are required to be covered by health insurance**. All matriculated Cal Maritime students are automatically enrolled in and charged for the endorsed "Student Accident and Sickness Insurance Plan" unless a completed Medical Insurance Fee Waiver Form certifying comparable required coverage is received by the semester deadlines (September 15 for fall and January 25 for spring*). Medical Insurance Fee Waiver Forms are available in the Student Health and Wellness Center or **www.csum.edu/Health/Index.asp**.

Please feel free to contact us with any questions or concerns regarding this matter at 707/654-1170 or healthcenter@csum.edu.

* Dates are subject to change
****The care of certain illnesses, injuries and conditions occasionally may require hospitalization or referral to other community medical facilities for after hours, long term, specialty or other forms of care requiring staff, facilities, and equipment which are not available in our Health Center, or beyond the scope of authorized services.

SERVICES AVAILABLE
At CMA, the following basic services are available to enrolled students:

- Clinic based primary care of acute and sub-acute conditions, illnesses, and injuries. This includes physical examinations in the presence of bona fide medical indications and USCG licensing;
- Clinic based primary care of preexistent acute and sub-acute conditions and exacerbations thereof;
- The provision of family planning services, consistent with current medical practice, excluding surgical procedures;
- 24-Hour Nurse Advice Line. Students can call for accurate and confidential health information 800/977-0027;
- Health Education programs;
- Immunization programs for the prevention and control of communicable diseases;
- Evaluation and counseling for individual health problems (including screening);
- Preparation and maintenance of professional medical records;
- Medical liaison services with other community health providers, including health insurance carriers;
- Consultative services in health related issues involved in other campus programs, such as the annual training cruise;
- Basic dispensing of pharmaceuticals under medical supervision;
- Emergency first aid available to all persons while on the CMA campus if a campus physician or qualified personnel is on duty;
- SAMSHA Random Drug Testing Program; and
- Referrals for drug and/or alcohol counseling.

STUDENT COUNSELING SERVICES

Psychological counseling is available to CMA students and their significant others from the Student Counseling Service. Licensed psychologists provide individual and couples counseling. Counseling sessions at CMA are free and confidential. Appointments can be made directly through the Student Counseling Service, which is located in the Student Health and Wellness Center, or through the assistant in the Marine Programs Office.

Many students find counseling helpful in resolving problems such as relationship difficulties, adjusting to the pressures of college, and family issues. Students who experience periods of depression, anxiety, concern about alcohol or other drug use, or a change in eating or sleeping patterns should consider counseling.

Some students come for one appointment to work out or to resolve a difficulty. Other students decide to meet regularly for a period of time to develop insight into the nature of problems. This second option will make future difficulties less likely. The Student Counseling Service will work with you so that you may find greater success and enjoyment personally, academically and professionally.

If you should ever find yourself in a time of personal crisis and the Student Counseling Center is closed, contact any Student Services staff member or a community resource.

Health Services

Sutter Solano Medical Center, Vallejo 554-4444
Emergency Services.....554-5201
Physicians Referral 800/234-4849
Kaiser Permanente Medical Center, Vallejo .651-1000
Advice Nurse 800/977-0027
Planned Parenthood 643-4545
Birthright Pregnancy Crisis Center.....642-5001
Family Planning of Solano County.....553-5509
Health and Social Services Dept.....553-5509
Poison Control Center (24 hours)..... 800/342-9293
National HIV/AIDS Information & Service (24 hrs)
..... 800/232-4636

Mental Health and Intervention

Mental Health Crisis Line (24 hrs) 428-1131
Suicide Prevention (24 hours).....428-1131
Alcoholics Anonymous (24 hrs) 643-8217
Genesis House (24 hrs).....557-3165
Rape Crisis of Solano County (24 hrs) 644-7273
Victims of Crime Resource Center 800/842-8467

CENTER FOR ENGAGEMENT, TEACHING AND LEARNING (CETL)

The Center for Engagement, Teaching and Learning (CETL) is located in the Laboratory Building, Room 114, on The California Maritime Academy (CMA) campus. The CETL provides instructional support for the retention and academic success of Cal Maritime students through community engagement and service learning, open computer access, disability resources, and free tutoring. In addition, the Center and its staff provide development workshops on pedagogy, assessment and technology as a resource for faculty contributing to student success.

Tutoring

The CETL offers accessible academic support through FREE group and limited individual tutoring. We provide assistance or scaffolding to assist the student on his path toward learning independence. Tutoring support is available for courses in the following broad subject areas: math, writing/English, science, engineering, and marine transportation.

Student Disability Resource Office (SDRO)

The SDRO is committed to supporting the academic success of Cal Maritime's students with verified disabilities. We provide support services and information resources to individual students with disabilities and to the entire campus community. The Center provides a quiet study and testing room for students with documented disabilities as well as a limited software and hardware designed to assist learning. Expanding this role, the Center provides assistance and workshops for the campus community in support of the Chancellor's Assistive Technology Initiative (ATI).

Students applying for disability services should follow these steps in completion of necessary SDRO application materials:

1. Read guidelines for disability documentation/ verification. (Guidelines may differ according to disability.)

2. Submit Application for Services and disability verification (documents) to SDRO office.

3. Schedule Intake Appointment and bring class schedule.

4. SDRO determines appropriate accommodations.

5. Instructors are notified by SDRO.

6. Student consults with individual instructors regarding appropriate accommodations.

Instructions and forms are available at
http://www.csum.edu/Academics/SDRO.asp

Student Success Materials

Materials are available in the CETL to help students develop the skills necessary to be successful. Pamphlets and handouts cover topics such as: making good choices, goal setting, time management, note-taking, etc. In addition, tutors can provide one-on-one discussion and assistance on these topics illustrating successful student habits.

Other Support Services

- Learning Advice/Support: If students would like advice regarding learning techniques, anyone may make an appointment with the Director of the Center for Engagement, Teaching and Learning for private consultations.

- Quiet Study Environment: The CETL provides a quiet study environment with moveable tables to accommodate individual or group study and several computers available with CMA log-in information.

- Computing and Wireless Environment: The CETL provides a quiet study environment with 25 computers (requiring a CMA login) and a comfortable lounge area supporting individual or group study and several computers available.

For further information on any of the CETL services, please contact us:

Director, Center for Engagement, Teaching and Learning
CETL Telephone: 707/654-1283
CETL Fax: 707/654-1159
Web Site: **http://www.csum.edu/Academics/CETL/**

CENTER FOR COMMUNITY ENGAGEMENT

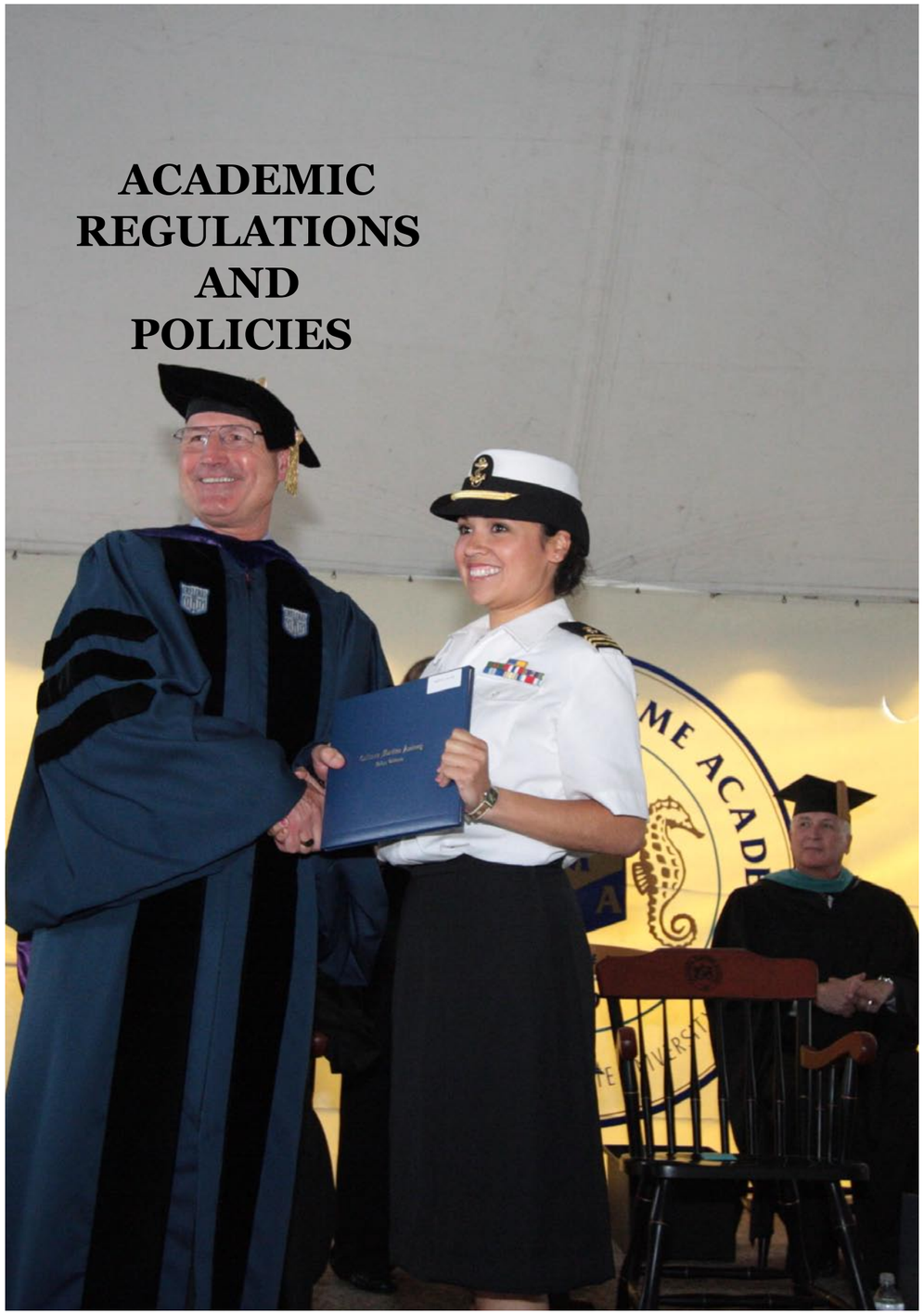
What is Community Engagement?

Community Engagement and Service Learning has been a foundation of The California State University since the first campus opened in 1857. Community Engagement and Service Learning (CE & SL) are teaching and learning techniques providing situated and anchored student participation. This participation in meaningful and planned community service experiences directly relates to course content extending learning beyond the theoretical. Through engagement and reflective activities, students not only enhance their understanding of course content but also grow in general knowledge, civic responsibility, self-awareness, and commitment. Learners gain valuable leadership experience and greater self-confidence in personal skills and abilities as they offer valuable talent and resources off campus. In short, CE & SL applies classroom skills and concepts in real-life settings. CE & SL are not the same as volunteering; although they often involve volunteer activities in the community, CE & SL activities are coordinated with specific educational objectives identified in each associated course. For example, students in an accounting course may work with local nonprofits to assist low-income individuals with free tax preparation.

CE & SL courses may occur in almost every discipline, from sociology and management to physics, biology and engineering. Almost any course can be designed with a CE & SL component.

The time that students spend in the community on service projects is integrated into the course structure and assignments, equivalent to the same amount of effort as do other traditional courses and fulfill the same graduation requirements. A 1999 study conducted by the CSU Needs and Priorities Survey indicates that more than 135,000 CSU students performed a total of 33.6 million hours of community service. Of the students surveyed, 65% stated that CSL courses helped them master the subject material better than traditional courses allowed. Seventy percent said the service-learning courses developed more civic awareness and responsibility, and 69% said service-learning courses provided greater opportunity to explore career options. Indeed, job recruiters actively seek and hire students with CSL experience since they are aware of the valuable insights that students gain when they engage in CE & SL—working with diverse populations and touching the lives of people in the community who are most in need.

To learn more about the CSL courses offered at The California Maritime Academy or obtain information about events, community partners, opportunities at other CSU campuses, and resources for faculty and students, please contact the Community Engagement Director in LAB 114 or at 707/654-1288. In addition, Dr. Kathryn Marocchino offers Community Service Learning courses each semester and may be contacted at 707/654-1152. The Center for Community Engagement is located in the Center for Engagement, Teaching and Learning (CETL), in the Laboratory Building and is open Monday through Friday.



ACADEMIC REGULATIONS AND POLICIES

ACADEMIC AWARDS AND HONORS

Cal Maritime maintains several programs to honor matriculating students who have earned distinction in the area of academic excellence. Recognition of those students is made through the following programs:

A. PRESIDENT'S LIST

The President's List is published at the end of every semester to honor those students who have excelled academically. The student to be honored must have met the following qualifications:

- a minimum semester grade point average of 3.75,
- no grade lower than a "C,"
- a minimum of 12 graded units (excludes "CR" grades), and
- no incomplete grades.

B. DEAN'S LIST

The Dean's List is published at the end of every semester to honor those students who have excelled academically. The student to be honored must have met the following qualifications:

- a minimum semester grade point average of 3.25,
- no grade lower than a "C,"
- a minimum of 12 graded units (excludes "CR" grades), and
- no incomplete grades.

C. HONORS

At commencement, Cal Maritime recognizes outstanding academic students receiving baccalaureate degrees with the distinction of academic honors. The honor is based on all academic degree work completed at Cal Maritime and indicates a high level of scholastic achievement:

- cum laude, 3.25–3.49 GPA
- magna cum laude, 3.50–3.74 GPA
- summa cum laude, 3.75–4.00 GPA

ACADEMIC BOARD

An Academic Board is maintained to hear academic disqualification and readmission appeals and to consider other academic issues as appropriate. It convenes the Friday prior to the beginning of each semester in a closed meeting. Students wishing to appeal academic disqualification or readmission denials must notify the Academic Dean or the Student Records Officer. The Academic Dean will then convene a meeting of the Academic Board. Students may appeal before the Board in person or submit a written appeal.

ACADEMIC DISHONESTY

POLICY STATEMENT

Cal Maritime functions best when its community members treat one another with honesty, respect, and trust. Because the quality of our graduates depends on the ethics they display, faculty members are expected to act promptly on suspected cases of academic dishonesty. The following policy is controlled by the California Code of Regulations: specifically, Title 5 § 41301.

ACADEMIC DISHONESTY

Cheating and academic dishonesty comprise all student behavior intended to gain unearned academic advantage or interfere with another's academics by fraudulent and/or deceptive means.

Examples of inappropriate student conduct that can lead to the imposition of sanctions include, but are not limited to, the following: (**See Academic Senate Policy #547 Inappropriate Academic Conduct at http://www.csum.edu/facultystaff/documents/547InappropriateAcademicConduct.pdf)**

A. Taking Information:

Copying graded homework assignments from another person;

Unauthorized collaborative efforts on take home exams or graded homework;

Looking at another student's paper during an examination;

Unauthorized use of text materials or notes during an examination.

B. Providing Information:
Giving one's work to another to be copied, paraphrased, or plagiarized;

Giving answers to another student during an examination;

After having taken an examination, passing information concerning the examination on to students who still must take it;

Providing a required writing assignment for another student;

Taking an exam, writing a paper, or doing a project for another student.

C. Plagiarizing:
Unauthorized copying of all or parts of an article, paper, book, published work or other proprietary source, including documents from the World Wide Web, and submitting all or parts of the article or paper as one's own work, without proper citations or attribution;

Submitting a paper acquired from a "research" or term paper service;

Failing to give credit for ideas, statements of fact, or conclusions derived by another author;

Failure to use quotation marks when quoting directly from another source, whether it is a paragraph, a sentence, or part thereof (except in some informal writing assignments, such as reading responses or reader's logs/journals, when the instructor has specified different guidelines)

Retyping a paper written by another and handing it in for credit;

Submitting a paper from house files for credit;

Claiming credit for artistic work done by someone else, such as a musical composition, painting, drawing, photo, sculpture, or design.

D. Other Examples of Inappropriate Academic Conduct:
Conspiring with one or more fellow students to engage in any form of academically dishonest conduct;

Lying to an instructor to improve one's grade;

Having another student take one's exam or do one's computer program or lab experiment;

Submitting a paper that is substantially the same for credit in two different courses without the approval of both instructors;

Altering a graded exercise after it has been returned, then submitting the exercise for re-grading;

Removing tests from any location without the instructor's approval;

Stealing exams or other course materials from an instructor or his or her agent;

Stealing or altering an instructor's grade book or other academic records;

Using spell-check or grammar-check software on a writing assignment when expressly prohibited from doing so;

Accessing, changing, or using any information or data from a computer system to gain academic advantage for yourself or any other student.

E. General Statement of Student Responsibility:
The student has full responsibility for both the content of academic assignments submitted for evaluation and the integrity with which all academic work submitted for evaluation has been done. Ignorance of an express rule regarding inappropriate student conduct does not excuse one from adhering to appropriate ethical standards in the completion of academic assignments. When in doubt as to the appropriateness of any action, students are to ask their instructors for clarification and guidance.

ACADEMY PROCESS IN RESPONSE TO INAPPROPRIATE STUDENT ACADEMIC CONDUCT

Charges of inappropriate student academic conduct can be brought to the Chair of the Committee on Academic Integrity by an instructor, a student, or any employee of The California Maritime Academy. This person, if other than the instructor of record, must first discuss the matter with that instructor. The resultant protocols follow the policy of the Academic Senate, with the burden of proof on the person(s) bringing the charge of academic dishonesty, and with the student entitled to a hearing. **(See Academic Senate Policy #547 Inappropriate Academic Conduct at http://www.csum.edu/facultystaff/documents/547InappropriateAcademicConduct.pdf)**
A summary of this policy follows.

Copies of all documents pertinent to the charge should be appended to the statement of the instructor or person bringing the charge. Committee hearings are closed to all except committee members, the charged student, the instructor, the person bringing the charge, and the charged student's advisor, witnesses, and other appropriate campus administrators.

Committee Findings:
Concurrent with the delivery of the Committee's findings and recommended sanctions to the involved student(s) and instructor(s) and the Provost/Vice President, Academic Affairs, the Chair of the Committee shall also forward a copy of his/her findings directly to the Chair of the Discipline Review and Investigating Committee (DRIC). The DRIC is NOT to conduct separate or additional hearings on academic issues already adjudicated by the Committee on Academic Integrity. But the DRIC may initiate an inquiry and conduct hearings into whether the actions of individuals brought before the Committee on Academic Integrity also involve moral, ethical, leadership and character issues such as cheating, lying, stealing, breaking and entering, or other conduct unbecoming a cadet in training, and therefore also fall within the purview of the policies governing the DRIC.

Imposition of Sanctions:
The Provost/Vice President, Academic Affairs will issue the letter to the involved student(s) setting forth the final disposition of the case and the terms of any imposed sanctions, with copies sent to the Student Conduct Coordinator and Chair of the Committee on Academic Integrity.

A copy of the Provost/VPAA's letter of final disposition is to be sent to the Student Conduct Coordinator for inclusion in the student's file.

Student Rebuttal and Appeals:
Within three days of receipt of the Committee's findings, the charged student may submit a written rebuttal. Final disposition of the case will belong to the President.

SANCTIONS:
One or more of the following sanctions may be imposed upon any student whose conduct falls short of the Academy's standards of academic integrity:

Probation:
A period of time during which limitations on status may include, but are not limited to, loss of specified privileges with acknowledgement by the student that any additional breaches of academic integrity will result in additional, more severe sanctions being imposed.

Suspension:
A mandated discontinuation of student status and temporary removal from the Academy for a definite period of time.

Expulsion:
A permanent, irrevocable termination of student status. Expulsion from one campus of the California State University extends to all other campuses within the system.

DENIAL OF ADMISSION OR READMISSION:
Admission or readmission to the Academy may be denied to any student found to have violated the provisions of the Academy's Policy on Inappropriate Student Academic Conduct (Section 41303 of Title 5, California Code of Regulations).

GOOD STANDING:
Imposition of a sanction or denial of (or qualification placed on) admission or readmission means that a student is not considered to be in good standing for purposes of admission to any institution of the California State University system, for the period during which sanctions apply (Section 40601(g) of Title 5, California Code of Regulations).

RECORD OF DISCIPLINE:
Probation, suspension, and/or expulsion shall be made part of the student's permanent academic record.

ACADEMIC STANDING

Students must maintain an overall and campus cumulative grade point average of 2.00 to be considered in good academic standing. (See **BACCALAUREATE DEGREE REQUIREMENTS** for details.) If students do not meet this standard, the following actions will ensue:

Academic Probation:
If an enrolled student's cumulative grade point average (GPA) as described above falls below 2.00, or if a student transfers into Cal Maritime with less than a 2.00 GPA from previous college coursework, the student will be placed on "academic probation." Students on academic probation must meet with their academic advisor to choose appropriate courses in which to enroll. Students will be dropped from classes if they fail to do so. Except in extraordinary cases, students shall enroll in a maximum of 15 semester units.

To facilitate an improvement in their grade point averages, students on academic probation are expected to repeat, within the probationary term(s), specific courses in which grades of "F" or "D" were previously earned. Additionally, they are expected to complete a minimum of 12 units with no grades of "F" and earn a 2.00 semester grade point average or raise their cumulative grade point averages above 2.00.

Any student with a cumulative grade point average below 2.00 will be allowed to continue on probation if his/her semester grade point average is at least 2.00 and he/she has completed 12 units or more with no grades of "F" in any course taken. Anyone who fails to meet the above terms of probation will be academically disqualified.

Academic Disqualification:
If, after a semester of academic probation, a student's cumulative grade point average is still below 2.00 and the terms of probation are not met, he or she will be academically disqualified. **In addition, a student who has failed a course three times will be subject to academic disqualification.** To appeal an academic disqualification, a student must notify the Academic Dean or the Student Records Officer prior to the Academic Board meeting, which convenes the Friday before the first day of school.

Readmission:
An academically disqualified student may apply for readmission at The California Maritime Academy only after completing an academic semester with at least 12 semester units with grades of "C" or better (C- grades are not acceptable) in each course attempted from an accredited college or university. In addition, students disqualified for a third failure of a course must successfully complete the course prior to readmission. Academically disqualified students may elect to enroll at Cal Maritime through Open University to register for courses in which grades of "D" or "F" were earned.

Students readmitted after academic disqualification will be admitted under current requirements for graduation, unless they have remained in "continuous attendance" at another accredited school for at least 1 semester or 2 quarters per academic year.

Students readmitted after academic disqualification will continue on probation unless through Open University or another accredited college they have been able to raise their cumulative grade point averages above 2.00. Students readmitted on academic probation must adhere to the terms of academic probation as described earlier.

ADMINISTRATIVE ACADEMIC PROBATION/DISQUALIFICATION

A student may be placed on probation or may be disqualified by appropriate campus authorities for unsatisfactory scholastic progress regardless of cumulative grade point average or progress points. Such actions shall be limited to those arising from repeated withdrawal, failure to progress toward an educational objective, and noncompliance with an academic requirement, and shall be consistent with guidelines issued by the Chancellor.

The following three reasons constitute grounds for being placed on Administrative Probation:

1. Withdrawal from all or a substantial portion of their courses in two successive terms or in any three terms;

2. Repeated failure to progress toward a degree or other program objective, when such failure is due to circumstances within the control of the student;

3. Failure to comply, after due notice, with an academic requirement or regulation that is routine for all students or a defined group of students.

Students who do not meet the conditions for removal of administrative probation may be subject to further administrative actions, including Administrative Dismissal.

ACADEMIC TRANSCRIPT POLICY

Requests for official transcripts must be in writing and must be signed and dated by the student. A request should include the following information:

- full name (including any other names used while attending Cal Maritime);
- last four digits of social security number and birth date;
- years attended Cal Maritime or the year graduated;
- the address where the transcript should be sent and the department and/or person to whom it should be directed;
- number of copies requested;
- a phone number and/or email address that we may contact in case any questions should arise.

Transcripts cannot be issued to anyone with a HOLD, which is an indication of an outstanding obligation to Cal Maritime.

The fee for a single transcript is $4.00. Requests will be processed within 3-10 working days. Should expedited service be required, meaning the transcript is mailed (not received) within 1-2 working days of receiving the request, the fee is $15.00. Whether for regular or expedited service, additional copies ordered at the same time are $2.00 each, and after the first ten, $1.00 each.

Please mail the request, along with a check or money order to:

The California Maritime Academy
Attn: Student Records Office
200 Maritime Academy Drive
Vallejo, CA 94590-8181

or fax the request to 707/654-1204. If faxing the request, please pay online at
www.csum.edu/paymentfees/options.asp

For questions regarding transcripts, call the transcript line at 707/654-1292 or Student Records at 707/654-1200. To access a transcript request form, go to **http://www.csum.edu/studentrecords/documents/students/misc_forms/Transcript-Misc%20Request.pdf**

ADDING AND DROPPING OF COURSES

Students may add or drop courses up to a specific deadline in each semester. The official Add Form must be approved by the course instructor and the student's academic advisor and submitted to the Student Records Office by the established deadline.

A. ADDING A COURSE
Students may add a course to their schedule only during the first five days of the semester. An approved Add Form must be submitted to the Records Office by the established deadline. Approval to add a course must be obtained from the course instructor and the student's academic advisor.

B. DROPPING A COURSE
Students are allowed to drop courses online with no grade recorded on their academic transcripts during the first four weeks of instruction. Students are responsible for attending all courses in which they have registered. Non-attendance does not constitute withdrawal.

Withdrawals after the first four weeks of instruction and prior to the last three weeks of instruction may be assigned only for serious and compelling reasons (e.g., illness, accident or death in the immediate family). Students may be required to provide documentation or verification of their particular circumstances. Approval to withdraw from a course during this period must be granted by the course instructor, Department Chair, and Academic Dean.

Students may withdraw from no more than 18 semester units. If withdrawal is approved, a grade of "W" will be posted on the student's Academic transcript, but it will not be used in calculating grade point average or progress points. Students withdrawing without a serious and compelling reason may receive a grade of "WU" in the course. Appeals may be directed to the Provost/Vice President, Academic Affairs.

Withdrawals shall not be permitted during the final three weeks of instruction except in cases, such as accident or serious illness, where the cause of withdrawal is due to circumstances clearly beyond the student's control and assignment of an Incomplete is not practicable.

CHANGE OF MAJOR

Students wishing to effect a change of major may do so with the approval of the department chair of the new major. Students must be in good academic standing for this approval to be granted.

Change of major forms may be obtained from the Student Records Office or at **http://www.csum.edu/studentrecords/documents/students/misc_forms/Change%20of%20Major.pdf**

COURSES

A. COURSE CHALLENGE

Students may receive credit for courses (grade: CR) by passing challenge examinations developed at Cal Maritime. The following rules apply:

1. Students must demonstrate substantial knowledge and background in the areas they are challenging.

2. Approval must be obtained for each challenge from the instructor and department chair. Applications are available in the Student Records Office.

3. The instructor must be presented with a receipt for the required fee, which must be paid prior to the challenge examination.

4. A course may be challenged only once.

5. Challenges will not be approved for courses in which any grade has been assigned, including "F", "IC", "WU", or "W."

6. Challenges will not be approved for courses in which a student is currently registered, or in a semester in which a student has dropped the course to be challenged.

7. Challenges are not allowed in certain cases, such as the GWE Exam and certain STCW classes.

B. REPETITION OF COURSES

Students may repeat courses only if they earned grades lower than a C. Up to 16 semester units may be repeated with "grade forgiveness." (Grade forgiveness is the circumstance in which the new grade replaces the former grade in terms of the calculation of the student's grade point average; although no longer used in the grade point average, the previous grade remains on the transcript.)

Students may repeat an individual course for grade forgiveness no more than two times. Grade forgiveness shall not be applicable to courses for which the original grade was the result of a finding of academic dishonesty.

Cal Maritime will permit students to repeat an additional 12 semester units with "grade averaging." In such instances the repeat grade shall not replace the original grade for grade point average calculation; instead both grades shall be calculated into the student's grade point average.

A student who receives a grade of F, WU, or IC in a course for the third time at Cal Maritime will be academically disqualified (see academic standing policy regarding readmission).

Students repeating a course at another accredited college are expected to adhere to Cal Maritime's **Course Transfer Policy**. When a course is repeated elsewhere, the student will be given credit toward meeting the graduation requirement and the overall grade point average will be affected; however the Cal Maritime grade point average will not be affected.

C. CREDIT FOR WORK EXPERIENCE

Cal Maritime does not grant credit for work experience. If a student has such knowledge, he/she may apply to challenge the appropriate course that parallels the work experience.

D. CREDIT BY EXAMINATION

Cal Maritime grants credit to those students who pass certain examinations that have been approved. These include the Advanced Placement (AP) examination of the College Board, College-Level Examination Program (CLEP), International Baccalaureate (IB), and the CSU English Equivalency Examination (EEE).

E. COURSE COMPLETION BY EXTENSION OR CORRESPONDENCE

Students may complete a total of 24 semester units by extension or correspondence to meet the baccalaureate degree requirements at Cal Maritime. Only extension or correspondence courses from accredited institutions are acceptable. The rules for course transfer apply.

F. INDEPENDENT STUDY

An Independent Study course is substantial study above and beyond the regular offerings in the Academy catalog. One to three units of credit, determined prior to registration, will be granted for Independent Study. The student must arrange with an Academy faculty member to be the Independent Study Advisor. Grading is typically by letter grade, although the student may request the CR/NC grading basis. An approved Application for Independent Study must be on file in the Student Records Office by the end of the normal add period.

G. INDIVIDUAL STUDY

Individual Study applies to any course listed in the Academy catalog but not offered in a particular semester. In very rare circumstances, a student may petition an instructor to offer a course that falls into this category. The Department Chair and instructor must approve the individual study. An application, obtained from the Student Records Office, must be on file by the end of the normal add period.

COURSE TRANSFER AND ACADEMIC CLASS LEVEL

A. COURSE TRANSFER

The Student Records Officer will be responsible for approval of course transfer. Appeals can be made to the Department Chair.

A student may take a course concurrently at another regionally accredited college if the course is established as equivalent and approval is made prior to enrollment. The student may be expected to provide a syllabus and other information about the equivalent course prior to the approval process.

The equivalent course must carry credit equal to or greater than the course offered at Cal Maritime. The student must have an official transcript sent to the Student Records Office upon completion of the course, regardless of the grade earned.

Units and grades earned in transferable courses completed at other colleges are not used in calculating the campus grade point average but are included in the student's overall grade point average.

B. ACADEMIC LEVEL

Students are classified according to the number of overall units of baccalaureate-level course work completed (all college-level work, including Cal Maritime) for purposes of financial aid determination. Level distinctions are not applicable to watch standing, priority registration, housing, graduation, or corps standing.

Academic level is calculated as follows:

Freshman ..... 0–29.5 units
Sophomore..... 30–59.5 units
Junior ..... 60–89.5 units
Senior..... 90 or more units

FACULTY ADVISORS

Faculty advising is necessary for academic success. Students must consult with their advisors in any of the following cases:

- registering for courses,
- adding courses,
- taking an overload or
- having been placed on academic probation.

GRADING SYSTEM

The quality of a student's work is measured by a system of grades utilizing the traditional A–F grading system. The following symbols will be used in evaluating student performance, including appropriate participation in the learning experiences as well as formal testing.

A. LETTER GRADES

Letter Scale	*Definition*
A+, A, A-	Performance has been of the highest level, showing sustained excellence.
B+, B, B-	Performance has been good.
C+, C, C-	Performance has been adequate, satisfactorily meeting the course requirements.
D+, D, D-	Performance has been less than satisfactory.
F	Performance has been poor, such that course requirements have not been met.

WU ..... Withdrawal Unauthorized.
Equivalent to an "F" (see section B: Grade Explanations).

IC ..... Incomplete Charged.
Equivalent to an "F" (see section B: Grade Explanations).

W ..... Withdrawal.
Students may withdraw from no more than 18 semester units (see section B: Grade Explanations).

CR ..... Credit.
A credit grade equates to a grade of "C" or better (see section B: Grade Explanations); also used for course challenges.

NC ..... No Credit.
A no credit grade equates to a grade below "C" (see section B: Grade Explanations).

AU ..... Audit.
An AU earns neither academic nor degree credit (see section B: Grade Explanations).

I ..... Incomplete Authorized.
Course must be completed by sixth week of the following semester (may be extended in extraordinary cases).

RD ..... Report delayed.

B. GRADE EXPLANATIONS

1. *Withdrawal Unauthorized*:
The symbol "WU" indicates that an enrolled student did not withdraw from the course prior to the established deadline and also failed to complete course requirements. It is used when, in the opinion of the instructor, completed assignments or course activities or both were insufficient to make normal evaluation of academic performance possible. For purposes of grade point average and progress point computation this symbol is equivalent to an "F."
It is the student's responsibility to withdraw officially from a course in which he or she has registered yet never attended or has stopped attending. (A student has four weeks from the start of instruction to withdraw officially from a course.)

2. *Incomplete Charged:*
The "IC" grade may be used when a student who received an authorized incomplete "I" has not completed the required coursework within the allowed time limit. The "IC" replaces the "I" and is counted as a failing grade for grade point average and progress point computation.

3. *Credit/No Credit courses in general*:
Some courses are offered *only* on a credit/no credit basis. Grades of credit or no credit are neutral to the calculation of the student's grade point average even if the final grade is no credit.

Credit/No Credit courses required for graduation:
Some courses required for graduation are offered only on a credit/no credit basis. If the student's grade in these classes is no credit, the course must be repeated until the credit grade is earned.

Credit/No Credit option:
A credit/no credit grade pattern may be selected by the student in courses for which the A-F pattern is the norm for the course. No course that meets a student's graduation requirement may be taken on a credit/no credit basis except as described above.

The following rules apply when a student selects CR/NC grading option when the course is not normally offered on that basis:

(1) the student must submit an application to the Student Records Office, which must be approved by the course instructor and the student's department chair;

(2) the deadline for applying for CR/NC grading is the fifth day of the applicable semester;

(3) once the application for CR/NC grading has been made, the student may not change the grading option for that course; and (4) CR/NC is not used in the computation of the student's semester or cumulative grade point average. An application for the credit/no credit grading option can be obtained in the Student Records Office.

In the case of remedial courses (EGL 001 Introduction to Composition; EGL 105 English as a Second Language; and MTH 001 Intermediate Algebra), the grade awarded must be on an A, B, C, NC basis. If a student receives a grade lower than a C, a grade of NC will automatically be awarded. Remedial courses carry units of credit that apply to the student's unit loads for a given semester but do not apply toward graduation.

4. *Audit option*:
An auditor is a student who enrolls in a course for informational purposes only. A student must petition the Student Records Office to audit a class. Enrollment as an auditor is subject to permission of the instructor provided that enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected; however, examinations and assignments are not mandatory.

Once enrolled as an auditor, a student may not change to credit status unless such a change is requested no later than the last day to add classes in that term. Likewise, a student who is enrolled for credit may not change to audit after the last day to add classes. An AU grade for the audited course will appear on the student's transcript. An AU earns neither academic nor degree credit.

5. *Incomplete authorized*:
The symbol "I" (Incomplete Authorized) indicates that a portion of required course work has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified, reasons and that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the attention of the instructor and to determine from the instructor the remaining course requirements which must be satisfied to remove the Incomplete. A final grade is assigned when the work agreed upon has been completed and evaluated.

An "I" must normally be made up by the end of the sixth week of the next academic semester unless the student requests an extension from the instructor.

This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an "I" being converted to an "IC" symbol (equivalent to an "F").

6. *Withdrawal:*
The symbol "W" indicates that the student was permitted to withdraw from the course after the fourth week of instruction with the approval of the instructor and appropriate campus officials. It carries no connotation of quality of student performance and is not used in calculating grade point average or progress points. **Students may withdraw from no more than 18 semester units.**

C. GRADE POINT AVERAGE COMPUTATION

Grade point averages are determined by dividing the total number of weighted grade points earned in the semester by the total number of graded units attempted in the semester. A weighted grade point is determined by multiplying the grade points earned in the course by the number of units in the course. The following grade points are assigned for each equivalent letter grade:

A, A+	**= 4.0**	**B-**	**= 2.7**	**D+**	**= 1.3**
A-	**= 3.7**	**C+**	**= 2.3**	**D**	**= 1.0**
B+	**= 3.3**	**C**	**= 2.0**	**D-**	**= 0.7**
B	**= 3.0**	**C-**	**= 1.7**	**F/WU/IC**	**= 0.0**

UNITS

A semester unit at Cal Maritime assumes a one-hour class per week class for a period of 14 weeks. It is the standard quantity used for measurement of college and university work.

1. *Lecture*.
One unit equals one hour of classroom work per week in most classes, predominately those of the lecture or lecture-discussion format. It is generally assumed that a student spends two hours of outside preparation for each hour spent in such classes.

2. *Laboratory*.
   In laboratories, there are two or three hours a week for each unit, depending on outside lab preparation. In specialized training and performance courses, such as sea training, ship operations, and intercollegiate athletics, there are more than three hours per week required per unit.

MISCELLANEOUS ACADEMIC POLICIES

A. NORMAL COURSE LOAD

Twelve (12) to twenty (20) units constitute a normal course load at Cal Maritime. A student wishing to enroll in more than 20 units (15 units when on Academic Probation) must have the approval of his or her academic advisor and Department Chair. A student receiving financial aid must take at least 12 units during the fall or spring semester to be considered full time.

B. REGISTRATION PROCEDURES

The Student Records Office handles all forms, procedures, and deadlines for registration. Registration for the fall normally occurs in the middle of the previous spring semester, and registration for the spring/cruise semester occurs in the middle of the previous fall. All students must see their academic advisor prior to registration. Students are not permitted to attend any classes for which they are not officially registered.

Priority registration is offered to currently enrolled students by class, based on date of entry. Regular registration is typically the two-week period afterward. Currently enrolled students not registering by the end of the regular registration period are subject to a $100 late fee.

Incoming freshmen and students accepted for readmission may register only after priority registration has ended.

C. CLASSROOM ATTENDANCE

Students are expected to attend all classes unless an absence is properly authorized. It is up to the course instructor to establish an appropriate attendance policy, except for those courses that have outside agency requirements: i.e., STCW-approved courses. Students failing to adhere to the attendance requirements established by the course instructor or the Academy may be dropped from the class. (See **Dropping a Course** and **Withdrawal Unauthorized**.)

D. GRADE CHANGE PROCEDURES

Institutional academic processes leading to the awarding of grades cannot be completely error free. Events can transpire which suggest to a student that the grade he or she was assigned for a particular course was inappropriate.

Academic Senate Policy #546 outlines the procedures and instructions to be followed should a student wish to challenge the appropriateness of a grade assigned for a specific course. A student must present a formal written request for change of grade to the Chair of the Committee on Academic Integrity within the first six weeks of the term following the term within which the grade in question was assigned.

STUDENTS CALLED TO PUBLIC SERVICE

Students called to or engaged in public service for reasons beyond their control will not lose registration priority, academic credit, fees, or degree status. Such activities may include military service, fire fighting, public security, or the like. To accommodate such students, Cal Maritime will accept withdrawals at any point throughout the semester.

Students may be granted an extended leave of absence for up to two years for engagement in public service beyond their control. If currently enrolled, they must complete a leave of absence form obtained from the Student Records Office or online at **www.csum.edu/studentrecords/documents/students/misc_forms/Leave%20of%20Absence.pdf**. An approved leave will ensure that they retain their catalog rights and that they can register for subsequent terms without reapplying for admission.

The federal government determines possible student loan grace and deferment provisions based on the circumstances of involvement in a particular public service. Should the federal government modify its regulations governing various loan programs, Cal Maritime will adopt those modifications for its students.

WITHDRAWAL FROM SCHOOL

Students wishing to withdraw from Cal Maritime within the first four weeks of instruction may do so by completing the required paperwork in the Student Records Office. No grade for the semester of withdrawal will be recorded on the student's transcript.

Students having a serious and compelling reason to withdraw after the first four weeks of instruction may do so without penalty. Approval to withdraw during this period must be granted by the student's course instructors, Department Chair, and Academic Dean. If a petition is approved, a grade of "W" will be posted on the student's academic transcript. Students withdrawing during this period *without* a serious and compelling reason may receive a grade of "WU" in all classes. Students withdrawing from school after the first four weeks who have been granted approval to withdraw must still follow all established procedures for official withdrawal from the Academy.

Withdrawal from school with a grade of "W" during the final three weeks of instruction is permitted only when the cause of the withdrawal is clearly beyond the student's control and assignment of an "I" (Incomplete) is not practicable.

Students may either request a leave of absence for up to one year or resign if their return within one year is not anticipated. They are responsible for notifying the Student Records Office during the semester or any break if they do not plan to return to school for the upcoming semester. The required paperwork for official withdrawal will be mailed to the student. (See **READMISSION REQUIREMENTS**.)

ACADEMIC RENEWAL

A maximum of one academic year of coursework with unsatisfactory grades may be excluded from credit and grade point consideration if course repetition is inappropriate (e.g., the major has changed, or the courses are not offered at Cal Maritime).

Removal of previous work from degree consideration under the above circumstances is subject to the following provisions:

1. The student has requested the action formally and has presented evidence that the work completed in the term(s) under consideration is substandard and not representative of present scholastic ability and level of performance; and

2. At least five calendar years must have elapsed since the course work was attempted; and

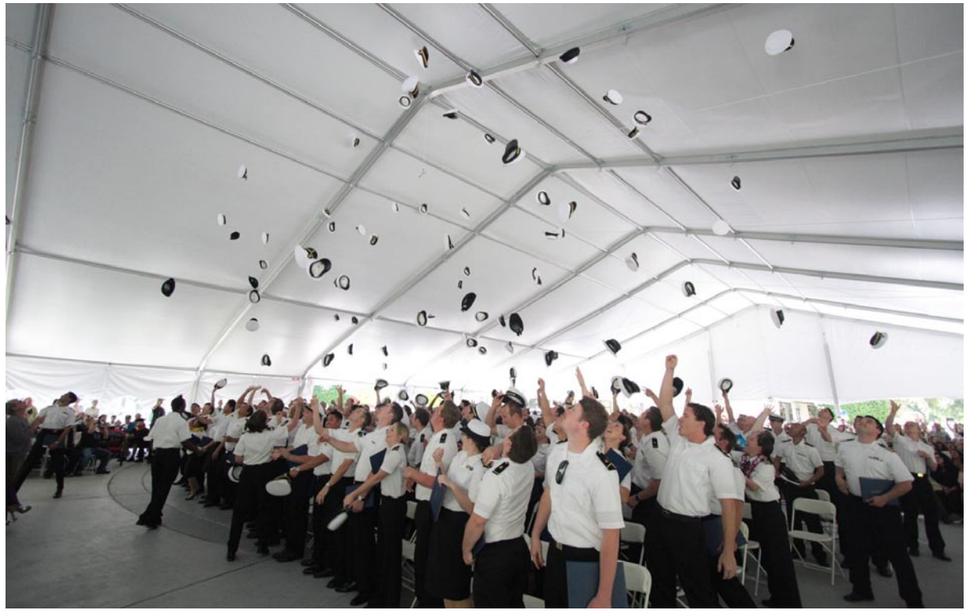
3. Since the most recent work to be disregarded was completed, the student has subsequently completed at the campus 15 semester units with at least a 3.0 GPA; 30 semester units with at least a 2.5 GPA; or 45 semester units with at least a 2.0 GPA; and

4. The student must provide evidence that past performance was due to extenuating circumstances *and that additional enrollment would be necessary to qualify for a degree if the request were not approved;* and

5. When such action is taken, the student's permanent academic record shall be annotated so that it is evident that no work taken during the disregarded term(s), even if satisfactory, may apply toward baccalaureate requirements. However, all work must remain legible on the record to ensure a true and complete academic history.

Information concerning academic regulations and policies at Cal Maritime may be obtained from the Student Records Office, 200 Maritime Academy Drive, Vallejo, CA 94590-8181, at 707/654-1201.

BACCALAUREATE DEGREE REQUIREMENTS



BACCALAUREATE DEGREE REQUIREMENTS

CUMULATIVE GRADE POINT AVERAGE FOR GRADUATION

A candidate for a Bachelor of Science or Bachelor of Arts degree at Cal Maritime must have completed the academic program with a cumulative grade point average of not less than 2.0 in all of three areas:

- Overall: all baccalaureate-level units completed (all college-level work, no matter what the institution, including Cal Maritime);
- Campus: all units completed at Cal Maritime; and
- Major: all units completed in the major.

REQUIREMENTS IN UNITED STATES HISTORY, CONSTITUTION AND AMERICAN IDEALS

Demonstrated competencies in U.S. History, the U.S. Constitution, and California State and local government are required for graduation. These requirements may be satisfied through the completion of one course in U.S. government and one course in U.S. history.

RESIDENCY REQUIREMENTS

A student must spend no fewer than three years at a state or federal academy to be eligible for a U.S. Coast Guard license (46CFR Ch II, Part 310). To be eligible for a degree from Cal Maritime, a student must complete a minimum of 30 units of upper division coursework at this institution.

GRADUATION REQUIREMENT IN WRITING PROFICIENCY

The Graduate Writing Examination (GWE)
The Graduation Writing Assessment Requirement (GWAR) requires that all CSU students demonstrate competence in written communication before they are granted a baccalaureate degree. At Cal Maritime, all students who have achieved junior standing and have completed EGL 100 English Composition and at least 60 units of academic coursework must either take EGL 300 Advanced Writing or challenge said course by successfully completing the Graduate Writing Examination (GWE). Students who pass the GWE will receive credit for EGL 300.

The GWE may be attempted twice, but students who fail a second time must take EGL 300. The class and the exam are offered every semester. Students who sit for the GWE will be charged a fee.

Please note that according to the Chancellor's Office (Executive Order 665), "Students shall be matriculated at the CSU campus where they satisfy the Graduation Writing Assessment Requirement (GWAR)." (1997, p. 4) Unless a student has previously met this requirement at another CSU campus before transferring to Cal Maritime, **he or she must satisfy the GWAR at Cal Maritime**.

Students taking the GWE read a passage–roughly 600 to 800 words–and use the reading as a basis for their written commentary. Students are expected to answer a question (or questions) in a 700-word essay which speaks to clarity, quality of thought, mechanics and completeness, as well as unity and development of concepts. Students have three (3) hours in which to complete the handwritten exam and are allowed to use dictionaries and thesauri. Non-native English speakers and students with documented disabilities will receive special accommodation, upon request.

For more information about the Graduate Writing Assessment Requirement or the Graduate Writing Exam at Cal Maritime, please contact Dr. Julie Chisholm at jchisholm@csum.edu.

U.S. COAST GUARD LICENSE EXAMINATION

The U.S. Coast Guard will issue a license as Third Mate or Third Assistant Engineer to graduates of Cal Maritime who

- are U.S. citizens,
- complete the licensed program,
- meet the minimum physical standards established by the Coast Guard, and
- pass the license examination.

To be eligible to take the license examination, a student must do the following:

- pay the evaluation and examination fee,
- complete all Cal Maritime academic requirements at the completion of the academic year that the examination is taken, and

- complete all Cal Maritime academic requirements within five (5) years of the date of application.

SEA TRAINING REQUIREMENTS

Three 60-day training cruises, established by the U.S. Coast Guard, are required of all students seeking a license as Third Mate or Third Assistant Engineer.

The cruises will be accomplished in the following order on the following vessels: training ship, commercial ship, and training ship. This program is part of the academic curriculum and carries credit for graduation.

Transfers from other state maritime academies may receive credit for each cruise completed within the same program, as long as the sea training was of 60 days or more and the STCW requirements covered on the cruises were completed. Transfers from the U.S. Merchant Marine Academy will receive credit for only 60 days of sea time as the USMMA's training is on a commercial ship. A transfer from the USMMA will have to complete two cruises on board Cal Maritime's training ship. Navy or unlicensed merchant marine sea time may not meet the sea training requirements of Cal Maritime as required by the U.S. Coast Guard.

