General Information

Message from the President

For generations, Californians have taken advantage of their coastline to fulfill their dreams and destinies. The Pacific Ocean and its tributaries have been utilized for business, as transportation to a new life, and as a focus of a preferred lifestyle. For over 80 years, this proud heritage has endured at the CSU Maritime Academy - a thriving institution of technology, engineering, international business, global studies, and transportation, located on the San Francisco Bay. Our waterfront location, maritime tradition, and Corps of Cadets offer students a unique opportunity for intellectual, professional, and personal development. Our students engage in a living-learning environment that emphasizes active learning both in and out of the classroom. By offering this blend of intellectual exploration, applied technology, and leadership training, Cal Maritime provides graduates with a breadth of professional skills unparalleled in most other institutions of higher education. In addition, the intimacy of our small, residential institution creates a richness of shared experiences that defines and binds them to their alma mater for life.

Under the guidance and tutelage of a proud and dedicated faculty and staff, we offer a curriculum that, while unique, is flexible enough for graduates to 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, offshore drilling, and the fishing industries. Proof of that flexibility can be found in our employment and career advancement rates, which are routinely among the highest of any undergraduate institution.

A major cornerstone of our strategic vision is global engagement, with our students participating in the annual cruise aboard our 500-foot Training Ship *Golden Bear*, sailing on a commercial ship, or working in summer internships with international companies. These experiences expose our students to other 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 on the Pacific Rim in the new American Pacific century offers students a vantage point from which to realize a horizon of enormous opportunity.

We are proud of our role in the California State University system and of our tradition of serving the state and nation as the West Coast's only maritime university. I encourage you to begin preparing for your bright future at Cal Maritime.

Rear Admiral Thomas A. Cropper, USMS
President

University at a Glance

Cal Maritime at a Glance

The maritime industry has a significant role in today's global economy. The men and women who work at ports and on ships are vital in the transportation of goods and commodities throughout the world. These merchant mariners manage cargo to its destination, navigate ships, manage ports and terminals, and oversee engine rooms. They understand the impact they may have on the environment through accidental oil spills and effluent discharge. Some work to improve engines and energy systems; others work in maritime law, safety, ship brokering and insurance, towing, piloting, amongst several facets of maritime trade and transportation.

Located in Vallejo, California, California State University Maritime Academy (Cal Maritime) is one of only seven degree-granting maritime academies in the United States, and the only one located on the West coast. It is a unique and

specialized campus of the California State University that offers licensed and non-licensed degree programs to meet the above diverse needs of the maritime industry.

Licensed programs prepare students for the Third Mate or Third Assistant Engineer license issued by the United States Coast Guard upon successfully completing their baccalaureate degree and passing the United States Coast Guard licensing examination. The 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.

Students interested in becoming a licensed Third Mate need to complete their studies in the Marine Transportation degree program. Students interested in becoming a licensed Third Assistant Engineer need to complete their studies in the Marine Engineering Technology degree program or the licensed Mechanical Engineering degree program.

In addition, Cal Maritime offers degrees in several non-licensed programs. Graduates in these programs typically work in shore-side jobs related to the maritime industry. For example, graduates are prepared to work in U.S. federal, state, and local governments; agencies specializing in maritime security; international organizations such as the International Maritime Organization (IMO) and the International Maritime Bureau (IMB); and insurance and underwriting firms specializing in shipping and maritime issues.

They are also prepared to pursue graduate study in engineering, maritime law, international relations, public policy, maritime affairs, and international business and trade.

The non-licensed degree programs include: Mechanical Engineering, Facilities Engineering Technology, International Business and Logistics, and Global Studies and Maritime Affairs.

Normally, all students, regardless of major, sail on at least one two-month cruise aboard Cal Maritime's ship, the Training Ship *Golden Bear*. Students in licensed programs must complete three cruises - two aboard the training ship and one on a commercial vessel. Engineers in non-licensed programs cruise once on the training ship and participate in two Cooperative Education (Co-Op) programs on land. Students in the International Business and Logistics program, as well as the Global Studies and Maritime Affairs program, complete one Co-Op program on land and may complete an international study program in lieu of the training cruise, depending on space availability in either experience.

At Cal Maritime, all students are in the Corps of Cadets. They are required to wear uniforms, attend formations and "stand watch." However, there is no armed service obligation requirement. Military options are available including programs offered by the Coast Guard and Navy. (See section on Military Opportunities.)

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC), 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001, www.wascsenior.org. The Marine Engineering Technology and Facilities Engineering Technology programs are accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, www.abet.org. The Mechanical Engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, www.abet.org. 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 State University Maritime Academy deck and engine programs are in compliance with the requirements of the International Convention of the Standards for Training, Certification, and Watchkeeping for Seafarers 1978, as amended.

Mission, Vision, Beliefs and Values

Mission

The California State University Maritime Academy's 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 educational opportunities for those in the transportation and related industries