COMMENCEMENT AND THE AWARDING OF DEGREES AND LICENSES

In order for a degree candidate to participate in commencement he/she must be able to complete all academic requirements before the beginning of the following fall semester. Students are expected to apply for graduation in January of the commencement year. The Student Records Office will then determine eligibility to participate in commencement. Degree and any appropriate license will be awarded upon completion of all degree requirements.

CURRICULUM

THE ACADEMIC PROGRAM

A Four-Part Mission:
The mission of The California Maritime Academy is to provide each student with a college-level education in intellectual learning, applied technology, leadership development, and global awareness.

Intellectual Learning means the acquisition of basic knowledge and the ability to apply that knowledge in new situations. One who has mastered such learning will have progressed beyond a mere absorption of facts and be able to analyze data, identify key issues, evaluate alternatives, solve problems, and apply old solutions to new scenarios. Ultimately, such a thinker will have internalized the conceptual framework of a field and be able to construct new meaning within that field. Hence courses in the major and General Education both begin in the freshman year, to culminate later in courses that require greater maturity and knowledge.

Applied Technology, the second component of Cal Maritime's mission, is active learning that replaces or supplements traditional classroom lecture or discussion. Students who have studied concepts engage in "hands-on" activities that integrate previous knowledge and apply it to real-world situations and scenarios.

This method takes such forms as (a) kinesthetic activities such as operating ships or repairing equipment, (b) problem solving and skill application in simulators, (c) lab work such as applying theories in controlled environments, (d) design projects, and (e) cooperative education projects with industry. Cal Maritime makes the assumption that in our programs, "knowing" the subject goes beyond the intellectual exchange of the classroom and includes, in addition, addressing it in very concrete ways.

Leadership in the modern maritime industry, whether one is a ship's officer or in a management position ashore, requires sophistication and a rare collection of skills and insights that inspire trust, confidence, and the willingness of others to follow. Cadets are exposed to the aspects of leadership in many areas of the academic and co-curricular programs. The foundation for their development is laid in the classroom, in courses that address leadership issues through examining the literature, discussing case studies, and providing laboratory settings such as cruise and simulator. Such courses are to be found throughout the curriculum.

Global Awareness, the fourth component of the Cal Maritime mission, is a necessity in the modern maritime industry. Crews and passengers together represent international communities. Ports of call present varied regulatory and political environments. The world is getting smaller, and the modern maritime leader must appreciate and respect diversity while knowing and understanding the many guises in which it appears.

Students at Cal Maritime receive training in global awareness not only in the Global Studies and Maritime Affairs major, and the many courses scattered throughout the curriculum, but also in the required cruises that provide sea training and visits to ports of call. Here students can experience connections to the larger world and develop an understanding of how their selected vocations will function in the context of an international setting.

Practical Focus
Maritime Academy provide not only intellectual enrichment but also the skills and knowledge necessary for the workplace. Such courses address all of the requirements of the Standards for Training Certification and Watchstanding Code (STCW), as established by the IMO (International Maritime Organization, and all of the training and preparation necessary for the practical work regardless of the field of study.

OPTIONAL MINORS

Students wishing to declare a minor will complete a coherent program of courses in some field other than the major. For descriptions of minors, see the introductory pages to the various departments. The following minors are available:

Department of Engineering Technology
- Qualified Member of the Engine Department (QMED)

ABS School of Maritime Policy and Management
- Business Administration
- Global Studies and Maritime Affairs
- Law

Department of Mechanical Engineering
- Power Generation

Department of Naval Science
- Naval Science

Department of Sciences and Mathematics
- Marine Science

The following requirements apply:

- Minors consist of at least 15 units
- No coursework used to fulfill minor requirements may simultaneously fulfill requirements toward another minor or toward courses that are tagged on the student's curriculum sheet as a "Course in Major"
- All courses used to complete the minor must be completed with at least a "C" grade
- At least nine of the units must be completed at Cal Maritime

A minor will be noted on the student's transcript.

SEA TRAINING

The Sea Training program is divided into three training periods of approximately eight weeks each. During the training periods students put the skills and knowledge they have been taught in the classroom to the ultimate test—actual practice. The entire operation of the *Training Ship GOLDEN BEAR* is performed by students, with licensed faculty officers acting in an advisory capacity. First-year students do the more elementary tasks, while third-year students perform all the duties of ship officers.

The sea training is designed to comply with the International Maritime Organization's Standards of Training, Certification and Watchkeeping of Seafarers, 1995. Additionally, the sea training is designed to provide all students with an understanding of the maritime industry and the requirements of living in a ship environment.

Students' majors will normally determine the type of sea training program that will pertain to them. See below for majors and the type of sea training that accompanies that major:

BA/IBL: 1st sea training experience (in specialized program)

FET: 1st sea training experience as engineering students

GSMA: 1st sea training experience (in specialized program)

MET: all three sea training experiences as engineering students

ME: 1st or all three sea training experiences as engineering students

MT: all three sea training experiences as deck students

ACADEMIC DEPARTMENTS/ SCHOOLS

DEPARTMENT OF ATHLETICS

DEPARTMENT OF ATHLETICS

INTERCOLLEGIATE ATHLETICS

Intercollegiate athletics, an important part of the co-curricular education program offered at Cal Maritime, provides an active link with other college campuses. A variety of intercollegiate sports programs are offered for both men and women. Currently, athletic teams for men consist of basketball, crew, golf, rugby, sailing, soccer and water polo. Women's teams are sponsored in crew, sailing, water polo, and basketball.

The athletic team is known as the ***Keelhaulers,*** after a form of punishment in the bygone days of sailing. This unique name has generated considerable publicity for Cal Maritime over the years, including a listing as one of the Top 25 Collegiate Nicknames in the country.

Approximately 20-25% of the student body participates in one or more intercollegiate sports each year. In order to be eligible, student athletes must maintain a minimum cumulative grade point average of 2.0 or higher.

A new state-of-the-art physical education complex is slated for construction in 2010-11, and the Bodnar Athletic Field has been renovated, with the addition of a scoreboard, bleachers, and lights for night games.

Cal Maritime has a staff of dedicated coaches as well as a National Athletic Trainers' Association (NATA) certified Athletic Trainer who operates a recently expanded training room with state-of-the-art modalities.

Cal Maritime is a member of the National Association of Intercollegiate Athletics (NAIA) and competes in the Far West Region of the California Pacific Conference, of which it is a charter member. The Keelhaulers are also part of the Collegiate Water Polo Association, Western Intercollegiate Rowing Association (WIRA), Pacific Coast Intercollegiate Yacht Racing Association (PCIYRA), and USA Rugby.

ATHLETICS FACULTY

Marv Christopher (2004)
Director of Athletics and Recreation
A.A., Liberal Arts, Mohawk Valley Community College, 1971
B.S., Education, State University of New York, Brockport, 1973
M.S.E., Education, State University of New York, Cortland, 1975

Susan "Charlie" Arms (1999)
Director of Sailing, Varsity Sailing Coach
B.A., Recreation and Leisure Studies, CSU Long Beach, 1987
Master Mariner, 50 GT Inland OUPV, Near Coastal
US SAILING Keelboat Instructor Trainer
Level 1 Small Boat Instructor Trainer
Level 2 Performance Sailing Instructor
Powerboat Handling Instructor

Patrick Hollister (1986)
Assistant Athletic Director
Director of Intramurals and Recreation
B.A., History, University of California, Davis, 1984
M.A., Education, United States International University, 1993

Jeffrey S. Ward (2002)
Head Athletic Trainer
B.A., San Diego State University, 1995
ATC, PTA
M.A., Kinesiology, St. Mary's College of California, 2006

PHYSICAL EDUCATION PROGRAM

As time and their academic schedules allow, many students participate in a variety of physical education classes, such as Beginning/Intermediate Swimming, Sailing, Weight Lifting, and Martial Arts.

A variety of classes are offered to improve the quality of life focus on nutrition, fitness, and weight management. In these classes goals are set and students receive specialized, tailor-made counseling from their instructors.

INTRAMURALS AND RECREATION

Intramural and recreational programs have traditionally been an important aspect of life at Cal Maritime. Activities include competition between divisions in such teams sports as flag football, basketball, indoor soccer, volleyball and softball. Individual tournaments are held in a variety of sports, including tennis, badminton, table tennis, swimming, weight lifting, and fun runs.

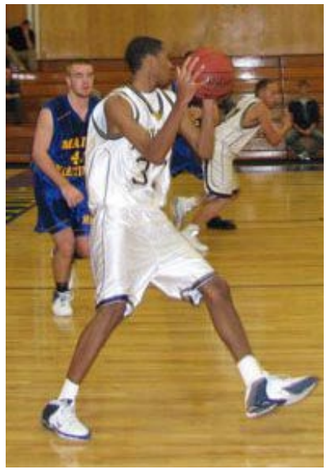
On-campus facilities include playing fields; sports courts; an indoor 25-meter swimming pool; a gymnasium for basketball, badminton, and volleyball; an Olympic free-weight room; weight machine rooms; and a cardio-aerobic exercise room for circuit training.

During the annual summer training cruises aboard the *Training Ship GOLDEN BEAR*, students and staff have access to a well-equipped state-of-the-art exercise and weight room with a variety of bicycle and rowing ergometers and weight machines. The ship's weight room comes fully equipped with mirrors and a TV monitor for viewing exercise videos.

The indoor heated pool is available to students several hours a week with a certified lifeguard present, as is the Olympic free-weight room, also with supervision.

CLUB SPORTS

The Director of Intramurals and Recreation also has responsibility for clubs sponsored by the Associated Student Body. These include baseball, cycling, and fencing.



PHYSICAL EDUCATION AND ATHLETICS COURSES

PE 100. BEGINNING/INTERMEDIATE SWIMMING

PE 111. SPORTS CONDITIONING

PE 114. WEIGHT MANAGEMENT THROUGH EXERCISE

PE 120. WEIGHT TRAINING

PE 125. MARTIAL ARTS

PE 135. DRILL TEAM AND COLOR GUARD

PE 160. BEGINNING SAILING–BASIC KEELBOAT

PE 165. SAIL TRAINING FOR THE MERCHANT MARINE RESERVE

PE 185. STUDY ABROAD ELECTIVE

PE 260. INTERMEDIATE SAILING

PE 385. STUDY ABROAD ELECTIVE

PE 390. INDEPENDENT STUDY

PE 395. SPECIAL TOPICS

INTERCOLLEGIATE SPORTS

Students are required to register in the appropriate sport and fill out the necessary medical forms prior to participation. All student athletes are required to maintain a minimum over-all cumulative GPA of 2.0. Participation is subject to the approval of the coach.

PE 210. INTERCOLLEGIATE SOCCER

PE 225. INTERCOLLEGIATE WATER POLO (MEN'S AND WOMEN'S)

PE 230. INTERCOLLEGIATE SAILING

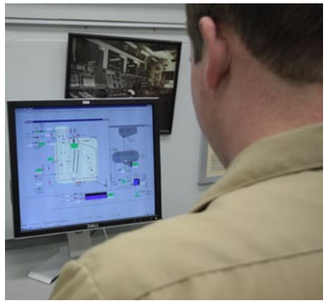
PE 235. INTERCOLLEGIATE CREW

PE 240. INTERCOLLEGIATE BASKETBALL (MEN'S AND WOMEN'S)

PE 250. INTERCOLLEGIATE GOLF

PE 255. RUGBY

DEPARTMENT OF ENGINEERING TECHNOLOGY



DEPARTMENT OF ENGINEERING TECHNOLOGY

The Department of Engineering Technology offers two unique degree programs: Facilities Engineering Technology and Marine Engineering Technology. Both programs share a common educational philosophy that supports the four-points of Cal Maritime's mission: intellectual learning, applied technology, leadership development and global awareness.

- Intellectual learning is achieved in the classroom, beginning with a foundation in mathematics and the physical sciences, and progressing into the engineering sciences of materials, solid and fluid mechanics, thermodynamics, electricity, electronics, system controls and power engineering. General education in written, oral and digital communications, humanities and social sciences rounds out the curricula.

- Engineering laboratories, power plant simulators, sea training and industry internships afford students the opportunity to apply the principles of engineering technology in real-world operations and maintenance. Other practical competencies are attained in manufacturing processes coursework: engineering graphics, machine shop and welding.

- Students gain practical experience as leaders and followers of small working groups in the classroom and laboratory and as watch teams aboard ship and in power plant simulators. Leadership skills may be further developed through active participation in the Corps of Cadets, sport teams, and campus clubs.

- Voyages throughout the Pacific Rim aboard the training ship and international exchange programs afford the students opportunity to visit foreign lands and experience cultures around the world. In order to foster a responsible approach to environmental stewardship, Engineering Technology coursework explores advanced engine technologies for emission abatement, alternative fuels and renewable energy resources.

Graduates of the Facilities Engineering Technology and Marine Engineering Technology programs receive a Bachelor of Science degree accredited by the Technology Accreditation Commission of ABET. Marine Engineering Technology graduates are also certified in the STCW competencies for Officers in Charge of the Engineering Watch. Owing to the practical training, leadership development and qualifying professional examinations included in both curricula, students of the Engineering Technology majors are "work ready" upon graduation.

ENGINEERING TECHNOLOGY FACULTY

Thomas W. Mader (2000)
Associate Professor and Chair
A.B., Physics, UC Berkeley, 1970
M.S., Nuclear Physics, Naval Postgraduate School, 1971
M.S.E., Engineering Management, The Catholic University of America, 1997
Chief Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Mitchell G. Cihomsky (2008)
Assistant Professor, Faculty Chief Engineer
B.S., Business and Economics, Lehigh University, 1975
Diploma, Calhoon MEBA Engineering School, 1979
M.B.A., New York University, 1986
Chief Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Jonathan Fischer (2006)
Assistant Professor
B.S., Biomechanics Engineering, University of Pittsburgh, PA, 2002
B.A., History of Science, University of Pittsburgh, PA, 2002
M.S., Mechanical Engineering, UC Berkeley, 2004

Scott Green (1997)
Maritime Vocational Lecturer II
B.S., Marine Engineering Technology, California Maritime Academy, 1986
Third Assistant Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Robert Jackson (2000)
Maritime Vocational Instructor III
B.S., Marine Engineering, California Maritime Academy, 1976
Chief Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Michael S. Kazek (2008)
Lecturer
B.S., Marine Engineering, U.S. Coast Guard Academy, 1984
M.S.E., Naval Architecture and Marine Engineering, University of Michigan, 1986
M.S.E., Mechanical Engineering, University of Michigan, 1986

Terry Mancilla (2009)
Assistant Professor
A.S., Electronics, College of Marin, 1970
B.S., Electrical Engineering, San Francisco State University, 1972
M.S., Engineering Management, UC Berkeley, 1976

John V. Massey (2006)
Assistant Professor, FET Program Director
B.S., Nuclear Engineering, Georgia Institute of Technology, 1975
M.S., Nuclear Engineering, Purdue University, 1976
Ph.D., Nuclear Engineering, Georgia Institute of Technology, 1980

Jennifer E. Ross (2003)
Maritime Vocational Lecturer II
B.S., Marine Engineering Technology, California Maritime Academy, 1999
Second Assistant Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Michael Strange (2008)
Assistant Professor
B.S., Mechanical Engineering, San Diego State University, 1984
M.S., Mechanical Engineering, Stanford University, 1986

EMERITUS FACULTY

George N. Christodoulou (1983–1995)
Professor

Albert S. McLemore (1977-2006)
Professor

THE MAJORS

FACILITIES ENGINEERING TECHNOLOGY

The Facility Engineering Technology (FET) major provides an undergraduate education for industrial engineers employed in large-scale facilities; commercial buildings, power plants and manufacturing facilities. The curriculum provides a foundation in the fundamentals of mechanical and electrical system engineering, as well as practical training in the operation and maintenance of real-world commercial and industrial facilities. The FET program has the following educational objectives:

- Graduates will have the knowledge and ability to perform analysis, applied design, and development of systems and processes that support the effective operations of facilities.

- Graduates will have the knowledge and ability to manage and lead technical activities in the facilities and power industries.

- Graduates will have the knowledge and ability to function effectively as leaders on professional teams.

- Graduates will have the knowledge and ability to communicate effectively with speaking, writing, and presentation skills including the ability to put together a compelling argument.

- Graduates will demonstrate a respect for professional, ethical, and social issues as well as a commitment to safety, quality and productivity.

The FET curriculum includes three 60-day practical training experiences; one sea training period aboard the *Training Ship GOLDEN BEAR* and two industry co-operative education opportunities. The FET program also requires satisfactory completion of a qualifying examination administered by the Association for Facilities Engineering (AFE) to become a Certified Plant Engineer-in-Training (CPE-IT).

MARINE ENGINEERING TECHNOLOGY

The Marine Engineering Technology (MET) major provides an undergraduate education for marine engineers employed aboard commercial and military vessels. The curriculum provides a foundation in the engineering fundamentals of shipboard mechanical and electrical systems, as well as practical training in the operation and maintenance of steam, motor and gas turbine propulsion plants. The MET program has the following educational objectives:

- Graduates will have the knowledge and ability to function effectively as leaders on professional teams.
- Graduates will have the knowledge and ability to communicate effectively with speaking, writing, and presentation skills including the ability to put together a compelling argument.
- Graduates will demonstrate a respect for professional, ethical, and social issues as well as a commitment to safety, quality and productivity.
- Graduates will have the knowledge and ability to be respected professionals as licensed engineers and in other positions in the maritime industry.
- Graduates will have the knowledge and ability to manage and lead technical activities.

The MET curriculum includes three 60-day practical training experiences; two sea training periods aboard the *Training Ship GOLDEN BEAR* and one sea training period aboard a military or commercial vessel. The MET program also requires satisfactory completion of a qualifying examination administered by the U.S. Coast Guard to become a Third Assistant Engineer, Steam and Motor Vessels, Unlimited Horsepower.

PROFESSIONAL CERTIFICATIONS AND MEMBERSHIPS

Students completing ET 342 Refrigeration and Air Conditioning coursework are eligible to take a written exam for professional certification as EPA Universal Technicians.

Students who achieve a grade point average in the upper 25% of their class for three or more consecutive semesters are awarded membership in the Engineering Technology National Honor Society, TAU ALPHA PI.

In order to further their professional development students of the Engineering Technology majors are encouraged to become student members of societies associated with facilities and marine engineering professions. Local area professional societies that sponsor undergraduate programs and provide career networking opportunities include the Association for Facilities Engineering (AFE), International Society of Automation (ISA) and the Society of Naval Architects and Marine Engineers (SNAME).

MINOR IN MARINE ENGINEERING

The Qualified Member of the Engine Department (QMED) minor is designed for Marine Transportation students who seek a better understanding of engineering systems and wish to become eligible for the U.S. Coast Guard QMED endorsement. See Department of Marine Transportation for details.

Required for QMED minor:

		Units
CRU 150	Sea Training I (Engine)	8
EPO 110	Plant Operations I	1
EPO 125	Intro to Marine Engineering	3
EPO 213	Welding Lab	1
EPO 215	Manufacturing Processes I	1
EPO 220	Diesel Engineering I	2
EPO 321	Diesel Plant Simulator	1
EPO 324	Refrigeration and A/C for QMED	3
EPO 325	QMED Fundamentals	3

MINOR IN POWER GENERATION

The Power Generation minor is available to students completing the Mechanical Engineering major. This minor is designed to provide practical knowledge and operational training in power generation—including generation from fossil fuels and renewable sources. See Department of Mechanical Engineering for details.

Required for Power Generation minor:

		Units
ENG 440	Power Engineering	3
EPO 210	Plant Operations II	1
EPO 214	Boilers	3
EPO 230	Steam Plant System Operations	1
EPO 235	Steam Plant Watch Team Management	1
EPO 310	Plant Operations III	1
EPO 312	Turbines	3
EPO 319	Facilities Engineering Diagnostics Lab	1
EPO 321	Diesel Plant Simulator	1

FACILITIES ENGINEERING TECHNOLOGY MAJOR
GOLD COMPANY
CURRICULUM

Subject to Change

Total Units: 163

Certified Plant Engineer-In Training Certificate Required for Graduation

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
ENG	100	Engineering Graphics	2.0
EPO	110	Plant Operations I	1.0
EPO	125	Intro to Marine Engineering✱	3.0
EPO	213	Welding Lab	1.0
ET	110	Intro to Engineering Technology✱	1.0
MTH	100	College Algebra & Trigonometry	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**16.0**

SPRING (Freshman Year)

CHE	205	Chemistry of Plant Processes✱	3.0
DL	105	Marine Survival	1.0
DL	105L	Marine Survival Lab	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
EGL	100	English Composition	3.0
ELEC	8	American Institutions Elective	3.0
LIB	100	Information Fluency in the Digital World	2.0
MTH	210	Calculus I	4.0
		Total	**17.0**

SPRING CRUISE (Freshman Year)

CRU	150	Sea Training I (Engine)	8.0
EPO	220	Diesel Engineering I✱	2.0
		Total	**10.0**

FALL (Sophomore Year)

COM	220	Programming Apps for ETs	1.0
COM	220L	Programming Apps for ETs Lab	1.0
ELEC	20	Critical Thinking Elective	3.0
EPO	210	Plant Operations II	1.0
EPO	214	Boilers✱	3.0
EPO	215	Manufacturing Processes I	1.0
EPO	230	Steam Plant System Operations✱	1.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**19.0**

SPRING (Sophomore Year)

EGL	110	Speech Communication	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
EPO	235	Steam Plant Watch Team Mgmt✱	1.0
EPO	312	Turbines✱	3.0
ET	232	Statics✱	3.0
PHY	205	Engineering Physics II	4.0
		Total	**17.0**

SPRING CO-OP (Sophomore Year)

CEP	270	FET Co-Op I	8.0
		Total	**8.0**

FALL (Junior Year)

ELEC	22	Humanities Elective (Upper Division)	3.0
EPO	319	Facilities Engr. Diagnostics Lab✱	1.0
ET	230	Properties of Materials✱	2.0
ET	230L	Properties of Materials Lab✱	1.0
ET	250	Electrical Circuits✱	3.0
ET	250L	Electrical Circuits Lab✱	1.0
ET	330	Dynamics✱	3.0
ET	344	Thermodynamics✱	3.0
		Total	**17.0**

SPRING (Junior Year)

EGL	300	Advanced Writing	(3.0)
EPO	310	Plant Operations III	1.0
EPO	315	Manufacturing Processes II	1.0
EPO	321	Diesel Plant Simulator✱	1.0
ET	332	Strength of Materials✱	3.0
ET	340	Fluid Mechanics✱	3.0
ET	340L	Fluid Mechanics Lab✱	1.0
ET	342	Refrigeration & A/C✱	2.0
ET	342L	Refrigeration & A/C Lab✱	1.0
ET	370	Electronics✱	3.0
ET	370L	Electronics Lab✱	1.0
		Total	**17.0**

SPRING CO-OP (Junior Year)

CEP	370	FET Co-Op II	8.0
		Total	**8.0**

FALL (Senior Year)

ELEC	9	American Institutions Elective	3.0
ENG	470	Engineering Management✱	3.0
ET	350	Electrical Machinery✱	3.0
ET	350L	Electrical Machinery Lab✱	1.0
ET	400	Instr & Measurement✱	3.0
ET	400L	Instr & Measurement Lab✱	1.0
ET	442	HVAC✱	2.0
ET	442L	HVAC Lab✱	1.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	32	Social Science Elective (Upper Division)	3.0
ENG	472	Facilities Management✱	3.0
ET	460	Automation✱	3.0
ET	460L	Automation Lab✱	1.0
ET	490	Power Engr Technology✱	3.0
ET	490L	Power Engr Technology Lab✱	1.0
HUM	310	Engineering Ethics	3.0
		Total	**17.0**

✱ **Courses in Major (CGPA = 2.0 is Required)**

FACILITIES ENGINEERING TECHNOLOGY MAJOR
BLUE COMPANY
CURRICULUM

Subject to Change

Total Units: 163 — **Certified Plant Engineer-In Training Certificate Required for Graduation**

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
ELEC	8	American Institutions Elective	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
ENG	100	Engineering Graphics	2.0
ET	110	Intro to Engineering Technology✱	1.0
MTH	100	College Algebra & Trigonometry	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**17.0**

SPRING (Freshman Year)

CHE	205	Chemistry of Plant Processes✱	3.0
DL	105	Marine Survival	1.0
DL	105L	Marine Survival Lab	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
EGL	100	English Composition	3.0
EPO	110	Plant Operations I	1.0
EPO	125	Intro to Marine Engineering✱	3.0
EPO	213	Welding Lab	1.0
MTH	210	Calculus I	4.0
		Total	**17.0**

SPRING CRUISE (Freshman Year)

CRU	150	Sea Training I (Engine) 8.0
EPO	220	Diesel Engineering I✱ 2.0
		Total 10.0

FALL (Sophomore Year)

COM	220	Programming Apps for ETs	1.0
COM	220L	Programming Apps for ETs Lab	1.0
ELEC	20	Critical Thinking Elective	3.0
EPO	210	Plant Operations II	1.0
EPO	214	Boilers✱	3.0
EPO	215	Manufacturing Processes I	1.0
EPO	230	Steam Plant System Operations✱	1.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**19.0**

SPRING (Sophomore Year)

EGL	110	Speech Communication	3.0
EPO	235	Steam Plant Watch Team Mgmt✱	1.0
EPO	312	Turbines✱	3.0
ET	232	Statics✱	3.0
LIB	100	Information Fluency in the Digital World	2.0
PHY	205	Engineering Physics II	4.0
		Total	**16.0**

SPRING CO-OP (Sophomore Year)

CEP	270	FET Co-Op I 8.0
		Total 8.0

FALL (Junior Year)

ELEC	22	Humanities Elective (Upper Division)	3.0
EPO	319	Facilities Engr. Diagnostics Lab✱	1.0
ET	230	Properties of Materials✱	2.0
ET	230L	Properties of Materials Lab✱	1.0
ET	250	Electrical Circuits✱	3.0
ET	250L	Electrical Circuits Lab✱	1.0
ET	330	Dynamics✱	3.0
ET	344	Thermodynamics✱	3.0
		Total	**17.0**

SPRING (Junior Year)

EGL	300	Advanced Writing	(3.0)
EPO	310	Plant Operations III	1.0
EPO	315	Manufacturing Processes II	1.0
EPO	321	Diesel Plant Simulator✱	1.0
ET	332	Strength of Materials✱	3.0
ET	340	Fluid Mechanics✱	3.0
ET	340L	Fluid Mechanics Lab✱	1.0
ET	342	Refrigeration & A/C✱	2.0
ET	342L	Refrigeration & A/C Lab✱	1.0
ET	370	Electronics✱	3.0
ET	370L	Electronics Lab✱	1.0
		Total	**17.0**

SPRING CO-OP (Junior Year)

CEP	370	FET Co-Op II 8.0
		Total 8.0

FALL (Senior Year)

ELEC	9	American Institutions Elective	3.0
ENG	470	Engineering Management✱	3.0
ET	350	Electrical Machinery✱	3.0
ET	350L	Electrical Machinery Lab✱	1.0
ET	400	Instr & Measurement✱	3.0
ET	400L	Instr & Measurement Lab✱	1.0
ET	442	HVAC✱	2.0
ET	442L	HVAC Lab✱	1.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	32	Social Science Elective (Upper Division)	3.0
ENG	472	Facilities Management✱	3.0
ET	460	Automation✱	3.0
ET	460L	Automation Lab✱	1.0
ET	490	Power Engr Technology✱	3.0
ET	490L	Power Engr Technology Lab✱	1.0
HUM	310	Engineering Ethics	3.0
		Total	**17.0**

✱ **Courses in Major (CGPA = 2.0 is Required)**

MARINE ENGINEERING TECHNOLOGY MAJOR
GOLD COMPANY
CURRICULUM

Subject to Change

Total Units: 161 — **Third Assistant Engineer's/OICEW License Required for Graduation**

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
ENG	100	Engineering Graphics▶	2.0
EPO	110	Plant Operations I▶	1.0
EPO	125	Intro to Marine Engineering✱	3.0
EPO	213	Welding Lab▶	1.0
ET	110	Intro to Engineering Technology✱	1.0
MTH	100	College Algebra & Trigonometry	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**16.0**

SPRING (Freshman Year)

DL	105	Marine Survival▶	1.0
DL	105L	Marine Survival Lab▶	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
EGL	100	English Composition	3.0
ELEC	8	American Institutions Elective	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
LIB	100	Information Fluency in the Digital World	2.0
MTH	210	Calculus I	4.0
		Total	**17.0**

SPRING CRUISE (Freshman Year)

CRU	150	Sea Training I (Engine)▶ 8.0
EPO	220	Diesel Engineering I✱ 2.0
		Total 10.0

FALL (Sophomore Year)

COM	220	Programming Appl for ETs	1.0
COM	220L	Programming Appl for ETs Lab	1.0
ELEC	20	Critical Thinking Elective	3.0
EPO	210	Plant Operations II▶	1.0
EPO	214	Boilers✱	3.0
EPO	215	Manufacturing Processes I▶	1.0
EPO	230	Steam Plant System Operations▶✱	1.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**19.0**

SPRING (Sophomore Year)

EGL	110	Speech Communication▶	3.0
EPO	235	Steam Plant Watch Team Mgmt▶✱	1.0
EPO	312	Turbines✱	3.0
ET	232	Statics✱	3.0
NSC	100	Naval Science for the MMO	3.0
PHY	205	Engineering Physics II	4.0
		Total	**17.0**

SPRING CRUISE (Sophomore Year)

CRU	250	Sea Training II (Engine) 8.0
		Total 8.0

FALL (Junior Year)

ELEC	22	Humanities Elective (Upper Division)	3.0
ET	230	Properties of Materials✱	2.0
ET	230L	Properties of Materials Lab▶✱	1.0
ET	250	Electrical Circuits✱	3.0
ET	250L	Electrical Circuits Lab▶✱	1.0
ET	330	Dynamics✱	3.0
ET	344	Thermodynamics✱	3.0
FF	200	Basic/Adv Marine Firefighting◘▶	0.0
		Total	**16.0**

SPRING (Junior Year)

EGL	300	Advanced Writing▶	(3.0)
EPO	310	Plant Operations III	1.0
EPO	315	Manufacturing Processes II▶	1.0
EPO	322	Diesel Engineering II/Simulator✱	1.0
EPO	322L	Diesel Engineering II/Simulator Lab▶✱	1.0
ET	332	Strength of Materials✱	3.0
ET	340	Fluid Mechanics✱	3.0
ET	340L	Fluid Mechanics Lab✱	1.0
ET	342	Refrigeration & A/C✱	2.0
ET	342L	Refrigeration & A/C Lab✱	1.0
ET	370	Electronics✱	3.0
ET	370L	Electronics Lab✱	1.0
		Total	**18.0**

SPRING CRUISE (Junior Year)

CRU	350	Sea Training III (Engine)▶ 8.0
		Total 8.0

FALL (Senior Year)

ELEC	9	American Institutions Elective	3.0
ENG	430	Naval Architecture▶✱	3.0
ENG	470	Engineering Management✱	3.0
ET	350	Electrical Machinery✱	3.0
ET	350L	Electrical Machinery Lab▶✱	1.0
ET	400	Instr & Measurement✱	3.0
ET	400L	Instr & Measurement Lab✱	1.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	32	Social Science Elective (Upper Division)	3.0
EPO	217	Shipboard Medical▶	1.0
ET	460	Automation✱	3.0
ET	460L	Automation Lab✱	1.0
ET	490	Power Engr Technology✱	3.0
ET	490L	Power Engr Technology Lab✱	1.0
HUM	310	Engineering Ethics	3.0
		Total	**15.0**

▶ **STCW Courses (Must receive a "C-" or better, or "CR")**

✱ **Courses in Major (CGPA = 2.0 is Required)**

◘ **FF 200 Basic/Advanced Marine Firefighting is also offered in Spring (Junior Year)**

MARINE ENGINEERING TECHNOLOGY MAJOR **Subject to Change**
BLUE COMPANY
CURRICULUM

Total Units: 161 **Third Assistant Engineer's/OICEW License Required for Graduation**

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
ELEC	8	American Institutions Elective	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
ENG	100	Engineering Graphics►	2.0
ET	110	Intro to Engineering Technology❋	1.0
MTH	100	College Algebra & Trigonometry	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**17.0**

SPRING (Freshman Year)

DL	105	Marine Survival►	1.0
DL	105L	Marine Survival Lab►	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
EGL	100	English Composition	3.0
EPO	110	Plant Operations I►	1.0
EPO	125	Intro to Marine Engineering❋	3.0
EPO	213	Welding Lab►	1.0
LIB	100	Information Fluency in the Digital World	2.0
MTH	210	Calculus I	4.0
		Total	**16.0**

SPRING CRUISE (Freshman Year)

CRU	150	Sea Training I (Engine)►	8.0
EPO	220	Diesel Engineering I❋	2.0
		Total	**10.0**

FALL (Sophomore Year)

COM	220	Programming Apps for ETs	1.0
COM	220L	Programming Apps for ETs Lab	1.0
ELEC	20	Critical Thinking Elective	3.0
EPO	210	Plant Operations II►	1.0
EPO	214	Boilers❋	3.0
EPO	215	Manufacturing Processes I►	1.0
EPO	230	Steam Plant System Operations►❋	1.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**19.0**

SPRING (Sophomore Year)

EGL	110	Speech Communication►	3.0
EPO	235	Steam Plant Watch Team Mgmt►❋	1.0
EPO	312	Turbines❋	3.0
ET	232	Statics❋	3.0
NSC	100	Naval Science for the MMO	3.0
PHY	205	Engineering Physics II	4.0
		Total	**17.0**

SPRING CRUISE (Sophomore Year)

CRU	250	Sea Training II (Engine)	8.0
		Total	**8.0**

FALL (Junior Year)

ELEC	22	Humanities Elective (Upper Division)	3.0
ET	230	Properties of Materials❋	2.0
ET	230L	Properties of Materials Lab►❋	1.0
ET	250	Electrical Circuits❋	3.0
ET	250L	Electrical Circuits Lab►❋	1.0
ET	330	Dynamics❋	3.0
ET	344	Thermodynamics❋	3.0
FF	200	Basic/Adv Marine Firefighting◘►	0.0
		Total	**16.0**

SPRING (Junior Year)

EGL	300	Advanced Writing►	(3.0)
EPO	310	Plant Operations III	1.0
EPO	315	Manufacturing Processes II►	1.0
EPO	322	Diesel Engineering II/Simulator❋	1.0
EPO	322L	Diesel Engineering II/Simulator Lab►❋	1.0
ET	332	Strength of Materials❋	3.0
ET	340	Fluid Mechanics❋	3.0
ET	340L	Fluid Mechanics Lab❋	1.0
ET	342	Refrigeration & A/C❋	2.0
ET	342L	Refrigeration & A/C Lab❋	1.0
ET	370	Electronics❋	3.0
ET	370L	Electronics Lab❋	1.0
		Total	**18.0**

SPRING CRUISE (Junior Year)

CRU	350	Sea Training III (Engine)►	8.0
		Total	**8.0**

FALL (Senior Year)

ELEC	9	American Institutions Elective	3.0
ENG	430	Naval Architecture►❋	3.0
ENG	470	Engineering Management❋	3.0
ET	350	Electrical Machinery❋	3.0
ET	350L	Electrical Machinery Lab►❋	1.0
ET	400	Instr & Measurement❋	3.0
ET	400L	Instr & Measurement Lab❋	1.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	32	Social Science Elective (Upper Division)	3.0
EPO	217	Shipboard Medical►	1.0
ET	460	Automation❋	3.0
ET	460L	Automation Lab❋	1.0
ET	490	Power Engr Technology❋	3.0
ET	490L	Power Engr Technology Lab❋	1.0
HUM	310	Engineering Ethics	3.0
		Total	**15.0**

► STCW Courses (Must receive a "C-" or better, or "CR")
❋ Courses in Major (CGPA = 2.0 is Required)
◘ FF 200 Basic/Advanced Marine Firefighting is also offered in Spring (Junior Year)

ENGINEERING TECHNOLOGY COURSES

COOPERATIVE EDUCATION

CEP 185. STUDY ABROAD ELECTIVE

CEP 270. FET CO-OP I

CEP 370. FET CO-OP II

CEP 385. STUDY ABROAD ELECTIVE

CEP 390. INDEPENDENT STUDY

CEP 395. SPECIAL TOPICS

CRUISE

CRU 150. SEA TRAINING I (ENGINE)

CRU 185. STUDY ABROAD ELECTIVE

CRU 250. SEA TRAINING II (ENGINE)
Commercial Cruise

CRU 275. SEA TRAINING II (ENGINE)
(COAST GUARD ONLY)

CRU 350. SEA TRAINING III (ENGINE)

CRU 385. STUDY ABROAD ELECTIVE

CRU 390. INDEPENDENT STUDY

CRU 395. SPECIAL TOPICS

ENGINEERING

ENG 100. ENGINEERING GRAPHICS

ENG 185. STUDY ABROAD ELECTIVE

ENG 385. STUDY ABROAD ELECTIVE

ENG 390. INDEPENDENT STUDY

ENG 395. SPECIAL TOPICS

ENG 430. NAVAL ARCHITECTURE

ENG 470. ENGINEERING MANAGEMENT

ENG 472. FACILITIES MANAGEMENT

ENGINEERING PLANT OPERATIONS

EPO 125. INTRODUCTION TO MARINE ENGINEERING

EPO 185. STUDY ABROAD ELECTIVE

EPO 213. WELDING LAB

EPO 214. BOILERS

EPO 215. MANUFACTURING PROCESSES I

EPO 217. SHIPBOARD MEDICAL

EPO 220. DIESEL ENGINEERING I
.

EPO 230. STEAM PLANT SYSTEM OPERATIONS

EPO 235. STEAM PLANT WATCH TEAM MANAGEMENT

EPO 312. TURBINES

EPO 315. MANUFACTURING PROCESSES II

EPO 319. FACILITIES ENGINEERING DIAGNOSTICS LAB

EPO 321. DIESEL PLANT SIMULATOR

EPO 322. DIESEL ENGINEERING II/ SIMULATOR

EPO 322L. DIESEL ENGINEERING II/ SIMULATOR LAB

EPO 324. REFRIGERATION & A/C FOR QMED

EPO 325. QMED FUNDAMENTALS

EPO 385. STUDY ABROAD ELECTIVE

EPO 390. INDEPENDENT STUDY

EPO 395. SPECIAL TOPICS

EPO 413. ADVANCED WELDING AND FABRICATION

ENGINEERING TECHNOLOGY

ET 110. INTRODUCTION TO ENGINEERING TECHNOLOGY

ET 185. STUDY ABROAD ELECTIVE

ET 230. PROPERTIES OF MATERIALS

ET 230L. PROPERTIES OF MATERIALS LAB

ET 232. STATICS

ET 250. ELECTRICAL CIRCUITS

ET 250L. ELECTRICAL CIRCUITS LAB

ET 330. DYNAMICS

ET 332. STRENGTH OF MATERIALS

ET 340. FLUID MECHANICS

ET 340L. FLUID MECHANICS LAB

ET 342. REFRIGERATION AND AIR CONDITIONING

ET 342L. REFRIGERATION AND AIR CONDITIONING LAB

ET 344. THERMODYNAMICS

ET 350. ELECTRICAL MACHINERY

ET 350L. ELECTRICAL MACHINERY LAB

ET 370. ELECTRONICS

ET 370L. ELECTRONICS LAB

ET 385. STUDY ABROAD ELECTIVE

ET 390. INDEPENDENT STUDY

ET 395. SPECIAL TOPICS

ET 400. INSTRUMENTATION AND MEASUREMENT

ET 400L. INSTRUMENTATION AND MEASUREMENT LAB

ET 442. HEATING, VENTILATION, AND AIR CONDITIONING

ET 442L. HEATING, VENTILATION, AND AIR CONDITIONING LAB

ET 460. AUTOMATION

ET 460L. AUTOMATION LAB

ET 490. POWER ENGINEERING TECHNOLOGY

ET 490L. POWER ENGINEERING TECHNOLOGY LAB

HUMANITIES

HUM 310. ENGINEERING ETHICS

DEPARTMENT OF THE LIBRARY

ACRL Association of College & Research Libraries
A Division of the American Library Association

DEPARTMENT OF THE LIBRARY

LIBRARY SERVICES

The Cal Maritime Library is service-oriented and committed to developing savvy information users. Study and research are supported through the Library's Information Fluency Program, rich collections of all types of materials, study facilities, ship's library, a top-notch technology infrastructure, and computerized online services.

The library building is a vital place for learning with inspiring views of the Carquinez Straits and San Pablo Bay. It is open to the campus and general public more than any other service facility on campus. The collections number approximately 35,000 books, 7,500 bound periodicals, 250 current magazine and journal subscriptions, and hundreds of DVDs and VHS recordings. 1,000 square feet of documents, photographs, and artifacts preserving more than 75 years of Cal Maritime heritage are also collected and made available for research and display. The library also provides a continually updated collection of best sellers for recreational reading.

Computer workstations in the Library connect to the campus network, coursework, and the Internet at large. The library building also provides wireless connectivity to those with portable computing devices.

The library's web site, **http://library.csum.edu**, is the portal for locating its information resources. Online resources include over 12,000 current periodicals, 5,000 e-books, and substantial publications from state, national and international governments. In addition, books and other materials can be located and delivered within days from virtually any U.S. library via the library's online services systems. Vital web resources are collected and organized for convenient access. The library is increasingly making course materials available through its E-Reserves system and a variety of other types of research and historical materials available through its E-Archives.

Requests to purchase or otherwise acquire materials for the collections are sought and given every consideration.

INFORMATION FLUENCY PROGRAM

The Cal Maritime Library is a "teaching library." Instructional opportunities abound. The semester-long, two-credit course "LIB 100 Information Fluency in the Digital World", introduces students to computing, critical thinking, information access, ethical research practices and evaluation skills. Other classroom instructional opportunities are integrated into the syllabi of several core freshmen level courses and within higher level courses within the curriculum of a major. In addition, the library also authors instructional materials and makes them available within courses, on the web, and at the literature racks in the library building. The Library's professional faculty and staff are keen to consult with students, faculty, staff, and industry.

LIBRARY FACULTY AND STAFF

Carl Phillips (1999)
Library Director
B.A., History, University of Washington, Seattle, 1989
M.S., Library and Information Science, University of Illinois, Urbana-Champaign, 1991

Benjamin Bolin (2006)
Sr. Assistant Librarian
B.A., History, Brigham Young University, 2004
M.L.I.S., Library and Information Science, San José State University, 2007

Jennifer Haupt (2008)
Library Assistant II
B.A., History, San Francisco State University, 1994

Mark Stackpole (2004)
Information Technology Consultant
B.A., Theatre Arts, Indiana University, Bloomington, 1983
M.L.S., Library and Information Science, Case Western Reserve University, 1984

Larry Stevens (2008)
Library/Archives Assistant

Michele Van Hoeck (2009)
Sr. Assistant Librarian
B.S., Electrical Engineering, Cornell University, 1983
M.L.I.S., Library and Information Science, University of California, Berkeley, 1993
M.A., English, Sonoma State University, 2004

LIBRARY COURSES

LIBRARY

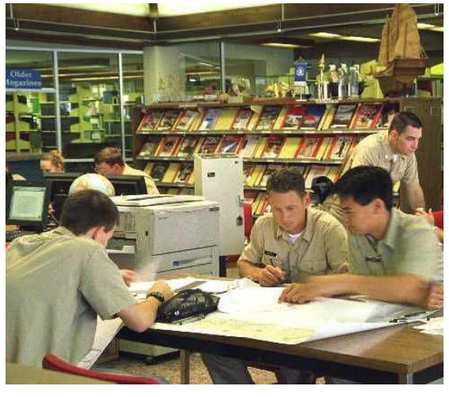
LIB 100. INFORMATION FLUENCY IN THE DIGITAL WORLD

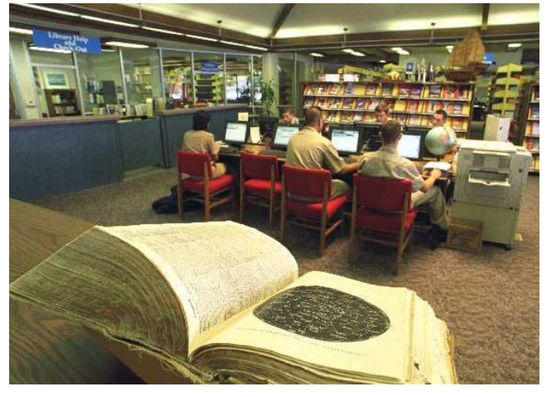
LIB 185. STUDY ABROAD ELECTIVE

LIB 385. STUDY ABROAD ELECTIVE

LIB 390. INDEPENDENT STUDY

LIB 395. SPECIAL TOPICS





DEPARTMENT OF MARINE TRANSPORTATION

Photo by Bruce Damonte for NBBJ

DEPARTMENT OF MARINE TRANSPORTATION

The degree program in Marine Transportation includes extensive academic breadth and technical expertise. Through experiences in the classroom, laboratories, in various simulators, and aboard the training ship and commercial vessels, students achieve a level of professional confidence, competence, and leadership that allows them to function in decision-making positions with the international transportation industry.

MISSION STATEMENT

The mission of the Department of Marine Transportation is to develop in our graduates the practical skills, judgment, character, and leadership traits necessary to become leaders in the maritime industry, both at sea and ashore. To this end, by way of practical and theoretical training at sea, in simulators, and in the classroom, the Marine Transportation Program seeks to do the following:

- prepare our students to meet, along with a wide array of seamanship and advanced mariners skills, all U.S. Coast Guard and international requirements for Second Mate/Officer in Charge of the Navigational Watch at the Operational Level;
- provide them with a well-rounded liberal education culminating in a Bachelor of Science Degree in accordance with California State University requirements;
- imbue in them a strong sense of ethics, personal integrity, accountability, and officership;
- provide opportunities to develop the leadership and communication skills (both written and verbal) to be an effective leader;
- provide opportunities for obtaining various additional maritime professional certifications.

MARINE TRANSPORTATION FACULTY

Samuel R. Pecota (2004)
Associate Professor and Chair
B.S., Nautical Science,
U.S. Merchant Marine Academy, 1980
M.A., Transportation Management,
American Military University, 2005
Master Mariner, Unlimited, Any Ocean

Steve Browne (2004)
Associate Professor
B.A., Computer Studies,
Northwestern University, 1989
M.E.M., Engineering Management,
Northwestern University, 1997
Master Mariner, Unlimited, Any Ocean

Peter J. Hayes (2001)
Associate Professor
B.S., Marine Transportation,
Texas A&M University at Galveston, 1988
M.A., Public and Private Management,
University of Houston, Clear Lake, 1999
J.D., Concord Law School, 2007
Master Mariner, Unlimited, Any Ocean

Mark P. Hensley (2004)
Maritime Vocational Lecturer II
B.S., Nautical Science,
U.S. Merchant Marine Academy, 1970
Master Mariner, Unlimited, Any Ocean
Master Mariner, Auxiliary Sail Vessels,
Limited Tonnage
First Class Pilot, Hinchinbrook Entrance to Rocky Point, AK

Paul R. Leyda (1992)
Professor, Faculty Captain
B.S., Nautical Science,
California Maritime Academy, 1975
M.S., Maritime Management,
Maine Maritime Academy, 1989
Master Mariner, Unlimited, Any Ocean

Tuuli Messer-Bookman (1996)
Professor
B.S., Marine Transportation,
U.S. Merchant Marine Academy, 1986
J.D., University of San Francisco,
School of Law, 1995
Master Mariner, Unlimited, Any Ocean

Scott M. Powell (2009)
Assistant Professor
A.A.S., Marine Technology,
Great Lakes Maritime Academy/Northwestern Michigan College, 1998
B.S., Business Administration,
Ferris State University, 2003
M.S., International Transportation Management,
SUNY Maritime College, 2008
Master Mariner, Unlimited, Great Lakes and Inland Waters
Master Mariner, 1600 Tons, Any Ocean
Second Mate, Unlimited, Any Ocean
First Class Pilot, between Duluth, Gary, Buffalo, and between Port Weller and Cape Vincent

Scott Saarheim (2000)
Maritime Vocational Instructor II
B.S., Marine Transportation,
California Maritime Academy, 1991
Third Mate, Unlimited, Any Ocean

William E. Schmid (2000)
Maritime Vocational Instructor III
B.S., Nautical Science,
Maine Maritime Academy, 1978
Master Mariner, Unlimited, Any Ocean
First Class Pilot, Hinchinbrook Entrance to Rocky Point, AK

Robert Stewart (1982)
Professor
B.S., Marine Transportation,
U.S. Merchant Marine Academy, 1975
M.P.A., CSU Hayward, 1988
D.P.A., Public Administration,
Golden Gate University, 1997
Master Mariner, Unlimited, Any Ocean

EMERITUS FACULTY

Brian Law (1977–1999)
Professor

David Sears (1979–2004)
Professor

THE MAJOR

MARINE TRANSPORTATION (MT)

The student choosing a career as a licensed deck officer (mate) or a shoreside maritime manager majors in Marine Transportation. This major provides the broadest maritime industry training possible consistent with officer licensing requirements.

Marine Transportation graduates have a broad employment field open to them. A wide variety of shoreside management positions await the graduate in numerous maritime sectors, including vessel operations, ship's agency, marine insurance, stevedoring, charter brokering, and federal employment, as well as shipboard employment opportunities. This major, among the wide array of professional skills taught, is designed to prepare the student to take the U.S. Coast Guard STCW licensing exam for Second Mate and Officer in Charge of the Navigational Watch. Passing this examination, which results in the issuance of a Third Mate's license, is essential for a student seeking employment as a licensed deck officer on a commercial vessel.

THE QUALIFIED MEMBER OF THE ENGINE DEPARTMENT (QMED) MINOR

The Qualified Member of the Engine Department (QMED) minor is designed for those who seek a better understanding of engineering systems and their operations. Upon completion of the minor, Marine Transportation students holding valid Merchant Mariner Documents (MMD) and meeting United States Coast Guard (USCG) seatime and physical requirements will be eligible to take the USCG QMED exam modules for General Safety (#80) and Deck Engineer (#82). MT/QMED students may pursue additional endorsements such as Junior Engineer, Electrician, Refrigeration, etc., after successful completion of the basic QMED endorsement, though it is not required for completion of the minor, which is available to students in other majors. However, additional coursework may be required to meet prerequisite requirements, and the USCG QMED endorsement on the MMD may not be available to all students. Students interested in pursuing this minor should meet with their advisor as well as the MT Department Chair.

Required for QMED minor:

		Units
CRU 150	Sea Training I (Engine)	8
EPO 110	Plant Operations I	1
EPO 125	Intro to Marine Engineering	3
EPO 213	Welding Lab	1
EPO 215	Manufacturing Processes I	1
EPO 321	Diesel Plant Simulator	1
EPO 324	Refrigeration and A/C for QMED	3
EPO 325	QMED Fundamentals	3

Deck Licenses
Deck licenses issued by the U.S. Coast Guard in increasing rank are as follows: Third Mate, Second Mate, Chief Mate, and Master. A raise in grade is dependent upon the graduate's ability to accumulate sea time, usually one year's sea time in each license category, and to pass USCG examinations of increasing complexity and difficulty.

SEA TRAINING: DECK

CRU 100 SEA TRAINING I

This evolution addresses skills required of Ratings Forming Part of the Navigational Watch. Students develop internationally mandated skills by practicing on shipboard equipment. They steer the ship, keep a proper lookout, monitor and control conditions for safety, operate emergency equipment, and demonstrate emergency procedures. These skills are evaluated by shipboard officers trained to assess International Standards of Watch Keeping. Students must also demonstrate competencies in emergency and occupational safety, basic personal survival, and procedures to prevent pollution of the marine environment. In addition, they acquire a basic knowledge of deck maintenance and tools used on deck. Small boat operation skills are also developed, particularly in anchor ports.

CRU 200 SEA TRAINING II (COMMERCIAL)

While aboard a commercial vessel for a period of at least 60 days, cadets are given a series of projects to perform and an extensive written report to prepare on their experiences. The report covers many components of navigation, seamanship, labor relations, human relations, and safe cargo handling and stowage.

This report is assessed for completeness and accuracy by an assigned faculty member after the end of the commercial cruise. The student must meet departmental commercial cruise policy, which includes maintaining a 2.0 GPA in selected professional courses and adhering to disciplinary and academic probation requirements. For more information, the student should see the special prerequisites listed under the CRU 200 course description.

CRU 300 SEA TRAINING III

This evolution addresses skills required of Officer in Charge of the Navigational Watch. During this final cruise, students must demonstrate competence in skills established by international standards. These include planning and conducting a passage; determining the ship's position by celestial, terrestrial and electronic means; and maintaining a safe navigational watch. Students are assessed in their ability to respond promptly and properly to shipboard emergencies and to distress situations on other vessels. Cadets must also demonstrate adequate skills in maneuvering the ship. At the end of this cruise, they should be qualified to perform the duties of licensed deck officers at sea, with the exception of watchstanding skills to be assessed by full mission simulator afterward.

Total Units: 159

MARINE TRANSPORTATION CURRICULUM
Third Mate's/OICNW License Required For Graduation

Subject to Change

Optional QMED minor courses are bolded. Additional units must be added to total for each semester.

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

COM 100	Introduction to Computers	2.0
DL 105	Marine Survival►	1.0
DL 105L	Marine Survival Lab►	1.0
DL 105X	USCG Lifeboatman's Exam►	0.0
DL 109	Industrial Equipment and Safety	1.0
DL 115	Marlinspike	1.0
MTH 100	College Algebra & Trigonometry	4.0
NAU 103	Intro to Marine Transportation✱	3.0
NAU 105	Ship Structure►✱	2.0
NSC 100	Naval Science for the MMO	3.0
PE 100	Beginning/Intermediate Swimming	(.5)
	Total	**18.0**

SPRING (Freshman Year)

CHE 100	Chemistry I	3.0
CHE 100L	Chemistry I Lab	1.0
DL 100	Small Craft Operations►	1.0
DL 110	Ship Operations I	1.0
DL 120	Cargo Operations	1.0
ECO 100	Macroeconomics	3.0
EGL 100	English Composition	3.0
ELEC 31	Social Science Elective (Lower Division)	3.0
NAU 110	Seamanship►✱	3.0
	Total	**19.0**

SPRING CRUISE (Freshman Year)

CRU 100	Sea Training I (Deck)►	8.0
	Total	**8.0**

FALL (Sophomore Year)

DL 111	Ship Operations II	1.0
DL 325	Radar/ARPA (Last Name A-K)►✱	2.0
DL 325L	Radar/ARPA Lab (A-K)►✱	2.0
ELEC 20	Critical Thinking Elective	3.0
EPO 125	**Intro to Marine Engineering◈**	**3.0**
NAU 102	Navigation I►✱	4.0
NAU 102L	Navigation I Lab►✱	0.0
NAU 305	Rules of the Road►✱	2.0
PHY 100	Physics I	3.0
PHY 100L	Physics I Lab	1.0
	Total	**14.0**
	OR	
		18.0

SPRING (Sophomore Year)

DL 240	GMDSS►✱	2.0
DL 240L	GMDSS Lab►✱	1.0
DL 325	Radar/ARPA (Last Name L-Z)►✱	2.0
DL 325L	Radar/ARPA Lab (L-Z)►✱	2.0
ELEC 9	American Institutions Elective	3.0
EPO 110	**Plant Operations I►◈**	**1.0**
EPO 215	**Manufacturing Processes I►**	**1.0**
NAU 205	Ship Stability►✱	3.0
NAU 310	Electricity/Electronics✱	3.0
NAU 310L	Electricity/Electronics Lab✱	1.0
	Total	**13.0**
	OR	
		17.0

SPRING CRUISE (Sophomore Year)

CRU 200	Sea Training II (Deck)	5.0
CRU 200L	Sea Training II Lab (Deck)	3.0
	Total	**8.0**

FALL (Junior Year)

DL 310	Marine Supervisory Lab	1.0
EGL 110	Speech Communication►	3.0
EGL 300	Advanced Writing►	(3.0)
ELEC 21	Humanities Elective (Lower Division) (Last Name A-K)	3.0
EPO 213	**Welding Lab►**	**1.0**
FF 200	Basic/Adv. Marine Firefighting◘►	0.0
NAU 302	Advanced Navigation►✱	3.0
NAU 302L	Advanced Navigation Lab►✱	0.0
NAU 320	Tank Vessel Operations►✱	3.0
NAU 330	Meteorology►	3.0
NAU 335	ECDIS (Last Name L-Z)►✱	2.0
NAU 335L	ECDIS Lab (Last Name L-Z)►✱	1.0
	Total	**16.0**

SPRING (Junior Year)

DL 311	Marine Management Lab	1.0
DL 320	Introduction to Bridge Simulation►	2.0
ELEC 21	Humanities Elective (Lower Division) (Last Name L-Z)	3.0
EPO 324	**Refrigeration & A/C for QMED►**	**3.0**
NAU 120	Marine Engineering► **(Not for QMED)**	3.0
NAU 202	Celestial Navigation►✱	4.0
NAU 202L	Celestial Navigation Lab►✱	0.0
NAU 325	Cargo Vessel Operations►✱	3.0
NAU 335	ECDIS (Last Name A-K)►✱	2.0
NAU 335L	ECDIS Lab (Last Name A-K)►✱	1.0
	Total	**16.0**

SPRING CRUISE 1 OR 2 (Junior Year)

CRU 300	Sea Training III (Deck)►	8.0
	Total	**8.0**

SPRING QMED CRUISE 1 OR 2 (Junior Year)

CRU 150	**Sea Training I (Engine)►⃠**	**8.0**
EPO 220	**Diesel Engineering I►**	**2.0**
	Total	**10.0**

FALL (Senior Year)

DL 200	Ship Handling (Last Name A-K)►	1.0
DL 305	Tug and Barge (Last Name L-Z)	1.0
DL 405	Shipboard Medical (A-K)►	1.0
DL 405L	Shipboard Medical Lab (A-K)►	1.0
DL 420	Watchstanding Simulation►	2.0
ELEC 8	American Institutions Elective	3.0
ELEC 22	Humanities Elective (Upper Division)	3.0
EPO 321	**Diesel Plant Simulator►**	**1.0**
HUM 400	Ethics	3.0
MGT 105	Mgmt and Organizational Behavior	3.0
NAU 410	License Seminar	2.0
NAU 410L	License Seminar Lab	0.0
	Total	**17.0**
	OR	
		19.0

SPRING (Senior Year)

DL 125	Graphics	1.0
DL 200	Ship Handling (Last Name L-Z)►	1.0
DL 305	Tug and Barge (Last Name A-K)	1.0
DL 405	Shipboard Medical (L-Z)►	1.0
DL 405L	Shipboard Medical Lab (L-Z)►	1.0
ELEC 22	Humanities Elective (Upper Division)	3.0
EPO 325	**QMED Fundamentals►**	**3.0**
LAW 315	Admiralty Law	2.0
MGT 310	Port and Terminal Management	3.0
NAU 415	Transportation Security►✱	3.0
NAU 400	Advanced Maritime Topics✱ **TAKE THIS**	3.0
NAU 430	Liquified Gas Cargos✱ **OR BOTH**	2.0
NAU 430L	Liquified Gas Cargos Lab✱ **OF THESE**	1.0
	Total	**16.0**
	OR	
		18.0

► **STCW Courses (Must receive a "C-" or better, or "CR")**

◈ **QMED students must take EPO 125 AND EPO 110 to fulfill coursework equivalent to NAU 120.**

✱ **Courses in Major (CGPA = 2.0 is Required)**

◘ **FF 200 Basic/Adv. Marine Firefighting is also offered in Spring (Junior Year).**

⃠ **May not be taken with another Sea Training course.**

NOTE: Course content/curriculum may be modified to meet STCW or other regulatory requirements.

MARINE TRANSPORTATION COURSES

CRUISE

CRU 100. SEA TRAINING I (DECK)

CRU 185. STUDY ABROAD ELECTIVE

CRU 190. BASIC SAFETY TRAINING
(non-license program course)
(Maritime Operations Course)

CRU 195. INTRODUCTION TO MARITIME OPERATIONS
(non-license program course)
(Maritime Operations Course)

CRU 200. SEA TRAINING II (DECK)

CRU 200L. SEA TRAINING II LAB (DECK)

CRU 225. USCG SEA TRAINING II (DECK)

CRU 225L. USCG SEA TRAINING II LAB

CRU 300. SEA TRAINING III (DECK)

CRU 385. STUDY ABROAD ELECTIVE

CRU 390. INDEPENDENT STUDY

CRU 395. SPECIAL TOPICS

DECK LABS

DL 100. SMALL CRAFT OPERATIONS
(Maritime Operations Course)

DL 105. MARINE SURVIVAL
(Maritime Operations Course)

DL 105L. MARINE SURVIVAL LAB
(Maritime Operations Course)

DL 105X. USCG LIFEBOATMAN'S EXAM
(Maritime Operations Course)

DL 109. INDUSTRIAL EQUIPMENT AND SAFETY
(Maritime Operations Course)

DL 110. SHIP OPERATIONS I
(Maritime Operations Course)

DL 111. SHIP OPERATIONS II
(Maritime Operations Course)

DL 115. MARLINSPIKE
(Maritime Operations Course)

DL 120. CARGO OPERATIONS
(Maritime Operations Course)

DL 125. GRAPHICS

DL 185. STUDY ABROAD ELECTIVE

DL 200. SHIP HANDLING
(Maritime Operations Course)

DL 240. GLOBAL MARITIME DISTRESS SAFETY SYSTEM (GMDSS)

DL 240L. GLOBAL MARITIME DISTRESS SAFETY SYSTEM (GMDSS) LAB

DL 305. TUG AND BARGE
(Maritime Operations Course)

DL 310. MARINE SUPERVISORY LAB
(Maritime Operations Course)

DL 311. MARINE MANAGEMENT LAB
(Maritime Operations Course)

DL 320. INTRODUCTION TO BRIDGE SIMULATION

DL 325. RADAR/ARPA

DL 325L. RADAR/ARPA LAB

DL 385. STUDY ABROAD ELECTIVE

DL 390. INDEPENDENT STUDY

DL 395. SPECIAL TOPICS

DL 405. SHIPBOARD MEDICAL

DL 405L. SHIPBOARD MEDICAL LAB

DL 420. WATCHSTANDING SIMULATION

NAUTICAL SCIENCE

NAU 102. NAVIGATION I

NAU 102L. NAVIGATION I LAB

NAU 103. INTRODUCTION TO MARINE TRANSPORTATION

NAU 105. SHIP STRUCTURE

NAU 110. SEAMANSHIP

NAU 120. MARINE ENGINEERING

NAU 185. STUDY ABROAD ELECTIVE

NAU 202. CELESTIAL NAVIGATION

NAU 202L. CELESTIAL NAVIGATION LAB

NAU 205. SHIP STABILITY

NAU 302. ADVANCED NAVIGATION

NAU 302L. ADVANCED NAVIGATION LAB

NAU 305. RULES OF THE ROAD

NAU 310. ELECTRICITY AND ELECTRONICS

NAU 310L. ELECTRICITY AND ELECTRONICS LAB

NAU 320. TANK VESSEL OPERATIONS

NAU 325. CARGO VESSEL OPERATIONS

NAU 330. METEOROLOGY

NAU 335. ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)

NAU 335L. ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS) LAB

NAU 385. STUDY ABROAD ELECTIVE

NAU 390. INDEPENDENT STUDY

NAU 395. SPECIAL TOPICS

NAU 400. ADVANCED MARITIME TOPICS

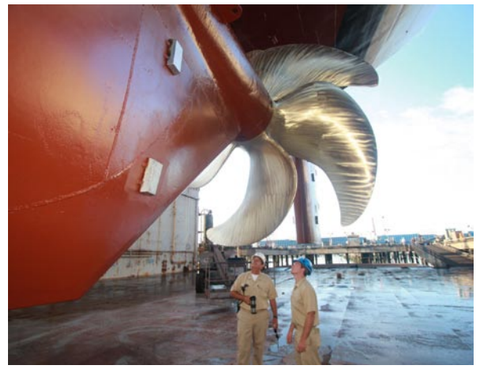
NAU 410. LICENSE SEMINAR

NAU 410L. LICENSE SEMINAR LAB

NAU 415. TRANSPORTATION SECURITY

NAU 430. LIQUIFIED GAS CARGOS

NAU 430L. LIQUIFIED GAS CARGOS LAB



DEPARTMENT OF MARITIME OPERATIONS

DEPARTMENT OF MARITIME OPERATIONS

The Department of Maritime Operations is centered on the Cal Maritime waterfront and encompasses the *Training Ship GOLDEN BEAR*, Boathouse, and Pier. The faculty and staff are comprised of both deck and engineering marine professionals of various backgrounds and experiences. Many of the faculty are alumni of the Academy.

The mission of the department is to teach Applied Technology through experiential or hands-on learning. The goal is to provide cadets with the basic hands-on skills, technical expertise, and leadership experiences so that they can continue to develop as licensed officers throughout their career either at sea or ashore.

MARITIME OPERATIONS FACULTY

Daniel Weinstock (1996)
Professor and Chair
B.S., Nautical Industrial Technology, California Maritime Academy, 1984
M.S., Education, Dowling College, 1995
Master Mariner, Unlimited, Any Ocean

Tom Allen (1996)
Maritime Vocational Instructor II
Boatswain

Michael Andrews (1997)
Maritime Vocational Instructor III
B.S., Marine Engineering Technology, California Maritime Academy, 1976
Second Assistant Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Robert J. Brown (2005)
Maritime Vocational Instructor II
B.S., Nautical Industrial Technology, California Maritime Academy, 1986
Third Mate, Unlimited, Any Ocean
Master of Towing Vessels
1600-Ton Master, Any Ocean

Jesse Cartee (2008)
Maritime Vocational Lecturer II
B.S., Marine Transportation, California Maritime Academy, 2004
Second Mate, Unlimited, Any Ocean
1600-Ton Master, Any Ocean

David W. Coleman (1999)
Maritime Vocational Lecturer III
B.S., Nautical Industrial Technology, California Maritime Academy, 1986
Second Mate, Unlimited, Any Ocean
Master of Towing Vessels
1600-Ton Master, Any Ocean

Lyle Cook (1991)
Maritime Vocational Instructor IV
Chief Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Britt T. Elliot (1996)
Maritime Vocational Instructor III
B.S., Nautical Industrial Technology, California Maritime Academy, 1981
B.S., Economics, CSU Sacramento, 1989
Third Mate, Unlimited, Any Ocean
Master of Towing Vessels, Designated T.O.A.R. Assessor
1600-Ton Master, Any Ocean

Stephen Evans (2009)
Maritime Vocational Lecturer II
B.S. Marine Engineering Technology, California Maritime Academy, 2002
First Assistant Engineer, Steam and Gas Turbine Vessels, Unlimited Horsepower
Second Assistant Engineer, Diesel Vessels, Unlimited Horsepower

Peter G. McGroarty (1997)
Maritime Vocational Instructor II
Boatswain
Master Hometrade, Unlimited Tonnage, United Kingdom

Richard Muller (2007)
Maritime Vocational Lecturer II
A.S., Marine Technology, Suffolk County Community College, 1982
B.S., Marine Biology, Long Island University, Southampton Campus, 1986
100-Ton Master, Near Coastal

MARITIME OPERATIONS COURSES

CRUISE

CRU 185. STUDY ABROAD ELECTIVE

CRU 190. BASIC SAFETY TRAINING (non-license program course)

CRU 195. INTRODUCTION TO MARITIME OPERATIONS (non-license program course)

CRU 385. STUDY ABROAD ELECTIVE

CRU 390. INDEPENDENT STUDY

CRU 395. SPECIAL TOPICS

DECK LABS

DL 100. SMALL CRAFT OPERATIONS

DL 105. MARINE SURVIVAL

DL 105L. MARINE SURVIVAL LAB

DL 105X. USCG LIFEBOATMAN'S EXAM

DL 109. INDUSTRIAL EQUIPMENT AND SAFETY

DL 110. SHIP OPERATIONS I

DL 111. SHIP OPERATIONS II

DL 115. MARLINSPIKE

DL 120. CARGO OPERATIONS

DL 185. STUDY ABROAD ELECTIVE

DL 200. SHIP HANDLING

DL 305. TUG AND BARGE

DL 310. MARINE SUPERVISORY LAB

DL 311. MARINE MANAGEMENT LAB

DL 385. STUDY ABROAD ELECTIVE

DL 390. INDEPENDENT STUDY

DL 395. SPECIAL TOPICS

ENGINEERING PLANT OPERATIONS

EPO 110. PLANT OPERATIONS I

EPO 185. STUDY ABROAD ELECTIVE

EPO 210. PLANT OPERATIONS II

EPO 310. PLANT OPERATIONS III

EPO 385. STUDY ABROAD ELECTIVE

EPO 390. INDEPENDENT STUDY

EPO 395. SPECIAL TOPICS

ABS SCHOOL OF MARITIME POLICY AND MANAGEMENT

ABS SCHOOL OF MARITIME POLICY AND MANAGEMENT

The ABS School of Maritime Policy and Management contains three programs: 1) The Bachelor of Science in Business Administration/International Business and Logistics, 2) the Bachelor of Arts in Global Studies and Maritime Affairs, and 3) the campus-wide program in Culture and Communications. In addition, the school provides students with CSU-mandated breadth and depth in Written and Oral Communications, Critical Thinking, Humanities, and the Social Sciences. The school also offers three minors to Cal Maritime students: 1) Business Administration, 2) Law, and 3) Global Studies and Maritime Affairs.

Students in the degree programs develop an interdisciplinary understanding of the maritime domain, a unique perspective on the interdependencies between maritime policy and the management of the global transportation supply chain, and the ethical, communication and critical thinking skills needed to make positive contributions in today's challenging and dynamic global environment.

MARITIME POLICY AND MANAGEMENT FACULTY

Donna Nincic (2001)
Professor, Director, and Chair
- B.A., International Relations, Carleton College, Northfield, MN, 1981
- M.A., International Relations, New York University, NY, 1985
- M.A., Economics, New York University, NY, 1988
- Ph.D., Political Science, New York University, NY, 1995

Graham W. Benton (2001)
Associate Professor
- B.A., English Literature, Bates College, Lewiston, ME, 1988
- M.A., Literatures in English, Rutgers University, New Brunswick, NJ, 1996
- Ph.D., Literatures in English, Rutgers University, New Brunswick, NJ, 2002

Julie K. Chisholm (2004)
Assistant Professor
- B.A., English, St. Mary's College of California, 1991
- M.A., English, University of California, Davis, 1994
- Diploma of Hispanic Studies, Universidad de Barcelona, 1997
- Ph.D., Literature & Creative Writing, University of Houston, 2002

Christopher B. Clott (2008)
Associate Professor
- B.A., Urban Studies, Fordham University, Bronx, NY, 1977
- M.B.A., Business Administration, St. Xavier University, 1986
- Ph.D., Higher Ed. Policy Studies, University of Illinois, Chicago, 1994

Ryan Dudley (2006)
Assistant Professor
- B.S., Political Science, Santa Clara University, 1997
- Ph.D., Political Science, University of California, Davis, 2009

Matt Dudman (2007)
Lecturer
- A.B., International Relations (minor in French), University of California, Davis, 1990
- M.B.A., University of California Davis Graduate School of Management, Davis, CA, 1993
- J.D., Tulane Law School, New Orleans, LA, 1996
- LL.M., Taxation, Golden Gate University, San Francisco, CA, 2000

Chris Frick (2005)
Lecturer
- B.A., English, Colorado College, Colorado Springs, CO, 1995
- M.A., Literature, New Mexico State University, Las Cruces, NM, 1997
- Ph.D., 19th-Century British Literature, University of South Carolina, Columbia, SC, 2003

Keith F. Graham (1975)
Lecturer
B.A., History, Santa Clara University, 1974
J.D., Santa Clara University School of Law, 1977
State Bar of California
Merchant Marine Staff Officer

Linda Guo (2003)
Lecturer
B.A., French, Beijing Second Foreign Language Institute, Beijing, China, 1982
M.A., French, Arizona State University, Tempe, AZ, 1992

Bruce Hartman (2005)
Lecturer
B.A., Mathematics, Princeton University
M.S.Ed., Mathematics and Education, University of Pennsylvania
Ph.D., Management Information Systems, University of Arizona, 1994

Lui Hebron (2006)
Assistant Professor
B.A., Political Science, University of Florida, Gainsville, FL, 1985
M.A., International Affairs, American University, Washington, DC, 1988
M.A., Political Science, Binghamton University, Binghamton, NY, 1990
Ph.D., Political Science, Florida State University, Tallahassee, FL, 1995

Timothy G. Lynch (2001)
Associate Professor
B.A., History, Brooklyn College, 1994
M.A., American History, Brooklyn College, 1997
Ph.D., American History, City University of New York–Graduate School and University Center, 2004

Robert Manheimer (2007)
Lecturer
B.A., Spanish Literature and Political Science, University of California, San Diego, 1985
M.A., Teaching English to Speakers of Other Languages (TESL), University of Hawaii, 1992
Ph.D., (ABD), Educational Linguistics, Stanford University, 2009

Kathryn D. Marocchino (1990)
Professor
B.A., Languages and Business Administration, Santorre di Santarosa Technical Institute, Turin, Italy, 1972
Doctorate, Modern Foreign Languages and Literature, University of Turin, 1979
Fellow in Thanatology: Death, Dying and Bereavement, 2005

Louis McDermott (1976)
Lecturer
B.A., Government, University of Arizona, Tucson, AZ, 1963
M.A., History, University of Minnesota, Minneapolis, MN, 1968
Ed.D., Organization and Leadership, University of San Francisco, San Francisco, CA, 1984

Jennifer Metz (2008)
Lecturer
B.A., History, California State University, Sacramento, 2004
M.A., History, University of California, Davis, 2007
Ph.D., (ABD), History, University of California, Davis, 2009

Robert Neumann (2006)
Lecturer
B.F.A., History of Art/Asian Studies, Ohio State University, 1972
M.A.Ed., California State University, Sonoma, 1980
M.B.A., International Management, Golden Gate University, 1985

Bunny Paine-Clemes (1993)
Professor
B.S., Education, University of Texas, Austin, 1967
M.A., Literature, University of Houston, Main Campus, 1972
Ph.D., Literature, University of Houston, Main Campus, 1980

Harry Portolos (2006)
Lecturer
A.S., Shipbuilding, Solano Community College, CA, 1990
B.S., Management, John F. Kennedy University, Orinda, CA, 2001
M.B.A., Leadership John F. Kennedy University, Orinda, CA, 2001

Emeritus Faculty

A. René Viargues (1974–2004)
Professor

BACHELOR OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION/ INTERNATIONAL BUSINESS AND LOGISTICS

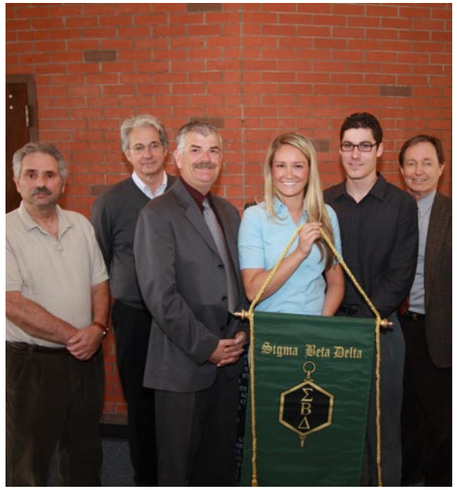
The mission of the program in Business Administration/International Business and Logistics is to graduate students who are readily employable and highly qualified for further education. Students will have a practical balance of theoretical knowledge, experiential learning, strong ethical values, and global leadership skills. We enhance learning by close involvement in international maritime affairs, unique educational platforms, vibrant industrial partnerships, and diversity of faculty, staff and cadets.

The Business Administration/International Business and Logistics program is accredited by the International Assembly for Collegiate Business Education (IACBE), P.O. Box 25217, Overland Park, KS, 66225, 913/631-3009, **www.iacbe.org/**.

OBJECTIVES

Students in the program will:

- Be readily employable or highly qualified for further education;
- Have an educational experience working directly in an industry position as a credit course;
- Have an international educational experience as a credit course;
- Take courses that meet requirements for entry into MBA programs. Students will have an option to go directly into such a degree program after graduation;
- Address critical issues of the day in core courses, while having the opportunity for electives that allow you to concentrate;
- Emphasize the maritime business, transportation, and logistics in their coursework;
- Have an education grounded in leadership, communication, critical thinking, ethics, global emphasis, technology and research.



BUSINESS ADMINISTRATION MAJOR
INTERNATIONAL BUSINESS AND LOGISTICS CURRICULUM

Subject to Change

Total Units: 120

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

BUS	120	The Environment of Mod. Business✱	3.0
COM	100	Introduction to Computers	(2.0)
ECO	100	Macroeconomics✱	3.0
EGL	100	English Composition	3.0
ELEC	81	Foreign Language I Elective	3.0
MTH	100	College Algebra and Trigonometry	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**16.0**

SPRING (Freshman Year)

BUS	165	Business Decision Analysis	3.0
ELEC	20	Critical Thinking Elective	3.0
ELEC	63	Physical Science Elective	3.0
ELEC	63L	Physical Science Lab Elective	1.0
ELEC	82	Foreign Language II Elective	3.0
MGT	100	Principles of Management✱	3.0
		Total	**16.0**

FALL (Sophomore Year)

BUS	100	Accounting Principles I: Financial✱	3.0
BUS	220	Business Communications✱	3.0
ELEC	9	American Institutions Elective	3.0
MGT	205	Org. Behavior & Labor Relations✱	3.0
MTH	205	Calculus for Business	3.0
		Total	**15.0**

SPRING (Sophomore Year)

BUS	101	Accounting Principles II: Managerial✱	3.0
BUS	190	Cruise Port Analysis	1.0
BUS	205	Business Statistics✱	3.0
ECO	101	Microeconomics✱	3.0
ELEC	8	American Institutions Elective	3.0
MGT	305	Information Systems Mgmt✱	3.0
		Total	**16.0**

SPRING CRUISE (Sophomore Year)

BUS	195	Cruise Special Topics	3.0
BUS	300	International Business	3.0
CRU	190	Basic Safety Training	(1.0)
CRU	999	T.S.G.B. Cruise Participation	0.0
		Total	**6.0**

FALL (Junior Year)

BUS	200	Introduction to Marketing✱	3.0
BUS	310	Financial Management✱	3.0
EGL	300	Advanced Writing	(3.0)
LAW	100	Business Law✱	3.0
MGT	340	Global Logistics✱	3.0
MGT	410	Quantitative Managerial Methods✱	3.0
		Total	**15.0**

SPRING (Junior Year)

ELEC	62	Life Science Elective	3.0
LAW	300	International Law✱	3.0
MGT	415	Operations Management✱	3.0
		Major Elective✱✱	3.0
		Total	**12.0**

SPRING CO-OP (Junior Year)

CEP	300	Business Industry Co-Op	(3.0)
		Total	**(3.0)**

FALL (Senior Year)

BUS	405	Business Leadership/Group Dynamics✱	3.0
MGT	400	Strategic Management✱	3.0
MGT	420	Supply Chain Management✱	3.0
		Major Elective✱✱	3.0
		Total	**12.0**

SPRING (Senior Year)

BUS	301	International Business II-Country Research Analysis & Global Marketing✱	3.0
ELEC	22	Humanities Elective (Upper Division)	3.0
HUM	315	Business Ethics	3.0
MGT	440	Logistics Case Analysis✱	3.0
		Total	**12.0**

✱ Required Courses in Major (CGPA = 2.0 is Required)

✱✱Elective Courses in Major (CGPA = 2.0 is Required)

BACHELOR OF ARTS DEGREE IN GLOBAL STUDIES AND MARITIME AFFAIRS

Students in the Global Studies and Maritime Affairs major develop:

A solid theoretical background in the social sciences, applied to the needs of the greater maritime and transportation industries;

Applied knowledge relevant to government agencies, non-profit organizations, international organizations, and businesses dealing with maritime issues: specifically, a solid foundation in economic and political globalization theories and the theories of the policy process; an understanding of global maritime history and the importance of maritime power to the power of the state; and an awareness of, and facility with, current global maritime issues as they relate to security, trade, and the environment;

The intellectual tools necessary to understand maritime policy issues in an increasingly globalized world: specifically, critical thinking, quantitative and non-quantitative research capability, leadership skills, and cultural and diversity awareness.

The major emphasizes four maritime policy areas:

- **International Maritime Security**
  This policy area focuses on maritime issues from a security perspective: specifically, the different threats in the coastal and near coastal zones, in international waters, and on the high seas. Topics covered include (but are not limited to) the following: sea-lane security, maritime piracy and terrorism, illegal immigration, innocent passage, force majure, and changing naval policies (both in the United States and in key countries around the world). A specific focus is on the identification of emerging maritime threats and the policies needed to counter these threats effectively.

- **International Maritime Environmental Policy**
  This policy area will focus on maritime environmental issues pertaining to global shipping. Here the course offerings extend to marine policy in general, rather than just policies with a focus on shipping and trade. Whaling, fisheries management, and the environmental standards of shipbuilding are examples of issues covered. Policy ramifications of each are examined in depth.

- **Maritime Law and Organizations**
  This focus is on international maritime law and international maritime organizations, such as the U.N. Convention on the Law of the Sea (UNCLOS III), the International Maritime Organization (IMO), the International Maritime Bureau (IMB), and the U.S. Maritime Administration (MARAD). Policy impacts of these and other organizations are examined in detail.

- **International Maritime Trade and Policy**
  This policy area focuses on maritime issues from the perspective of international political economy. Economic globalization is one of the most profound and far-reaching events of the late twentieth and early twenty-first century; its implications reach well into the trade and economic relations of all nations, the United States included. Here, the specific focus is on changing patterns of international trade and transportation, the "globalization" of the shipping industry, and the global political and economic forces behind these phenomena.

The objective in each of these core areas is to give students a theoretical foundation drawn from the social science fields of international relations, political science, public policy, history, and economics. The theoretical tools employed will allow students to understand and analyze shipping and maritime policies in a global economic, political, and environmental context.

Career Opportunities for Majors

GSMA students will be prepared for policy careers in maritime trade and economics, maritime security (port security, piracy, and maritime terrorism), and maritime law. They may enter the following fields:

- U.S. federal, state, and local governments; MARAD, the State Department, the Department of Homeland Security, the Department of Commerce, and allied areas;

- Agencies specializing in maritime security, including the Department of Defense, the Central Intelligence Agency, the Federal Bureau of Investigation, the Immigration and Naturalization Service, the Department of Transportation, and the United States Coast Guard;

- International organizations such as the International Maritime Organization (IMO) and the International Maritime Bureau (IMB);

- Graduate study in maritime law at institutions such as Tulane, Roger Williams, and the University of Virginia – each of which has program specializations in maritime law;

- Insurance and underwriting firms specializing in shipping and maritime issues.

Additionally, the curriculum focus will provide rigorous preparation for further study at the graduate level in International Relations, Public Policy, Maritime Affairs, and Business Administration (especially International Business and Trade).

GLOBAL STUDIES AND MARITIME AFFAIRS MAJOR CURRICULUM

Subject to Change

Total Units: 120

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

ECO	100	Macroeconomics	3.0
EGL	100	English Composition	3.0
ELEC	70	Mathematics Elective	4.0
ELEC	81	Foreign Language I Elective	3.0
GMA	105	Ocean Politics✱	3.0
LIB	100	Info Fluency in the Digital World	2.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**18.0**

SPRING (Freshman Year)

ELEC	8	American Institutions Elective	3.0
ELEC	20	Critical Thinking Elective	3.0
ELEC	63	Physical Science Elective	3.0
ELEC	63L	Physical Science Lab Elective	1.0
ELEC	82	Foreign Language II Elective	3.0
GMA	100	Intro to International Relations✱	3.0
		Total	**16.0**

FALL (Sophomore Year)

ELEC	9	American Institutions Elective	3.0
GMA	215	Intro to Comparative Politics✱	3.0
GMA	300	U.S. Foreign Policy✱	3.0
MTH	107	Elementary Statistics✱	4.0
		Total	**13.0**

SPRING (Sophomore Year)

EGL	110	Speech Communication	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
GMA	210	GSMA Cruise 1A: Port Analysis✱	2.0
GMA	220	Comparative Maritime Policies✱	3.0
		Major Elective✱✱	3.0
		Total	**14.0**

SPRING CRUISE (Sophomore Year)

CRU	190	Basic Safety Training	1.0
CRU	999	T.S.G.B. Participation	0.0
GMA	211	GSMA Cruise 1B: Sea Component✱	1.0
GMA	395-1	Special Topics✱+	3.0
GMA	395-2	Special Topics✱+	3.0
		Total	**8.0**

FALL (Junior Year)

EGL	300	Advanced Writing	(3.0)
ELEC	62	Life Science Elective	3.0
GMA	330	Maritime Security✱	3.0
GMA	360	Globalization✱	3.0
		Major Elective✱✱	3.0
		Total	**12.0**

SPRING (Junior Year)

ELEC	45	Lifelong Understanding Elective	3.0
HIS	300	Maritime History of the U.S.✱	3.0
HUM	325	Globalization of Culture✱	3.0
		Major Elective✱✱	3.0
		Total	**12.0**

SPRING CO-OP (Junior Year)

CEP	330	GSMA Co-Op✱	3.0
		Total	**3.0**

FALL (Senior Year)

GMA	400	Senior Seminar I: Methods & Design✱	3.0
GMA	405	International Maritime Organizations✱	3.0
HUM	400	Ethics✱	3.0
		Major Elective✱✱	3.0
		Total	**12.0**

SPRING (Senior Year)

GMA	203	U.S. Maritime Policy✱	3.0
GMA	401	Senior Seminar II: Senior Project✱	3.0
		Major Elective✱✱	3.0
		Major Elective✱✱	3.0
		Total	**12.0**

◘ELECTIVE REQUIREMENTS

18 Units Major Electives✱✱

◘ Be sure to read the 2009-2011 Cal Maritime catalog and talk to your advisor to determine GSMA elective courses.

✱ Required Courses in Major (CGPA = 2.0 is Required)

✱✱ Elective Courses in Major (CGPA = 2.0 is Required)

+ Special Topics courses on cruise will be determined by the itinerary and instructor expertise, after consultation with the ABS School of Maritime Policy and Management.

MARITIME POLICY AND MANAGEMENT MINORS

MINOR IN BUSINESS ADMINISTRATION

Required for minor:	Units
BUS 100 Accounting I	3
BUS 101 Accounting II	3
BUS 205 Statistics	3
BUS 310 Financial Management	3
ECO 101 Microeconomics	3
LAW 100 Business Law	3

Plus any two of the following:	Units
BUS 200 Marketing	3
BUS 300 International Business	3
ECO 305 Managerial Economics	3
MGT 340 Global Logistics	3

MINOR IN LAW

Individuals who satisfactorily complete law-related courses should contact the law advisor for details about a minor.

Preconditional law courses are some or all of the following:

	Units
LAW 100 Business Law	3
LAW 200 Environmental Law	3
LAW 300 International Law	3
LAW 315 Admiralty Law	2

Following consultation with the law advisor, students would then enroll in BUS 390 Independent Study (3-5 units) and MGT 315 Internship (3 units), which are both mandatory to complete the minor.

MINOR IN GLOBAL STUDIES AND MARITIME AFFAIRS

Required for minor:

	Units
GMA 105 Ocean Politics	3
HIS 300 Maritime History of the U.S	3
GMA 200 Globalization	3
– or –	
GMA 100 Introduction to International Relations	3

Plus at least six units of the following:

Any GMA-designated course	3
ECO 200 Economic Geography	3
LAW 200 Environmental Law	3
LAW 300 International Law	3

PROGRAM IN CULTURE AND COMMUNICATIONS

The program in Culture and Communications houses Cal Maritime's Writing Program, foreign language offerings, and courses that have been traditionally housed within humanities and arts departments. Not only is the program an integral component of the School of Maritime Policy and Management, it also serves the entire campus community by providing CSU depth and breadth requirements in General Education areas A, C, and E—and supports the mission of Cal Maritime through its deep commitment to intellectual learning.

To be capable, enlightened citizens in today's world, students must learn to understand other cultures, whether through speaking a foreign language or studying another culture's literature, beliefs, arts, and institutions. The objectives of the study of culture are as follows:

- Develop global awareness through learning about the cultures, ethnic groups, and languages of other peoples and civilizations – ideally, participating in these cultures directly;
- Develop a "humanized" awareness, appreciating the arts and being able to discuss them intelligently; thinking critically about human institutions and their importance; learning about psychological, social, aesthetic, and cultural processes and how they are constructed; and
- Cultivate an interdisciplinary commitment to cultural awareness and an ability to communicate effectively across boundaries which must necessarily be fused with ethics to create a sense of oneself in the world, produce leadership traits, and foreground in all our students the need for critical, yet flexible and adaptive thinking.

Students must also learn to communicate clearly, whether in English or another language, with those whose assumptions may be very different from their own. To think, write and speak well are the hallmarks of an educated person. The objectives of the Study of Communication are as follows:

- Write effective, undergraduate-level prose in English, with emphasis on mechanics, organization, and the rhetorical situation;
- Recognize that communication literacy is an ongoing, lifelong process of critical reading and thinking, and drafting and revisiting work;
- Give attention to oral expression, whether by discussion of important topics or in presentations using audience appeal, thoughtful and useful content, precise language, and logical organization; and
- Use the technological and research tools necessary as appropriate support in written and oral communication and understand the conventions and significance of appropriate documentation guidelines.

In addition to an interdisciplinary commitment to cultural awareness and communication literacies, this program also strives to instill the following habits, traits, and affective dimensions:

- Taking responsibility for one's own learning, exhibiting intellectual curiosity and independence, developing a commitment to lifelong learning and growth, and making judicious use of mentors, teamwork, and other resources where needed;
- Developing a code of ethics that incorporates self-awareness, truthfulness, integrity, and service to the community, as suggested by the mission statement of this institution; and
- Cultivating successful attitudes, such as self-confidence, self-discipline, respect for self and others, and cooperation with a group or team.

MARITIME POLICY AND MANAGEMENT COURSES

BUSINESS

BUS 100. ACCOUNTING PRINCIPLES I: FINANCIAL

BUS 101. ACCOUNTING PRINCIPLES II: MANAGERIAL

BUS 120. THE ENVIRONMENT OF MODERN BUSINESS

BUS 165. BUSINESS DECISION ANALYSIS

BUS 185. STUDY ABROAD ELECTIVE

BUS 190. CRUISE PORT ANALYSIS

BUS 195. CRUISE SPECIAL TOPICS

BUS 200. INTRODUCTION TO MARKETING

BUS 205. BUSINESS STATISTICS

BUS 220. BUSINESS COMMUNICATIONS

BUS 300. INTERNATIONAL BUSINESS

BUS 301. INTERNATIONAL BUSINESS II –COUNTRY RESEARCH ANALYSIS AND GLOBAL MARKETING

BUS 302. PRINCIPLES OF RESEARCH DESIGN, IMPLEMENTATION AND ANALYSIS

BUS 302L. PRINCIPLES OF RESEARCH DESIGN, IMPLEMENTATION AND ANALYSIS LAB

BUS 310. FINANCIAL MANAGEMENT

BUS 385. STUDY ABROAD ELECTIVE

BUS 390. INDEPENDENT STUDY

BUS 395. SPECIAL TOPICS

BUS 400. BUSINESS AND SOCIETY

BUS 405. BUSINESS LEADERSHIP AND GROUP DYNAMICS

COMMUNITY SERVICE LEARNING

CSL 120. COMMUNITY SERVICE LEARNING

CSL 185. STUDY ABROAD ELECTIVE

CSL 210. DYING: THE FINAL STAGE OF LIVING

CSL 385. STUDY ABROAD ELECTIVE

CSL 390. INDEPENDENT STUDY

CSL 395. SPECIAL TOPICS

COOPERATIVE EDUCATION

CEP 185. STUDY ABROAD ELECTIVE

CEP 300. BUSINESS INDUSTRY CO-OP I

CEP 330. GSMA CO-OP

CEP 385. STUDY ABROAD ELECTIVE

CEP 390. INDEPENDENT STUDY

CEP 395. SPECIAL TOPICS

ECONOMICS

ECO 100. MACROECONOMICS

ECO 101. MICROECONOMICS

ECO 185. STUDY ABROAD ELECTIVE

ECO 200. ECONOMIC GEOGRAPHY

ECO 305. MANAGERIAL ECONOMICS

ECO 385. STUDY ABROAD ELECTIVE

ECO 390. INDEPENDENT STUDY

ECO 395. SPECIAL TOPICS

ENGLISH AND COMMUNICATIONS

EGL 100. ENGLISH COMPOSITION

EGL 110. SPEECH COMMUNICATION

EGL 185. STUDY ABROAD ELECTIVE

EGL 200. INTRODUCTION TO LITERATURE

EGL 220. CRITICAL THINKING

EGL 300. ADVANCED WRITING

EGL 305. TWENTIETH-CENTURY AMERICAN LITERATURE

EGL 310. U.S. LITERATURE OF THE SEA

EGL 315. WORLD LITERATURE OF THE SEA

EGL 320. LITERATURE OF THE FANTASTIC

EGL 325. CREATIVE WRITING

EGL 330. LITERATURE AND PSYCHOLOGY

EGL 385. STUDY ABROAD ELECTIVE

EGL 390. INDEPENDENT STUDY

EGL 395. SPECIAL TOPICS

GLOBAL STUDIES AND MARITIME AFFAIRS

GMA 100. INTRODUCTION TO INTERNATIONAL RELATIONS

GMA 105. OCEAN POLITICS

GMA 120. INTRODUCTION TO ENVIRONMENTAL POLICY

GMA 185. STUDY ABROAD ELECTIVE

GMA 210. GSMA CRUISE 1A: PORT ANALYSIS

GMA 211. GSMA CRUISE 1B: SEA COMPONENT

GMA 215. INTRODUCTION TO COMPARATIVE POLITICS

GMA 220. COMPARATIVE MARITIME POLICIES

GMA 225. POLITICS OF PACIFIC ASIA

GMA 230. U.S. MARITIME POLICY

GMA 300. U.S. FOREIGN POLICY

GMA 310. THE GEOPOLITICS OF ENERGY

GMA 315. POLITICS OF CHINA

GMA 320. OCEAN ENVIRONMENTAL MANAGEMENT

GMA 330. MARITIME SECURITY

GMA 345. ASIAN SECURITY

GMA 360. GLOBALIZATION

GMA 385. STUDY ABROAD ELECTIVE

GMA 386. PANETTA INSTITUTE ELECTIVE

GMA 390. INDEPENDENT STUDY

GMA 395. SPECIAL TOPICS

GMA 400. SENIOR SEMINAR I: METHODS AND DESIGN

GMA 401. SENIOR SEMINAR II: RESEARCH PROJECT

GMA 405. INTERNATIONAL MARITIME ORGANIZATIONS

GMA 450. SPECIAL TOPICS IN MARITIME POLICY

GOVERNMENT

GOV 185. STUDY ABROAD ELECTIVE

GOV 200. AMERICAN GOVERNMENT

GOV 385. STUDY ABROAD ELECTIVE

GOV 390. INDEPENDENT STUDY

GOV 395. SPECIAL TOPICS

HISTORY

HIS 100. U.S. HISTORY (TO 1877)

HIS 101. U.S. HISTORY (FROM 1877)

HIS 185. STUDY ABROAD ELECTIVE

HIS 210. HISTORY OF LATIN AMERICA

HIS 300. MARITIME HISTORY OF THE U.S.

HIS 305. THE WORLD SINCE 1500, A GLOBAL HISTORY

HIS 315. WORLD MARITIME HISTORY I: ANTIQUITY TO AGE OF DISCOVERY

HIS 316. WORLD MARITIME HISTORY II: AGE OF EXPLORATION THROUGH THE NUCLEAR AGE

HIS 350. RACE, CLASS AND GENDER IN THE MARITIME WORLD

HIS 360. BAY AREA MARITIME HISTORY

HIS 385. STUDY ABROAD ELECTIVE

HIS 390. INDEPENDENT STUDY

HIS 395. SPECIAL TOPICS

HUMANITIES

HUM 100. HUMANITIES

HUM 101. PERSPECTIVES IN CULTURE: THE ANCIENT WORLD THROUGH THE RENAISSANCE

HUM 102. PERSPECTIVES IN CULTURE: POST-RENAISSANCE TO THE PRESENT

HUM 110. WORLD CULTURE JOURNEYS

HUM 130. CREATIVITY

HUM 185. STUDY ABROAD ELECTIVE

HUM 300. ART OF THE CINEMA

HUM 305. COMPARATIVE WORLD RELIGIONS

HUM 310. ENGINEERING ETHICS (Engineering Technology and Mechanical Engineering Course)

HUM 315. BUSINESS ETHICS

HUM 325. GLOBALIZATION OF CULTURE

HUM 385. STUDY ABROAD ELECTIVE

HUM 390. INDEPENDENT STUDY

HUM 395. SPECIAL TOPICS

HUM 400. ETHICS

LANGUAGES

LAN 110. SPANISH I

LAN 115. SPANISH II

LAN 120. CHINESE I

LAN 125. CHINESE II

LAN 185. STUDY ABROAD ELECTIVE

LAN 385. STUDY ABROAD ELECTIVE

LAN 390. INDEPENDENT STUDY

LAN 395. SPECIAL TOPICS

LAW

LAW 100. BUSINESS LAW

LAW 185. STUDY ABROAD ELECTIVE

LAW 200. ENVIRONMENTAL LAW

LAW 300. INTERNATIONAL LAW

LAW 315. ADMIRALTY LAW

LAW 385. STUDY ABROAD ELECTIVE

LAW 390. INDEPENDENT STUDY

LAW 395. SPECIAL TOPICS

LEADERSHIP

LDR 185. STUDY ABROAD ELECTIVE

LDR 210. FOUNDATIONS OF LEADERSHIP

LDR 385. STUDY ABROAD ELECTIVE

LDR 390. INDEPENDENT STUDY

LDR 395. SPECIAL TOPICS

MANAGEMENT

MGT 100. PRINCIPLES OF MANAGEMENT

MGT 105. MANAGEMENT AND ORGANIZATIONAL BEHAVIOR

MGT 185. STUDY ABROAD ELECTIVE

MGT 205. ORGANIZATIONAL BEHAVIOR AND LABOR RELATIONS

MGT 300. ADVANCED MANAGEMENT TECHNIQUES (for MT only)

MGT 305. INFORMATION SYSTEMS MANAGEMENT

MGT 310. PORT AND TERMINAL MANAGEMENT AND OPERATIONS

MGT 315. INTERNSHIP

MGT 325. PRINCIPLES OF PURCHASING

MGT 335. ADVANCED INFORMATION SYSTEMS

MGT 340. GLOBAL LOGISTICS

MGT 385. STUDY ABROAD ELECTIVE

MGT 390. INDEPENDENT STUDY

MGT 395. SPECIAL TOPICS

MGT 400. STRATEGIC MANAGEMENT

MGT 410. QUANTITATIVE MANAGERIAL METHODS

MGT 415. OPERATIONS MANAGEMENT

MGT 420. SUPPLY CHAIN MANAGEMENT

MGT 440. LOGISTICS CASES AND ANALYSIS

PERFORMING ARTS

PA 185. STUDY ABROAD ELECTIVE

PA 385. STUDY ABROAD ELECTIVE

PA 390. INDEPENDENT STUDY

PA 395. SPECIAL TOPICS

TRANSPORTATION

TRA 185. STUDY ABROAD ELECTIVE

TRA 300. TRANSPORTATION CARRIER MANAGEMENT

TRA 305. MARITIME POLICY SEMINAR

TRA 310. MARINE CHARTERING AND INSURANCE

TRA 385. STUDY ABROAD ELECTIVE

TRA 390. INDEPENDENT STUDY

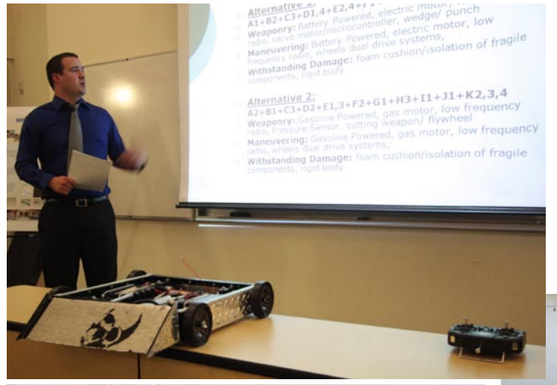
TRA 395. SPECIAL TOPICS

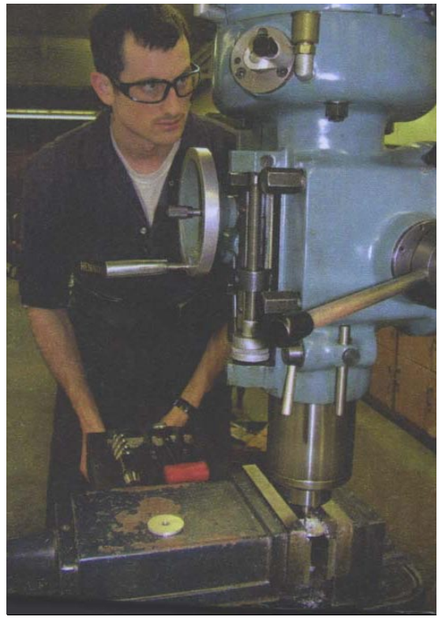
TRA 400. TRANSPORTATION OF HAZARDOUS MATERIALS

TRA 405. IMPORT AND EXPORT REGULATIONS

TRA 410. NATIONAL AND STATE TRANSPORTATION POLICIES

DEPARTMENT OF MECHANICAL ENGINEERING





DEPARTMENT OF MECHANICAL ENGINEERING

The mission of the Mechanical Engineering program is to produce entry-level professionals capable of applying their knowledge of science and engineering in the design, analysis, evaluation, and production of engineering devices and systems. It also provides students with the necessary academic preparation for further education and professional development in their chosen career.

MECHANICAL ENGINEERING FACULTY

Stephen W. Pronchick (1994)
Professor and Chair
- B.S., Aerospace Engineering, University of Notre Dame, 1973
- M.S., Aerospace Engineering, Georgia Institute of Technology, 1975
- Ph.D., Mechanical Engineering, Stanford University, 1983

Nader Bagheri (1990)
Professor
- B.S., Mechanical Engineering, CSU Fresno, 1981
- M.S., Mechanical Engineering, UC Davis, 1984
- Ph.D., Mechanical Engineering, UC Davis, 1989
- Professional Engineer, California

Jim Gutierrez (2001)
Associate Professor
- B.S., Mechanical Engineering, CSU Sacramento, 1985
- M.S., Engineering, UC Davis, 1991
- Ph.D., Engineering, UC Davis, 1998
- Professional Engineer, California

Antony Hasson-Snell (2001)
Associate Professor
- B.S., Mechanical Engineering, University College, London, 1983
- M.S., Marine Mechanical Engineering, University College, London, 1984
- Ph.D., Aerospace Engineering, University of Minnesota, 1991

Michael Holden (2007)
Assistant Professor
- B.S., Aeronautical and Mechanical Engineering, English Minor, UC Davis, 1992
- M.S., Aeronautics and Astronautics, Stanford University, 1994
- Ph.D., Aeronautics and Astronautics, Stanford University, 1999

Thomas R. Nordenholz (1998)
Professor
- B.S., Mechanical Engineering, State University of New York at Buffalo, 1990
- M.S., Mechanical Engineering, UC Berkeley, 1995
- Ph.D, Mechanical Engineering, UC Berkeley, 1998

THE MAJOR

The Mechanical Engineering curriculum provides a sound foundation for the practice of engineering through instruction in basic sciences and mathematics, computer applications, design, laboratory experiences, communication, humanities, and social sciences. The curriculum requires a core of mechanical engineering courses in the energy and the mechanical stems, as well as a two-course capstone design experience starting in the fall of the senior year. Computer applications and design experiences are integrated into several required and stem-elective courses. Excellent facilities in circuits, instrumentation and measurements, electromechanical machinery, controls, materials/mechanical, manufacturing processes, and fluids/thermal laboratories further strengthen the instructional Mechanical Engineering program. Through selection of electives, students can choose to specialize in either the energy design stem or the mechanical design stem.

Students should visit the Mechanical Engineering Department web page at **www.csum.edu/Academics/Majors/ME** for a description of its assessment system. The assessment system includes a Program Educational Objectives (PEO) process and a Program Outcomes (PO) process. The PEO process includes assessment tools such as Industry Advisory Board Assessment, Alumni Survey Assessment, Employer Survey Assessment, Western Association of Schools and Colleges (WASC) Assessment, and Engineering Accreditation Commission of ABET Assessment.

The PO process includes Student Portfolios, Instructor Class Assessment, Student Evaluations of Instructor/ Course, Cruise/Co-op Report Assessment, Senior Project Design Assessment, Graduating Senior Survey Assessment, and Course Portfolios. These assessment tools are used to ensure that the ME program educational mission and constituency needs are met. The results are further used to develop and improve the program.

The Mechanical Engineering Program Educational Objectives are as follows:

Mechanical engineering graduates of the California Maritime Academy will:

A. Be well educated professionals who utilize their intellectual learning, applied technology experience, leadership skills and global awareness in successful careers, and continue to improve their skills through lifelong learning and advanced studies;

B. Effectively practice as professional engineers, managers, and leaders in the maritime and energy industries and a wide variety other fields, and as licensed engineers in the merchant marine;

C. Successfully combine fundamental engineering knowledge, core leadership skills and the practical experience gained at the Academy to turn ideas into reality for the benefit of society;

D. Be influential members of multidisciplinary teams, creatively and effectively contributing to the design, development, and objective evaluation of engineering components, systems, and products, and clearly communicating the work in an appropriate manner to their customers and colleagues; and

E. Personally assume and actively encourage peers to uphold the professional, ethical, social and environmental responsibilities of their profession.

The Mechanical Engineering Program Outcomes are as follows:

1. An ability to apply knowledge of mathematics, science, and engineering;

2. An ability to design and conduct experiments, as well as to analyze and interpret data;

3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economics, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;

4. An ability to function on multi-disciplinary teams;

5. An ability to identify, formulate, and solve engineering problems;

6. An understanding of professional and ethical responsibility;

7. An ability to communicate effectively;

8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;

9. A recognition of the need for, and an ability to engage in life-long learning;

10. A knowledge of contemporary issues;

11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;

12. An ability to apply principle of engineering, basic science, and mathematics (including multivariate calculus and differential equations) to model, analyze, design, and realize physical systems, components or processes;

13. Ability to work professionally in both thermal and mechanical systems areas;

14. An ability to apply the “hands-on” knowledge to solve/understand engineering design problems/ systems;

15. An ability to demonstrate leadership roles; and

16. An ability to comprehend and convey technical information.

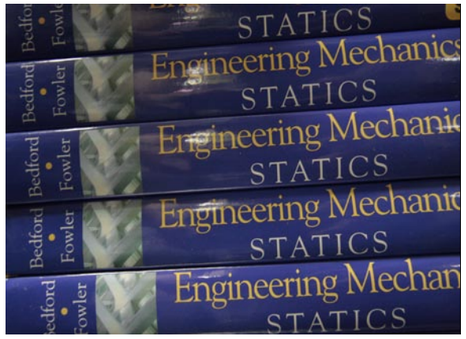
OPTIONS WITHIN THE MECHANICAL ENGINEERING PROGRAM

The mechanical engineering program at Cal Maritime has two options that students may follow to obtain their degree. Both options result in a Bachelor of Science degree in mechanical engineering, and provide students with strong hands-on experiences and an international experience to complement their engineering education. Both options have the same core ME curriculum, and were defined to maintain the mission of the academy and the four objectives of intellectual learning, applied technology, global awareness and leadership. Also, both options are essentially identical in the first year, allowing students to explore their interests before deciding upon an option. All students, regardless of their option, are part of the Corps of Cadets, which is the focal point for the leadership facet of our mission.

THE ME-USCG OPTION

The ME-USCG option is designed for students who wish to use their engineering degree as a marine engineer. The curriculum consists of the core mechanical engineering courses (see the ME Option), and additional courses intended to provide additional training for a marine engineer, much of which is required to obtain the merchant marine third assistant engineer’s license. Students are required to obtain experience at sea through three summer cruises, two of them aboard the academy’s training ship, and one aboard a commercial vessel. In addition, students in this option must pass the Third Assistant Engineer exam given by the United States Coast Guard (USCG).

This is clearly a very demanding option. Nonetheless, many of the mechanical engineering students at Cal Maritime choose this option. For these students, sailing is the reason they chose to study at Cal Maritime, and this option serves them well.



THE ME OPTION

The ME option is intended for students who are not specifically interested in pursuing a career in the merchant marine. Students take the core mechanical engineering courses, which combine traditional engineering courses with practical training. One cruise experience is required. This practical training and the cruise experience distinguish Cal Maritime from many other engineering schools, and is excellent preparation for anyone entering the engineering profession. In addition to one cruise, two summer internships with industry are required in the ME option.

To help assess the overall effectiveness of this option, all students in this major are required to take the Fundamentals of Engineering (FE) exam in October of their senior year. Passing the test is not a graduation requirement, but the students must present the official results of the test to the department. Those who pass the FE exam, upon completion of work experience requirements and further testing, may become licensed professional engineers later in their career.

MINOR IN POWER GENERATION

Students who pursue the ME option may also, if they choose, acquire a minor in Power Generation. The minor requires an additional 15 units beyond the requirements for ME option. The additional courses provide exposure and practical experience with traditional (steam, diesel) as well as alternative and renewable power generation systems. Students with this minor would typically seek careers in shoreside facilities.

Required for Power Generation minor:

		Units
ENG 440	Power Engineering	3
EPO 210	Plant Operations II	1
EPO 214	Boilers	3
EPO 230	Steam Plant System Operations	1
EPO 235	Steam Plant Watch Team Management	1
EPO 310	Plant Operations III	1
EPO 312	Turbines	3
EPO 319	Facilities Engineering Diagnostics Lab	1
EPO 321	Diesel Plant Simulator	1

Please inform Student Records if you choose an alternate option. Otherwise your Degree Progress Report will be incorrect.

MECHANICAL ENGINEERING MAJOR
THIRD ASSISTANT ENGINEER'S LICENSE OPTION
GOLD COMPANY
CURRICULUM

Subject to Change

Total Units: 164

Third Assistant Engineer's/OICEW License Required for Graduation

THIRD ASSISTANT ENGINEER'S LICENSE COURSES ARE BOLDED. ADDITIONAL UNITS MUST BE ADDED TO TOTAL FOR EACH SEMESTER.

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
EGL	100	English Composition	3.0
ENG	110	Intro to Engineering and Technology✱	1.0
ENG	120	Engineering Communications►✱	2.0
EPO	110	Plant Operations I►	1.0
EPO	125	Intro to Marine Engineering	3.0
EPO	213	Welding Lab►	1.0
MTH	210	Calculus I	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**19.0**

SPRING (Freshman Year)

DL	105	Marine Survival►	1.0
DL	105L	Marine Survival Lab►	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
ELEC	20	Critical Thinking Elective	3.0
ELEC	21	Humanities Elective (Lower Div.)	3.0
MTH	211	Calculus II	4.0
NSC	**100**	**Naval Science for the MMO**	**3.0**
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**16.0**

SPRING CRUISE (Freshman Year)

CRU 150 Sea Training I (Engine)►	8.0
EPO 220 Diesel Engineering I	2.0
Total	**10.0**

FALL (Sophomore Year)

ENG	210	Engineering Computer Programming	2.0
EPO	**210**	**Plant Operations II►**	**1.0**
EPO	215	Manufacturing Processes I►	1.0
ME	220	Computer Aided Engineering✱	2.0
ME	230	Engineering Materials✱	3.0
ME	232	Engineering Statics✱	3.0
MTH	212	Calculus III	4.0
PHY	205	Engineering Physics II	4.0
		Total	**19.0**

SPRING (Sophomore Year)

ENG	250	Electrical Circ & Electronics✱	3.0
ENG	250L	Electrical Circ & Electronics Lab►✱	1.0
EPO	**214**	**Boilers**	**3.0**
EPO	**230**	**Steam Plant System Operations►**	**1.0**
ME	240	Engineering Thermodynamics✱	3.0
ME	330	Engineering Dynamics✱	3.0
ME	332	Mechanics of Materials✱	3.0
MTH	215	Differential Equations	4.0
		Total	**17.0**

SPRING CRUISE (Sophomore Year)

CRU 250 Sea Training II (Engine)	8.0
Total	**8.0**

FALL (Junior Year)

ENG	300	Engineering Numerical Analysis✱	4.0
EPO	**235**	**Steam Plant Watch Team Mgmt►**	**1.0**
EPO	**312**	**Turbines**	**3.0**
EPO	**322**	**Diesel Engineering II/Simulator**	**1.0**
EPO	**322L**	**Diesel Engineering II/Simulator Lab►**	**1.0**
FF	**200**	**Basic/Adv Marine Firefighting◘►**	**0.0**
ME	340	Engineering Fluid Mechanics✱	3.0
ME	350	Electromech Machinery✱	3.0
ME	350L	Electromech Machinery Lab►✱	1.0
ME	360	Instr. & Measurement Sys✱	2.0
ME	360L	Instr. & Measurement Sys Lab✱	1.0
		Total	**14.0**

SPRING (Junior Year)

EGL	300	Advanced Writing►	(3.0)
EPO	**310**	**Plant Operations III**	**1.0**
ME	339	Material/Mechanical Lab►✱	2.0
ME	344	Heat Transfer✱	3.0
ME	392	Mechanical Design✱	3.0
ME	460	Automatic Feedback Control✱	3.0
ME	460L	Automatic Feedback Control Lab✱	1.0
ME	490	Engineering Design Process✱	3.0
STEM	1	Stem Course (See Box)✱	3.0
		Total	**18.0**

SPRING CRUISE (Junior Year)

CRU 350 Sea Training III (Engine)►	8.0
Total	**8.0**

► **STCW Courses (Must receive a "C-" or better, or "CR")**
✱ **Courses in Major (CGPA = 2.0 is Required)**
◘ **FF 200 Basic/Advanced Marine Firefighting is also offered Spring (Junior Year)**

FALL (Senior Year)

ELEC	8	American Institutions Elective	3.0
ENG	**430**	**Naval Architecture►✱**	**3.0**
ENG	470	Engineering Management✱	3.0
ME	349	Fluid/Thermal Lab✱	2.0
ME	394	Fluid/Thermal Design✱	3.0
ME	492	Project Design I✱	3.0
STEM	2	Stem Course (See Box)✱	3.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	9	American Institutions Elective	3.0
EPO	**217**	**Shipboard Medical►**	**1.0**
HUM	310	Engineering Ethics	3.0
ME	342	Refrigeration & A/C✱	3.0
ME	429	Manufacturing Processes Lab►✱	2.0
ME	494	Project Design II✱	3.0
STEM	3	Stem Course (See Box)✱	4.0
		Total	**18.0**

STEM COURSES

Energy Design Stem
ME 440 Advanced Fluids & Thermodynamics✱
ME 442 HVAC Design✱
ME 444 Energy Systems Design✱

Mechanical Design Stem
ME 434 Advanced Mechanics of Materials✱
ME 430 Mechanical Vibrations✱
ME 432 Machinery Design✱

Please inform Student Records if you choose an alternate option. Otherwise your Degree Progress Report will be incorrect.

MECHANICAL ENGINEERING MAJOR
THIRD ASSISTANT ENGINEER'S LICENSE OPTION
BLUE COMPANY
CURRICULUM

Subject to Change

Total Units: 164

Third Assistant Engineer's/OICEW License Required for Graduation

THIRD ASSISTANT ENGINEER'S LICENSE COURSES ARE BOLDED. ADDITIONAL UNITS MUST BE ADDED TO TOTAL FOR EACH SEMESTER.

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
EGL	100	English Composition	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
ENG	110	Intro to Engineering and Technology✱	1.0
ENG	120	Engineering Communications►✱	2.0
MTH	210	Calculus I	4.0
NSC	**100**	**Naval Science for the MMO**	**3.0**
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**17.0**

SPRING (Freshman Year)

DL	105	Marine Survival►	1.0
DL	105L	Marine Survival Lab►	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
ELEC	20	Critical Thinking Elective	3.0
EPO	110	Plant Operations I►	1.0
EPO	125	Intro to Marine Engineering	3.0
EPO	213	Welding Lab►	1.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**18.0**

SPRING CRUISE (Freshman Year)

CRU 150 Sea Training I (Engine)►	8.0
EPO 220 Diesel Engineering I	2.0
Total	**10.0**

FALL (Sophomore Year)

ENG	210	Engineering Computer Programming	2.0
EPO	**210**	**Plant Operations II►**	**1.0**
EPO	215	Manufacturing Processes I►	1.0
ME	220	Computer Aided Engineering✱	2.0
ME	230	Engineering Materials✱	3.0
ME	232	Engineering Statics✱	3.0
MTH	212	Calculus III	4.0
PHY	205	Engineering Physics II	4.0
		Total	**19.0**

SPRING (Sophomore Year)

ENG	250	Electrical Circ & Electronics✱	3.0
ENG	250L	Electrical Circ & Electronics Lab►✱	1.0
EPO	**214**	**Boilers**	**3.0**
EPO	**230**	**Steam Plant System Operations►**	**1.0**
ME	240	Engineering Thermodynamics✱	3.0
ME	330	Engineering Dynamics✱	3.0
ME	332	Mechanics of Materials✱	3.0
MTH	215	Differential Equations	4.0
		Total	**17.0**

SPRING CRUISE (Sophomore Year)

CRU 250 Sea Training II (Engine)	8.0
Total	**8.0**

FALL (Junior Year)

ENG	300	Engineering Numerical Analysis✱	4.0
EPO	**235**	**Steam Plant Watch Team Mgmt►**	**1.0**
EPO	**312**	**Turbines**	**3.0**
EPO	**322**	**Diesel Engineering II/Simulator**	**1.0**
EPO	**322L**	**Diesel Engineering II/Simulator Lab►**	**1.0**
FF	**200**	**Basic/Adv Marine Firefighting◘►**	**0.0**
ME	340	Engineering Fluid Mechanics✱	3.0
ME	350	Electromech Machinery✱	3.0
ME	350L	Electromech Machinery Lab►✱	1.0
ME	360	Instr. & Measurement Sys✱	2.0
ME	360L	Instr. & Measurement Sys Lab✱	1.0
		Total	**14.0**

SPRING (Junior Year)

EGL	300	Advanced Writing►	(3.0)
EPO	**310**	**Plant Operations III**	**1.0**
ME	339	Material/Mechanical Lab►✱	2.0
ME	344	Heat Transfer✱	3.0
ME	392	Mechanical Design✱	3.0
ME	460	Automatic Feedback Control✱	3.0
ME	460L	Automatic Feedback Control Lab✱	1.0
ME	490	Engineering Design Process✱	3.0
STEM	1	Stem Course (See Box)✱	3.0
		Total	**18.0**

SPRING CRUISE (Junior Year)

CRU 350 Sea Training III (Engine)►	8.0
Total	**8.0**

► **STCW Courses (Must receive a "C-" or better, or "CR")**
✱ **Courses in Major (CGPA = 2.0 is Required)**
◘ **FF 200 Basic/Advanced Marine Firefighting is also offered Spring (Junior Year)**

FALL (Senior Year)

ELEC	8	American Institutions Elective	3.0
ENG	**430**	**Naval Architecture►✱**	**3.0**
ENG	470	Engineering Management✱	3.0
ME	349	Fluid/Thermal Lab✱	2.0
ME	394	Fluid/Thermal Design✱	3.0
ME	492	Project Design I✱	3.0
STEM	2	Stem Course (See Box)✱	3.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	9	American Institutions Elective	3.0
EPO	**217**	**Shipboard Medical►**	**1.0**
HUM	310	Engineering Ethics	3.0
ME	342	Refrigeration & A/C✱	3.0
ME	429	Manufacturing Processes Lab►✱	2.0
ME	494	Project Design II✱	3.0
STEM	3	Stem Course (See Box)✱	4.0
		Total	**18.0**

STEM COURSES

Energy Design Stem
ME 440 Advanced Fluids & Thermodynamics✱
ME 442 HVAC Design✱
ME 444 Energy Systems Design✱

Mechanical Design Stem
ME 434 Advanced Mechanics of Materials✱
ME 430 Mechanical Vibrations✱
ME 432 Machinery Design✱

Please inform Student Records if you choose an alternate option. Otherwise your Degree Progress Report will be incorrect.

MECHANICAL ENGINEERING MAJOR
ME OPTION – GOLD COMPANY
(OPTIONAL POWER GENERATION MINOR)
CURRICULUM

Subject to Change

Total Units: 164

Students Must Report Scores on the Fundamentals of Engineering Exam for Graduation

OPTIONAL POWER GENERATION MINOR COURSES ARE BOLDED. ADDITIONAL UNITS MUST BE ADDED TO TOTAL FOR EACH SEMESTER.

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
EGL	100	English Composition	3.0
ENG	110	Intro to Engr and Technology✱	1.0
ENG	120	Engineering Communications✱	2.0
EPO	110	Plant Operations I	1.0
EPO	125	Intro to Marine Engineering	3.0
EPO	213	Welding Lab	1.0
MTH	210	Calculus I	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**19.0**

SPRING (Freshman Year)

DL	105	Marine Survival	1.0
DL	105L	Marine Survival Lab	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
ELEC	20	Critical Thinking Elective	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**16.0**

SPRING CRUISE (Freshman Year)

CRU 150 Sea Training I (Engine)	8.0
EPO 220 Diesel Engineering I	2.0
Total	**10.0**

FALL (Sophomore Year)

ENG	210	Engineering Computer Programming	2.0
EPO	**210**	**Plant Operations II**	**1.0**
EPO	215	Manufacturing Processes I	1.0
ME	220	Computer Aided Engineering✱	2.0
ME	230	Engineering Materials✱	3.0
ME	232	Engineering Statics✱	3.0
MTH	212	Calculus III	4.0
PHY	205	Engineering Physics II	4.0
		Total	**19.0**

SPRING (Sophomore Year)

ENG	250	Electrical Circ & Electronics✱	3.0
ENG	250L	Electrical Circ & Electronics Lab✱	1.0
EPO	**214**	**Boilers**	**3.0**
EPO	**230**	**Steam Plant System Operations**	**1.0**
ME	240	Engineering Thermodynamics✱	3.0
ME	330	Engineering Dynamics✱	3.0
ME	332	Mechanics of Materials✱	3.0
MTH	215	Differential Equations	4.0
		Total	**17.0**

SPRING CO-OP (Sophomore Year)

CEP 250 ME Co-Op I	8.0
Total	**8.0**

FALL (Junior Year)

ENG	300	Engineering Numerical Analysis✱	4.0
EPO	**235**	**Steam Plant Watch Team Mgmt**	**1.0**
EPO	**312**	**Turbines**	**3.0**
EPO	**319**	**Facilities Engr Diagnostics Lab**	**1.0**
EPO	**321**	**Diesel Plant Simulator**	**1.0**
ME	340	Engineering Fluid Mechanics✱	3.0
ME	350	Electromech Machinery✱	3.0
ME	350L	Electromech Machinery Lab✱	1.0
ME	360	Instr. & Measurement Sys✱	2.0
ME	360L	Instr. & Measurement Sys Lab✱	1.0
		Total	**14.0**

SPRING (Junior Year)

EGL	300	Advanced Writing	(3.0)
EPO	**310**	**Plant Operations III**	**1.0**
ME	339	Material/Mechanical Lab✱	2.0
ME	344	Heat Transfer✱	3.0
ME	392	Mechanical Design✱	3.0
ME	460	Automatic Feedback Control✱	3.0
ME	460L	Automatic Feedback Control Lab✱	1.0
ME	490	Engineering Design Process✱	3.0
STEM	1	Stem Course (See Box)✱	3.0
		Total	**18.0**

SPRING CO-OP (Junior Year)

CEP 350 ME Co-Op II	8.0
Total	**8.0**

✱ Courses in Major
(CGPA = 2.0 is Required)

FALL (Senior Year)

ELEC	8	American Institutions Elective	3.0
ENG	**440**	**Power Engineering✱**	**3.0**
ENG	470	Engineering Management✱	3.0
ME	349	Fluid/Thermal Lab✱	2.0
ME	394	Fluid/Thermal Design✱	3.0
ME	492	Project Design I✱	3.0
STEM	2	Stem Course (See Box)✱	3.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	9	American Institutions Elective	3.0
HUM	310	Engineering Ethics	3.0
ME	342	Refrigeration & A/C✱	3.0
ME	429	Manufacturing Processes Lab✱	2.0
ME	494	Project Design II✱	3.0
STEM	3	Stem Course (See Box)✱	4.0
		Total	**18.0**

STEM COURSES

Energy Design Stem
ME 440 Advanced Fluids & Thermodynamics✱
ME 442 HVAC Design✱
ME 444 Energy Systems Design✱

Mechanical Design Stem
ME 434 Advanced Mechanics of Materials✱
ME 430 Mechanical Vibrations✱
ME 432 Machinery Design✱

Please inform Student Records if you choose an alternate option. Otherwise your Degree Progress Report will be incorrect.

MECHANICAL ENGINEERING MAJOR
ME OPTION – BLUE COMPANY
(OPTIONAL POWER GENERATION MINOR)
CURRICULUM

Subject to Change

Total Units: 164

Students Must Report Scores on the Fundamentals of Engineering Exam for Graduation

OPTIONAL POWER GENERATION MINOR COURSES ARE BOLDED. ADDITIONAL UNITS MUST BE ADDED TO TOTAL FOR EACH SEMESTER.

Writing Proficiency Requirement: All Junior students must demonstrate upper division writing competency as a graduation requirement. This may be fulfilled by passing either the Graduation Writing Exam or EGL 300 Advanced Writing.

FALL (Freshman Year)

CHE	100	Chemistry I	3.0
CHE	100L	Chemistry I Lab	1.0
EGL	100	English Composition	3.0
ELEC	21	Humanities Elective (Lower Division)	3.0
ENG	110	Intro to Engr and Technology✱	1.0
ENG	120	Engineering Communications✱	2.0
MTH	210	Calculus I	4.0
PE	100	Beginning/Intermediate Swimming	(.5)
		Total	**17.0**

SPRING (Freshman Year)

DL	105	Marine Survival	1.0
DL	105L	Marine Survival Lab	1.0
DL	105X	USCG Lifeboatman's Exam	0.0
ELEC	20	Critical Thinking Elective	3.0
EPO	110	Plant Operations I	1.0
EPO	125	Intro to Marine Engineering	3.0
EPO	213	Welding Lab	1.0
MTH	211	Calculus II	4.0
PHY	200	Engineering Physics I	3.0
PHY	200L	Engineering Physics I Lab	1.0
		Total	**18.0**

SPRING CRUISE (Freshman Year)

CRU 150 Sea Training I (Engine)	8.0
EPO 220 Diesel Engineering I	2.0
Total	**10.0**

FALL (Sophomore Year)

ENG	210	Engineering Computer Programming	2.0
EPO	**210**	**Plant Operations II**	**1.0**
EPO	215	Manufacturing Processes I	1.0
ME	220	Computer Aided Engineering✱	2.0
ME	230	Engineering Materials✱	3.0
ME	232	Engineering Statics✱	3.0
MTH	212	Calculus III	4.0
PHY	205	Engineering Physics II	4.0
		Total	**19.0**

SPRING (Sophomore Year)

ENG	250	Electrical Circ & Electronics✱	3.0
ENG	250L	Electrical Circ & Electronics Lab✱	1.0
EPO	**214**	**Boilers**	**3.0**
EPO	**230**	**Steam Plant System Operations**	**1.0**
ME	240	Engineering Thermodynamics✱	3.0
ME	330	Engineering Dynamics✱	3.0
ME	332	Mechanics of Materials✱	3.0
MTH	215	Differential Equations	4.0
		Total	**17.0**

SPRING CO-OP (Sophomore Year)

CEP 250 ME Co-Op I	8.0
Total	**8.0**

FALL (Junior Year)

ENG	300	Engineering Numerical Analysis✱	4.0
EPO	**235**	**Steam Plant Watch Team Mgmt**	**1.0**
EPO	**312**	**Turbines**	**3.0**
EPO	**319**	**Facilities Engr Diagnostics Lab**	**1.0**
EPO	**321**	**Diesel Plant Simulator**	**1.0**
ME	340	Engineering Fluid Mechanics✱	3.0
ME	350	Electromech Machinery✱	3.0
ME	350L	Electromech Machinery Lab✱	1.0
ME	360	Instr. & Measurement Sys✱	2.0
ME	360L	Instr. & Measurement Sys Lab✱	1.0
		Total	**14.0**

SPRING (Junior Year)

EGL	300	Advanced Writing	(3.0)
EPO	**310**	**Plant Operations III**	**1.0**
ME	339	Material/Mechanical Lab✱	2.0
ME	344	Heat Transfer✱	3.0
ME	392	Mechanical Design✱	3.0
ME	460	Automatic Feedback Control✱	3.0
ME	460L	Automatic Feedback Control Lab✱	1.0
ME	490	Engineering Design Process✱	3.0
STEM	1	Stem Course (See Box)✱	3.0
		Total	**18.0**

SPRING CO-OP (Junior Year)

CEP 350 ME Co-Op II	8.0
Total	**8.0**

✱ Courses in Major
(CGPA = 2.0 is Required)

FALL (Senior Year)

ELEC	8	American Institutions Elective	3.0
ENG	**440**	**Power Engineering✱**	**3.0**
ENG	470	Engineering Management✱	3.0
ME	349	Fluid/Thermal Lab✱	2.0
ME	394	Fluid/Thermal Design✱	3.0
ME	492	Project Design I✱	3.0
STEM	2	Stem Course (See Box)✱	3.0
		Total	**17.0**

SPRING (Senior Year)

ELEC	9	American Institutions Elective	3.0
HUM	310	Engineering Ethics	3.0
ME	342	Refrigeration & A/C✱	3.0
ME	429	Manufacturing Processes Lab✱	2.0
ME	494	Project Design II✱	3.0
STEM	3	Stem Course (See Box)✱	4.0
		Total	**18.0**

STEM COURSES

Energy Design Stem
ME 440 Advanced Fluids & Thermodynamics✱
ME 442 HVAC Design✱
ME 444 Energy Systems Design✱

Mechanical Design Stem
ME 434 Advanced Mechanics of Materials✱
ME 430 Mechanical Vibrations✱
ME 432 Machinery Design✱

MECHANICAL ENGINEERING COURSES

COOPERATIVE EDUCATION

CEP 185. STUDY ABROAD ELECTIVE

CEP 250. ME CO-OP I

CEP 350. ME CO-OP II

CEP 385. STUDY ABROAD ELECTIVE

CEP 390. INDEPENDENT STUDY

CEP 395. SPECIAL TOPICS

ENGINEERING

ENG 100. ENGINEERING GRAPHICS (Engineering Technology Course)

ENG 110. INTRODUCTION TO ENGINEERING AND TECHNOLOGY

ENG 120. ENGINEERING COMMUNICATIONS

ENG 185. STUDY ABROAD ELECTIVE

ENG 210. ENGINEERING COMPUTER PROGRAMMING

ENG 250. ELECTRICAL CIRCUITS AND ELECTRONICS

ENG 250L. ELECTRICAL CIRCUITS AND ELECTRONICS LAB

ENG 300. ENGINEERING NUMERICAL ANALYSIS

ENG 385. STUDY ABROAD ELECTIVE

ENG 390. INDEPENDENT STUDY

ENG 395. SPECIAL TOPICS

ENG 430. NAVAL ARCHITECTURE (Engineering Technology Course)

ENG 440. POWER ENGINEERING

ENG 470. ENGINEERING MANAGEMENT

ENG 472. FACILITIES MANAGEMENT (Engineering Technology Course)

HUMANITIES

HUM 185. STUDY ABROAD ELECTIVE

HUM 310. ENGINEERING ETHICS

HUM 385. STUDY ABROAD ELECTIVE

MECHANICAL ENGINEERING

ME 185. STUDY ABROAD ELECTIVE

ME 220. COMPUTER AIDED ENGINEERING

ME 230. ENGINEERING MATERIALS

ME 232. ENGINEERING STATICS

ME 240. ENGINEERING THERMODYNAMICS

ME 330. ENGINEERING DYNAMICS

ME 332. MECHANICS OF MATERIALS

ME 339. MATERIAL/MECHANICAL LAB

ME 339L. MATERIAL/MECHANICAL LAB LAB

ME 340. ENGINEERING FLUID MECHANICS

ME 342. REFRIGERATION AND AIR CONDITIONING

ME 344. HEAT TRANSFER

ME 349. FLUID/THERMAL LAB

ME 349L. FLUID/THERMAL LAB LAB

ME 350. ELECTROMECHANICAL MACHINERY

ME 350L. ELECTROMECHANICAL MACHINERY LAB

ME 360. INSTRUMENTATION AND MEASUREMENT SYSTEMS

ME 360L. INSTRUMENTATION AND MEASUREMENT SYSTEMS LAB

ME 385. STUDY ABROAD ELECTIVE

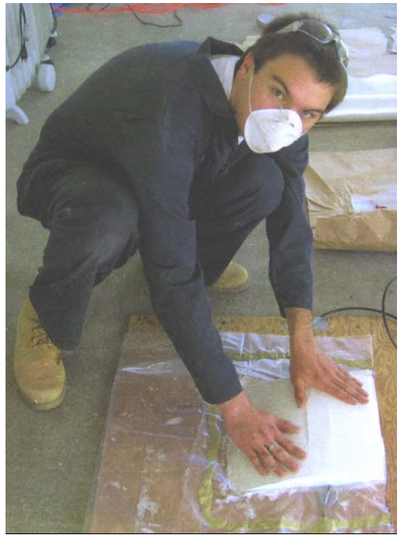
ME 390. INDEPENDENT STUDY

ME 392. MECHANICAL DESIGN

ME 394. FLUID/THERMAL DESIGN

ME 395. SPECIAL TOPICS

ME 429. MANUFACTURING PROCESSES LAB



ME 430. MECHANICAL VIBRATIONS

ME 432. MACHINERY DESIGN

ME 434. ADVANCED MECHANICS OF MATERIALS

ME 440. ADVANCED FLUID MECHANICS AND THERMODYNAMICS

DEPARTMENT OF NAVAL SCIENCE

The U.S. Navy's Presence on Cal Maritime's Campus

HONOR

COURAGE

COMMITMENT

DEPARTMENT OF NAVAL SCIENCE

The Department of Naval Science administers the Naval Science courses on campus as well as the academy's Merchant Marine Reserve (MMR) unit. Naval Science courses are offered at both lower and upper levels and cover subjects such as ethics, naval operations, the history of the U.S. Navy and Merchant Marine, ship communications, national defense organization, underway replenishment, anti-terrorism/ force-protection fundamentals, convoy tactics, and naval tradition.

NAVAL SCIENCE FACULTY

Joseph J. Lauman, LT, USN (2007)
OIC and Chair
B.S., Systems Engineering,
United States Naval Academy, 2002

David W. Oldham, LT, USN (2009)
Asst. OIC/Instructor Naval Science
B.S., Mechanical Engineering,
Penn State University, 2005

ABOUT MMR DET-71

The Merchant Marine Reserve, Detachment 71, is an officer accessions training unit that produces merchant marine officers for the US Navy Reserve. Participating license track students may be eligible for the following:

- Student Incentive Pay (SIP)
- Advanced leadership training
- Participation in community service events
- U.S. Navy Reserve officer commission upon graduation
- Option to apply for Active Duty Commission in U.S. Navy

Become a part of a proud tradition by joining MMR DET-71! Learn more at:

www.csum.edu/military/MMR/index.asp

NAVAL SCIENCE MINOR

Required for Minor:

		Units
NSC 200	Naval Science for the Merchant Marine Reservist I	3
NSC 400	Leadership, Ethics, and Naval Science for the Merchant Marine Reservist II	4

Additional courses from the following may be used to make a total of at least 8 units for the minor:

NSC 100	Naval Science for the MMO (Only for non-licensed majors)	3
NSC 255	Midshipman Naval Training Cruise (in conjunction with CRU 200 or CRU 250)	3
NSC 310	Naval Operations	4
	and	
NSC 310L	Naval Operations Lab	0
NSC 315	Navigation (for engineers)	4
	and	
NSC 315L	Navigation Lab (for engineers)	0
NSC 390	Independent Study in Naval Science (may be used in lieu of NSC 310 with Chair approval)	3
NSC 450	Advanced Midshipman Naval Training (one unit per semester up to a total of five units)	1

NAVAL SCIENCE COURSES

NSC 100. NAVAL SCIENCE FOR THE MERCHANT MARINE OFFICER

NSC 185. STUDY ABROAD ELECTIVE

NSC 200. NAVAL SCIENCE FOR THE MERCHANT MARINE RESERVIST I

NSC 255. MIDSHIPMAN NAVAL TRAINING CRUISE

NSC 310. NAVAL OPERATIONS

NSC 310L. NAVAL OPERATIONS LAB

NSC 315. NAVIGATION (FOR ENGRS)

NSC 315L. NAVIGATION LAB (FOR ENGRS)

NSC 385. STUDY ABROAD ELECTIVE

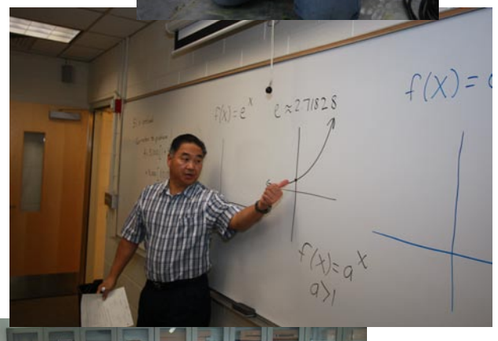
NSC 390. INDEPENDENT STUDY

NSC 395. SPECIAL TOPICS

NSC 400. LEADERSHIP, ETHICS, AND NAVAL SCIENCE FOR THE MERCHANT MARINE RESERVIST II

NSC 450. ADVANCED MIDSHIPMAN NAVAL TRAINING

DEPARTMENT OF SCIENCES AND MATHEMATICS



DEPARTMENT OF SCIENCES AND MATHEMATICS

The Department of Sciences and Mathematics helps students master foundational skills in sciences and mathematics that they will apply in their major fields of study, their careers, and their lives. In addition, the department provides courses in sciences, mathematics, and computer sciences that meet the CSU educational requirements for depth and breadth. The goal of the department is to give students skill-sets so that they will know how to acquire basic quantitative information, analyze the information, solve problems, formulate conclusions and alternate solutions, and create predictive models.

The Department of Sciences and Mathematics provides general education courses to all majors and offers a minor in Marine Science.

SCIENCES AND MATHEMATICS FACULTY

Lloyd Kitazono (1978)
Professor and Chair
B.S., Marine Biology, University of California, Davis, 1975
M.A., Marine Sciences, San Francisco State University, 1978

Greg H. Cho (1999)
Assistant Professor
B.S., Mechanical Engineering, Yonsei University, Korea, 1983
M.S., Mechanical Engineering, Yonsei University, Korea, 1983
Ph.D, Mechanical and Aeronautical Engineering, University of California, Davis, 1996

Ken Dobra (1999)
Lecturer
B.A., Biology, Kent State University, 1969
Ph.D., Physiology, Indiana University, 1973

Taiyo Inoue (2009)
Assistant Professor
B.S., Mathematics, University of California, Davis, 2000
Ph.D., Mathematics, University of California, Berkeley, 2007

Jaya Punglia (1993)
Professor
M.S., Physics, Vikram University, Ujjain, India, 1964
Ph.D., Physics, University of London, 1972

JoAnne Strickland (2005)
Lecturer
B.S., Mechanical Engineering, University of Virginia, 1984
M.S., Computer Information Systems, University of Phoenix, 2004

Brandon Tenn (2006)
Lecturer
B.S., Mathematics and Chemistry, University of Hawaii at Manoa, 2001
Ph.D., Physical Chemistry, University of California, Davis, 2009

Cynthia S. Trevisan (2008)
Assistant Professor
M.S., Physics, Universidad de Buenos Aires, Argentina, 1994
Ph.D., Physics, University College London, United Kingdom, 2002

James W. Wheeler (1980)
Professor
B.A., Chemistry, CSU Sacramento, 1970
Ph.D., University of Idaho, 1976
Juris Doctor, University of Pacific, McGeorge School of Law, 1986

EMERITUS FACULTY

Carl L. Mampaey (1978-2004)
Professor

GENERAL EDUCATION

As part of its mission, the Department of Sciences and Mathematics delivers a broad spectrum of GE courses focusing on the CSU Educational Breadth Requirements.

The General Education component has two goals:

1. To provide students with a foundation of skills that will be applied in their major fields (measurement, computation, and scientific reasoning);

2. To provide instructional depth and breadth to ensure that graduates will have a well-rounded knowledge in math and science.

MARINE SCIENCE MINOR

Minor Advisor - Lloyd Kitazono

Required for Minor:

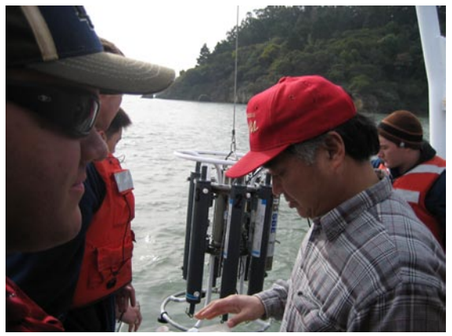
		Units
MSC 390	Independent Study	3

At least nine units of the following oceanography courses:

MSC 100	Intro. to Geological & Chemical Oceanography	3
MSC 105	Intro. to Biological & Physical Oceanography	3
MSC 200	Oceanographic Instruments and Analysis	3
MSC 205	Marine Biology	3

Additional courses from the following may be used to make a total of at least 15 units for the minor:

GMA 105	Ocean Politics (not for Global Studies majors)	3
NAU 330	Meteorology (not for Marine Transportation majors)	3



SCIENCES AND MATHEMATICS COURSES

CHEMISTRY

CHE 100. CHEMISTRY I

CHE 100L. CHEMISTRY I LAB

CHE 185. STUDY ABROAD ELECTIVE

CHE 205. CHEMISTRY OF PLANT PROCESSES

CHE 385. STUDY ABROAD ELECTIVE

CHE 390. INDEPENDENT STUDY

CHE 395. SPECIAL TOPICS

COMPUTERS

COM 100. INTRODUCTION TO COMPUTERS

COM 185. STUDY ABROAD ELECTIVE

COM 220. PROGRAMMING APPLICATIONS FOR ENGINEERING TECHNOLOGY MAJORS

COM 220L. PROGRAMMING APPLICATIONS FOR ENGINEERING TECHNOLOGY MAJORS LAB

COM 385. STUDY ABROAD ELECTIVE

COM 390. INDEPENDENT STUDY

COM 395. SPECIAL TOPICS

MARINE SCIENCE

MSC 100. INTRODUCTION TO GEOLOGICAL AND CHEMICAL OCEANOGRAPHY

MSC 105. INTRODUCTION TO BIOLOGICAL AND PHYSICAL OCEANOGRAPHY

MSC 185. STUDY ABROAD ELECTIVE

MSC 200. OCEANOGRAPHIC INSTRUMENTS AND ANALYSIS

MSC 205. MARINE BIOLOGY

MSC 385. STUDY ABROAD ELECTIVE

MSC 390. INDEPENDENT STUDY

MSC 395. SPECIAL TOPICS

MATHEMATICS

MTH 100. COLLEGE ALGEBRA AND TRIGONOMETRY

MTH 105. FINITE MATH

MTH 107. ELEMENTARY STATISTICS

MTH 185. STUDY ABROAD ELECTIVE

MTH 205. CALCULUS FOR BUSINESS

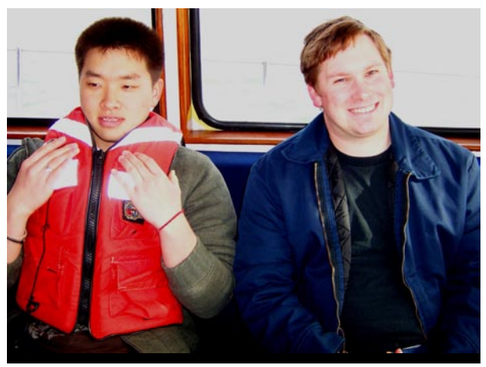
MTH 210. CALCULUS I

MTH 211. CALCULUS II

MTH 212. CALCULUS III

MTH 215. DIFFERENTIAL EQUATIONS

MTH 385. STUDY ABROAD ELECTIVE



MTH 390. INDEPENDENT STUDY

MTH 395. SPECIAL TOPICS

PHYSICS

PHY 100. PHYSICS I

PHY 100L. PHYSICS I LAB

PHY 105. PHYSICS II

PHY 185. STUDY ABROAD ELECTIVE

PHY 200. ENGINEERING PHYSICS I

PHY 200L. ENGINEERING PHYSICS I LAB

PHY 205. ENGINEERING PHYSICS II

PHY 385. STUDY ABROAD ELECTIVE

PHY 390. INDEPENDENT STUDY

PHY 395. SPECIAL TOPICS

COURSES

DEFINITIONS

A **prerequisite** is an academic requirement that must be completed prior to enrolling in a course.

A **co-requisite** is an academic requirement that must be taken concurrently with a course.

► Denotes a course that fulfills STCW (Standards of Training, Certification, and Watchkeeping for Seafarers) requirements. USCG license program students must achieve a grade of "C-" or better in order to pass an STCW course.

(CSL) Denotes that these courses have a community service component, which may be in addition to regular class hours or part of the course itself, as indicated.

ACADEMIC DEPARTMENT/SCHOOL DESIGNATIONS

ATH = Athletics
ET = Engineering Technology
XL = Extended Learning
LIB = Library
MT = Marine Transportation
MO = Maritime Operations
MPM = Maritime Policy and Management
ME = Mechanical Engineering
NS = Naval Science
SM = Sciences & Mathematics

Please refer to the academic department/school designation listed after the course description to determine the department/school that maintains the course.

All courses are graded using the A–F system unless otherwise specified.

COURSE NUMBERING SYSTEM

0 – 99..... remedial courses (not applicable to degree)
100 – 299..... lower division
300 – 499..... upper division

BUSINESS

BUS 100. ACCOUNTING PRINCIPLES I: FINANCIAL
CLASS HOURS: 3, CREDIT: 3
Prerequisites: None
The objective of this course is to provide the financial accounting principles within which a company functions. Topics include measuring income, establishing financial position, and reporting the results of the accounting cycle. **MPM**

BUS 101. ACCOUNTING PRINCIPLES II: MANAGERIAL
CLASS HOURS: 3, CREDIT: 3
Prerequisite: BUS 100
The focus of this course is on planning and controlling business operations.The course includes data analysis, budgets, product costing and pricing, and quantitative decision-making. **MPM**

BUS 120. THE ENVIRONMENT OF MODERN BUSINESS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: None
A survey course to introduce the student to the various components and issues relating to modern business. Topics to be covered include: management, operations, human behavior in business settings, human resources, marketing, financial management and planning both personal and enterprise, and business ethical issues. The focus of the course will be the introduction to the student of the business faculty and the different aspects of business practices today, the interaction between global business, people, and the governments, and the issues facing enterprises large and small. Business career opportunities will also be addressed during each part of the course. **MPM**

BUS 165. BUSINESS DECISION ANALYSIS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 100
The success of business executives and managers depends on their decision-making abilities and sound knowledge they incorporate in their decision-making process. The Business Decision Analysis course covers concepts and quantitative tools as aids in managerial decision making. Students will learn to utilize algebraic techniques and computer technology to solve business decision problems. They will be introduced to the concepts of probability and time value of money, their importance to business and how to incorporate them in business problems and solving them. A wide range of business applications will be covered, including many from transportation, logistics, the maritime industry, and international business. **MPM**

BUS 185. STUDY ABROAD ELECTIVE
MPM

BUS 190. CRUISE PORT ANALYSIS
CLASS HOURS: 1, CREDIT: 1
Prerequisites: None
Co-requisite: Cruise
An introductory course for students not involved in Coast Guard licensing, covering shipboard operational requirements necessary to make modern sea-going vessels function efficiently. Students also conduct studies of commercial elements in ports to be visited during cruise. They plan and arrange for site visits, factory or transport enterprise visits, seminars, and other activities to be conducted while in port, and/or during voyages. **MPM**

BUS 195. CRUISE SPECIAL TOPICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: BUS 190
Co-requisite: Cruise
This course is a special topics course to be taught to business students on cruise. Topics will be related to the specific cruise destinations, and reflect the expertise and interest of the instructor as well as the nature of the cruise. There may be a service learning component as determined by the instructor. **MPM**

BUS 200. INTRODUCTION TO MARKETING
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ECO 100
This course introduces the student to the marketing function in a business environment. The various marketing components of product, price, promotion, and place are examined in the context of the competitive business arena. Case studies and the analysis of marketing plans are discussed. **MPM**

BUS 205. BUSINESS STATISTICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 205
This foundation course discusses statistical methods that management would find useful in solving common business problems. The course discusses such topics as decision-making in the face of uncertainty, probability and expectation, estimation, tests of hypothesis, regression analysis, and analysis of variance. **MPM**

BUS 220. BUSINESS COMMUNICATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: None
Focuses on the three main communication skills required by a decision-maker: written, oral, and presentational. Besides communication skills, the course also has a critical thinking component that builds analytical skills and includes library and Internet research. **MPM**

BUS 300. INTERNATIONAL BUSINESS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ECO 100
This course introduces the student to the effects of multi-national operations on business strategy and decision making by exploring the economic, political, financial, legal, and social nature of the international environment. The formulation, selection, and implementation of multi-national strategies are examined in the context of the global business environment. **MPM**

BUS 301. INTERNATIONAL BUSINESS II —COUNTRY RESEARCH ANALYSIS AND GLOBAL MARKETING
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 120, BUS 200, BUS 300
Students explore, in detail, some major issues of doing business globally, such as environment, supply chain competition, regulation, security, exchange rates and international finance, and legal and cultural issues. Focus will be principally maritime and transport related. Students learn through case studies and research and analysis of specific country information from major international organizations. **MPM**

BUS 302. PRINCIPLES OF RESEARCH DESIGN, IMPLEMENTATION & ANALYSIS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: BUS 205, or an equivalent at least sophomore level statistics course from transfer credits or another Cal Maritime department.
Co-requisite: BUS 302L
The purpose of this course is to give students a working appreciation of both quantitative and qualitative research methodologies. The classroom presentations will focus on theory and examples; the lab will give students an opportunity to put theory into practice by designing, implementing and analyzing a business research project. Student teams conduct work on the projects. Within the teams there will be a cross-functional approach so that each student will be involved at one time or another in assignments that involve all major aspects of the research project. In addition to the usual evaluation by the professor, peer evaluation will round out the students' project experiences. **MPM**

BUS 302L. PRINCIPLES OF RESEARCH DESIGN, IMPLEMENTATION & ANALYSIS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite: Same as BUS 302
Co-requisite: BUS 302
MPM

BUS 310. FINANCIAL MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 101, BUS 205, MTH 205
Introduction to management and formation of capital; the finance function and its environment; techniques of financial analysis; planning and control; management of working capital; capital budgeting; cost of capital; money and capital market analysis; management of capital structure. **MPM**

BUS 385. STUDY ABROAD ELECTIVE
MPM

BUS 390. INDEPENDENT STUDY
MPM

BUS 395. SPECIAL TOPICS
MPM

BUS 400. BUSINESS AND SOCIETY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ECO 101
Analysis of the American business system in terms of socioeconomic and political constraints imposed upon business organizations by external environments. Special reference to ethical issues in business, corporate social responsibility, and profit maximization. **MPM**

BUS 405. BUSINESS LEADERSHIP AND GROUP DYNAMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 220, CEP 300, EGL 300, Senior Class Standing
Behavioral and psychological aspects of leadership in the business environment are the focus of this course. Behavioral concepts include practical training in how to follow, development of skills in leadership, communication, team membership, and management of personal stress. Psychological concepts include attitude development, corporate culture values, and personality assessment. In addition, students perform a detailed leadership analysis of their co-op (or other work experience, with instructor's approval), resulting in a professional paper, and an oral presentation in class. **MPM**

CHEMISTRY

CHE 100. CHEMISTRY I
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Co-requisite: CHE 100L
This course is an intensive survey of the fundamental principles of chemistry. Primary emphases focus on atomic and molecular structure, atomic and hybrid orbital theories, stoichiometry, bonding theories including molecular orbital theory, molecular geometry, thermochemistry, and the states of matter. **SM**

CHE 100L. CHEMISTRY I LAB
LAB HOURS: 3, CREDIT: 1
Co-requisite: CHE 100
As a co-requisite, this course is designed to expand upon as well as reinforce chemical concepts introduced in CHE 100 and introduce students to processes, hardware, instruments and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include metric measurement, properties of chemicals, emission spectra, bonding, Avogadro's Number, reaction stoichiometry, the ideal gas law, thermochemistry, and solutions. **SM**

CHE 185. STUDY ABROAD ELECTIVE
SM

CHE 205. CHEMISTRY OF PLANT PROCESSES
CLASS HOURS: 3, CREDIT: 3
Prerequisites: CHE 100, CHE 100L
This course examines the role that water plays in both production and power plant processes. Emphases within the course focus on the nature of liquid mixtures, including equilibrium concepts as they relate to solution chemistry, sources and types of organic and inorganic water contamination, the quantification of water contamination and the pre-treatment and post-treatment of water utilized in plant processes. **SM**

CHE 385. STUDY ABROAD ELECTIVE
SM

CHE 390. INDEPENDENT STUDY
SM

CHE 395. SPECIAL TOPICS
SM

COMMUNITY SERVICE LEARNING

CSL 120. COMMUNITY SERVICE LEARNING
CLASS HOURS: 3
COMMUNITY SERVICE HOURS: 30
CREDIT: 3
Prerequisite: None
This course is designed to provide an exceptional and personalized mandatory community service-learning experience where students apply their academic knowledge and skills to community based issues and needs. This experiential based approach will be combined with a series of lectures and discussions covering issues related to students' community service learning. Guest speakers and readings are used to acquaint students with a variety of topics related to their service activities. In addition, students take part in regular reflection activities where they critically analyze their personal service experience from a number of different perspectives. **MPM**

CSL 185. STUDY ABOARD ELECTIVE
MPM

CSL 210. DYING: THE FINAL STAGE OF LIVING
CLASS HOURS: 3,
COMMUNITY SERVICE HOURS: 10
CREDIT: 3
Prerequisite: None
Co-requisite: EGL 100
In this unique course, students learn to view death, the final stage of growth, less as an adversary and more as a defining part of life. By reflecting on medical, cultural and religious responses to death in general terms, they are taught to understand and articulate the emotional and spiritual needs of the dying as human beings go through the process of daily living. This course also includes a mandatory community service-learning component, which requires students to work with the terminally ill and/or the bereaved through Kaiser Vallejo's Hospice Department. **MPM**

Other courses that include a Community Service Learning component are as follows:
EGL 110 Speech Communication
HIS 300 Maritime History of the U.S.

CSL 385. STUDY ABROAD ELECTIVE
MPM

CSL 390. INDEPENDENT STUDY
MPM

CSL 395. SPECIAL TOPICS
MPM

COMPUTERS

COM 100. INTRODUCTION TO COMPUTERS
CLASS/LAB HOURS: 2, CREDIT: 2
Prerequisite: None
Provides students with a basic understanding of word processing, presentation software, spreadsheet software and simple database operations. **SM**

COM 185. STUDY ABROAD ELECTIVE
SM

COM 220. PROGRAMMING APPLICATIONS FOR ENGINEERING TECHNOLOGY MAJORS
CLASS HOURS: 1, CREDIT: 1
Co-requisite: COM 220L
This course is designed to instruct Engineering Technology students in the skills needed to utilize the basic operations of calculators and computers in a modern engineering environment. The scope of this course will range from simple calculations commonly found in engineering applications to the more complex operations necessary to evaluate physical phenomena in the real world. The reduction of physical data and basic functions to graphical representations will be explored in full using both calculators and computers. **SM**

COM 220L. PROGRAMMING APPLICATIONS FOR ENGINEERING TECHNOLOGY MAJORS LAB
LAB HOURS: 2, CREDIT: 1
Co-requisite: COM 220
Supports the instruction in COM 220 by providing actual experience in engineering problem solutions using computer applications. This lab uses various common computer applications, such as Microsoft Excel, to analyze engineering situations, perform data manipulation, solve problems, and analyze graphs. The programming environment of Visual Basic for Applications (VBA) is used to write programs to perform engineering analysis. **SM**

COM 385. STUDY ABROAD ELECTIVE
SM

COM 390. INDEPENDENT STUDY
SM

COM 395. SPECIAL TOPICS
SM

COOPERATIVE EDUCATION

CEP 185. STUDY ABROAD ELECTIVE
ME, ET, BA, GMS

CEP 250. ME CO-OP I
CREDIT: 8
Prerequisite: Sophomore Class Standing
This course is the first of two summer co-ops required for some students in the Mechanical Engineering program. It requires the student to work onsite in an industry, research facility, or research institution under a cooperative education training agreement for a 2-3 month period. Students will encounter practical work and current research experiences. These experiences will vary with the participating companies, facilities, and institutions. The student will work in a paid position under a degreed engineering supervisor in cooperation with the Career Development Center. **ME**

CEP 270. FET CO-OP I
CREDIT: 8
Prerequisites: CRU 150, Sophomore Class Standing
This course is the first of two summer co-ops required for the Facilities Engineering Technology major. It requires the student to work in industry under a cooperative education training agreement by working onsite for a 2-month period. Students will encounter current and practical work experience with various facilities. **ET**

CEP 300. BUSINESS INDUSTRY CO-OP I
CREDIT: 3
Prerequisites: Permission of the Chair
This course allows the student to spend time in a domestic work environment that has been setup by the Business Department. The student is expected to acquire practical learning outcomes in management, resource allocation, and business communications. The focus of this experience is to get employment in a company that will enhance the theoretical knowledge, improve the practical learning and build leadership and management skills. **MPM**

CEP 330. GSMA CO-OP
CREDIT: 3
Prerequisites: GMA 100, GMA 105
Provides students with experience in industry, government and NGO settings in areas relevant to the GSMA major. Students apply classroom knowledge to real-world issues and bring the work experience back to the classroom to enrich their academic understanding of maritime policy concerns. Specific experience varies with the co-op setting, but includes written and oral communication skills, applied knowledge and opportunities for in-depth appreciation of a specific aspect of maritime security, environmental and other policy issues. Generally taken during the third summer, but may be done at any time with the permission of the GSMA Co-op Coordinator and GMS Department Chair. **MPM**

CEP 350. ME CO-OP II
CREDIT: 8
Prerequisites: CEP 250, Junior Class Standing
This course is the second and final of two summer co-ops required for some students in the Mechanical Engineering program. It requires the student to work onsite in an industry, research facility, or research institution under a cooperative education training agreement for a 2-3 month period. Students will encounter practical work and current research experiences. Experiences vary with the participating companies, facilities, and institutions but should include teamwork, communication, and engineering design problem-solving opportunities. The student will work in a paid position under a degreed engineering supervisor in cooperation with the Career Development Center. **ME**

CEP 370. FET CO-OP II
CREDIT: 8
Prerequisites: CEP 270, Junior Class Standing
CEP 370 is the second and final of two summer cooperative education courses required by the Facilities Engineering Technology Program. This course requires the student to work in industry under a cooperative education training agreement by working onsite for a 2-month period. Students will encounter current and practical work experience with various facilities. **ET**

CEP 385. STUDY ABROAD ELECTIVE
ME, ET, MPM

CEP 390. INDEPENDENT STUDY
ME, ET, MPM

CEP 395. SPECIAL TOPICS
ME, ET, MPM

CRUISE

CRU 100. SEA TRAINING I (DECK)►
CREDIT: 8
Prerequisites: DL 100, DL 105, DL 105L, DL 105X, DL 109, DL 110, DL 115, DL 120, NAU 105, NAU 110
A valid passport and successful completion of the USCG Lifeboatman's exam are required for all students embarking on all training cruises.
Comprises the first sea training experience for the student. During this period of training aboard the *Training Ship GOLDEN BEAR*, the emphasis is on ship familiarization, safety drills and training, basic deck watchstanding skills as helmsman and lookout, vessel maintenance and sanitation, and practical seamanship. Students will be required to demonstrate competencies in selected STCW '95 topics. **MT**
Graded: Credit/No Credit

CRU 150. SEA TRAINING I (ENGINE)►
CREDIT: 8
Prerequisites: DL 105, DL 105L, DL 105X, EPO 110, EPO 125
A valid passport and successful completion of the USCG Lifeboatman's exam are required for all students embarking on all training cruises.
First at-sea experience on the training ship. Introduction to the fundamentals of engineering systems operations and shipboard routine, including operation and monitoring techniques for diesel propulsion, electrical power generation, and evaporators and support equipment. Duties during emergency situations such as fire, abandon ship, and rescue are also learned. By the end of the cruise, the student will have demonstrated the required STCW competencies and understand basic power plant operation and maintenance. **ET**

CRU 185. STUDY ABROAD ELECTIVE
ET, MT

CRU 190. BASIC SAFETY TRAINING►
CLASS HOURS: 12; LAB HOURS: 12
CREDIT: 1
Prerequisites: Valid CPR and Basic First Aid Certification from a recognized EMS Organization
This course, a primer in shipboard safety awareness for staff and students not involved in Coast Guard licensing, provides basic training in lifesaving and firefighting procedures, modeled after the Coast Guard and IMO approved BST matrix. It includes both knowledge-based topics and laboratory proficiencies in lifesaving and firefighting equipment usage as well as personal safety techniques. **MO**
Graded: Credit/No Credit

CRU 195. INTRODUCTION TO MARITIME OPERATIONS (non-license program course)
CLASS HOURS: 1, CREDIT: 1
Prerequisite: CRU 190, or DL 105 and DL 105L
An introductory course for students not involved in Coast Guard licensing, designed to introduce non-traditional maritime students to various shipboard operational requirements necessary to make modern sea-going vessels function efficiently. **MO**
Graded: Credit/No Credit

CRU 200. SEA TRAINING II (DECK)
CREDIT: 5
Prerequisites: CRU 100, DL 111, FCC Element 1, DL 325, DL 325L, EGL 100, NAU 102, NAU 102L, NAU 205, NAU 305
Also, during the year preceding commercial cruise, the student must not have been found guilty of violating Academy drug and/or alcohol regulations, or state or federal laws involving drugs or alcohol, and must not be on disciplinary probation during the prior term. A valid passport and successful completion of the USCG Lifeboatman's exam are required for all students embarking on all training cruises.
Co-requisite: CRU 200L
This course is the student's second sea training experience. Students are required to participate in a sea training program aboard an approved commercial or federal vessel. The period of onboard training consists of either 60 days for minimum Coast Guard requirements or 90 days for the Tankerman PIC DL certification. During their training period students will document and analyze various aspects of shipboard operation and procedures as prescribed by the department. This guided analysis will constitute their project for which they will be issued a letter grade. **MT**

CRU 200L. SEA TRAINING II LAB (DECK)
CREDIT: 3
Prerequisites: Same as for CRU 200
Co-requisite: CRU 200
This course exposes students to the type of observations and tasks required by STCW 95. As a basis for grading this course, the student completes a comprehensive check list that parallels the STCW 95 standards for which they will be certified on CRU 300. This check list parallels STCW 95 competencies but does not provide certification or equivalency. **MT**
Graded: Credit/No Credit

CRU 225. USCG SEA TRAINING II (DECK)
CREDIT: 5
Prerequisites: Same as for CRU 200. Must be fully accepted as a candidate in the California Maritime Academy Precommissioning Pilot (CMAPPP) Program.
A valid passport and successful completion of the USCG Lifeboatman's exam are required for all students embarking on all training cruises.
Co-requisite: CRU 225L
This course is the student's second sea training experience and is mandatory for all fully accepted students in the California Maritime Academy Pre-Commissioning Pilot (CMAPPP) Program. Students are required to participate in a sea training program aboard an approved Coast Guard cutter. The period of onboard training consists of 60 days for minimum Coast Guard requirements. The objectives of the Cadet Training Program are to expand the student's knowledge of Coast Guard operations and missions from the perspective of a junior officer; reinforce academic year programs and prior training experiences with hands-on experience; develop in an operational environment the specialized skills and knowledge necessary to become a successful career officer; reinforce in each student professional competence, dedication, commitment, and a sense of service history; provide students hands-on experience with the required interaction between chief petty officers and the wardroom; and provide each student the required seagoing experience. **MT**

CRU 225L. USCG SEA TRAINING II LAB (DECK)
CREDIT: 3
Prerequisites: Same as for CRU 200L
Co-requisite: CRU 225
This course exposes students to the type of observations and task required for ensigns in the Coast Guard in accordance with the Personnel Qualification Standard (PQS) and IMO STCW 95 certification. As a basis for grading this course, the student completes a comprehensive professional notebook of required CG observations and tasks. Additionally, the workbook will parallel many STCW 95 standards for which they will be certified in CRU 300. This workbook parallels but does not certify nor is equivalent to STCW 95 competencies. **MT** Graded: Credit/No Credit

CRU 250. SEA TRAINING II (ENGINE)
CREDIT: 8
Prerequisites: CRU 150, EPO 110, EPO 125, EPO 210, EPO 213, EPO 215, and EPO 220 with no grade less than a C-
This course is a 60-day sea training experience aboard a commercial or government vessel for students pursuing a USCG Third Assistant Engineer's License. A comprehensive engineering report and performance evaluations by the ship's engineering officers are the basis for course grading. The Commercial Cruise Project includes a journal of operational and maintenance experiences, technical descriptions and drawings of shipboard engineering systems, and a summary of measures to implement environmental and SOLAS regulations. **ET**

CRU 275. USCG SEA TRAINING II (ENGINE) (COAST GUARD ONLY)
CREDIT: 8
Prerequisites: CRU 150, EPO 210
Must be fully accepted as a candidate in the CMAPPP Program.
This course, the student's second sea training experience, is mandatory for all fully accepted students in the California Maritime Academy Pre-Commissioning Pilot Program (CMAPPP). Students are required to participate in a sea training program aboard a Coast Guard cutter. The period of onboard training consists of 60 days for minimum Coast Guard requirements. The objectives of the Cadet Training program are to expand the student's knowledge of Coast Guard operations and missions from the perspective of a junior officer; reinforce academic-year programs and prior training with hands-on experience; develop in an engineering environment the specialized skills and knowledge necessary to become a successful career officer; reinforce in each student professional competence, dedication, commitment, and a sense of service history; provide students experience with the required interaction between chief petty officers and the ward room; and give each student a minimum of 60 days seagoing experience. A comprehensive report is required upon completion of the cruise. **ET**

CRU 300. SEA TRAINING III (DECK)►
CREDIT: 8
Prerequisites: CRU 200 or CRU 225, CRU 200L or CRU 225L, DL 310, DL 311, DL 320, NAU 202, NAU 202L, NAU 302, NAU 302L, NAU 320, NAU 330, FCC Elements 1 and 7, FF 200
A valid passport and successful completion of the USCG Lifeboatman's exam are required for all students embarking on all training cruises.
This course is the third sea training experience for the student. During this period of training aboard the *Training Ship GOLDEN BEAR*, the emphasis is on ship maneuvering skills, celestial navigation, collision avoidance, weather reporting, radio, communications, bridge team management, supervision of vessel maintenance, and bridge watchstanding as the cadet in charge. Students will be required to demonstrate competencies in 1995 STCW selected topics. **MT**
Graded: Credit/No Credit

CRU 350. SEA TRAINING III (ENGINE)►
CREDIT: 8
Prerequisites: CRU 250 or CRU 275, EPO 310, FF 200
During the cruise, the student functions as the supervisor and assumes responsibility for the proper performance of the first cruise students in engineering tasks. Responsibility is in the following areas: (1) as watch engineer, directly responsible to a licensed watch officer for the operation of all systems, ensuring that all data is properly taken and recorded and all duties properly performed; (2) as daywork assistant, maintaining and repairing equipment and systems under the supervision of an instructor; and (3) as engineering assistant, carrying out Third Assistant duties under the supervision of the Chief Engineer. By the end of cruise, the student will have demonstrated required STCW competencies and be ready to stand watch as a Third Assistant Engineer. **ET**

CRU 385. STUDY ABROAD ELECTIVE
ET, MT

CRU 390. INDEPENDENT STUDY
ET, MT

CRU 395. SPECIAL TOPICS
ET, MT

DECK LABS

DL 100. SMALL CRAFT OPERATIONS►
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 105, DL 105L, pass swimming assessment test or PE 100
Instruction in small boat/motor lifeboat operation. Practical training in small boat handling, with emphasis on maneuvering characteristics, relative motion, and small engine operation. The cadets will continue to develop and practice their leadership skills by acting as the boat operator/coxswain. As such, the acting boat operator/coxswain will be in charge of organizing the vessel crew into a functioning team able to carry out all aspects of small boat operations, from tying up and letting go to emergency procedures. **MO**

DL 105. MARINE SURVIVAL►
CLASS HOURS: 1, CREDIT: 1
Prerequisite: Pass swimming assessment test or PE 100
Co-requisite: DL 105L
This course prepares the student for the U.S. Coast Guard Lifeboatman's Endorsement. Students must pass this class with a C- or better to qualify to take the Coast Guard Lifeboatman's exam. This class conforms to the STCW Requirements for personal survival training as well as components of the social responsibility requirement. Students will be instructed in the preparation, embarkation, and launching of survival craft and will become familiar with the correct use of all survival equipment, as well as the proper actions to take to preserve the lives of those in their charge. **MO**

DL 105L. MARINE SURVIVAL LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisite: Pass swimming assessment test or PE 100
Co-requisite: DL 105
Students receive hands-on training in basic personal and group survival techniques. Through a combination of multiple pool sessions and actual operation of survival craft, students will be given the skills required for the practical section of the U.S. Coast Guard Lifeboatman's Endorsement. This course conforms to STCW requirements for personal survival training as well as components of the social responsibility requirement. **MO** Graded: Credit/No Credit

DL 105X. USCG LIFEBOATMAN'S EXAM
CREDIT: 0 MO Graded: Credit/No Credit

DL 109. INDUSTRIAL EQUIPMENT AND SAFETY
LAB HOURS: 2, CREDIT: 1
Prerequisite: None
This course is designed to prepare Marine Transportation students to safely enter into learning and work assignments aboard the *Training Ship Golden Bear*. It covers many basic safe work practices, personal protective equipment, hazard recognition, and regulatory requirements. **MO**

DL 110. SHIP OPERATIONS I
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 109, DL 115 (may be taken concurrently)
Hands-on introduction to day-to-day shipboard operational and maintenance routines under supervision from upperclass cadets and ship's officers. Undertaken will be structural maintenance, cleaning, lubrication, and various other work projects expected of the ordinary seaman. Students are instructed in power and specialty tools, safe work practices, and HAZMAT/pollution procedures. **MO**
Graded: Credit/No Credit

DL 111. SHIP OPERATIONS II
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 110, DL 115
A continuation of Ship Operations I, with additional emphasis placed on cruise preparation procedures and the work expectations of Able Bodied Seamen. Emphasis is placed on Marlinspike Application, the ability to work with limited supervision, safe working habits, and the proper work ethic for jobs assigned, along with efficiency in the use of labor and material resources. **MO**
Graded: Credit/No Credit.

DL 115. MARLINSPIKE
LAB HOURS: 3, CREDIT: 1
Prerequisite: None
Besides acquiring a thorough working knowledge of rope-work, rigging and safety procedures, students will learn knots. **MO**

DL 120. CARGO OPERATIONS
LAB HOURS: 3, CREDIT: 1
Prerequisite: None
Practical instruction in various types of cargo handling equipment and rigs. Covered are theoretical stress evaluation and cargo gear maintenance, in addition to cargo lifting and securing arrangements. Students practice on cargo rig models, the Academy's ship, and boat rigs, as well as taking field trips to observe local cargo handling facilities. Forklift training and safety certification are course requirements. **MO**

DL 125. GRAPHICS
LAB HOURS: 2, CREDIT: 1
Prerequisite: None
A general course in interpreting engineering drawings. Material covered includes lettering, applied geometry, orthographic projections, free hand and isometric sketching, drawings of ship-board devices and equipment, and blueprint reading. **MT**

DL 185. STUDY ABROAD ELECTIVE
MO, MT

DL 200. SHIP HANDLING►
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 100, DL 105, DL 105L, pass swimming assessment test or PE 100
Practical experience in shiphandling with vessels large enough to gain an appreciation for ship-handling problems encountered with much larger vessels. Participants are exercised in "soft" landings, emergency procedures, mooring techniques and line handling, and collision avoidance. **MO**

DL 240. GLOBAL MARITIME DISTRESS SAFETY SYSTEM (GMDSS)►
CLASS HOURS: 2, CREDIT: 2
Prerequisites: MTH 100, PHY 100, PHY 100L
Co-requisite: DL 240L
A comprehensive STCW-95-compliant course designed to explore various aspects of how to use a marine VHF radio, the Maritime Mobile Service and the Maritime Mobile Satellite Service. Students will demonstrate a theoretical knowledge of equipment compliance, electronic communications systems, calling procedures, distress alerting techniques, and marine safety information. Course leads to FCC licensing for Marine Radio Operator Permit (Element 1) and GMDSS Operator's License (Element 7). Student must also be enrolled in DL 240L. (Additional fee required). **MT**

DL 240L. GLOBAL MARITIME DISTRESS SAFETY SYSTEM (GMDSS) LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisites: Same as for DL 240
Co-requisite: DL 240
A comprehensive STCW-95-compliant lab designed to give students hands-on experience using equipment in the Maritime Mobile Service and the Maritime Mobile Satellite Service. Course to include a 24-hour communications watch on CRU 300. Student must also be enrolled in DL 240. **MT**

DL 305. TUG AND BARGE
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 100
This course introduces the specific operations required of towing and pushing vessels. Students are supervised in the use of the Academy's tug and barge in specific towing operations. **MO**

DL 310. MARINE SUPERVISORY LAB
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 109, DL 110, DL 111, DL 115
Basic introduction into the supervisory skills required of first-level managers by means of supervising and directing groups of persons to competently accomplish individual work projects. Job planning, resource allocation, labor relations and personnel safety assurance are the primary objectives of the course. **MO**

DL 311. MARINE MANAGEMENT LAB
LAB HOURS: 3, CREDIT: 1
Prerequisites: DL 109, DL 110, DL 111, DL 115, DL 310
Continuation of Marine Supervisory Lab, with new emphasis on complete project management versus supervising of individual job components. A complete array of management concepts, including labor relations, material and labor availability, safety and weather considerations, and regulatory compliance variables are stressed in successful project completion. Accountability is emphasized for the successful completion of assigned projects on time while maximizing utility of resources available. Project organization, pre-planning, and implementation are required as vessel prepares for cruise departure. Students are introduced to material acquisition processes and paperwork requirements necessary to achieve project completion. **MO**

DL 320. INTRODUCTION TO BRIDGE SIMULATION►
CLASS HOURS: 2, LAB HOURS: 2, CREDIT: 2
Prerequisites: CRU 200L or CRU 225L, DL 240, DL 240L (may be taken concurrently)
Introduction to California Maritime's bridge simulator. Instructional emphasis is placed on standardized watchstanding methodology, practices, and task priorities. **MT** Graded: Credit/No Credit

DL 325. RADAR/ARPA►
CLASS HOURS: 2, CREDIT: 2
Prerequisites: CRU 100, NAU 102, NAU 102L (may be taken concurrently), NAU 305 (may be taken concurrently), MTH 100, Sophomore Class Standing
Co-requisite: DL 325L
A comprehensive STCW course emphasizing an elementary understanding of RADAR/ARPA theory, factors affecting performance and accuracy, and the limitations of contact detection. Satisfactory completion of this course is a requirement for the issuance of a USCG Third Mate's License. **MT**
Graded: Credit/No Credit

DL 325L. RADAR/ARPA LAB►
LAB HOURS: 4, CREDIT: 2
Co-requisite: DL 325
MT Graded: Credit/No Credit

DL 385. STUDY ABROAD ELECTIVE
MO, MT

DL 390. INDEPENDENT STUDY
MO, MT

DL 395. SPECIAL TOPICS
MO, MT

DL 405. SHIPBOARD MEDICAL►
CLASS HOURS: 1, CREDIT: 1
Prerequisites: Senior Class Standing, CRU 300
Co-requisite: DL 405L
The practical application of the principles of Advanced First Aid. Subjects include diagnosis and treatment of traumatic injuries, cardio-pulmonary resuscitation, shipboard sanitation, including certificates necessary for licensing and for Level 3 STCW. **MT**

DL 405L. SHIPBOARD MEDICAL LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisite: Senior Class Standing, CRU 300
Co-requisite: DL 405
MT

DL 420. WATCHSTANDING SIMULATION►
CLASS HOURS: 2, LAB HOURS: 2, CREDIT: 2
Prerequisites: CRU 300, DL 240, DL 240L
Full mission bridge watchstanding simulator designed as a capstone course for senior students. The course objective is to assess basic watchstanding skills at the STCW 95 OICNW level. **MT** Graded: Credit/No Credit

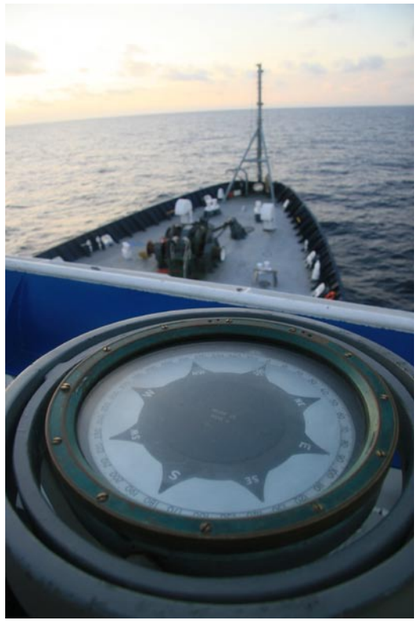
ECONOMICS

ECO 100. MACROECONOMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Basic economic methodology, analysis, and policy; economic institutions, organizations and industrial structure, the monetary system; measurement, determination and stability of national income; monetary, fiscal and balance of payment problems and policies. **MPM**

ECO 101. MICROECONOMICS
CLASS HOURS: 3, CREDIT: 3
Recommended Prerequisite: ECO 100
Introduction to microeconomics and the behavior of economic agents. The economic way of thinking is now very prominent in interpreting modern life, including global business activity. Microeconomics, fundamental in analysis of business and human behavior, is preferred because it gives quantitative predictions. Students analyze the allocation of scarce resources, costs of production, supply and demand, consumer preference, elasticity, and utility theory. They study determination of prices and output in competition and monopoly; the role of public policy, and comparative economic systems, and some modern views of agent behavior. **MPM**

ECO 185. STUDY ABROAD ELECTIVE
MPM

ECO 200. ECONOMIC GEOGRAPHY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Commercial regions of the world, the pattern of production, distribution, and consumption, as well as contemporary industrial and commercial development are discussed. **MPM**

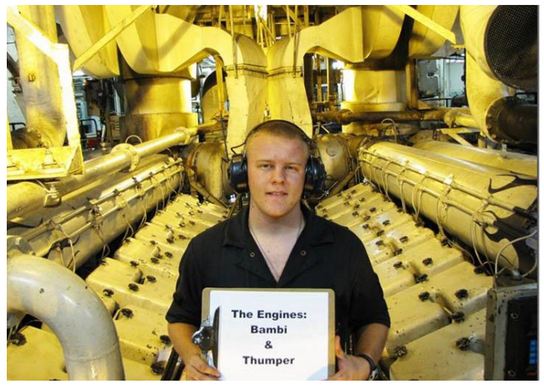


ECO 305. MANAGERIAL ECONOMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 101, BUS 205, BUS 310, ECO 101
Examines concepts of management decision-making using knowledge of the global economic forces. The focus of this class is on economic micro and macro theory to explain events in the local economy and foreign economies. Using logical observations of the economy, the course emphasizes the development of decision-making criteria for strategic business decisions. **MPM**

ECO 385. STUDY ABROAD ELECTIVE
MPM

ECO 390. INDEPENDENT STUDY
MPM

ECO 395. SPECIAL TOPICS
MPM



ELECTIVES

ELEC 8 AMERICAN INSTITUTIONS (HISTORY) ELECTIVES
HIS 100 U. S. HISTORY (TO 1877)
HIS 101 U. S. HISTORY (FROM 1877)

ELEC 9 AMERICAN INSTITUTIONS (GOVERNMENT) ELECTIVES
GOV 200 AMERICAN GOVERNMENT

ELEC 20 CRITICAL THINKING ELECTIVES
EGL 220 CRITICAL THINKING

ELEC 21 HUMANITIES (LOWER DIVISION)
EGL 200 INTRODUCTION TO LITERATURE
HUM 100 HUMANITIES
HUM 101 CULTURE: PRE-RENAISSANCE
HUM 102 CULTURE: POST-RENAISSANCE
HUM 110 WORLD CULTURE JOURNEYS
HUM 130 CREATIVITY
HUM 195 SPECIAL TOPICS (3 UNITS)
LAN 110 SPANISH I
LAN 115 SPANISH II
LAN 120 CHINESE I
LAN 125 CHINESE II

ELEC 22 HUMANITIES ELECTIVES (UPPER DIVISION)
EGL 305 20TH-CENTURY AMERICAN LIT.
EGL 310 U.S. LITERATURE OF THE SEA
EGL 315 WORLD LITERATURE OF THE SEA
EGL 320 LITERATURE OF THE FANTASTIC
EGL 325 CREATIVE WRITING (3 UNITS)
EGL 330 LITERATURE AND PSYCHOLOGY
HUM 300 ART OF THE CINEMA
HUM 305 COMPARATIVE WORLD RELIGIONS
HUM 310 ENGINEERING ETHICS
HUM 315 BUSINESS ETHICS
HUM 325 GLOBALIZATION OF CULTURE
HUM 395 SPECIAL TOPICS (3 UNITS)
HUM 400 ETHICS

ELEC 31 SOCIAL SCIENCE ELECTIVES (LOWER DIVISION)
CSL 120 COMMUNITY SERV. LEARNING
CSL 210 DYING: FINAL STAGE OF LIVING
ECO 100 MACROECONOMICS
ECO 101 MICROECONOMICS
ECO 200 ECONOMIC GEOGRAPHY
GMA 100 INTRO. TO INTL RELATIONS
GMA 105 OCEAN POLITICS
GMA 120 INTRO TO ENVIRONMENTAL POLICY
GMA 195 SPECIAL TOPICS (3 UNITS)
GMA 215 INTRO TO COMPARATIVE POLITICS
GMA 220 COMPARATIVE MARITIME POLICIES
GMA 225 POLITICS OF PACIFIC ASIA
GMA 230 U.S. MARITIME POLICY
HIS 100 U.S. HISTORY (TO 1877)
HIS 101 U.S. HISTORY (FROM 1877)
HIS 210 HISTORY OF LATIN AMERICA
LAW 200 ENVIRONMENTAL LAW
LDR 210 FOUNDATIONS OF LEADERSHIP

ELEC 32 SOCIAL SCIENCE ELECTIVES (UPPER DIVISION)
GMA 300 U.S. FOREIGN POLICY
GMA 310 THE GEOPOLITICS OF ENERGY
GMA 315 POLITICS OF CHINA
GMA 320 OCEAN ENVIRONMENTAL MGMT
GMA 330 MARITIME SECURITY
GMA 345 ASIAN SECURITY
GMA 360 GLOBALIZATION
GMA 395 SPECIAL TOPICS (3 UNITS)
GMA 405 INT'L MARITIME ORGANIZATIONS
GMA 450 SPECIAL TOPICS IN MARITIME POLICY
HIS 300 MARITIME HISTORY OF THE U.S.
HIS 305 THE WORLD SINCE 1500
HIS 315 WORLD MARITIME HISTORY I
HIS 316 WORLD MARITIME HISTORY II
HIS 350 RACE, CLASS AND GENDER
HIS 360 BAY AREA MARITIME HISTORY
HIS 395 SPECIAL TOPICS (3 UNITS)
LAW 300 INTERNATIONAL LAW
TRA 305 MARITIME POLICY SEMINAR

ELEC 45 LIFELONG UNDERSTANDING ELECTIVES
BUS 120 THE ENVIRONMENT OF MODERN BUSINESS
CSL 120 COMMUNITY SERVICE LEARNING
CSL 210 DYING: THE FINAL STAGE OF LIVING
HUM 130 CREATIVITY
LDR 210 FOUNDATIONS OF LEADERSHIP

ELEC 62 LIFE SCIENCE ELECTIVES
MSC 105 INTRO TO BIOLOGICAL & PHYSICAL OCEANOGRAPHY
MSC 205 MARINE BIOLOGY

ELEC 63/63L PHYSICAL SCIENCES ELECTIVES
CHE 100/CHE 100L CHEMISTRY I/LAB
PHY 100/PHY 100L PHYSICS I/LAB

ELEC 70 MATHEMATICS ELECTIVES
MTH 100 COLLEGE ALGEBRA AND TRIGONOMETRY
MTH 210 CALCULUS I

ELEC 81 FOREIGN LANGUAGE ELECTIVES
LAN 110 SPANISH I
LAN 120 CHINESE I

ELEC 82 FOREIGN LANGUAGE ELECTIVES
LAN 115 SPANISH II
LAN 125 CHINESE II

ENGINEERING

ENG 100. ENGINEERING GRAPHICS►
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
Introduction to engineering graphics, the primary media for developing and communicating engineering system design information. Preparation of technical drawings using drafting instruments and computer-aided design (CAD) software is based on ANSI standards and includes orthographic projections, dimensioning, and tolerances. **ET**

ENG 110. INTRODUCTION TO ENGINEERING AND TECHNOLOGY
CLASS HOURS: 1, CREDIT: 1
Prerequisite: None
Introduction to the engineering and technology professions and curricula, including the professional responsibilities of engineers and engineering technologists, the organization of the engineering and technology profession, and the library and Internet research, along with outside speakers from the profession. **ME**

ENG 120. ENGINEERING COMMUNICATIONS►
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
Focuses on the communication aspects (oral, visual, graphical, and written) of the engineering profession by introducing students to technical writing, word processing, presentation software, and spreadsheets. **ME**

ENG 185. STUDY ABROAD ELECTIVE
ET, ME

ENG 210. ENGINEERING COMPUTER PROGRAMMING
CLASS HOURS: 2, CREDIT: 2
Prerequisites: None
An introduction to the use and engineering applications of MATLAB, and an introduction to computer programming using MATLAB. Main topics include array and matrix manipulation, plotting in 2 and 3 dimensions, solving linear systems of equations, and solving nonlinear equations. In addition, the basic programming constructs, including input and output formatting, functions, conditional statements, and loops are introduced. A basic introduction to linear algebra is also included. **ME**

ENG 250. ELECTRICAL CIRCUITS AND ELECTRONICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: PHY 205
Co-requisite: ENG 250L
This course covers the theory and analysis of DC and AC circuits. Real and ideal sources, power transfer and power factor. Resistor, capacitor, and inductor circuits, transient response, frequency response and transfer functions. Single phase and multiphase power systems, and amplifier circuits and semiconductor devices. **ME**

ENG 250L. ELECTRICAL CIRCUITS AND ELECTRONICS LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisite: PHY 205
Co-requisite: ENG 250
Supports instruction and theory of ENG 250 using hands-on circuit and electronics analysis. Use of meters, scopes and breadboard techniques to construct and measure transient and steady-state responses. MATLAB simulations used in response prediction. **ME**

ENG 300. ENGINEERING NUMERICAL ANALYSIS
CLASS HOURS: 4, CREDIT: 4
Prerequisites: ENG 210, MTH 215
Mathematical solutions to engineering problems involving error analysis, systems of linear algebraic equations, analytical and numerical methods in solving ordinary differential equations using finite difference and finite element methods. Typical engineering problems in heat transfer, mechanical vibrations, and mechanics of materials will be solved using MS Excel, MATLAB software. A standard finite element code will be used in the finite element analysis portion of this course. **ME**

ENG 385. STUDY ABROAD ELECTIVE
ET, ME

ENG 390. INDEPENDENT STUDY
ET, ME

ENG 395. SPECIAL TOPICS
ET, ME

ENG 430. NAVAL ARCHITECTURE►
CLASS HOURS: 3, CREDIT: 3
Prerequisites for ET Students: ET 332, ET 340
Prerequisites for ME Students: ME 332, ME 340
Covers ship nomenclature, initial and damaged stability theory and calculations, hull structural design considerations, ship resistance and propulsion power prediction. **ET**

ENG 440. POWER ENGINEERING
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ME 240 or ET 344
This course will survey the various processes used to convert various energy resources—fossil fuel (coal, oil, natural gas) and nuclear fuel as well as renewable sources (hydroelectric, solar, wind, geothermal, biomass, ocean tidal and wave)—into useful electrical and mechanical energy. The focus will be on the engineering analysis, technology, and societal and environmental benefits and impacts of each process. **ME**

ENG 470. ENGINEERING MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ELEC 20, Junior Class Standing
Begins with a brief introduction to the engineering profession and then focuses on total quality management, personnel management and communications, project management and legal concerns. Topics such as professional liability and ethics will provide the student with a sense of his or her responsibility. In addition, numerous case studies enhance student understanding. **ET**

ENG 472. FACILITIES MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: CEP 250 or CEP 270
Topics from various engineering and technology disciplines are covered and integrated into a structure consistent with the understanding and experiences needed in the facilities engineering management profession. This course is the introductory course to the Facilities Engineering profession. In their senior year, students must take and pass a comprehensive examination administered by an independent agency as designated by the engineering technology faculty. **ET**

ENGINEERING PLANT OPERATIONS

EPO 110. PLANT OPERATIONS I►
LAB HOURS: 3, CREDIT: 1
Prerequisite: None
A laboratory class directly involved in the inspection, maintenance, and repair of marine machinery and systems aboard the training ship. Emphasis is the safe and proper use of hand and power tools and the identification and repair of valves, pumps, fittings, piping, switches, controllers, and circuit breakers. Lab reports will be completed on work performed. **MO**
Graded: Credit/No Credit

EPO 125. INTRODUCTION TO MARINE ENGINEERING
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Co-requisite: EPO 110 (None for QMED)
An introductory course in marine engineering that develops a basic understanding of common shipboard systems: their function, arrangement, major components and principles of operation. Hands-on studies of the engineering systems aboard the *Training Ship GOLDEN BEAR* reinforce engineering system concepts discussed in class. Completion of shipboard practical training requirements familiarize the student with the watch routine and safety equipment in preparation for follow-on practical training at sea. **ET**

EPO 185. STUDY ABROAD ELECTIVE
ET, MO

EPO 210. PLANT OPERATIONS II►
LAB HOURS: 3, CREDIT: 1
Prerequisite: EPO 110
Continuation of the practical work performed on the training ship or in facilities maintenance lab. Equipment maintenance is emphasized with work on diesel engines, air compressors, generators, electrical equipment and pumps. Lab reports will be completed on work performed. **MO** Graded: Credit/No Credit

EPO 213. WELDING LAB►
LAB HOURS: 3, CREDIT: 1
Prerequisite: None
A laboratory course that provides the experience in welding, brazing, cutting, and burning techniques sufficient to effect emergency repairs and routine maintenance of engineering structures and systems**.** **ET**

EPO 214. BOILERS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EPO 125
Comprehensive study of fossil fuel steam generators, with emphasis on marine propulsion plants. Studies include the principles of boiler design and construction, boiler auxiliaries, principles of combustion, heat recovery equipment, automated boiler controls, and boiler water treatment. In addition, the course prepares students for the steam plant section of the U.S. Coast Guard Third Assistant Engineer's Exam. **ET**

EPO 215. MANUFACTURING PROCESSES I►
LAB HOURS: 3, CREDIT: 1
Prerequisite: None
An introduction to machine shop practices utilizing engine lathes and milling machines, precision measuring instruments and hand tools. Assigned projects include execution of designs developed by students in prior graphics design courses. **ET**

EPO 217. SHIPBOARD MEDICAL►
LAB HOURS: 2, CREDIT: 1
Prerequisite: Senior Class Standing
Practical applications and the principles of First Aid and Medical Care. Topics include body structure and function, resuscitation techniques, and bleeding control. Shock management, burns and scalds, cold and heat effects, rescue and casualty transport, toxicological hazards, spinal injuries, fractures, dislocation and muscular injuries, radio medical advice, pharmacology, sterilization, cardiac arrest and drowning. **ET**

EPO 220. DIESEL ENGINEERING I
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
Introduction to the internal combustion engine utilized by industry and merchant vessels. Covered topics include basic theory, history of the diesel engine, gas exchange process, engine types, engine construction, engine parts, fuel injection, and merchant vessel propulsion. All diesel engine types are covered but emphasis is given to the crosshead type slow-speed diesel engine which is the dominant form of main propulsion for the world's merchant fleet. The course prepares students for the motor section of the USCG Third Assistant Engineer's examination. **ET**

EPO 230. STEAM PLANT SYSTEM OPERATIONS►
LAB HOURS: 2, CREDIT: 1
Prerequisites: EPO 125
A hands-on learning experience in the Steam Plant Simulator. An introduction to the engineering systems, operating and emergency procedures, and watch requirements of a steam propulsion plant. **ET**

EPO 235. STEAM PLANT WATCH TEAM MANAGEMENT►
LAB HOURS: 2, CREDIT: 1
Prerequisites: EPO 214, EPO 230
A hands-on learning experience in the Steam Plant Simulator. Develops fault analysis techniques for steam propulsion plants, communication skills in a work environment, and management abilities. **ET**

EPO 310. PLANT OPERATIONS III
LAB HOURS: 3, CREDIT: 1
Prerequisite: EPO 210
A continuation of the practical work performed on the training ship or in facilities maintenance lab. Supervision of equipment maintenance is emphasized. The students rotate in working on main propulsion, electrical and auxiliary equipment. Lab reports will be completed on work performed. **MO**

EPO 312. TURBINES
CLASS HOURS: 3, CREDIT: 3
Prerequisites: EPO 214
Comprehensive study of steam turbines, condensers, reduction gears, propulsion shafting, and gas turbines, with emphasis on marine propulsion plants. Steam and gas turbine controls and the thermodynamic principles of efficient steam plant operation are also included. Through the course, students will gain the knowledge to operate and maintain turbines and their auxiliary systems. In addition, the course prepares students for the steam plant section of the U.S. Coast Guard Third Assistant Engineer's Exam. **ET**

EPO 315. MANUFACTURING PROCESSES II
LAB HOURS: 3, CREDIT: 1
Prerequisite: EPO 215
A continuation of EPO 215 Manufacturing Processes I, emphasizing work on metal lathes and vertical milling machines. **ET**

EPO 319. FACILITIES ENGINEERING DIAGNOSTICS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite: CRU 150
Examines the theory and application to machinery maintenance of vibration analysis, oil analysis, machinery alignment, thermography, and overall plant performance analysis. Includes the study of various machinery maintenance programs applied to facilities engineering systems, including machinery history, trend analysis, and predictive maintenance. **ET**

EPO 321. DIESEL PLANT SIMULATOR►
LAB HOURS: 2, CREDIT: 1
Prerequisite: EPO 220
This course provides an introduction to the operation of slow-speed diesel propulsion systems. The course consists of lecture and practical training in engineering systems and proper operating procedures. The student will learn to operate a heavy-fuel diesel-propulsion plant under normal operating conditions. Students will learn to work effectively as a team to diagnose combustion and machinery faults under emergency conditions representative of those encountered on an operating vessel. This course will emphasize Engine Team Management techniques utilizing the simulator as an instructional tool to train the students in good communications and problem solving even during stressful conditions. **ET**

EPO 322. DIESEL ENGINEERING II/ SIMULATOR
CLASS HOURS: 1, CREDIT: 1
Prerequisite: EPO 220
Co-requisite: EPO 322L
The study of engineering systems and components associated with diesel power plants. Topics include exhaust treatment equipment and advanced engine technologies applied to the reduction of harmful emissions. The course consists of lecture and practical training in diesel engine systems, normal operations and maintenance, and casualty procedures. **ET**

EPO 322L. DIESEL ENGINEERING II/ SIMULATOR LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisite: EPO 220
Co-requisite: EPO 322
In the Diesel Plant Simulator the student will learn to operate a heavy-fuel diesel-propulsion plant under normal operating and emergency conditions. Students will learn to work effectively as a team to diagnose combustion and machinery faults representative of those encountered in operating diesel power plants. This course will emphasize Engine Team Management techniques utilizing the simulator as an instructional tool to train the students in good communications and problem solving even during stressful conditions. **ET**

EPO 324. REFRIGERATION & A/C FOR QMED►
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Introduction to basic refrigeration and air conditioning principles and equipment. Included are the theory and application of direct and indirect refrigeration cycles commonly found on merchant ships and ashore, including main cargo freezers, air conditioning systems, chill water systems, refrigerated vans, and ice machines. Single-phase electrical motor and motor starter theory. Course includes daily lecture and some lab work. **ET**

EPO 325. QMED FUNDAMENTALS►
CLASS HOURS: 3, CREDIT: 3
Prerequisites: EPO 125, EPO 220, NAU 310, NAU 310L
This course is an overview of the fundamental principles of electrical distribution systems, electric power generation, electric drive motors, electric motor control, auxiliary boilers, and auxiliary steam systems. The course is intended as a preparatory course for students taking the USCG unlicensed examination for QMED Diesel Engineer. **ET**

EPO 385. STUDY ABROAD ELECTIVE
ET, MO

EPO 390. INDEPENDENT STUDY
ET, MO

EPO 395. SPECIAL TOPICS
ET, MO

EPO 413. ADVANCED WELDING AND FABRICATION
LAB HOURS: 3, CREDIT: 1
Prerequisites: EPO 213, EPO 215
A practical experience in taking a fabrication project through each step to completion. Scheduling, drawings, materials lists, various fabricating techniques, and teamwork are all part of the assigned project. **ET**

ENGINEERING TECHNOLOGY

ET 110. INTRODUCTION TO ENGINEERING TECHNOLOGY
CLASS HOURS: 1, CREDIT: 1
Prerequisite: None
A survey course introducing the engineering technology profession and curriculum. Topics in engineering education, academic success strategies, and career opportunities are covered. Also, the basic concepts of engineering analysis are introduced through the use of engineering units and significant figures in calculations. Field trips are utilized to give the students exposure to their chosen profession. **ET**

ET 185. STUDY ABROAD ELECTIVE
ET

ET 230. PROPERTIES OF MATERIALS
CLASS HOURS: 2, CREDIT: 2
Prerequisite: CHE 100, CHE 100L, MTH 210
Co-requisite: ET 230L
Examination of the properties of materials from the atomic to the macroscopic levels, looking at crystal structures and the application of materials to engineering systems. Emphasis is on metals, but nonmetals are discussed. Mechanical properties, creep, fatigue, corrosion and failure characteristics are covered. Current usage of advanced materials is also discussed. **ET**

ET 230L. PROPERTIES OF MATERIALS LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisite: CHE 100, CHE 100L, MTH 210
Co-requisite: ET 230
Investigates the physical characteristics of materials through testing, data acquisition, and calculations. Tests conducted include tensile, fatigue, creep, impact energy, and hardenability. Students learn how the properties described in ET 230 are derived. **ET**

ET 232. STATICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 210, PHY 200, PHY 200L
Force systems and the conditions of equilibrium for particles and rigid-bodies are studied in two and three dimensions. The principles of equilibrium, moments, and dry friction are applied to engineering system components and structures. **ET**

ET 250. ELECTRICAL CIRCUITS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 211, PHY 205
Co-requisite: ET 250L
Principles and applications of DC and AC circuit analysis, node and mesh equations, Thevenin equivalent circuits, maximum power transfer, first order transients, simple filters and amplifiers, phasors, power, power factor, and reactive power in single-phase systems. **ET**

ET 250L. ELECTRICAL CIRCUITS LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisite: MTH 211, PHY 205
Co-requisite: ET 250
Application of circuit elements and principles from ET 250 in laboratory measurements and analysis. **ET**

ET 330. DYNAMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ET 232
Force systems and motion of particles and rigid-bodies are studied in two and three dimensions. The principles of dependent and relative motion, work and energy, conservation of energy, and impulse and momentum are applied to engineering system components. **ET**

ET 332. STRENGTH OF MATERIALS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 211, ET 230L, ET 232
Study of basic concepts in strength of materials: normal, shear, bending, and bearing stress; stress-strain relation; and design properties of materials. Practical application of structure calculations for sizing bolts, rivets, shafts, beams, columns, and pressure vessels. **ET**

ET 340. FLUID MECHANICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 211, PHY 205
Co-requisite: ET 340L
The application of principles of incompressible fluid flow. Topics include forces in static fluids and fluids in motion, applications of Bernoulli's equation, pressure losses in pipe systems, open channel flows, pump selection, and air flow in ducts. **ET**

ET 340L. FLUID MECHANICS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite: MTH 211, PHY 205
Co-requisite: ET 340
ET

ET 342. REFRIGERATION AND AIR CONDITIONING
CLASS HOURS: 2, CREDIT: 2
Prerequisite: ET 344
Co-requisite: ET 342L
Introduction to basic refrigeration and air conditioning principles and equipment. Included are the theory and application of direct and indirect refrigeration cycles commonly found on merchant ships and ashore including main cargo freezers, air conditional systems, chill water systems, absorption systems, refrigerated vans, and ice machines. **ET**

ET 342L. REFRIGERATION AND AIR CONDITIONING LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite: ET 344
Co-requisite: ET 342
ET

ET 344. THERMODYNAMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: PHY 200, PHY 200L
Basic laws of thermodynamics and their applications to heat-power machinery applied on shipboard heat-power plants, steam and gas turbines, internal combustion engines, and vapor-compression refrigeration systems. **ET**

ET 350. ELECTRICAL MACHINERY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ET 250, ET 250L
Co-requisite: ET 350L
Principles and application of magnetic circuits and transformers, three-phase power, power factor correction, DC motors and generators, three-phase AC motors and alternators, single-phase motors, stepper motors, electronic motor control, and circuit protection devices. **ET**

ET 350L. ELECTRICAL MACHINERY LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisites: ET 250, ET 250L
Co-requisite: ET 350
Application of the principles from ET 350 in laboratory measurements and analysis. **ET**

ET 370. ELECTRONICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: COM 220, COM 220L, ET 250, ET 250L
Co-requisite: ET 370L
Principles and application of electronic circuits and components, microcontrollers, operational amplifiers, comparators, peak detectors, active filters, timer circuits, AD conversion, serial communication, and micro electro-mechanical systems. **ET**

ET 370L. ELECTRONICS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: COM 220, COM 220L, ET 250, ET 250L
Co-requisite: ET 370
Application of the principles from ET 370 in laboratory measurements and analysis, followed by a comprehensive team project. **ET**

ET 385. STUDY ABROAD ELECTIVE
ET

ET 390. INDEPENDENT STUDY
ET

ET 395. SPECIAL TOPICS
ET

ET 400. INSTRUMENTATION AND MEASUREMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ET 370, ET 370L
Co-requisite: ET 400L
A study of instrumentation devices and their uses in monitoring processes. Instrumentation used for measuring temperature, pressure, level, flow, position and motion as well as other types of analytical measurement are studied. In addition to instrumentation, the principles of signal conditioning are also studied including op-amp applications, filtering, applications to pneumatic systems, and digital signal conditioning. Concludes with a study of how instrumentation relates to modern data acquisition systems; how to optimize measurements and effectively analyze measured signals. Laboratory applications are investigated concurrently with course topics. **ET**

ET 400L. INSTRUMENTATION AND MEASUREMENT LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: ET 370, ET 370L
Co-requisite: ET 400
This lab is designed to study principles introduced in ET 400 Instrumentation and Measurement. Lab procedures include studies involving signal conditioning, Wheatstone bridge applications, use of operational amplifiers for signal conditioning, Boolean logic, thermal transducers, strain gage measurements, variable capacitance transducers, and optical transducers. Computer-based data acquisition methods are used in all the procedures. **ET**

ET 442. HEATING, VENTILATION, AND AIR CONDITIONING
CLASS HOURS: 2, CREDIT: 2
Prerequisites: ET 342, ET 342L
Co-requisite: ET 442L
This is the final course in a two course series of applied thermodynamics with regards to refrigeration/air conditioning cycle. This course will focus on the HVAC requirements of facilities with application to ships as well as any facility. Designing of HVAC systems, including heat balance, duct design and fan selection will be used to examine the system requirements and to examine potential modification to the existing system. The course will prepare the student for the Certified Plant Engineer–In Training (CPE-IT), Fundamentals of Engineering (FE), and United States Coast Guard (USCG) exams. **ET**

ET 442L. HEATING, VENTILATION, AND AIR CONDITIONING LAB
LAB HOURS: 2: CREDIT: 1
Prerequisites: ET 342, ET 342L
Co-requisite: ET 442
ET

ET 460. AUTOMATION
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ET 400, ET 400L
Co-requisite: ET 460L
A study of automation in power plants, engineering processes, and manufacturing processes leading to an understanding of modern control systems. Principles of analog and digital control systems are studied, as well as measurement methods and final control valves and actuators. PID (proportional plus integral plus derivative) control applications and programmable logic controllers are also studied. Modeling, measurement and control of mechanical, thermal, fluid, and electrical systems are investigated. **ET**

ET 460L. AUTOMATION LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: ET 400, ET 400L
Co-requisite: ET 460
This lab is designed to study principles introduced and discussed in ET 460. Lab procedures include introduction to the concepts of closed loop control, PLC (programmable logic controllers) programming, pneumatic logic and control applications, a study of frequency response in systems (Bode plots), and process loop tuning methods. **ET**

ET 490. POWER ENGINEERING TECHNOLOGY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ET 344, ET 350, ET 350L
Co-requisite: ET 490L
A capstone course in engineering technology in which students apply the engineering fundamentals of previous thermodynamics and electrical machinery coursework to studies of combustion processes, combustion by-products and emission abatement and electrical distribution and transmissions systems commonly found in modern marine propulsion plants and the power industry. Additionally, through guest lecturer presentations and/or field trips, students will become familiar with renewable energy resources. As a research project, students will conduct an energy audit of a virtual facility and develop an engineering model for application of "green" technologies to improve energy efficiency and reduce the carbon footprint. **ET**

ET 490L. POWER ENGINEERING TECHNOLOGY LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: ET 344, ET 350, ET 350L
Co-requisite: ET 490
In the Power Laboratory, students will perform thermodynamic analyses of operating power generation equipment. **ET**

ENGLISH AND COMMUNICATIONS

EGL 001. INTRODUCTION TO COMPOSITION
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Intensive practice in the basics of expository writing. The course stresses the grammar of sentences, punctuation, paragraph organization and development to help students write effective college-level English. Entering students are required to take a placement exam, regardless of what previous college English courses they have had, to determine whether this course is appropriate for them. Graded: A, B, C, NC
XL

EGL 100. ENGLISH COMPOSITION
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 001 or EGL 105, or passing score on EPT, or otherwise exempt from remediation.
The theory and practice of expository writing, with particular emphasis on argumentation and persuasion. The course focuses on competence in reading, thinking and writing through the analysis and composition of expository prose. Also included is a research paper component introducing students to concepts of information fluency, logical fallacies, rhetorical strategies, and other research methods and practices. This course may not be challenged by examination. **MPM**

EGL 105. ENGLISH AS A SECOND LANGUAGE
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Intermediate English as a Second Language course is required for all international students. The course is an alternative to the English course requirements for U.S. students. This course may substitute for EGL 001 for students whose primary language is not English. Graded: A, B, C, NC **XL**

EGL 110. SPEECH COMMUNICATION►
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
This course teaches the basic principles of oral communication and public speaking and offers the opportunity to excel in these areas. It is designed to help students in occupational and social situations by improving self-expression, self-confidence, and self-understanding, while paying attention to the basic elements of organization and delivery.

This class also has a community service learning component that allows students to join the CMA Toastmasters Club in order to refine their speaking skills and to learn the roles and formal duties of club officers. **MPM**

EGL 185. STUDY ABROAD ELECTIVE
MPM

EGL 200. INTRODUCTION TO LITERATURE
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100
Involves the critical evaluation of literary techniques, elements, and theories. Students read and discuss an appropriate selection of poetry, fiction, and drama. Required oral and written assignments support students in the formulation and expression of logical thinking through argument and analysis. **MPM**

EGL 220. CRITICAL THINKING
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100
Introduces the use of critical thinking skills with emphasis on examining those structures or elements of thought implicit in all argumentation: deductive and inductive reasoning; logical fallacies; implications, assumptions, and consequences; denotative and connotative elements in language; and rhetorical modes and methods. **MPM**

EGL 300. ADVANCED WRITING►
CLASS HOURS: 3, CREDIT: 3
Prerequisites: EGL 100, Junior Class Standing
A writing proficiency course for students who do not pass the Graduate Writing Examination (GWE). Students must master four basic essay types and achieve a good grasp of mechanics, coherence, completeness and unity of thought in their writing. They are also taught to plan, organize, and proofread their writing, as well as arrange information in ways conducive to the promotion of good communication. By the end of the course, they are expected to have a thorough grasp of the grammatical, lexical and syntactical aspects of English and to write in a manner consistent with college graduation requirements, focusing on clarity, insightfulness and development of concepts. **MPM**

EGL 305. TWENTIETH-CENTURY AMERICAN LITERATURE
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 220
Representative readings in American literature of the 20th century, with emphasis on those writers who have had the most significant influence on American literary thought and value, particularly those representing cultural diversity in America. Course meets a humanities elective requirement. **MPM**

EGL 310. U.S. LITERATURE OF THE SEA
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100
EGL 310 is a survey of those plays, poems and fiction produced in the United States which are shaped by, or specifically represent, the varied relationships of Americans to the seas. The objective of this course is to explore, analyze, and interrogate the way "the sea" has been represented by American writers in a variety of cultural texts. While the course is shaped around several themes—the sea as a site of exploration, romance, and adventure; the sea as a symbol of primal terror; and the sea as a space of commerce and recreation—special attention will be paid to how U.S. maritime literature constructs a national identity and advances or critiques the nation-building enterprise. **MPM**

EGL 315. WORLD LITERATURE OF THE SEA
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100
EGL 315 is a survey of non-U.S. plays, poems and fiction which are thematically categorized by their maritime focus. The objective of this course is to explore, analyze, and interrogate the way "the sea" has been represented by international writers in a variety of cultural texts, with particular attention paid to the European and Caribbean traditions. While the course is shaped around several themes—the sea as a site of exploration, romance, and adventure; the sea as a symbol of primal terror; and the sea as a space of commerce and recreation—special attention will be given to issues of the sea as an impediment to, or a facilitator of, the colonialist enterprise. **MPM**

EGL 320. LITERATURE OF THE FANTASTIC
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 220
This course centers on the reading and analysis of quality supernatural fiction and defines literature of the fantastic in terms that the average student may comprehend and thus relate to, within the larger context of a true literary genre. The authors dealt with come from a wide range of ancient and modern writers (both Eastern and Western) whose works represent the patterns and uses of the supernatural as it functions in society. Several important issues raised by contemporary critical theory are also examined, such as reader-response, the relation between comedy and the fantastic as well as that between literature and madness, and the link between aesthetic experience and social context. **MPM**

EGL 325. CREATIVE WRITING
CLASS HOURS: 1–3, CREDIT: 1–3
Prerequisite: EGL 100
An introduction to creative writing, with an emphasis on aesthetics and self-expression rather than on publication. Mini- lectures define the elements of successful fiction and poetry; focused exercises provide practice in these elements; published models are examined for technique and structure. Credit varies depending on the amount of work accomplished by the student and the number of classes attended. Course meets a humanities elective requirement, depending on the units completed. **MPM**

EGL 330. LITERATURE AND PSYCHOLOGY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 220
In this course students analyze how various psychological principles and theories may be applied to literary selections. Concepts to be covered include Jungian archetypes, especially the shadow; the Freudian Oedipus complex; and issues of human growth from childhood through adolescence and adulthood, including abuse; dysfunctional families; dreams and fantasies; the psychology of men and women, lust and love, death and dying. A research paper requires the student to apply psychological principles to a play or novel. **MPM**

EGL 385. STUDY ABROAD ELECTIVE
MPM

EGL 390. INDEPENDENT STUDY
MPM

EGL 395. SPECIAL TOPICS
MPM

FIREFIGHTING

FF 185. STUDY ABROAD ELECTIVE
XL

FF 200. BASIC/ADVANCED MARINE FIREFIGHTING►
CREDIT: 0
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning. Graded: Credit/No Credit
XL

FF 385. STUDY ABROAD ELECTIVE
XL

FF 390. INDEPENDENT STUDY
XL

FF 395. SPECIAL TOPICS
XL

GLOBAL STUDIES AND MARITIME AFFAIRS

GMA 100. INTRODUCTION TO INTERNATIONAL RELATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
This course is an introduction to the principal concepts, theories, and issues in international relations. While frequent use will be made of current and historical events in the lectures and readings, the main focus of the course is to provide students with the tools and analytical framework with which to analyze the rapidly changing international arena. The class is divided into four parts. Part I will address traditional approaches to the study of international relations, focusing on the system, state, and individual levels of analysis. Part II will present an overview of economic globalization, and the impact this has had on issues such as the following: a) the political and security behavior of states, b) the future of the state as an economic entity, and c) the distribution of wealth between North and South. Part III will address traditional security concerns of states, from both the "realist" and "idealist" perspectives, as well as from an ethical point of view. Part IV will focus on global environmental concerns, including (but not limited to) global warming, ocean and fisheries degradation, and fresh water access. Throughout, we will view economic, security and environmental concerns in an interdependent context. **MPM**

GMA 105. OCEAN POLITICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
This course addresses the economic, security, and environmental aspects of the world's oceans within the framework of the International Relations discipline. It will focus on the international dimensions of a global resource, whose components are increasingly becoming scarce, and on the means–both cooperative and conflictual–by which these resources have been, and are likely to be, managed. The course is divided into three parts: I, Oceans and Economic Resources; II, Oceans and Conflict; and III, Oceans and the Environment. Parts II and III, which highlight non-violent means for resolving economic, security, and environmental disputes, will include international, regional, and non-governmental mechanisms of conflict management. This approach will include, but will not be limited to, the Law of the Sea Convention, the International Maritime Organization, and regional bi- and multi-lateral agreements. **MPM**

GMA 120. INTRODUCTION TO ENVIRONMENTAL POLICY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
GMA 120 is intended as an introductory course in environmental politics and policy. This course examines the process through which environmental policy is generated in both the domestic and international spheres and analyzes its implications. Current issues in U.S. and international environmental policy are central to the course, and special attention is paid to environmental politics and policy in the maritime field. **MPM**

GMA 185. STUDY ABROAD ELECTIVE
MPM

GMA 210. GSMA CRUISE 1A: PORT ANALYSIS
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
Postrequisite: GMA 211
A two-semester-sequence course that provides an opportunity for sophomore GSMA majors to integrate their preparation for cruise in the Fall semester of the sophomore year with actual cruise course work completed while underway during the Annual Training Cruise on the *Training Ship GOLDEN BEAR*. During Cruise 1A, students will prepare country and port analyses for the proposed cruise ports. These analyses will be presented as part of an ongoing lecture series during the Training Cruise itself. In addition, port visits, field trips, and the like will be set up prior to leaving on the Training Cruise. Students will also complete an element of the curriculum in the Follow the Voyage series or complete a web-based component for posting during the Training Cruise itself. **MPM**

GMA 211. GSMA CRUISE 1B: SEA COMPONENT
CLASS HOURS: 1, CREDIT: 1
Prerequisite: GMA 210
During Cruise 1B, students will integrate the shoreside component of Cruise 1A by engaging in port and country briefings, providing materials for the Bear's Tale and possible web posting, as well as engaging in field trips during port visits. Directed reading, research, and writing will be assigned under the direction of a faculty member. **MPM**

GMA 215. INTRODUCTION TO COMPARATIVE POLITICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The course provides an introduction to important themes of comparative political analysis, in order to identify and explain differences in political systems and political life across different states and regions of the world. The course focuses on the development of the fundamental elements of modern political systems: state, nation, market, civil society, democracy, and authoritarianism. Throughout, close attention will be paid to interactions between these elements - for example, between states and markets, or between civil society and authoritarian regimes. The course also focuses on the role of institutions, such as political parties and constitutional structures, in shaping these interactions. **MPM**

GMA 220. COMPARATIVE MARITIME POLICIES
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 105, GMA 215
Provides an overview of the central concepts and approaches of comparative maritime policy and places in a broader world setting by presenting, within an integrated fashion, many of the organizing concepts, findings and theories that structure and define the discipline. In addition to learning the specifics about the conduct of maritime politics in a variety of different countries, students will learn the basic concepts, theories and general patterns that explain maritime political behavior and political outcomes both within and across the broad system types. We will emphasize many current maritime issues, events, and problems in our world today and try to gain some theoretical perspective on them. **MPM**

GMA 225. POLITICS OF PACIFIC ASIA
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
This class is designed to introduce students to the Asian-Pacific's historical background, traditional culture, contemporary society, domestic politics, political economy and foreign policy. The course combines multi-disciplinary approaches to the study of Asia, drawing on the insights of the historian, anthropologist, sociologist, economist, as well as the political scientist. The course is segmented into three parts: The first part takes a systemic overview of the Asian-Pacific region emphasizing its history, tradition, culture and society, and political and economic development. In part two we examine specific countries -- emphasizing various aspects of domestic and foreign politics and policy process. Part three focuses on the trends and transformations that are currently sweeping the Asian-Pacific and its implications for the world. **MPM**

GMA 230. U.S. MARITIME POLICY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 105
GMA 230 is intended as an introductory course in United States maritime policy. This course examines the process through which United States maritime policy is formulated and analyzes its domestic and international implications. Current issues in facing the U.S. maritime community are central to the course, and special attention is paid to port issues and security policies. The course is structured by two fundamental components: the historic evolution of U.S. maritime policy and the analysis of contemporary policy. Students are encouraged to think critically about U.S. maritime policy, both past and present, and offer new ideas that create an encouraging future. **MPM**

GMA 300. U.S. FOREIGN POLICY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: HIS 200, GMA 100
Examines the manner in which U.S. foreign policy is made and analyzes the implications of this policy-making process; with an emphasis on current issues in US foreign and international maritime policies. Focuses on the goals and inputs of US foreign policy to understand how international, domestic, and individual constraints affect the policy process and outcomes. Encourages students to think creatively about the choices available to political leaders and why, in the face of alternatives, a particular course of action or policy tends to be selected. **MPM**

GMA 310. THE GEOPOLITICS OF ENERGY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 100
Oil has been the most important natural resource of the twentieth century. Its price and availability determine the macroeconomic health and stability of economies; access to it determines the foreign policies of many nations; and nations have been willing to go to war to secure its guaranteed access. This course explores the history of oil exploration, the policies that have informed national and international attention to energy procurement (or acquisition), and the geopolitics that have accompanied the development of the world's oil industry. **MPM**

GMA 315. POLITICS OF CHINA
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The People's Republic of China has made tremendous progress in successfully transforming itself from a communist, centrally planned economic organization to a capitalist, free market system. Politically, however, the authoritarian practices of the communist party remains firmly intact. In this class this paradox is examined from a historical, cultural, social, economic, and political perspective. In particular it aims to either discover the "formula" for China's success or uncover the fault-line which will ultimately bring forth its failure.

This is a fairly challenging 300-level course designed primarily for GSMA majors and minors. Everyone enrolled in the class should have a serious interest in Chinese Politics and a willingness to work hard. To that end, everyone is expected to do two things. First, all assigned readings on the issue under discussion should be read carefully before class. Second, some time should be spent prior to class considering any questions or instructions that the instructor may have highlighted at the previous meeting. **MPM**

GMA 320. OCEAN ENVIRONMENTAL MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 105
The marine environment is becoming increasingly stressed by growing global populations and industries. The world population has witnessed spectacular growth in the twentieth century, and may double in size by the middle of the twenty-first. This growth, combined with economic development and modernization, places extreme stress on all natural resources, ocean resources included.

In this class, we will look at environmental issues such as maritime pollution; ocean oil, gas, and natural resource exploration; global warming; habitat conservation; and species conservation. We will also explore and analyze the various solutions proposed to deal with them. Designed for students with little or no scientific background, the course provides basic science education integrated with major international environmental concerns, ecological principles, population, food, pesticides, forests, bio-diversity, water, atmosphere, ozone, global warming, energy, waste management, and sustainable development. **MPM**

GMA 330. MARITIME SECURITY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 100 or GMA 105
Recommended: GMA 300, GMA 305, HIS 300
Explores the emerging threats to global maritime trade, specifically those to the world's sea lanes of communication and chokepoints. Threats include, but are not limited to, the following: a) increased demand (leading to larger numbers of collisions); b) state threats that may lead to armed conflict such as those that exist in the South China Sea; c) non-state threats such as maritime piracy and terrorism. The role of the ISPS, MTSA, bilaterial agreements, international organizations and international law in resolving these issues is explored. **MPM Formerly GMA 430**

GMA 345. ASIAN SECURITY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: Recommended GMA 100 or GMA 105
This survey course in contemporary Asian regional and national security is a fairly challenging 300-level course designed primarily for GSMA majors and minors with a strong interest in international politics. Just how dangerous disputes in the region are, what the elements of regional security are, which countries' actions should be treated as threats to security, and what forms of cooperation best safeguard security are among the divisive issues examined. Though military and strategic concerns are addressed, the course puts great emphasis on the generally neglected areas of human, environmental and resource security, and issues of sustainable development and social justice. Everyone enrolled in the class should have a serious interest in contemporary security issues and a willingness to work hard. **MPM**

GMA 360. GLOBALIZATION
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The course is an overview of theories and issues in contemporary international political economy. Throughout the course, we will be concerned with the general question of how the global economic system bears on the power of the state, along with the strategies states develop to deal with an international economy increasingly beyond their individual control. The course is divided into several parts. The first examines the development of the international economic system since the Great Depression, as well as the theories claiming to account for this development. The second part addresses current issues and challenges dealing with the process of globalization, including but not limited to the following: 1) global economic integration and new patterns of economic interaction, including the region state, the virtual state, and the world city; and 2) the globalization and computerization of financial markets. Part III examines regional issues in the context of globalization: specifically, the challenges the Euro, Russia, China, and Third World nations present to the existing global order. Additionally, we will examine environmental degradation in the context of globalization. The course ends with a discussion of the future of capitalism. **MPM Formerly GMA 200**

GMA 385. STUDY ABROAD ELECTIVE
MPM

GMA 386. PANETTA INSTITUTE ELECTIVE
MPM

GMA 390. INDEPENDENT STUDY
MPM

GMA 395. SPECIAL TOPICS
MPM

GMA 400. SENIOR SEMINAR I: METHODS AND DESIGN
CLASS HOURS: 3, CREDIT: 3
Prerequisites: CEP 330, Senior Class Standing
A two–semester sequence-course that provides an opportunity for senior GSMA majors to integrate their basic understanding of the fields and curricular emphases that comprise the major by exploring the interrelationship between the substantive sub-fields, basic concepts, and the major modes of analysis in practice today. Directed reading, research, and writing culminating in the preparation of a senior thesis under direction of faculty adviser. The course culminates in a capstone thesis project.

The focus in GMA 400 is on research methods and thesis design. Students are expected to accomplish the following tasks: a) formulate a research question, b) discuss why the question is important, c) explain how the question can be answered, d) research and present a bibliography, and e) select the most appropriate methodology. **MPM**

GMA 401. SENIOR SEMINAR II: RESEARCH PROJECT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 400
The focus in GMA 401 is on the writing of the senior thesis, based on the research design completed in GMA 400. Students will be held to a writing deadline and will be expected to turn in written outlines and drafts of their thesis, as well as make class presentations on their work at appropriate intervals. **MPM**

GMA 405. INTERNATIONAL MARITIME ORGANIZATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: GMA 100
Shipping is the backbone of international trade. Today, the shipping industry accounts for more than 90% of the goods moved around the world. Because of the importance of trade to economic growth and development, governments have an interest in coordinating and normalizing international maritime policy. The evolution of maritime governance has led to number of international regimes and organizations. The intergovernmental cooperation that produces these regimes allows for a more efficient international maritime environment and shipping industry.

This course is intended as an advanced course in international maritime organizations. It emphasizes the theoretical analysis of the development and functioning of international institutions generally and maritime institutions specifically. The focus is on the mechanisms through which international regimes influence the behavior of states and the maritime industry. Special attention is paid to the International Maritime Organization (IMO), The United Nations Convention on the Law of the Sea (UNCLOS), and the impact of regimes on the U.S. maritime industry. **MPM**

GMA 450. SPECIAL TOPICS IN MARITIME POLICY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: Upper-Class Standing
This course will provide a forum for the study of a single issue in maritime policy: one for which there may be neither the demand nor the resources to justify a regular course. Topics may include (but are not limited to) the following: marine invasive species, maritime labor issues, fisheries management, port security, and other timely topics in maritime affairs as they arise. Students may repeat the class for credit as the topic changes. **MPM**

GOVERNMENT

GOV 185. STUDY ABROAD ELECTIVE
MPM

GOV 200. AMERICAN GOVERNMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The basic premises underlying American political institutions and behavior since World War II are analyzed through the application of generalized socio-political concepts to specific cases. A major course objective is a better understanding of the nature and function of contemporary state and federal political forces shaping principles and policies behind our lifestyle. (Fulfills the state graduation requirements for U.S. Constitutions, California State and local government, and Cal Maritime's government elective.) **MPM**

GOV 385. STUDY ABROAD ELECTIVE
MPM

GOV 390. INDEPENDENT STUDY
MPM

GOV 395. SPECIAL TOPICS
MPM

HISTORY

HIS 100. U.S. HISTORY (TO 1877)
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Introduces students to the principal developments in American political, economic, religious, and social life from pre-Columbian times through the era of Reconstruction. Key themes to be addressed include: indigenous civilizations, the colonization of the New World, the move towards independence, the Constitution and federalism, the development of slavery, the coming of and fighting of the Civil War, and the Era of Reconstruction. (Fulfills the state graduation requirements for U.S. Constitutions, California state and local government, and Cal Maritime's history elective.) **MPM**

HIS 101. U.S. HISTORY (FROM 1877)
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Introduces students to the principal developments in American political, economic, religious, and social life from the close of Reconstruction through the present. Key themes to be addressed include, but are not limited to: the settlement and development of the American West, the rise of big business, race relations, the rise of America to global prominence, the Great Depression and New Deal, the rise of the welfare state, and America's military heritage. (Fulfills the state graduation requirements for U.S. Constitutions, California State and local government, and Cal Maritime's history elective.) **MPM**

HIS 185. STUDY ABROAD ELECTIVE
MPM

HIS 210. HISTORY OF LATIN AMERICA
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
A survey of the political, social, economic, and cultural development of Latin America from pre-Columbian times to the present. Major emphases will be on indigenous civilizations, globalization, and the region's ambiguous relationship with the United States. This course will provide an appreciation of the multi-cultural heritage of the region, and emphasize the historical roots of modern Latin America. **MPM**

HIS 300. MARITIME HISTORY OF THE U.S. (CSL)
CLASS HOURS: 3
COMMUNITY SERVICE HOURS: 10
CREDIT: 3
Prerequisite: HIS 100 or HIS 101
A historical understanding of the development of the maritime industry in the U.S. The course addresses the importance of technology in the history of the U.S. maritime industry and the human dimensions of maritime history. The course also includes a mandatory community service learning component which involves students in projects ranging from the archiving of museum material to the restoration of historical artifacts. (Does not fulfill the state code requirements for U.S. Constitution and California State and local government or Cal Maritime's history elective.) **MPM**

HIS 305. THE WORLD SINCE 1500, A GLOBAL HISTORY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: EGL 100, HIS 100 or HIS 101
A survey of the essential characteristics and experiences of the major world regions, with an analysis of those forces or movements that have had a worldwide impact. Included are an analysis of the development of the politics, society, and culture of the world's major regions and a description of the contributions of the major ethnic groups and cultures to world history. (Does not fulfill the state code requirements for U.S. Constitution and California State and local governments, or Cal Maritime's history elective.) **MPM**

HIS 315. WORLD MARITIME HISTORY I: ANTIQUITY TO AGE OF DISCOVERY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100 or Equivalent
Maritime activities from pre-history through the age of exploration. Emphases will include the development of maritime commerce, naval warfare, improvements in naval architecture and ship design, and the role of waterways in the ancient world. The impact of maritime affairs on the establishment of overseas possessions, domination of the world's sea lanes, and on political, economic, socio-cultural and diplomatic constructs will be examined. **MPM**

HIS 316. WORLD MARITIME HISTORY II: AGE OF EXPLORATION THROUGH THE NUCLEAR AGE
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100 or Equivalent
Maritime activities from the age of exploration through the twentieth century. Emphases will include the development of maritime commerce, piracy and naval warfare, voyages of discovery, establishment of overseas possessions and domination of the world's sea lanes. The impact of maritime affairs on political, economic, socio-cultural military and diplomatic constructs will be examined. **MPM**

HIS 350. RACE, CLASS AND GENDER IN THE MARITIME WORLD
CLASS HOURS: 3, CREDIT: 3
Prerequisite: HIS 100 or HIS 101; EGL 100 or Equivalent
The maritime world as viewed through the lenses of race, class and gender, and a look at the role these social constructs play in American and global maritime history. Topics to be covered include, but are not limited to: maritime labor and marginalized workers, the "radical seas" and the ocean as heterotroph, women at sea and the paradox of femininity. The changing nature of maritime labor, and the increasingly globalized nature of the industry, will be examined from a variety of perspectives. **MPM**

HIS 360. BAY AREA MARITIME HISTORY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: HIS 100 or HIS 101; EGL 100 or Equivalent
An investigation into the history and maritime heritage of the San Francisco Bay Area. Topics to be covered include, but are not limited to: indigenous uses of the Bay, Spanish and Mexican California, the Gold Rush as a maritime phenomenon, post-Rush maritime developments, maritime labor and the shipbuilding industry, the role of the Navy in the Bay Area. The rise of San Francisco from colonial outpost to international entrepot, economic activity and environmental issues, and the impact of globalization on the region will be examined from a variety of perspectives. **MPM**

HIS 385. STUDY ABROAD ELECTIVE
MPM

HIS 390. INDEPENDENT STUDY
MPM

HIS 395. SPECIAL TOPICS
MPM

HUMANITIES

HUM 100. HUMANITIES
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
A survey of several arts (e.g., painting, sculpture, music, theater, film, dance, and architecture) in the Western world, as well as in other cultures, and concentrates on the media, basic perceptions, and terminology necessary to enhance overall comprehension and experience of the stylistic examples provided. Art is seen as a view of the universe and of human reality expressed in a particular medium and shared with others in order to enrich one's understanding of our existence. **MPM**

HUM 101. PERSPECTIVES IN CULTURE: THE ANCIENT WORLD THROUGH THE RENAISSANCE
CLASS HOURS: 3, CREDIT: 3
Prerequisites: None
A survey of the humanities, encompassing any and all of their forms: history, philosophy, theology, literature, painting, sculpture, music, theater, dance and architecture from the ancient world through the European Renaissance. Emphasis will be placed on understanding how communities and individuals shape and create symbolic structures in the pursuit of truth, beauty, nature, pleasure, and/or justice. Art is seen as a view of the universe and of human reality expressed in a particular medium and shared with others in order to enrich one's understanding of our existence. **MPM**

HUM 102. PERSPECTIVES IN CULTURE: POST-RENAISSANCE TO THE PRESENT
CLASS HOURS: 3, CREDIT: 3
Prerequisites: None
A survey of the humanities, encompassing any and all of their forms: history, philosophy, theology, literature, painting, sculpture, music, theater, dance and architecture following the European Renaissance to the twenty-first century. Emphasis will be placed on understanding how communities and individuals shape and create symbolic structures in the pursuit of truth, beauty, nature, pleasure, and/or justice. Art is seen as a view of the universe and of human reality expressed in a particular medium and shared with others in order to enrich one's understanding of our existence. **MPM**

HUM 110. WORLD CULTURE JOURNEYS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
An introduction to the history, culture, and society of those regions to be visited by the TSGB on its annual cruise. Major emphases will be on the indigenous cultures, traditions, and sociopolitical systems of the region under discussion. The course will emphasize the concept of cultural roots and developments, demonstrating how cultural ideas appear in different forms and influence one another. Students are expected to come away from the course with a heightened awareness of, and a deeper appreciation and respect for, the region that they will soon visit as representatives of this campus and this country. **MPM**

HUM 130. CREATIVITY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Following Ken Wilber's four-quadrant model, this course will investigate creativity as it manifests in the individual, the team, the product, and the system. Major questions to be investigated include the following: What is creativity? Why should I study it? What processes can I use to become more creative? How can being part of a team or supportive community enhance creativity? Which aesthetic standards hold true for all domains, and which are particular to a certain field of study? How can organizational structures enhance or impede creativity? Students will focus on both theory and practice as they apply the findings from research to their own lives. This interdisciplinary course will use examples from not only the arts (visual, performing, and literary) but also mathematics, science, engineering, business, and sports. **MPM**

HUM 185. STUDY ABROAD ELECTIVE
ET, ME, MPM

HUM 300. ART OF THE CINEMA
CLASS HOURS: 4, CREDIT: 3
Prerequisite: EGL 220
A study of the importance of film as an effective form of artistic expression, particularly as a reflection of worldwide values and attitudes in the Twentieth and Twenty-First Centuries. Emphasis is placed on major cinematic techniques, cinema history and the importance of film analysis. Full-length films will be viewed weekly and discussed, followed by written analyses. **MPM**

HUM 305. COMPARATIVE WORLD RELIGIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100
A comparative inquiry into the nature of major religions of the world. A broad overview that will familiarize the student with the major traditions, basic beliefs, religious literature, and cultural implications of the great religions of the world. It is hoped that such an investigation will create or affirm a respect for diverse cultures, peoples, and worldviews. Students should come away from this course with a heightened appreciation for this diversity, having not only examined some of the truths and doctrines of these great wisdom traditions, but also having embraced an extended vision of the world's cultures. **MPM**

HUM 310. ENGINEERING ETHICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: EGL 220, Junior or Senior Class Standing
Addresses the major concepts of ethics as applied to the discipline and practice of engineering. Topics include the scope and aims of engineering ethics, moral reasoning and ethical theories, engineering and society, ethics and the law, the engineer's responsibility for safety, engineers and the corporation, conflict of interest/crime in the workplace, rights of engineers/rules of professional conduct, ethics, global ethical issues involving the engineering community, engineering ethics in the computer age, environmental ethics, engineers as managers and leaders, engineers as expert witnesses, and steps to principled reasoning/ common rationalizations. **ET, ME**

HUM 315. BUSINESS ETHICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MGT 205 or permission of the Chair
An analysis of the American and international business systems in terms of ethics and the external constraints imposed on business organizations. Socioeconomic, political, and cultural environments will be addressed with respect to business organizations, operations, and profits. The student successfully completing this course will clearly understand the complexity of ethical issues in business today. This outcome is accomplished by providing an overview of business and economic systems in order to gain a better understanding of the environment in which businesses operate within our society and the expectations of that environment. **MPM**

HUM 325. GLOBALIZATION OF CULTURE
CLASS HOURS: 3, CREDIT: 3
Prerequisite: EGL 100
A study of globalization through the medium of culture. Instead of emphasizing the indigenous roots of native cultures, this course examines emergent cultural formations brought about by postcolonialism, internationalism, and new forms of media interrelations which produce a new culture of hybridity and heterogeneity. Attention is given to the identification, interpretation and interrogation of late twentieth-century and early twenty-first century cultural formations (literature, film, music, performance arts) that are produced and consumed in ways that resist traditional classifications according to national or regional identity. **MPM**

HUM 385. STUDY ABROAD ELECTIVE
ET, ME, MPM

HUM 390. INDEPENDENT STUDY
ET, ME, MPM

HUM 395. SPECIAL TOPICS
ET, ME, MPM

HUM 400. ETHICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Examines ethical dilemmas from theoretical perspectives and considers their application to personal and social issues, with an emphasis on moral reasoning and decision-making. This course examines a variety of controversial moral issues and shows how different views can be reached by appealing to different moral and ethical premises. Students will apply basic ethical theories to specific moral problems within their own fields of study. **MPM**

SEE ELECTIVES FOR A LISTING OF OTHER COURSES THAT MIGHT FULFILL A HUMANITIES ELECTIVE, ELEC 21 (LOWER DIVISION) AND ELEC 22 (UPPER DIVISION).

LANGUAGES

LAN 110. SPANISH I
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The course provides students with basic vocabulary and syntactic structures in Spanish. Conversation skills, listening comprehension, and reading/writing ability are emphasized. Points of interest regarding various Hispanic cultures will be presented. **MPM**

LAN 115. SPANISH II
CLASS HOURS: 3, CREDIT: 3
Prerequisite: LAN 110
Continued study of Spanish through listening, speaking, reading translation, composition, and grammatical analyses and application. Cultural knowledge continues to be an important component: elements of Hispanic character and customs are studied. **MPM**

LAN 120. CHINESE I
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The course provides students with basic character and vocabulary structures in Mandarin Chinese. Conversation skills, listening comprehension, and reading/writing ability are emphasized. Points of interest regarding Chinese cultures are presented. **MPM**

LAN 125. CHINESE II
CLASS HOURS: 3, CREDIT: 3
Prerequisite: LAN 120
Continued study of Mandarin Chinese through listening, speaking, reading translation, composition, and grammatical analysis and application. Points of interest regarding Chinese cultures will continue to be presented. **MPM**

LAN 185. STUDY ABROAD ELECTIVE
MPM

LAN 385. STUDY ABROAD ELECTIVE
MPM

LAN 390. INDEPENDENT STUDY
MPM

LAN 395. SPECIAL TOPICS
MPM

LAW

LAW 100. BUSINESS LAW
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Business law principles are presented at the appropriate undergraduate level for understanding those most useful and widely applied in the contemporary workplace. Students learn how the legal system facilitates business operations and discourages or controls harmful business practices. Students will recognize that the law is an integral part of our social system, both in shaping and being shaped by the broader society. Topics addressed include law as a business foundation; alternative dispute resolution, litigation and the court system; contract law principles; intellectual property; business torts and crimes; business organizations with emphasis on corporations; international business transactions and devices; real and personal property systems; ethics; and preparing contract proposals.
MPM

LAW 185. STUDY ABROAD ELECTIVE
MPM

LAW 200. ENVIRONMENTAL LAW
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
This survey course presents environmental law in a marine context. The course reviews laws governing pollution, radioactive wastes, fisheries conservation, maritime occupational safety laws, and enforcement. Upon completion of the course, students will have current information concerning how environmental laws and regulations affect the mariner. **MPM**

LAW 300. INTERNATIONAL LAW
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
International Law is presented in a maritime context. Topics addressed include the sources of international maritime law; the state-centric system; treaties; legal aspects of land, air, and water territories; law of the sea; piracy and maritime terrorism; ISPS Code; international jurisdiction over persons and vessels; international arbitration and courts; the law of war; and the law of war at sea. Practical, useful, contemporary knowledge is provided as well as an appreciation and discussion of the esoteric nature of international maritime law. Readings will involve case studies while lectures will offer substantive international law as it shapes the maritime world. Historic as well as current issues will be discussed employing balanced perspective and dialogue. **MPM**

LAW 315. ADMIRALTY LAW
CLASS HOURS: 2, CREDIT: 2
Prerequisite: Junior Class Standing or Documented Maritime Experience
Focuses upon the legal principles applicable to maritime commerce upon the seas and navigable water: traditionally called admiralty law. Coverage includes development of general maritime law and American admiralty law, indicia of jurisdiction, scope of the maritime jurisdiction, substantive maritime law, maritime liens, towage, salvage, maritime torts, collision law, worker's compensation claims, wrongful death, limitation of liability, and jurisdiction and procedure in maritime claims. **MPM**

LAW 385. STUDY ABROAD ELECTIVE
MPM

LAW 390. INDEPENDENT STUDY
MPM

LAW 395. SPECIAL TOPICS
MPM

LEADERSHIP

LDR 185. STUDY ABROAD ELECTIVE
MPM

LDR 210. FOUNDATIONS OF LEADERSHIP
CLASS HOURS: 3. CREDIT: 3
Prerequisites: None
This course is designed to assist students with developing the skills needed to be successful for a lifetime of engaged, responsible leadership. The course examines leadership in the context of a changing and culturally diverse workplace; students will gain an understanding of leadership and how this concept has developed over time. Various leadership models, from around the world and from different historical epochs, will be studied and analyzed. Additionally, students reflect on the meaning of ethics and decision-making in the contemporary world. Emphasis will be placed on interpersonal skills, team building, communication, personal development, and leadership. Students will develop personal attributes and social skills and be provided with opportunities to apply their knowledge. This course will serve as a beginning point for an examination of issues and concepts involved in the study of leadership and begin the process of preparing students for a lifetime of engaged, responsible leadership. **MPM**

LDR 385. STUDY ABROAD ELECTIVE
MPM

LDR 390. INDEPENDENT STUDY
MPM

LDR 395. SPECIAL TOPICS
MPM

LIBRARY

LIB 100. INFORMATION FLUENCY IN THE DIGITAL WORLD
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
This class will provide students with an introduction to research, information management and computing technology skills that are fundamental for success in the college environment and beyond. Students will explore the research process, develop efficient search methodologies in an online environment, and learn to critically evaluate resources. Simultaneously, students will be given an orientation to the use of Microsoft Office programs, with special attention paid to information management, critical-thinking and problem-solving. **LIB**

LIB 185. STUDY ABROAD ELECTIVE
LIB

LIB 385. STUDY ABROAD ELECTIVE
LIB

LIB 390. INDEPENDENT STUDY
LIB

LIB 395. SPECIAL TOPICS
LIB

MANAGEMENT

MGT 100. PRINCIPLES OF MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Introduces the basic principles and functions of management and provides the student with a foundation for becoming a better manager. Course material is multidisciplinary and attempts to integrate the findings of the behavioral sciences and other fields with classical, systems, and contingency approaches to management. **MPM**

MGT 105. MANAGEMENT AND ORGANIZATIONAL BEHAVIOR
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
This course explores important transitions and trends in the environment of contemporary global business processes and activities. Its main focus is the human resources channel of the supply chain, including the primary functions of recruiting, training, and work force maintenance. Within this primary focus, control mechanisms (such as protection of the confidentiality of employee records), labor relations, leadership, organizing, and planning are addressed. Case examples in the maritime and logistics industry will frequently be referenced to enhance course objectives. **MPM**

MGT 185. STUDY ABROAD ELECTIVE
MPM

MGT 205. ORGANIZATIONAL BEHAVIOR AND LABOR RELATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MGT 100
Presents the student with a comprehensive overview of the theory and practice of planning and managing human capital in business organizations. The student acquires knowledge and understanding of human resource management, unionism, multiculturalism, diversity, and the integration of business and government in organizing, planning, and controlling human resources. **MPM**

MGT 300. ADVANCED MANAGEMENT TECHNIQUES
CLASS HOURS: 3, CREDIT: 3
Prerequisites: None
Gives the student a basic understanding of quantitative methods and their application to business decision-making. The course includes statistics, probability, mathematics of finance, and inventory control. Use of computers for decision-making in management is also included. *(For MT Only)* **MPM**

MGT 305. INFORMATION SYSTEMS MANAGEMENT
CLASS HOURS: 2, LAB HOURS: 2, CREDIT: 3
Prerequisite: COM 100
A comprehensive study of the use of computers for management decision-making. An examination of traditional information systems and system development techniques focusing on the end user's perspective. The course uses applications software to develop knowledge of the computer environment. Students use databases to analyze information about the business environment from such sources as the Internet, the financial databases, and other library and college databases. **MPM**

MGT 310. PORT AND TERMINAL MANAGEMENT AND OPERATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ECO 100, MGT 100 or MGT 105
This course provides an overview of modern port and terminal operations, including logistics processes such as on-dock rail, strategic and tactical planning, harbor drayage, terminal gate protocols, equipment and cargo management, and integration of marine port and terminal operations with other modes of transportation. The student will gain an introduction to several different types of marine terminals, including containerized liner facilities, dry bulk, and liquid bulk facilities, ro-ro terminals, and others. The class presentation will be rooted in a brief historical review of developments in maritime industry and policy. **MPM**

MGT 315. INTERNSHIP
CREDIT: 2–3
Prerequisites: Junior Class Standing, with the permission of Department Chair, MGT 100 or MGT 105
Students may apply to complete an industry internship. Each assignment depends on each student's specialty or special area of interest. The activities may include, but are not limited to, vessel and stevedoring companies, shipyards, government agencies, ship brokerage/chartering firms, port authorities, insurance firms, or truck, rail, pipeline, or air carriers. Upon completion of the assignment, each student must submit a written report on the experiences and training received. Management issues are the focal points of the assignment and paper. The internship is only offered during the summer break for a minimum of two weeks. **MPM**

MGT 325. PRINCIPLES OF PURCHASING
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MGT 340
Supply and purchasing in modern business, and its role in global supply chain management and strategy. Students analyze and critique complex international cases based on real problems and real enterprises, learn what supply and suppliers can do to enhance revenue as well as reduce cost, and study the total supply management process in the context of organizational goals and supply chain management. Topics include a discussion of statistical process review, product and service supplier selection, outsourcing, ISO 9000, contracts, negotiations, cultural and ethical issues in supply management, and security, environmental, and product safety issues. **MPM**

MGT 335. ADVANCED INFORMATION SYSTEMS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MGT 305
An introduction to the concepts and principles of information systems in the context of modern organizations. The practical learning will concern database management: how to provide timely, accurate and relevant information to users in the organization; and how to use linear programming to quantify, format and solve business problems. **MPM**

MGT 340. GLOBAL LOGISTICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: BUS 120
Logistics is the science of movement of materials from raw material to the customer, a critical factor in today's global business environment. The maritime profession is a crucial part. Enterprises of all kinds find logistics to be a key difference for their customers, and an important way to get competitive advantage. Many recent business successes rely on visions involving logistics, and exploit the latest technologies. Students learn current ideas and technologies in the field from transportation, warehousing, inventory, product design, packaging, security, and reverse logistics, and look at global and management issues as well. Case analysis makes students devise answers and look at alternatives closely, so they can find their own answers later in their career. **MPM**

MGT 385. STUDY ABROAD ELECTIVE
MPM

MGT 390. INDEPENDENT STUDY
MPM

MGT 395. SPECIAL TOPICS
MPM

MGT 400. STRATEGIC MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisites: Senior Class Standing or approval of instructor and Department Chair, BUS 200, BUS 205, MGT 205
A capstone course that requires computer modeling and the use of most of the courses in the business curriculum to solve problems in business management. Because the course is an integrative case study course, students must use knowledge acquired in management, finance, accounting, and statistical analysis. **MPM**

MGT 410. QUANTITATIVE MANAGERIAL METHODS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 205, MGT 305
Practical applications of mathematical models for managerial decision-making. Topics include basis for optimization of decisions; linear and integer programming; transportation problems, queuing theory and simulation. Use of MS Excel as a tool for conducting optimization studies. Students use case analysis to learn how to develop and assess validity of models. **MPM**

MGT 415. OPERATIONS MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 205, MGT 340, MGT 420
Focuses on the concepts of production management. Topics include a discussion of manufacturing and service processes and strategies, production capacity analysis, quality management and other concepts. **MPM**

MGT 420. SUPPLY CHAIN MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MGT 340
Students focus on understanding basic techniques and strategic issues of global supply chain management, including the impact of culture, strategic planning, organization, and management control, which add value during the successful movement of products from their origins as raw materials to their final destinations as finished products. Specific topics may include customer service, e-commerce, facilities location, routing and pricing, storage, transportation, emerging technologies, and re-engineering the supply chain. Examples will be drawn from supply chains including a maritime link. **MPM**

MGT 440. LOGISTICS CASE ANALYSIS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MGT 340
This is a capstone course in logistics management requiring students to utilize and integrate their knowledge acquired in courses taken previously which deal with supply chains, transportation, and logistics. Several modes of learning advance students' ability to analyze complex logistics and supply chain scenarios and make decisions. Student teams compete in a logistics operations simulation with the goal of maximizing logistics contribution through their decision making. Case studies with both written reports and presentations teach students to apply modern principles and practices to achieve competitive advantage. Short critical reviews of current journal articles show how modern techniques are applied.

A logistics consulting project with an outside client allows students to see and deal with real situations and practitioners. Quantitative and qualitative modeling techniques will be employed and Microsoft Excel, as well as other computer software, will be utilized. **MPM**

MARINE SCIENCE

MSC 100. INTRODUCTION TO GEOLOGICAL AND CHEMICAL OCEANOGRAPHY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The history of oceanography, seafloor features, global plate tectonics, marine sediments, the chemistry of seawater, dissolved gases in seawater, and ocean resources are covered. The course meets a natural science elective requirement. **SM**

MSC 105. INTRODUCTION TO BIOLOGICAL AND PHYSICAL OCEANOGRAPHY
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Introduction to atmosphere-earth-ocean interactions, global climate processes, ocean circulation, waves, tidal processes, plankton, nekton, and benthic organisms. The course meets a natural science or life science elective requirement. **SM**

MSC 185. STUDY ABROAD ELECTIVE
SM

MSC 200. OCEANOGRAPHIC INSTRUMENTS AND ANALYSIS
CLASS HOURS: 2, CREDIT: 3
Prerequisite recommended: MSC 100
The course provides students "hands-on" experience with oceanographic sampling and analysis. Students learn techniques for measuring temperature, salinity, dissolved oxygen, phosphate, chlorophyll, pH and carbon dioxide, and submarine light levels. Two field trips are planned for the course. **SM**

MSC 200L. OCEANOGRAPHIC INSTRUMENTS AND ANALYSIS LAB
LAB HOURS: 3, CREDIT: 0
SM

MSC 205. MARINE BIOLOGY
CLASS HOURS: 3, CREDIT: 3
Prerequisite recommended: MSC 105
The topics covered in this course are marine invertebrates, marine algae, marine fishes, and marine mammals. Other topics covered are the ecology of tidepools, mudflats, sandy beaches, tropical reefs, and the deep benthos. The course meets a natural science or life science elective requirement. **SM**

MSC 385. STUDY ABROAD ELECTIVE
SM

MSC 390. INDEPENDENT STUDY
CLASS HOURS: Variable, CREDIT: 3
Prerequisites: MSC 100, MSC 105, MSC 200, MSC 205
A requirement for students completing the Marine Science Minor. The student chooses a topic of his/her choice and completes an independent study project under the direction of the Marine Science Minor advisor. The project culminates with a written report and oral report. **SM**

MSC 395. SPECIAL TOPICS
SM

MATHEMATICS

MTH 001. INTERMEDIATE ALGEBRA
CLASS HOURS: 4, CREDIT: 4
Prerequisite: Beginning Algebra
A thorough review of algebra at an intermediate level. The topics covered are sets and operations, equations and inequalities, polynomials, rational expressions, rational exponents, roots, radicals, quadratic equations, graphing equations, and functions. **XL**
Graded: A, B, C, NC.

MTH 100. COLLEGE ALGEBRA AND TRIGONOMETRY
CLASS HOURS: 4, CREDIT: 4
Prerequisite: Two years of high school algebra or MTH 001, or passing score on ELM, or otherwise exempt from remediation.
Combines the necessary elements of college algebra and trigonometry to prepare students for subsequent study of calculus, computer programming, navigation and the physical sciences. Topic coverage includes linear, quadratic and higher polynomial equations, rational logarithmic and exponential functions and equations, trigonometric functions and their inverses and equations, with graphical representation of all of the above. Other topics are generalized and periodic functional relationships, multivariable systems with matrix algebra including inversion and determinants, complex numbers, vectors and appropriate computational methods, the rapid computation of values in plane triangles and various functions using the pocket calculator. **SM**

MTH 105. FINITE MATH
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 100
A foundation course on basic theories and models of mathematics and how these models can be applied to decision making in business. Topics include systems of linear equations, linear programming, the mathematics of finance, probability, and basic concepts of statistics. **SM**

MTH 107. ELEMENTARY STATISTICS
CLASS HOURS: 4, CREDIT: 4
Prerequisite: MTH 100 or ELEC 70
This course is a study of general concepts of statistics, including sampling, probability distributions, statistical inferences, confidence intervals, hypothesis tests, and correlations. Use of technology, including graphing calculators or computers will be used extensively to describe and analyze data. **SM**

MTH 185. STUDY ABROAD ELECTIVE
SM

MTH 205. CALCULUS FOR BUSINESS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 100
Focuses on basics of calculus and the application of this topic to business decision-making and problem solving. Students will concentrate on formulae that will be performed on Excel later in the curriculum. The course will present math theory and math models. Exercises in critical thinking and model building will be introduced, along with the application of these two tools to the quantitative analysis of business problems. **SM**

MTH 210. CALCULUS I
CLASS HOURS: 4, CREDIT: 4
Prerequisite: MTH 100 or equivalent
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral. **SM**

MTH 211. CALCULUS II
CLASS HOURS: 4, CREDIT: 4
Prerequisite: MTH 210
An introduction to additional methods of integration and improper integrals. Presented are trigonometric and hyperbolic functions and their inverses; infinite sequences and series; and a brief introduction to linear, ordinary first, and second-order differential equations. **SM**

MTH 212. CALCULUS III
CLASS HOURS: 4, CREDIT: 4
Prerequisite: MTH 211 with a "C" or better
An introduction to the algebra and calculus of vectors. Presented are functions of several variables and partial differentiation, as well as multiple integration and vector analysis. **SM**

MTH 215. DIFFERENTIAL EQUATIONS
CLASS HOURS: 4, CREDIT: 4
Prerequisite: MTH 211 with a "C" or better
Introduces first-order differential equations and second-order differential equations with constant coefficients. Laplace transforms, small systems of linear differential equations, and numerical methods are presented, along with an introduction to second-order differential equations. **SM**

MTH 385. STUDY ABROAD ELECTIVE
SM

MTH 390. INDEPENDENT STUDY
SM

MTH 395. SPECIAL TOPICS
SM

MECHANICAL ENGINEERING

ME 185. STUDY ABROAD ELECTIVE
ME

ME 220. COMPUTER AIDED ENGINEERING
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
Familiarizes students with virtual product development and fundamentals of parametric design and solid modeling using advanced engineering software tools. Complex component design, assembly design and the development of working drawings are also covered. Students participate in Team Design/Reverse Engineering Projects. **ME**

ME 230. ENGINEERING MATERIALS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: CHE 100
Examination of the properties of materials from the atomic level through the molecular levels, looking at crystal structure. Emphasis is on metals, but nonmetals are discussed. Mechanical properties, creep, fatigue, corrosion, and failure characteristics are discussed. Phase Diagrams and thermal processing are also studied. Applying material properties in design is also discussed. **ME**

ME 232. ENGINEERING STATICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: PHY 200
Analysis of particles and rigid bodies at rest, using vector methods. Topics include the concepts of forces, moments, and equivalent force systems, calculation and use of centroids, equilibrium of rigid bodies, force analysis of trusses, frames, and machines, internal forces in structural members, and friction. **ME**

ME 240. ENGINEERING THERMODYNAMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: PHY 200
Study of the basic principles of thermodynamics and their applications to engineering processes and cycles. Topics include study of the first and second laws and the application of these laws to thermodynamic systems, with emphasis on power and refrigeration cycles. **ME**

ME 330. ENGINEERING DYNAMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ME 232, MTH 212
Analysis of particles and rigid bodies in motion using vector methods, calculus, and analytical geometry. Topics include kinematic analysis of motion and relative motion, kinetic analysis of forces and motion, rotation and translation of rigid bodies, work-energy methods, and impulse-momentum methods. **ME**

ME 332. MECHANICS OF MATERIALS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ME 230, ME 232, MTH 211
Application of stress and strain in design and analysis of simple structural members under load. Stresses and deformations in members with a single load in tension, torsion, shear or bending moment are analyzed, followed by the transformation of stresses and effects of combined loads. The analysis of statically indeterminate structures is also included. **ME**

ME 339. MATERIAL/MECHANICAL LAB►
CLASS HOURS: 1, CREDITS: 2
Prerequisites: ME 332, ME 360
Co-requisite: ME 339L
Principles of material science, mechanics of materials, and dynamics – applied, reinforced, and assessed through a series of experiments. The experiments involve calibration of instruments, measurement of mechanical quantities using data acquisition systems, analysis of data in order to obtain desired results, estimates of uncertainties in the results, and comparison of results with predicted outcomes based on theory. Experimental theory, procedures, and results are presented in formal written reports as well as oral presentations. **ME**

ME 339L. MATERIAL/MECHANICAL LAB LAB►
LAB HOURS: 2
Co-requisite: ME 339
ME

ME 340. ENGINEERING FLUID MECHANICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 212, PHY 200
Theory and fundamental principles of incompressible fluid flows. Topics include hydrostatic fluids, continuity, linear momentum, Bernoulli equations for control volumes, dimensional analysis, viscous duct flows, boundary layer flows, centrifugal and axial flow pumps, and pump performance curves and similarity rules. **ME**

ME 342. REFRIGERATION AND AIR CONDITIONING
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ME 240
Application of principles of thermodynamics and fluid mechanics to selection and performance evaluation of air conditioning and refrigeration systems. Topics include vapor-compression cycle performance, load calculations, refrigeration system component characteristics, refrigerant characteristics, environmental responsibilities, psychometrics and basic conditioning processes, and system balancing of refrigeration systems. Absorption refrigeration systems and cooling tower performance are also studied. **ME**

ME 344. HEAT TRANSFER
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ME 240, ME 340, MTH 215
Study of the fundamental mechanisms of the transfer of energy in the form of heat, including conduction, convection, and radiation. Topics include steady and transient conduction, free and forced convection, radiation, and heat exchanger analysis and design. **ME**

ME 349. FLUID/THERMAL LAB
CLASS HOURS: 1, CREDIT: 2
Prerequisites: ME 344, ME 360
Co-requisite: ME 349L
Principles and applications of fluid mechanics. thermodynamics and heat transfer through a series of laboratory experiments. Experiments to demonstrate fluid flow measurements, the first and second laws of thermodynamics, conduction and convection heat transfer, heat exchanger analyses and performance, and gas turbine and gasoline engine cycles. Acquisition and statistical analyses of experimental data, and

professional laboratory reports are also included. **ME**

ME 349L. FLUID/THERMAL LAB LAB
LAB HOURS: 2
Co-requisite: ME 349
ME

ME 350. ELECTROMECHANICAL MACHINERY
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ENG 250, ENG 250L
Co-requisite: ME 350L
This course covers the fundamentals of magnetism, magnetic circuits, and transformers. Included are principles and operation of series, shunt, compound DC generators and motors; single-phase and three-phase AC generators, synchronous and induction AC motors, DC and AC motor controllers, and stepper motors; and system protective devices and safety. **ME**

ME 350L. ELECTROMECHANICAL MACHINERY LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisites: ENG 250, ENG 250L
Co-requisite: ME 350
Supports instruction and theory of ME 350 using hands-on motor operation and analysis. **ME**

ME 360. INSTRUMENTATION AND MEASUREMENT SYSTEMS
CLASS HOURS: 2, CREDIT: 2
Prerequisites: ENG 210, ENG 250, ENG 250L
Co-requisite: ME 360L
Measurement techniques for mechanical testing: types of signals, dynamic response of measurement systems, frequency response, uncertainty analysis, types of instruments, basic input circuits, signal conditioning, computer based data acquisition, sampling, A/D conversion, time and frequency analysis, statistical analysis of data. **ME**

ME 360L. INSTRUMENTATION AND MEASUREMENT SYSTEMS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: ENG 210, ENG 250, ENG 250L
Co-requisite: ME 360
Data acquisition using a PC and LabView. Construction and use of basic input circuits. Use of signal conditioning to improve the quality of measurements. Calibration and use of common instruments, including strain gages, thermocouples, photovoltaic cells, RTDs, and accelerometers. Examination of the dynamic response of instruments. Time domain and frequency domain analysis of data. Presentation of data. Uncertainty estimates of measured data. Output of control signals. A final project is required. **ME**

ME 385. STUDY ABROAD ELECTIVE
ME

ME 390. INDEPENDENT STUDY
ME

ME 392. MECHANICAL DESIGN
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ME 332
Two parts are covered in this course. Part one represents the general overview of fundamentals on applied loads, material properties, stress and stains, stress concentrations, static as well as dynamic failure theories, and some tribiological considerations. Part two will relate these fundamentals to various machine elements, such as columns, thin and thick-walled cylinders, shafting and associated parts, bearings, gears fasteners and power screws, springs, brakes and clutches, and flexible machine elements. A design project from the text will be assigned to each group. **ME**

ME 394. FLUID/THERMAL DESIGN
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ME 344
This course covers analysis and design aspects of fluid and thermal systems. Included are instruction in piping systems, with the economics of pipe size selection and the sizing of pumps for systems, as well as double pipe, shell and tube, and cross flow heat exchangers: configuration, selection, analysis, and design. **ME**

ME 395. SPECIAL TOPICS
ME

ME 429. MANUFACTURING PROCESSES LAB►
CLASS HOURS: 1, LAB HOURS: 2
CREDIT: 2
Prerequisites: EPO 215, ME 220
Co-requisite: ME 494
Principles of manufacturing processes in the areas of metal removal, forming, joining, casting, and fundamentals of numerical control. Study of manufacturing includes design aspects, material considerations, review of latest methods, and numerical controlled machining utilizing computer graphics and solid modeling. (Pro/Engineer and Pro/Manufacturing.) **ME Formerly ME 329**

ME 430. MECHANICAL VIBRATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 215, ME 330
Analysis of mechanical systems undergoing vibration. Topics include free response of vibrating systems, response to harmonic excitation, response to general excitation, analysis of multi-degree of freedom systems using matrix methods, and techniques to suppress vibration. In addition, a series of laboratory experiments are done to demonstrate the theory learned in class. **ME**

ME 432. MACHINERY DESIGN
CLASS HOURS: 4, CREDIT: 4
Prerequisites: ME 330, ME 332
The kinematics of mechanisms is introduced. Position, velocity, and acceleration analysis of mechanisms are discussed, along with linkage synthesis. Other topics include dynamics of machinery, mechanism design, cam design, gear train design, force analysis of mechanisms, and engine dynamics. Students will design, animate, analyze, and optimize complex three-dimensional mechanisms using virtual prototyping tools for mechanism design and analysis. **ME**

ME 434. ADVANCED MECHANICS OF MATERIALS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ME 332
Several extensions of the theories of elementary mechanics of materials, including torsion of noncircular and thin walled bars, unsymmetrical bending, and shear flow in thin walled beams. New topics in mechanics of materials, including buckling of columns and energy methods. An introduction to the theory of elasticity with applications to problems in cartesian and cylindrical coordinates (including spinning disks and cylindrical pressure vessels). In addition, finite element analyses are performed on several of the problems studied during the course in order to compare theoretical and computational methods and highlight the limitations of both approaches. **ME**

ME 440. ADVANCED FLUID MECHANICS AND THERMODYNAMICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ME 240, ME 340
Advanced topics in gas dynamics, including compressible flow analysis of converging-diverging nozzles, normal and oblique shock waves, compressible duct flow with friction; and advanced topics in thermodynamics, including irreversibility, availability, and second-law analysis of thermodynamic systems, gas and vapor mixtures, chemical reactions, and thermodynamics of propulsion systems with applications. **ME**

ME 442. HEATING, VENTILATION, AND AIR CONDITIONING DESIGN
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ME 240, ME 340
Analysis and design of air conditioning systems for industrial and commercial applications. Topics include psychometrics, heating and cooling loads, HVAC systems and controls, infiltration, ventilation, fan performance, and duct design. **ME**

ME 444. ENERGY SYSTEMS DESIGN
CLASS HOURS: 4, CREDIT: 4
Prerequisite: ME 344
Application of fundamentals of thermodynamics, fluid mechanics, heat transfer in design, analysis, and selection of power production systems, auxiliary power units, and heat exchange systems. Topics also include economic evaluation and preliminary cost of estimation of energy systems. **ME**

ME 460. AUTOMATIC FEEDBACK CONTROL
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 215, ME 360, ME 360L
Co-requisite: ME 460L
Study of dynamic system modeling for various types of engineering systems. Analysis of dynamic systems using Laplace transform and state space methods. Open and closed loop stability. Design of feedback controllers using root-locus and frequency response techniques. Extensive use of MATLAB for analysis and simulation. **ME**

ME 460L. AUTOMATIC FEEDBACK CONTROL LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: MTH 215, ME 360, ME 360L
Co-requisite: ME 460
Supports instruction and theory of ME 460 using MATLAB modeling and simulation. Hands-on lab and case studies are performed. **ME**

ME 490. ENGINEERING DESIGN PROCESS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: Junior Class Standing, ENG 120
The tasks of engineering design processes are introduced and practiced. These tasks include identifying objectives and constraints, establishing functions, generating concepts, evaluating design alternatives, designing product architecture, selecting materials, and using mathematical modeling. Auxiliary techniques such as engineering statistics, dimensional analysis, design optimization, engineering economics,

and project management will also be studied. **ME**

ME 492. PROJECT DESIGN I
CLASS HOURS: 3, CREDIT: 3
Prerequisites: ME 490, ENG 300
Capstone projects will be assigned to groups of student teams who will implement the process of engineering design. They will identify a reasonable set of objectives, constraints, functions, and design specifications. They will subsequently generate design concepts and evaluate their alternatives to select the design that best meets the user's requirements. The teams will then work on product architecture, material selection, and mathematical modeling and engineering analysis. Finally, they will be required to present and submit a preliminary design report for their senior projects. **ME**

ME 494. PROJECT DESIGN II
CLASS HOURS: 2, LAB HOURS: 2, CREDIT: 3
Prerequisites: ME 492
In this course students will perform tasks to complete the preliminary designs initiated in Project Design I (ME 492), a project that will result in final and detailed designs. The tasks include refining the preliminary design, addressing design for assembly, design reliability and safety considerations, detailed drawings and bill of materials, prototyping and testing, product cost evaluation, and final design review. Finally, the students will present and submit a final report for their senior design projects. **ME**

NAUTICAL SCIENCE

NAU 102. NAVIGATION I►
CLASS HOURS: 3, CREDIT: 4
Prerequisite: MTH 100
Co-requisite: NAU 102L
This course introduces the basic tools and theory of piloting. Elements include basic coastal piloting, using terrestrial features and various plotting systems and techniques. Chart interpretation, plotting, and correction are emphasized, as are passage planning and navigation cross-checking. Emphasis is placed on neatness and precision and, toward the end of the course, speed in arriving at basic piloting solutions. This course is the foundation upon which all subsequent navigation courses will build. **MT**

NAU 102L. NAVIGATION I LAB►
LAB HOURS: 2, CREDIT: 0
Prerequisite: Same as NAU 102
Co-requisite: NAU 102
MT

NAU 103. INTRODUCTION TO MARINE TRANSPORTATION
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Introduction to the field of commercial marine transportation. This course provides a broad understanding of the maritime industry and relates the students' work and studies at CMA to the maritime world. It includes American maritime history, governmental policies and regulations, vessel and stevedore company organization, principles of foreign trade, documentation, and the various related organizations, both public and private. **MT**

NAU 105. SHIP STRUCTURE►
CLASS HOURS: 2, CREDIT: 2
Prerequisite: None
A survey course of ship design and construction, emphasizing nomenclature and structural components, hull strength and vessel performance characteristics. **MT**

NAU 110. SEAMANSHIP►
CLASS HOURS: 3, CREDIT: 3
Prerequisite: NAU 105
The study of basic seamanship, including sea terms and nomenclature, small boats, merchant ship characteristics, deck fittings, rigging, equipment, appliances, life-saving devices, and emergency procedures. Attention to the duties of a lookout/helmsman prepares students for duties on CRU 100. **MT**

NAU 120. MARINE ENGINEERING►
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
The study of shipboard engineering equipment, systems, and procedures associated with the propulsion and control of steam, diesel, and gas- turbine-powered merchant ships. Several auxiliary systems such as electrical distribution, deck machinery, cargo pumps/valves, and steering gears are also covered. (Course not required for QMED students.) **MT**

NAU 185. STUDY ABROAD ELECTIVE
MT

NAU 202. CELESTIAL NAVIGATION►
CLASS HOURS: 3, CREDIT: 4
Prerequisites: NAU 102, NAU 102L
Co-requisite: NAU 202L
A study of celestial navigation, including sun, moon, stars, and planets. Students are instructed in the use of modern sight reduction methods by table and calculator. Emphasis is placed on USCG/STCW requirements. **MT**

NAU 202L. CELESTIAL NAVIGATION LAB►
LAB HOURS: 2, CREDIT: 0
Prerequisites: Same as NAU 202
Co-requisite: NAU 202
MT

NAU 205. SHIP STABILITY►
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 100, NAU 105, PHY 100 (may be taken concurrently), PHY 100L (may be taken concurrently)
A study of the statics of naval architecture for ship hulls, emphasizing application to stability, trim, volume, and moment calculations by the ship's officer. Methods of calculation for determination of intact, upright stability and trim, including free surface corrections, are introduced prior to a study of stability analysis techniques and criteria. Computer-based training and practical application of *Training Ship GOLDEN BEAR* stability software will be utilized, and stress calculations and damage stability concepts will be covered. **MT**

NAU 302. ADVANCED NAVIGATION►
CLASS HOURS: 2, CREDIT: 3
Prerequisites: NAU 102, NAU 102L
Co-requisite: NAU 302L
Fundamental principles of electronic navigation systems and basic computational forms of the sailings will be covered. The course consists of both classroom lecture and practical lab applications. Upon completing the course, students should be able to demonstrate an understanding of the sailings, hyperbolic and radio navigation systems, and Global Positioning System. Integrated Bridge Systems will also be discussed. Miscellaneous navigation topics will be covered. The concept of navigational crosschecking will permeate all subjects. Emphasis is placed on accuracy, neatness, precision and the good judgment required of a modern merchant mariner. **MT**

NAU 302L. ADVANCED NAVIGATION LAB►
LAB HOURS: 2, CREDIT: 0
Prerequisites: Same as NAU 302
Co-requisite: NAU 302
MT

NAU 305. RULES OF THE ROAD►
CLASS HOURS: 2, CREDIT: 2
Prerequisites: CRU 100, CMA Sophomore Class Standing
Comprehensive study of the international rules of the road (COLREGS), including their origin, purpose, history, technical provisions, and application. Included is a comparative study of both international and inland rules, along with their interpretation and practical application, as well as a study of case histories and legal interpretations resulting from collisions at sea. **MT**

NAU 310. ELECTRICITY AND ELECTRONICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 100, PHY 100, PHY 100L
Co-requisite: NAU 310L
Theory of alternating current electricity, circuits, generators, motors, and semiconductors. Emphasizes shipboard systems, using STCW guidelines, to include regulatory and classification society requirements. In addition, radio communication theory is covered to the depth necessary for DL 240 (GMDSS). **MT**

NAU 310L. ELECTRICITY AND ELECTRONICS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisites: Same as NAU 310
Co-requisite: NAU 310
During the laboratory, hands-on experience is provided to ensure the students are proficient in the use of electrical/electronic test equipment such as multimeters and oscilloscopes, the reading and interpretation of schematics, and the use of technical manuals for trouble-shooting and for routine electrical/electronic maintenance. **MT**

NAU 320. TANK VESSEL OPERATIONS►
CLASS HOURS: 3, CREDIT: 3
Prerequisite: NAU 105 and NAU 205, or ENG 430
A study of ocean transportation of bulk liquid cargo. Areas covered include tanker construction and design, petroleum cargo characteristics, oil cargo planning and operations, ballasting, pollution control, safety, and U.S. Coast Guard regulations. **MT**

NAU 325. CARGO VESSEL OPERATIONS►
CLASS HOURS: 3, CREDIT: 3
Prerequisites: DL 120, NAU 205
A study of the international movement of dry cargo and the role that the ship's officer plays as a front line manager in the shipping organization's structure. In relation to break bulk, bulk, and container operations, the course covers cargo handling equipment, stowage of various commodities, cargo plans and planning of stowage, transportation HAZMAT, and trim and stability considerations. **MT**

NAU 330. METEOROLOGY►
CLASS HOURS: 3, CREDIT: 3
Prerequisites: MTH 100, PHY 100, PHY 100L
The science of meteorology covers principles of weather observations and reports; weather forecasting and the development of weather maps; and the study of air masses, fronts, winds and currents. **MT**

NAU 335. ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)►
CLASS HOURS: 2, CREDIT: 2
Prerequisites: DL 325, DL 325L, MTH 100, NAU 102, NAU 102L, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Co-requisite: NAU 335L
This course is specifically designed to instruct students in the theory and practical use of Electronic Chart Display and Information Systems (ECDIS). Also presented will be: raster and vector charts, use of ECDIS in voyage planning and recording, integration with other bridge systems like RADAR, ARPA, and AIS, latest developments in ECDIS design and implementation, and current IMO regulations governing use of ECDIS. Students must be concurrently enrolled in NAU 335L. **MT**

NAU 335L. ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS) LAB►
LAB HOURS: 2, CREDIT: 1
Prerequisites: Same as for NAU 335
Co-requisite: NAU 335
This lab provides the practical application of skills learned in NAU 335 using electronic charting display and navigational equipment. Students must be concurrently enrolled in NAU 335. **MT**
Graded: Credit/No Credit

NAU 385. STUDY ABROAD ELECTIVE
MT

NAU 390. INDEPENDENT STUDY
MT

NAU 395. SPECIAL TOPICS
MT

NAU 400. ADVANCED MARITIME TOPICS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: CRU 200, CRU 200L, DL 200 (may be taken concurrently), EGL 300
This course is designed to consolidate and advance the knowledge of seamanship gained by students in their earlier years at Cal Maritime, both on cruise and in the classroom. A study of the many aspects of seamanship is conducted, along with theoretical aspects of shiphandling. The steering gear, navigation safety regulations, and responsibility of the pilots are considered. Heavy weather, ice seamanship, and ground tackle are included. The ship's log and its legal standing are discussed, along with record keeping and the ship's officers' responsibility under the federal code, including ethics, alcohol and substance abuse issues, and crimes at sea. Students will be required to write a term paper and make an oral presentation to the class. **MT**

NAU 410. LICENSE SEMINAR
CLASS HOURS: 1, CREDIT: 2
Prerequisite: CMA Senior Class Standing, with graduation scheduled within the next six months. (License exam results expire one year after test date, and no license will be issued prior to a student's meeting all graduation requirements.)
Co-requisite: NAU 410L
The course is designed to tie together all of the subjects that will be covered in the third mates' license examination and to review much of the specific knowledge needed. The course includes, among other things, subject matter in navigation, rules of the road, seamanship, meteorology, marine rules and pollution regulations, cargo, and communications and watchstanding. **MT** Graded: Credit/No Credit

NAU 410L. LICENSE SEMINAR LAB
LAB HOURS: 2, CREDIT: 0
Prerequisite: Same as NAU 410
Co-requisite: NAU 410
MT

NAU 415. TRANSPORTATION SECURITY►
CLASS HOURS: 3, CREDIT: 3
Prerequisites for MT Students: CRU 200, NAU 325, Senior Class Standing
Prerequisite for BA Students: TRA 300
This course emphasizes maritime security on an **operational** level versus from a public policy perspective. It is modular in format and focuses on the International Ship and Port Security Code (ISPS), the Maritime Transportation Security Act of 2002 (MTSA) and domestic maritime security policies and requirements as outlined in the Code of Federal Regulations and USCG NVICs. Students will learn to understand port and ship vulnerability assessments, implement security plans, understand various levels of shipboard and terminal security responsibilities and administration. The course will also explore elements of chemical, biological and radiological defense (CBRD), crisis management, and equipment security technologies. Ship and terminal operations will be explored with respect to cargo and vessel screening programs and methods. Students successfully completing this course may earn industry-recognized security certificates. **MT**

NAU 430. LIQUIFIED GAS CARGOS
CLASS HOURS: 2, CREDIT: 2
Prerequisite for MT Students: NAU 320
Prerequisites for MET & ME Students: CRU 350, ENG 430
Co-requisite: NAU 430L
A study of the ocean transportation of liquified gas cargos, which includes liquified natural gas (LNG) and liquified petroleum gas (LPG). Areas covered include chemistry and physics, hazards, rules and regulations, ship design and cargo containment, cargo handling systems, safety, cargo handling operations, ship/shore interface, and emergency operations. The class, in conjunction with the Liquid Gas Cargo Simulator, will prepare the student to be a junior officer onboard liquid gas carriers. **MT**

NAU 430L. LIQUIFIED GAS CARGOS LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite for MT Students: NAU 320
Prerequisites for MET & ME Students: CRU 350, ENG 430
Co-requisite: NAU 430
This class will be conducted concurrently with NAU 430. By use of simulation, students will conduct cargo operations and gain system understanding of liquified gas carriers. **MT** Graded: Credit/No Credit

NAVAL SCIENCE

NSC 100. NAVAL SCIENCE FOR THE MERCHANT MARINE OFFICER
CLASS HOURS: 3, CREDIT: 3
An introduction to the organization of the U.S. Navy (including the Naval Control of Shipping Organization), with a discussion of the Merchant Marine Naval Reserve commission in order to provide a sound basis for liaisons between the U.S. Navy and the merchant marines. The concept of seapower is analyzed, with emphasis on the merchant marine-Navy interface in common seapower objectives. Underway replenishment and convoy operations are introduced. **NS**

NSC 185. STUDY ABROAD ELECTIVE
NS

NSC 200. NAVAL SCIENCE FOR THE MERCHANT MARINE RESERVIST I
CLASS HOURS: 3, CREDIT: 3
Prerequisite: NSC 100
Building on NSC 100, this course presents the nature of a hostile naval threat and types of surface, subsurface, and air attacks to which both U.S. naval and merchant shipping can be subjected. Merchant ship self-defense maneuvers and naval escort defensive actions are analyzed. The student should become proficient in the merchant marine-Navy communication interface and in ship maneuvering when in convoy. Navy officer communities, administration, and organization are discussed. Warship design, propulsion, and damage control methods are also introduced. **NS**

NSC 255. MIDSHIPMAN NAVAL TRAINING CRUISE
CREDIT: 3
Prerequisites: Sophomore Class Standing and must be sworn into the MMR program.
Co-requisite: May be concurrent if taken in conjunction with CRU 200/CRU 250 onboard a Navy vessel.
A rigorous training cruise aboard a U.S. naval surface vessel, submarine, or within an aviation squadron in which the midshipman is involved in a variety of training evolutions consisting of fundamentals, systems, watch stations, and responsibilities normally assigned to junior commissioned officers. Eligible students are chosen to participate based on deck or engineering department chair recommendation (if taken concurrently with CRU 200/CRU 250) and naval science department chair approval. Students must have demonstrated the ability to work independently and possess a minimum GPA of 2.50. **NS**

NSC 310. NAVAL OPERATIONS
CLASS HOURS: 3, CREDIT: 4
Prerequisites: NSC 200, U.S. citizenship
Co-requisite: NSC 310L
Operations topics covered include naval communications systems, sonar-radar search techniques, formations, and screening theory. Tactical formations and dispositions, relative motion, maneuvering board, and tactical plots are analyzed for force effectiveness and unity. Provides an introduction to the theory and principles of operation of naval weapons systems, including coverage on the capabilities and limitations of weapons and fire control systems. The theory of target acquisition, identification and tracking, trajectory principles, and basics of naval ordinance will be presented. The course is required for all Naval Science minors and recommended for those students pursuing a Naval Reserve commission. **NS**

NSC 310L. NAVAL OPERATIONS LAB
LAB HOURS: 2, CREDIT: 0
Co-requisite: NSC 310
NS

NSC 315. NAVIGATION (FOR ENGINEERS)
CLASS HOURS: 3, CREDIT: 4
Prerequisite: NSC 100
Co-requisite: NSC 315L
A comprehensive study of the theory, principles, and procedures of terrestrial and celestial navigation, movements, and employment, with an emphasis on naval applications and examples. Navigation topics include piloting, dead reckoning, radar navigation, and celestial theory. Practical work involving sight reduction, sextants, publications, and report logs. Rules of the road, lights, signals, and navigational aids, including inertial systems, are also covered. The course is required for engineering students pursuing a Naval Science minor. **NS**

NSC 315L. NAVIGATION LAB (FOR ENGINEERS)
LAB HOURS: 2, CREDIT: 0
Co-requisite: NSC 315
NS

NSC 385. STUDY ABROAD ELECTIVE
NS

NSC 390. INDEPENDENT STUDY
NS

NSC 395. SPECIAL TOPICS
NS

NSC 400. LEADERSHIP, ETHICS, AND NAVAL SCIENCE FOR THE MERCHANT MARINE RESERVIST II
CLASS HOURS: 4, CREDIT: 4
Prerequisite: NSC 200 or approval of Chair
Designed to provide midshipmen with the practical knowledge, leadership, and managerial skills necessary to function as a new naval reserve officer. Topics include merchant marine reserve, officer and enlisted rank structure, administrative duties of an officer, the naval justice system, management techniques, promotions, leadership, ethics, fitness reports and annual training (AT) requirement and procedures. **NS**

NSC 450. ADVANCED MIDSHIPMAN NAVAL TRAINING
CREDIT: 1
Prerequisite: MMR Midshipman under Contract (Naval Science Department Chair approval required)
A very intensive training opportunity for midshipmen desiring to increase their practical knowledge of the U.S. Navy's mission. Provides fundamental, intermediate, and upper level leadership experience through practical application of leadership management techniques. Students perform in a variety of billets. Eligible cadets are chosen to participate in NSC 250 according to their performance, aptitude, and warfare community interest. Training opportunities include, but are not limited to, field trips to surface, subsurface, aviation, and special operations units; close order drill; inspections; and naval officer career areas. Naval Science department chair approval required. May be used to satisfy open elective requirements. **NS**
Graded: Credit/No Credit

PERFORMING ARTS

PA 185. STUDY ABROAD ELECTIVE
MPM

PA 385. STUDY ABROAD ELECTIVE
MPM

PA 390. INDEPENDENT STUDY
MPM

PA 395. SPECIAL TOPICS
MPM

PHYSICAL EDUCATION AND ATHLETICS

PE 100. BEGINNING/INTERMEDIATE SWIMMING
LAB HOURS: 2, CREDIT: ½
Individual instruction for everyone, from beginning swimmers who need help in learning basic fundamentals and techniques to intermediate swimmers who want to improve their swimming technique and/or conditioning. **ATH**
Graded: Credit/No Credit

PE 111. SPORTS CONDITIONING
LAB HOURS: 2, CREDIT: 1
A total body/cardiovascular workout designed to condition and cross train athletes during the off- season. This is an intermediate-level fitness class. **ATH**
Graded: Credit/No Credit

PE 114. WEIGHT MANAGEMENT THROUGH EXERCISE
LAB HOURS: 2, CREDIT: 1
This course begins with a fitness evaluation and body composition test (lean muscle vs. fat tissue percentage). Through exercise and healthy nutrition the student will learn how to change his or her body composition and improve in an overall feeling of wellness. The student will also learn how aerobic conditioning and weight training work to burn excess calories and why diets may not be the solution to excess weight. The class includes an aerobic exercise session. **ATH**
Graded: Credit/No Credit

PE 120. WEIGHT TRAINING
LAB HOURS: 2, CREDIT: 1
Weight and circuit training will concentrate on assisting the student to develop endurance, strength, and flexibility through programs that can be adopted for bodybuilding or specific fitness for individual sports. Recommended as an off-season conditioning program for intercollegiate athletes. **ATH**
Graded: Credit/No Credit

PE 125. MARTIAL ARTS
LAB HOURS: 3, CREDIT: 1
A rigorous martial arts program designed to create discipline, flexibility, and fitness while teaching the fundamentals and techniques of Kajukenbo. Students can earn belt ranks. **ATH**
Graded: Credit/No Credit

PE 135. DRILL TEAM AND COLOR GUARD
LAB HOURS: 2, CREDIT: 1
Members routinely represent Cal Maritime at parades and other ceremonies. **ATH**
Graded: Credit/No Credit

PE 160. BEGINNING SAILING – BASIC KEELBOAT
LAB HOURS: 2, CREDIT: 1
This course provides both classroom and practical instruction in sailing theory and skills. Students will learn to skipper and crew a day sailing keelboat in familiar waters with light to moderate wind and sea conditions. Also included is instruction in how to use Tide and Current Tables and file a Float Plan. **ATH**
Graded: Credit/No Credit

PE 165. SAIL TRAINING FOR THE MERCHANT MARINE RESERVE
CLASS HOURS: 1, LAB HOURS: 2, CREDIT: 2
Co-requisites: NSC 100, NSC 450
This course is designed to meet or exceed the requirements of Navy Sailing Skipper "B" Qualification for Naval Officers Candidates, Navy Personnel and/or Active Duty Reserve Naval Personnel who desire sail training. Also included is instruction in how to use Tide and Current Tables and file a Float Plan. **ATH**
Graded: Credit/No Credit

PE 185. STUDY ABROAD ELECTIVE
ATH

PE 260. INTERMEDIATE SAILING
LAB HOURS: 2, CREDIT: 1
Prerequisite: PE 160 or Consent of instructor
Advanced practical instruction on sailing theory and the skills to skipper single-handed a day sailing keelboat in familiar waters in light to moderate wind and sea conditions. Further training on use of Tide and Current Tables and the proper filing of a Float Plan. **ATH** Graded: Credit/No Credit

PE 385. STUDY ABROAD ELECTIVE
ATH

PE 390. INDEPENDENT STUDY
ATH

PE 395. SPECIAL TOPICS
ATH

INTERCOLLEGIATE SPORTS
Students are required to register in the appropriate sport and fill out the necessary medical forms prior to participation. All student athletes are required to maintain a minimum over-all cumulative GPA of 2.0. Participation is subject to the approval of the coach.

PE 210. INTERCOLLEGIATE SOCCER
CREDIT: 1
Practice begins on the first day of school, and the season ends in mid November. Practices are from 4:30-6:30 PM daily. **ATH** Graded: Credit/No Credit

PE 225. INTERCOLLEGIATE WATER POLO (MEN'S AND WOMEN'S)
CREDIT: 1
Practice begins on the first day of school, and the season ends in mid November. Practices are from 4:30-6:30 PM daily. **ATH** Graded: Credit/No Credit

PE 230. INTERCOLLEGIATE SAILING
CREDIT: 1
Practice begins on the first day of school of each semester. Practices are normally from 4:30-6:30 PM daily. **ATH** Graded: Credit/No Credit

PE 235. INTERCOLLEGIATE CREW
CREDIT: 1
Practice begins on the first day of school of each semester. Practices are normally from 4:30-6:30 PM daily. **ATH** Graded: Credit/No Credit

PE 240. INTERCOLLEGIATE BASKETBALL (MEN'S AND WOMEN'S)
CREDIT: 1
Practice begins in early October, and the season continues into February. Practices are normally from 4:30-6:30 PM daily. **ATH**
Graded: Credit/No Credit

PE 250. INTERCOLLEGIATE GOLF
CREDIT: 1
Practices are by arrangement and begin in mid-September through November in the fall and from mid-January through March in the spring. **ATH**
Graded: Credit/No Credit

PE 255. RUGBY
CREDIT: 1
Practices begin in early October and continue through November in the fall and from early January through March in the spring. **ATH**
Graded: Credit/No Credit

PHYSICS

PHY 100. PHYSICS I
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 100
Co-requisite: PHY 100L
Fundamental principles of kinematics and dynamics, statics, rotational motion, work, energy, elasticity, wave motion, properties of solids, fluids and gases, and heat problem solving. SM

PHY 100L. PHYSICS I LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite: MTH 100
Co-requisite: PHY 100
A laboratory physics course designed to enhance the conceptual learning of physics by adding visual and tactile components through hands-on experience. The course will cover experiments based on the theory provided in PHY 100. Included are the study of vectors, kinematics and dynamics, forces and the equations of motion, Newton's Laws, Uniform circular motion, work-energy, impulse and momentum, gravitation, simple harmonic motion, buoyancy, heat and thermodynamics. **SM**

PHY 105. PHYSICS II
CLASS HOURS: 4, CREDIT: 4
Prerequisite: PHY 100
Fundamental principles of electrostatics, direct and alternating currents, electromagnetism, optics, quantum physics and nuclear processes. with problem solving. **SM**

PHY 185. STUDY ABROAD ELECTIVE
SM

PHY 200. ENGINEERING PHYSICS I
CLASS HOURS: 3, CREDIT: 3
Prerequisite: MTH 210
Co-requisite: PHY 200L
Covered are forces, torques, and static equilibrium; constant, accelerated, and periodic linear and rotational dynamics; gravity; fluid statics and dynamics; elasticity; temperature, thermal expansion, and heat transfer. **SM**

PHY 200L. ENGINEERING PHYSICS I LAB
LAB HOURS: 2, CREDIT: 1
Prerequisite: MTH 210
Co-requisite: PHY 200
Laboratory physics course designed to enhance conceptual learning of physics by adding a hands-on-learning component. The course will cover experiments based on the theory provided in PHY 200, including the study of forces, torques and static equilibrium; constant, accelerated, periodic, linear and rotational dynamics; gravity; fluid statics and dynamics; elasticity; temperature, thermal expansion and heat transfer. **SM**

PHY 205. ENGINEERING PHYSICS II
CLASS HOURS: 4, CREDIT: 4
Prerequisites: MTH 211, PHY 200
Laws of thermodynamics and the thermodynamics process; electrostatic and electromagnetic fields and forces; electric potential; capacitance, resistance and inductance; direct current circuits and instruments; R-L-C exponential circuits, alternating current circuits, and electromagnetic waves. **SM**

PHY 385. STUDY ABROAD ELECTIVE
SM

PHY 390. INDEPENDENT STUDY
SM

PHY 395. SPECIAL TOPICS
SM

TRANSPORTATION

TRA 185. STUDY ABROAD ELECTIVE
MPM

TRA 300. TRANSPORTATION CARRIER MANAGEMENT
CLASS HOURS: 3, CREDIT: 3
Prerequisite: ECO 100
This course will introduce the student to the field of transportation management with an emphasis on basic economic principles, and efficient and cost-effective systems. Each of the five traditional modes of transportation will be examined in the contexts of culture, economics, politics, and specific mode system characteristics. Attention will also be given to a new, sixth mode of transportation, i.e., electronic transmission. **MPM**

TRA 305. MARITIME POLICY SEMINAR
CLASS HOURS: 3, CREDIT: 3
Prerequisite: NAU 103 or TRA 300
United States and major global shipping nations' maritime policy, with special emphasis on past and present maritime legislation, will be explored, as well as foreign competition, unions, maritime wages, cargo preference, and government ship and route subsidies. International policies and regulations, including emerging security and safety regimes, will be discussed. **MPM**

TRA 310. MARINE CHARTERING AND INSURANCE
CLASS HOURS: 2, CREDIT: 2
Prerequisite: Junior Class Standing or Approval of Instructor and Department Chair
Encompasses the scope of major markets, trade terminology, function of ship owners, operators, charterers, brokers, and the terms and conditions of the most widely used charter parties for both dry and liquid cargo carriage. Also included are voyage charters, contracts of affreightment, time charters, bareboat charters and resolution of disputes. Effective management of time-chartered ships is also covered, along with a familiarization in the basic concepts of marine insurance contracts. **MPM**

TRA 385. STUDY ABROAD ELECTIVE
MPM

TRA 390. INDEPENDENT STUDY
MPM

TRA 395. SPECIAL TOPICS
MPM

TRA 400. TRANSPORTATION OF HAZARDOUS MATERIALS
CLASS HOURS: 3, CREDIT: 3
Prerequisite: None
Students investigate the chemistry of hazardous materials, regulations for their transportation by water, rail, truck, or air, packaging, container specifications, blocking and bracing, marking of shipments, and safety measures. Students also address security of shipments, from a regulatory, operational, and global business perspective. **MPM**

TRA 405. IMPORT AND EXPORT REGULATIONS
CLASS HOURS: 3, CREDIT: 3
Prerequisites: BUS 300, MGT 340, TRA 300
This seminar-type class gives a general overview of outsourcing and the process of importing and exporting goods or services, emphasizing the perspective of an entrepreneur starting an import/export business. Students investigate the nomenclature, procedures, and practices, including pricing, documentation and actions of key players. Topics discussed include theories of trade, globalization, outsourcing and the make-buy decision, intermediaries, and risk management. Students create a portfolio, which may be done independently or, in some cases, with a team. **MPM**

TRA 410. NATIONAL AND STATE TRANSPORTATION POLICIES
CLASS HOURS: 3, CREDIT: 3
Prerequisite: NAU 103 or TRA 300
Transportation and physical distribution in terms of public interest, administration of controls, subsidization, and procedures before various associations, study groups, and executive and regulatory bodies. **MPM**

APPENDIX

PRIVACY RIGHTS OF STUDENTS IN EDUCATION RECORDS

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (34 C.F.R. 99) set out requirements designed to protect the privacy of students concerning their records maintained by the campus. The statute and regulations govern access to certain student records maintained by the campus and the release of such records. The law provides that the campus must provide students access to most records directly related to them and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading, or otherwise inappropriate. The right to a hearing under this law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable data about the student. The institution has adopted a set of policies and procedures concerning implementation of the statute and the regulations. Copies of these policies and procedures may be obtained at the Student Records Office. Among the types of information included in the campus statement of policies and procedures are the following: 1) the types of student records and the information contained therein; 2) the official responsible for the maintenance of each type of record; 3) the location of access lists which indicate persons requesting or receiving information from the record; 4) policies for reviewing and expunging records; 5) the access rights of students; 6) the procedures for challenging the content of student records; 7) the cost which will be charged for reproducing copies of records; and 8) the right of the student to file a complaint with the Department of Education. An office and review board have been established by the Department to investigate and adjudicate violations and complaints. The office designated for this purpose is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-5920.

The campus is authorized under the Act to release "directory information" concerning students. "Directory information" includes the student's name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, grade level, enrollment status, degrees, honors, and awards received, and the most recent previous educational agency or institution attended by the student. The information designated above is subject to release by the campus at any time unless it has received a prior written objection from the student specifying information that the student requests not to be released. Written objections should be sent to the Provost/Vice President, Academic Affairs.

The campus is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the campus' academic, administrative, or service functions and who have reason for using student records connected with their campus or other related academic responsibilities. Disclosure may also be made to other persons or organizations under certain conditions (e.g., as part of the accreditation or program evaluation; in response to a court order or subpoena; in connection with financial aid; to other institutions to which the student is transferring).

NONDISCRIMINATION POLICY

The California State University does not discriminate on the basis of race, color, national origin, sex or gender, physical handicap, or sexual orientation in the educational programs or activities it conducts.

Race, Color, or National Origin

The California State University complies with the Requirements of Title VI and Title VII of the Civil Rights Act of 1964, as well as other applicable federal and state laws prohibiting discrimination. No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program of The California State University.

Disability

The California Maritime Academy, CSU, subscribes to the provisions of Sections 504 and 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and various state laws pertaining to the hiring and admission of the handicapped insofar as these regulations are compatible with U.S. Coast Guard requirements governing physical qualifications for merchant marine officers. Shipboard training is an essential part of the Academy's program. All students must be physically able to function on board the academy's training ship and small boats. There are no special facilities on board for handicapped students, faculty, crew, or visitors. The Director of Human Resources has been designated to coordinate the efforts of The California Maritime Academy to comply with these Acts in implementing regulations. For inquiries concerning compliance, please call 707/654-1135.

Sex/Gender

The California State University does not discriminate on the basis of sex, gender, or sexual orientation in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972 and certain other federal and state laws prohibit discrimination on these bases in education programs and activities operated by The California Maritime Academy. Such programs and activities include admission of students and employment. Inquiries concerning the application of these laws to programs and activities of The California Maritime Academy may be referred to the Director of Human Resources, the campus officer assigned the administrative responsibility of reviewing such matters or to the Regional Director of the Office for Civil Rights, United States Department of Education, 50 Beale Street, Suite 7200, San Francisco, CA 94105.

The California State University is committed to providing equal opportunities to male and female CSU students in all campus programs, including intercollegiate athletics.

DETERMINATION OF RESIDENCE FOR NONRESIDENT TUITION PURPOSES

University requirements for establishing residency are independent from those of other types of residency, such as for tax purposes, or other state or institutional residency. A resident for tuition purposes is someone who meets the requirements set forth in the Uniform Student Residence Requirements. These laws governing residence for tuition purposes at The California State University are California Education Code Sections 68000-68090, 68120-68134, and 89705-89707.5, and in Title 5 of the California Code of Regulations, Subchapter 5, Article 4, Sections 41900-41916. This material can be viewed on the Internet by accessing The California State University's web site at **www.calstate.edu/GC/resources.shtml**. These regulations were promulgated not to determine whether a student is a resident or nonresident of California, but rather to determine whether a student should pay University fees on an in-state or out-of-state basis.

The Cal Maritime Admission Office is responsible for determining the residence status of all new and returning students based on responses to the Application for Admission, Residency Questionnaire, and Reclassification Request Form, and, if necessary, other evidence furnished by the student. A student who fails to submit adequate information to establish eligibility for resident classification will be classified as a nonresident.

For an adult, physical presence in the state, combined with steps taken at least one year prior to the residence determination date, show an intent to make California the permanent home. A minor normally derives residence from the parent(s) they reside with or most recently resided with.

The steps necessary to show California residency intent will vary from case to case but will include, and is not limited to, the absence of residential ties to any other state; registering to vote and voting in elections in California; maintaining California vehicle registration and driver's license; maintaining California bank accounts; filing California state income tax returns and listing a California address on federal tax returns; owning residential property or occupying or renting an apartment where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; and maintaining a permanent military address and home of record in California if one is in the military service.

Nonresident students seeking reclassification are required to complete a supplemental questionnaire including questions concerning their financial dependence on parents who cannot satisfy University requirements for classification as residents for tuition purposes, which will be considered along with physical presence and intent in determining reclassification.

Non-citizens establish residence in the same manner as citizens, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States.

A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates at Cal Maritime are as follows:

Fall .....September 20
Spring..... January 25

Questions regarding residence determination dates should be directed to the Cal Maritime Admission Office, 707/654-1330.

Exceptions to the general residence requirements are contained in California Education Code sections 68070-68084 and California Code of Regulations, Title 5, Subchapter 5, Article 4, sections 41906-41906.5, and include, but are not limited to the following:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student, who remained, was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student.

2. Minors who have been present in California with the intent of acquiring residence for more than a year before the residence determination date, and entirely self-supporting for that period of time.

3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult *or adults,* not a parent, for the two years immediately preceding the residence determination date. Such an adult must have been a California resident for the most recent year.

4. The dependent children and spouse of persons in active military service stationed in California on the residence determination date. Retirement or transfer of the military person outside the state does not affect the exception, once attained.

5. Military personnel in active service in California on the residence determination date for purposes other than education at state-supported institutions of higher education. This exception continues until the military personnel have resided in the state the minimum time necessary to become a resident.

6. Military personnel in active service in California for more than one year immediately prior to being discharged from the military. Eligibility for this exception runs from the date the student is discharged from the military until the student has resided in state the minimum time necessary to become a resident.

7. Dependent children of a parent who has been a California resident for the most recent year. This exception continues until the student has resided in the state the minimum time necessary to become a resident, so long as continuous attendance is maintained at an institution.

8. Graduates of any school located in California and operated by the United States Bureau of Indian Affairs, including, but not limited to, the Sherman Indian High School. The exception continues so long as continuous attendance is maintained by the student at an institution.

9. Certain credentialed, full-time employees of California school districts.

10. Full-time CSU employees and their children and spouses; state employees assigned to work outside the state and their children and spouses. This exception continues until the student has resided in the state the minimum time necessary to become a California resident.

11. Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of law enforcement or fire suppression duties.

12. Certain amateur student athletes in training at the United States Olympic Training Center in Chula Vista, California. This exception continues until the student has resided in the state the minimum time necessary to become a resident.

13. Federal civil service employees and their natural or adopted dependent children if the employee has moved to California as a result of a military mission realignment action that involves the relocation of at least 100 employees. This exception continues until the student has resided in the state the minimum time necessary to become a resident.

14. State government legislative or executive fellowship program enrollees. The student ceases to be eligible for this exception when he or she is no longer enrolled in the qualifying fellowship.

Students classified as non-residents may appeal a final campus decision within 120 days of notification by the campus. A campus residence classification appeal must be in writing and submitted to

The California State University
Office of General Counsel
401 Golden Shore, 4th Floor
Long Beach, CA 90802-4210

The Office of General Counsel may make a decision on the appeal, or it may send the matter back to the campus for further review. Students incorrectly classified as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is also subject to discipline pursuant to Section 41301 of Title 5 of the California Code of Regulations.

Resident students who become nonresidents or who no longer meet the criteria for an exception must immediately notify the Admission Office.

Changes may have been made in the rate of nonresident tuition and in the statutes and regulations governing residence for tuition purposes in California between the time this information is published and the relevant residence determination date. Students are urged to review the statutes and regulations stated above.

AVERAGE SUPPORT COST PER FULL-TIME EQUIVALENT STUDENT AND SOURCES OF FUNDS

The total support cost per full-time equivalent student includes the expenditures for current operations, including payments made to students in the form of financial aid, and all fully reimbursed programs contained in state appropriations. The average support cost is determined by dividing the total cost by the number of full-time equivalent students (FTES).

The total CSU 2008/09 final budget amounts were $2,970,706,000 from state General Fund appropriations (not including capital outlay funding), $1,251,321,000 from State University Fee (SUF) Revenue, $276,093,000 from other fee revenues and reimbursements for a total of $4,498,120,000.

The number of projected 2008/09 full-time equivalent students (FTES) was 356,050. The number of full-time equivalent students was determined by dividing the total academic student load by 15 units per term (the figure used here to define a full-time student's academic load).

The 2008/09 average support cost per full-time equivalent student based on General Fund appropriation and State University Fee revenue only was $11,858 and when including all sources as indicated below was $12,633. Of this amount, the average student fee support per FTE was $4,290, which included all fee revenue in the CSU Operating Fund (e.g. State University Fee, nonresident tuition, application fees, and other miscellaneous fees).

2008/2009	Amount	Average Cost per FTE Student	Percentage
Total Support Cost	$4,498,120,000	$12,633	100%
♦ State Appropriation	2,970,706,000	8,343	66%
♦ Student Fee Support[1]	1,251,321,000	3,514	28%
♦ Other Income & Reimbursements[2]	276,093,000	775	6%

[1] Student fee support represents campus 2008/09 final budget submitted State University Fee revenue.

[2] The other income and reimbursements represent campus other fee 2008/09 final budget revenues submitted, as well as reimbursements in the CSU Operating Fund.

The average CSU 2008/09 academic year, resident, undergraduate student fees required to apply to, enroll in, or attend the university was $3,849. However, the costs paid by individual students varied depending on campus, program, and whether a student was part-time, full-time, resident, or nonresident.

IMPACTED PROGRAMS

The CSU designates programs as impacted when more applications from CSU regularly eligible students are received in the initial filing period (October and November for fall terms, June for winter terms, August for spring terms, February for summer terms) than can be accommodated. Some programs are impacted at every campus where they are offered; others are impacted only at some campuses. Candidates for admission must meet supplementary admission criteria if applying to an impacted program.

The CSU will announce during the fall filing period those programs that are impacted and the supplementary criteria campuses will use. Detailed impaction information is available at **http://www.calstate.edu/sas/impactioninfo.shtml** and via **www.csumentor.edu.**

That announcement will also be published in official CSU publications distributed to high school and college counselors, and made available online at

www.calstate.edu.

Information about the supplementary criteria is also provided to program applicants.

Applicants must file applications for admission to an impacted program during the initial filing period. Applicants who wish to be considered in impacted programs at more than one campus should file an application at each campus for which they seek admissions consideration.

Supplementary Admission Criteria

Each campus with impacted programs or admission categories uses supplementary admission criteria in screening applicants. Supplementary criteria may include rank-ordering of freshman applicants based on the CSU eligibility index, or rank-ordering of transfer applicants based on the overall transfer grade point average, completion of specified prerequisite courses, and a combination of campus-developed criteria. Applicants for freshman admission to impacted campuses or programs are required to submit scores on either the SAT or the ACT. For fall admission, applicants should take tests as early as possible and no later than October of the preceding year.

The supplementary admission criteria used by the individual campuses to screen applicants are made available by the campuses to all applicants seeking admission to an impacted program. Details regarding the supplemental admissions criteria are published at **www.calstate.edu/impactioninfo.shtml**.

TERMS IN 2009/2010	APPLICATIONS FIRST ACCEPTED	INITIAL FILING PERIOD	FILING PERIOD DURATION
Summer Semester or Quarter 2009	February 1, 2009	February 1-28, 2009	Each non-impacted campus accepts applications until capacities are reached. Many campuses limit undergraduate admission in an enrollment category due to overall enrollment limits. If applying after the initial filing period, consult the campus admission office for current information. Similar information is conveniently available at http://www.csumentor.edu/filing_status/Default.asp
Fall Semester or Quarter 2009	October 1, 2008	October 1-November 30, 2008	
Winter Quarter 2010	June 1, 2009	June 1-30, 2009	
Spring Semester or Quarter 2010	August 1, 2009	August 1-31, 2009	

Transfer Requirements

Students who have completed fewer than 60 transferable semester college units (fewer than 90 quarter units) are considered lower division transfer students. Student who have completed 60 or more transferable semester college units (90 or more quarter units) are considered upper division transfer students. Students who complete college units during high school or through the summer immediately following high school graduation are considered first-time freshmen and must meet those admission requirements. Transferable courses are those designated for baccalaureate credit by the college or university offering the courses and accepted as such by the campus to which the applicant seeks admission.

Lower Division Transfer Requirements

Generally, applicants will qualify for admission as a lower division transfer student if they have a grade point average of at least 2.0 (C or better) in all transferable units attempted, are in good standing at the last college or university attended, and meet any of the following standards:

1. Will meet the freshman admission requirements (grade point average and subject requirements) in effect for the term to which they are applying (see "Freshman Requirements" section); or

2. Were eligible as a freshman at the time of high school graduation except for the subject requirements, and have been in continuous attendance in an accredited college since high school graduation, and have made up the missing subjects.

Applicants who graduated from high school prior to 1988 should contact the Office of Admission to inquire about alternative admission programs.

Making Up Missing College Preparatory Subject Requirements

Lower division applicants who did not complete subject requirements while in high school may make up missing subjects in any of the following ways:

1. Complete appropriate courses with a C or better in adult school or high school summer sessions.

2. Complete appropriate college courses with a C or better. One college course of at least three semester or four quarter units will be considered equivalent to one year of high school study.

3. Earn acceptable scores on specified examinations.

Please consult with any CSU Admission Office for further information about alternative ways to satisfy the subject requirements. Due to enrollment pressures, many CSU campuses do not admit or enroll lower division transfer students.

Upper Division Transfer Requirements

Generally, applicants will qualify for admission as an upper division transfer student if they meet the following requirements:

1. They have a grade point average of at least 2.0 (C or better) in all transferable units attempted; and

2. They are in good standing at the last college or university attended; and they have completed at least 60 transferable semester units of college coursework with a grade point average of 2.0 or higher and a grade of C or better in each course used to meet the CSU general education requirements in written communication, oral communication, critical thinking and quantitative reasoning, e.g., mathematics. The 60 units must include all of the general education requirements in communication in the English language (both oral and written) and critical thinking (at least 9 semester units) and the requirement in mathematics/quantitative reasoning (usually 3 semester units) and the requirement in mathematics/quantitative reasoning (usually 3 semester units) **OR** the Intersegmental General Education Transfer Curriculum (IGETC) requirements in English communication and mathematical concepts and quantitative reasoning.

GRADUATE AND POST-BACCALAUREATE APPLICATION PROCEDURES

All graduate and post-baccalaureate applicants (e.g., Ed.D., joint PhD and EdD applicants, master's degree applicants, those seeking educational credentials, and holders of baccalaureate degrees interested in taking courses for personal or professional growth) must file a complete graduate application as described in the graduate and post-baccalaureate admission materials at **www.csumentor.edu**. Applicants seeking a second bachelor's degree should submit the undergraduate application for admission unless specifically requested to do otherwise. Applicants who completed undergraduate degree requirements and graduated the preceding term are also required to complete and submit an application and the $55 nonrefundable application fee. Since applicants for post-baccalaureate programs may be limited to the choice of a single campus on each application, re-routing to alternate campuses or later changes of campus choice are not guaranteed.

To be assured of initial consideration by more than one campus, it is necessary to submit separate applications (including fees) to each. Applications submitted by way of **www.csumentor.edu** are expected unless submission of an electronic application is impossible. An electronic version of the CSU graduate application is available at **www.csumentor.edu**. Application forms may also be obtained from the Graduate Studies Office or the Admissions Office of any California State University campus.

GRADUATE AND POST-BACCALAUREATE ADMISSION REQUIREMENTS

Admission Requirements

Graduate and post-baccalaureate applicants may apply for a degree objective, a credential or certificate objective, or may have no program objective. Depending on the objective, the CSU will consider an application for admission as follows:

General Requirements

The minimum requirements for admission to graduate and post-baccalaureate studies at a California State University campus are in accordance with university regulations as well as Title 5, Chapter 1, Subchapter 3 of the California Code of Regulations.

Specifically, a student shall at the time of enrollment: (1) have completed a four-year college course of study and hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association, or shall have completed equivalent academic preparation as determined by appropriate campus authorities; (2) be in good academic standing at the last college or university attended; (3) have attained a grade point average of at least 2.5 (A=4.0) in the last 60 semester (90 quarter) units attempted or have earned a grade point average of at least 2.5 on the last degree completed by the candidate; and (4) satisfactorily meet the professional, personal, scholastic, and other standards for graduate study, including qualifying examinations, as appropriate campus authorities may prescribe. In unusual circumstances, a campus may make exceptions to these criteria.

Students who meet the minimum requirements for graduate and post-baccalaureate studies may be considered for admission in one of the four following categories:

- **Post-Baccalaureate Unclassified**
  To enroll in graduate courses for professional or personal growth, applicants must be admitted as post-baccalaureate unclassified students. By meeting the general requirements, applicants are eligible for admission as post-baccalaureate unclassified students. Some departments may restrict enrollment of unclassified students because of heavy enrollment pressure. Admission in this status does not constitute admission to, or assurance of consideration for admission to, any graduate degree or credential program (Some campuses do not offer admission to unclassified post-baccalaureate students); or

- **Post-Baccalaureate Classified, e.g. Admission to an Education Credential Program**
  Persons wishing to enroll in a credential or certificate program, will be required to satisfy additional professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus; or

- **Graduate Conditionally Classified**
  Applicants may be admitted to a graduate degree program in this category if, in the opinion of appropriate campus authority, deficiencies may be remedied by additional preparation; or

- **Graduate Classified**
  To pursue a graduate degree, applicants are required to fulfill all of the professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus.

(These and other CSU admissions requirements are subject to change as policies are revised and laws are amended. The CSU web site **www.calstate.edu** and the CSU admissions portal **www.csumentor.edu** are good sources of the most up-to-date information.)

Graduate-Post-Baccalaureate TOEFL Requirement

All graduate and post-baccalaureate applicants, regardless of citizenship, whose native language is not English and whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who do not possess a bachelor's degree from a postsecondary institution where English is the principal language of instruction must receive a passing score on the Test of English as a Foreign Language (TOEFL) or the Computer-Based Test of English as a Foreign Language. Some programs may require a higher score. Some CSU campuses may use alternative methods for assessing fluency in English.

PROCEDURE FOR THE ESTABLISHMENT OR ABOLISHMENT OF A STUDENT BODY FEE

The law governing The California State University provides that fees defined as mandatory, such as a *student body association fee* and a *student body center fee*, may be established. A *student body association fee* must be established upon a favorable vote of two-thirds of the students voting in an election held for this purpose (Education Code, Section 89300). A *student body center fee* may be established only after a fee referendum is held which approves by a two-thirds favorable vote the establishment of the fee (Education Code, Section 89304). The *student body fee* was established at The California Maritime Academy by student referendum on March 14, 1995. The campus President may adjust the *student body association fee* only after the fee adjustment has been approved by a majority of students voting in a referendum established for that purpose (Education Code, Section 89300). The required fee shall be subject to referendum at any time upon the presentation of a petition to the campus President containing the signatures of 10 percent of the regularly enrolled students at the University. Once bonds are issued, authority to set and adjust *student body center fees* is governed by provisions of the State University Revenue Bond Act of 1947, including, but not limited to, Education Code, sections 90012, 90027, and 90068. *Student body association fees* support a variety of cultural and recreational programs, childcare centers, and special student support programs.

The process to establish and adjust other campus-based mandatory fees requires consideration by the campus fee advisory committee and a student referendum. The campus President may use alternative consultation mechanisms if he/she determines that a referendum is not the best mechanism to achieve appropriate and meaningful consultation. Results of the referendum and the fee committee review are advisory to the campus President. The President may adjust campus-based mandatory fees, but must request the Chancellor establish a new mandatory fee. The President shall provide to the fee advisory committee a report of all campus-based mandatory fees. The campus shall report annually to the Chancellor a complete inventory of all campus-based mandatory fees.

For more information or questions, please contact the Budget Office in the CSU Chancellor's Office at 562/951-4560.

STUDENT CONDUCT

Title 5, California Code of Regulations, § 41301.
Standards for Student Conduct

(a) Campus Community Values

The California Maritime Academy is committed to maintaining a safe and healthy living and learning environment for students, faculty, and staff. Each member of the campus community should choose behaviors that contribute toward this end. Students are expected to be good citizens and to engage in responsible behaviors that reflect well upon their university, to be civil to one another and to others in the campus community, and contribute positively to student and university life.

(b) Grounds for Student Discipline

Student behavior that is not consistent with the Student Conduct Code is addressed through an educational process that is designed to promote safety and good citizenship and, when necessary, impose appropriate consequences. The following are the grounds upon which student discipline can be based;

(1) Dishonesty, including:
  (A) Cheating, plagiarism, or other forms of academic dishonesty that are intended to gain unfair academic advantage.

  (B) Furnishing false information to a University official, faculty member, or campus office.

  (C) Forgery, alteration, or misuse of a University document, key, or identification instrument.

  (D) Misrepresenting one's self to be an authorized agent of the University or one of its auxiliaries.

(2) Unauthorized entry into, presence in, use of, or misuse of University property.

(3) Willful, material and substantial disruption or obstruction of University-related activity, or any on-campus activity.

(4) Participating in an activity that substantially and materially disrupts the normal operations of the University, or infringes on the rights of members of the University community.

(5) Willful, material and substantial obstruction of the free flow of pedestrian or other traffic, on or leading to campus property or an off-campus University related activity.

(6) Disorderly, lewd, indecent, or obscene behavior at a University related activity, or directed toward a member of the University community.

(7) Conduct that threatens or endangers the health or safety of any person within or related to the University community, including physical abuse, threats, intimidation, harassment, or sexual misconduct.

(8) Hazing, or conspiracy to haze. Hazing is defined as any method of initiation or pre-initiation into a student organization or student body, whether or not the organization or body is officially recognized by an educational institution, which is likely to cause serious bodily injury to any former, current, or prospective student of any school, community college, college, university or other educational institution in this state (Penal Code 245.6), and in addition, any act likely to cause physical harm, personal degradation or disgrace resulting in physical or mental harm, to any former, current, or prospective student of any school, community college, college, university or other educational institution. The term "hazing" does not include customary athletic events or school sanctioned events.

Neither the express or implied consent of a victim of hazing, nor the lack of active participation in a particular hazing incident is a defense. Apathy or acquiescence in the presence of hazing is not a neutral act, and is also a violation of this section.

(9) Use, possession, manufacture, or distribution of illegal drugs or drug-related paraphernalia, (except as expressly permitted by law and University regulations) or the misuse of legal pharmaceutical drugs.

(10) Use, possession, manufacture, or distribution of alcoholic beverages (except as expressly permitted by law and University regulations), or public intoxication while on campus or at a University related activity.

(11) Theft of property or services from the University community, or misappropriation of University resources.

(12) Unauthorized destruction, or damage to University property or other property in the University community.

(13) Possession or misuse of firearms or guns, replicas, ammunition, explosives, fireworks, knives, other weapons, or dangerous chemicals (without the prior authorization of the campus president) on campus or at a University related activity.

(14) Unauthorized recording, dissemination, or publication of academic presentations (including handwritten notes) for commercial purpose.

(15) Misuse of computer facilities or resources, including:

(A) Unauthorized entry into a file, for any purpose.

(B) Unauthorized transfer of a file.

(C) Use of another's identification or password.

(D) Use of computing facilities, campus network, or other resources to interfere with the work of another member of the University Community.

(E) Use of computing facilities and resources to send obscene or intimidating and abusive messages.

(F) Use of computing facilities and resources to interfere with normal University operations.

(G) Use of computing facilities and resources in violation of copyright laws.

(H) Violation of a campus computer use policy.

(16) Violation of any published University policy, rule, regulation or presidential order.

(17) Failure to comply with directions of, or interference with, any University official or any public safety officer while acting in the performance of his/her duties.

(18) Any act chargeable as a violation of a federal, state, or local law that poses a substantial threat to the safety or well-being of members of the University community, to property within the University community or poses a significant threat of disruption or interference with University operations.

(19) Violation of the Student Conduct Procedures, including:

(A) Falsification, distortion, or misrepresentation of information related to a student discipline matter.

(B) Disruption or interference with the orderly progress of a student discipline proceeding.

(C) Initiation of a student discipline proceeding in bad faith.

(D) Attempting to discourage another from participating in the student discipline matter.

(E) Attempting to influence the impartiality of any participant in a student discipline matter.

(F) Verbal or physical harassment or intimidation of any participant in a student discipline matter.

(G) Failure to comply with the sanction(s) imposed under a student disciplinary proceeding.

(20) Encouraging, permitting, or assisting another to do any act that could subject him or her to discipline.

(c) **Procedures for Enforcing This Code**

The Chancellor shall adopt procedures to ensure students are afforded appropriate notice and an opportunity to be heard before the University imposes any sanction for a violation of the Student Conduct Code.

(d) **Application of This Code**

Sanctions for the conduct listed above can be imposed on applicants, enrolled students, students between academic terms, graduates awaiting degrees, and students who withdraw from school while a disciplinary matter is pending. Conduct that threatens the safety or security of the campus community, or substantially disrupts the functions or operation of the University is within the jurisdiction of this Article regardless of whether it occurs on or off campus. Nothing in this Code may conflict with Education Code Section 66301 that prohibits disciplinary action against students based on behavior protected by the First Amendment.

Title 5, California Code of Regulations, § 41302. Disposition of Fees: Campus Emergency; Interim Suspension

The President of the campus may place on probation, suspend, or expel a student for one or more of the causes enumerated in Section 41301. No fees or tuition paid by or for such student for the semester, quarter, or summer sessions in which he or she is suspended or expelled shall be refunded. If the student is readmitted before the close of the semester, quarter, or summer session in which he or she is suspended, no additional tuition or fees shall be required on the student on account of the suspension.

During periods of campus emergency, as determined by the President of the individual campus, the President may, after consultation with the Chancellor, place into immediate effect any emergency regulations, procedures, and other measures deemed necessary or appropriate to meet the emergency, safeguard persons and property, and maintain educational activities.

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that such an immediate suspension is required in order to protect lives or property and to insure the maintenance of order.

A student so placed on interim suspension shall be given prompt notice of charges and the opportunity for a hearing within 10 days of the imposition of interim suspension. During the period of interim suspension, the student shall not, without prior written permission of the President or designated representative, enter any campus of The California State University other than to attend the hearing. Violation of any condition of interim suspension shall be grounds for expulsion.

CAMPUS SECURITY AND CRIME STATISTICS

The California Maritime Academy is required to publish crime statistics in compliance with Public Law 101-542, The Student Right-to-Know and Campus Security Act. These statistics are available through the Public Safety Office, 707/654-1175.

MOTOR VEHICLES

The use of motor vehicles (autos and motorcycles) at Cal Maritime is considered a privilege granted subject to compliance with Academy regulations. Parking is limited, however, and there is a charge for on-campus parking.

POLICY ON USE OF ALCOHOL AND DRUGS

In compliance with the federal Drug-Free Schools and Communities Act Amendments of 1989 (20 U.S.C.1145g), The California Maritime Academy prohibits the unlawful possession, use, sale, or distribution of alcohol and illegal drugs by students, faculty, and staff on its property, training vessels, or as part of any academy-sponsored activities.

This prohibition extends to any off-campus activities that are sponsored by the institution or any of its recognized clubs and organizations.

Students in training for a U.S. Coast Guard merchant mariner's license are subject to additional federal regulations regarding alcohol and drug use, and are also required to participate in the Academy's random drug testing program.

For more information regarding these regulations and the Standards of Student Conduct, please refer to the Student Handbook and Regulations Governing the Corps of Cadets, or contact the Department of Leadership Development Office at 707/654-1180.

SELECTIVE SERVICE SYSTEM REGISTRATION

The federal Military Selective Service Act (the "Act") requires most males residing in the United States to present themselves for registration with the Selective Service System within thirty days of their eighteenth birthday. Most males between the ages of 18 and 25 must be registered.

Males born after December 31, 1959, may be required to submit a statement of compliance with the Act and regulations in order to receive any grant, loan, or work assistance under specified provisions of existing federal law. In California, students subject to the Act who fail to register are also ineligible to receive any need-based student grants funded by the state or a public postsecondary institution.

Selective Service registration forms are available at any U.S. Post Office, and many high schools have a staff member or teacher appointed as a Selective Service Registrar. Applicants for financial aid can also request that information provided on the Free Application for Federal Student Aid (FAFSA) be used to register them with the Selective Service. Information on the Selective Service System is available and the registration process may be initiated online at **www.sss.gov**.

ON-CAMPUS RESIDENCY REQUIREMENT

The California Maritime Academy requires students enrolled in its baccalaureate degree programs to maintain residence on campus. See **Policy Statement 215.4**. This requirement is based upon the institution's educational and training mission. Exceptions to this policy may be made based on specific criteria established by the Academy. Information regarding exceptions to this policy can be obtained by clicking on the following link: **policy exceptions** or by contacting the Office of Housing and Residence Life.

THE CALIFORNIA STATE UNIVERSITY INTERNATIONAL PROGRAMS

Developing intercultural communication skills and international understanding among its students is a vital mission of The California State University (CSU). Since its inception in 1963, the CSU International Programs has contributed to this effort by providing qualified students an affordable opportunity to continue their studies abroad for a full academic year. More than 15,000 CSU students have taken advantage of this unique study option.

International Programs participants earn resident academic credit at their CSU campuses while they pursue full-time study at a host university or special study center abroad. The International Programs serves the needs of students in over 100 designated academic majors. Affiliated with more than 70 recognized universities and institutions of higher education in 20 countries, the International Programs also offers a wide selection of study locales and learning environments.

AUSTRALIA
Griffith University
Macquarie University
Queensland University of Technology
University of Queensland
University of Western Sydney
Victoria University

CANADA
The universities of the Province of Quebec including:
Bishop's University
Concordia University
McGill University
Université Laval
Université de Montréal
Université du Quebec system

CHILE
Pontificia Universidad Católica de Chile (Santiago)

CHINA
Peking University (Beijing)

DENMARK
Denmark's International Study Program
(international education affiliate of the University of Copenhagen)

FRANCE
Institut des Etudes Françaises pour Étudiants Étrangers
L'Académie d'Aix-Marseille (Aix-en-Provence)
Universités de Paris III, IV, VI, VII, VIII, IX, X, XI, XII, XIII
Institut Cahtolique de Paris
Université de Versailles-Saint-Quentin-en-Yvelines
Université Evry

GERMANY
University of Tübingen and a number of institutions of higher education in the Federal state of Baden-Württemberg

GHANA
University of Ghana, Legon

ISRAEL
Tel Aviv University
The Hebrew University of Jerusalem
University of Haifa

ITALY
CSU Study Center (Florence)
Universitá degli Studi di Firenze
L'Accademia di Belle Arti Firenze

JAPAN
Waseda University (Tokyo)

KOREA
Yonsei University (Seoul)

MEXICO
Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Querétaro

NEW ZEALAND
Lincoln University (Christchurch)
Massey University (Palmerston North)

SOUTH AFRICA
University of Kwazulu Natal
Nelson Mandela Metropolitan University

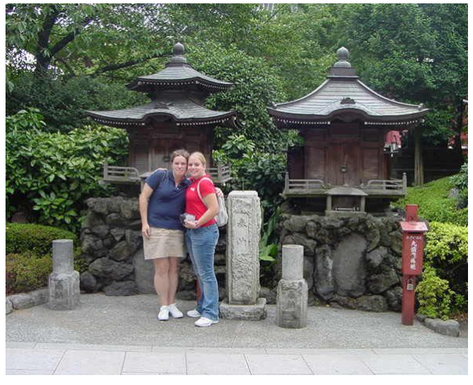
SPAIN
Universidad Complutense de Madrid
Universidad de Granada

SWEDEN
Uppsala University

TAIWAN
National Taiwan University (Taipei)
National Tsing Hua University

UNITED KINGDOM
Bradford University
Bristol University
Hull University
Kingston University
Sheffield University
University of Wales Swansea

International Programs pays all tuition and administrative costs for participating California resident students to a similar extent that such funds would be expended to support similar costs in California. Participants are responsible for all state university fees and program fees, personal costs, such as transportation, room and board, and living expenses. Financial aid, with the exception of Federal Work-Study, is available to qualified students.



To qualify for admission to the International Programs, students must have upper division or graduate standing at a CSU campus by the time of departure. Students at the sophomore level may, however, participate in the intensive language acquisition programs in France, Germany, and Mexico. California Community Colleges transfer students are eligible to apply directly from their community colleges.

Students must also possess a current cumulative grade point average of 2.75 or 3.0, depending on the program for which they apply. Some programs also have language study and/or other coursework prerequisites.

Additional information and application materials may be obtained on campus, or by writing to

The California State University International Programs
401 Golden Shore, Sixth Floor
Long Beach, CA 90802-4210

Visit us on the World Wide Web at
www.calstate.edu/ip.

INDEX

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

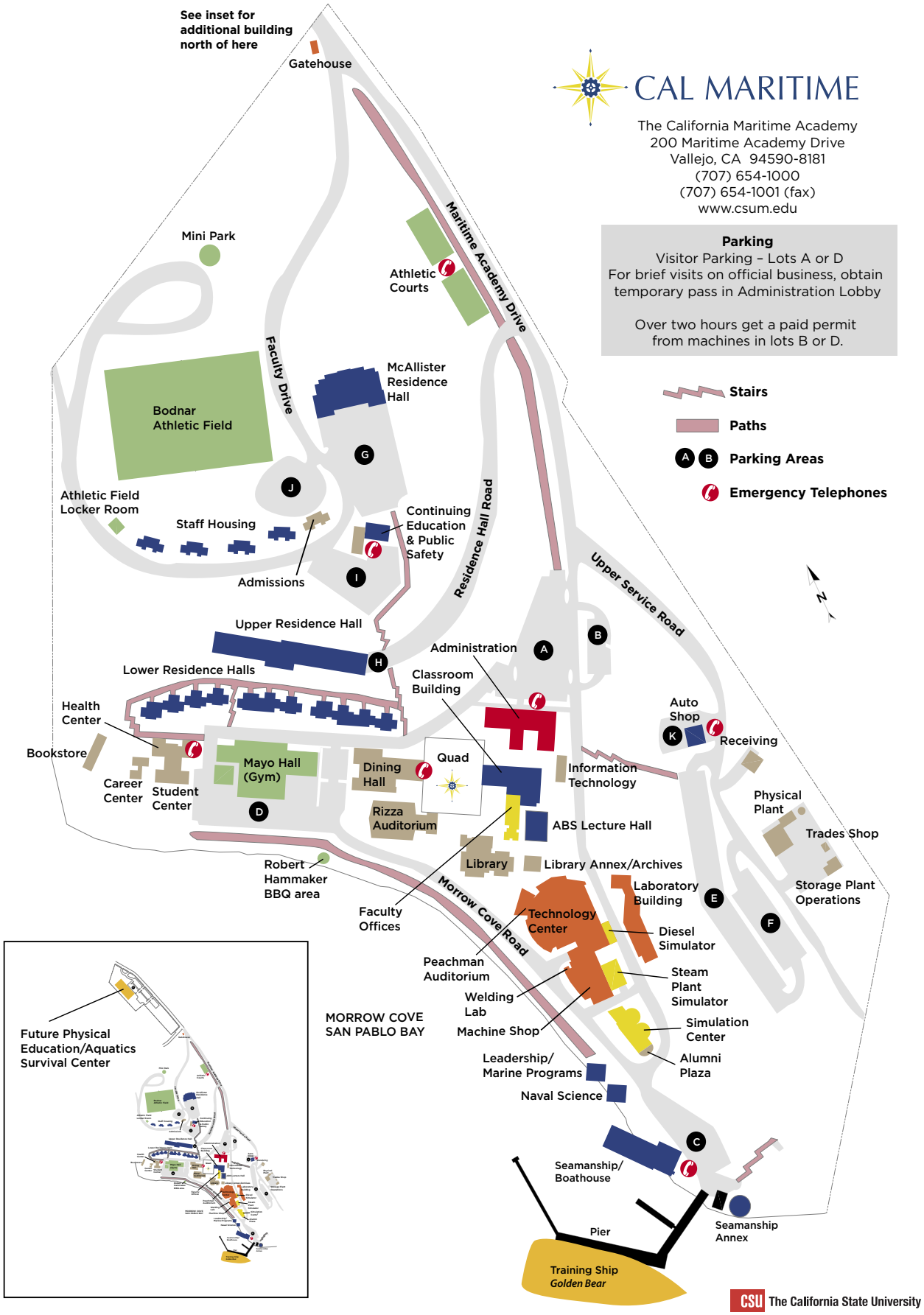
S

T

U

V

W


See inset for additional building north of here
Gatehouse
CAL MARITIME
The California Maritime Academy
200 Maritime Academy Drive
Vallejo, CA 94590-8181
(707) 654-1000
(707) 654-1001 (fax)
www.csum.edu
Parking
Visitor Parking – Lots A or D
For brief visits on official business, obtain temporary pass in Administration Lobby
Over two hours get a paid permit from machines in lots B or D.
Stairs
Paths
Parking Areas
Emergency Telephones
Maritime Academy Drive
Faculty Drive
Residence Hall Road
Upper Service Road
Morrow Cove Road
Mini Park
Athletic Courts
Bodnar Athletic Field
McAllister Residence Hall
Athletic Field Locker Room
Staff Housing
Continuing Education & Public Safety
Admissions
Upper Residence Hall
Lower Residence Halls
Health Center
Bookstore
Career Center
Student Center
Mayo Hall (Gym)
Dining Hall
Quad
Rizza Auditorium
Administration
Classroom Building
Information Technology
ABS Lecture Hall
Library
Library Annex/Archives
Robert Hammaker BBQ area
Faculty Offices
Auto Shop
Receiving
Physical Plant
Trades Shop
Storage Plant Operations
Laboratory Building
Technology Center
Diesel Simulator
Steam Plant Simulator
Simulation Center
Alumni Plaza
Peachman Auditorium
Welding Lab
Machine Shop
Leadership/ Marine Programs
Naval Science
MORROW COVE
SAN PABLO BAY
Seamanship/ Boathouse
Pier
Training Ship Golden Bear
Seamanship Annex
Future Physical Education/Aquatics Survival Center
CSU The California State University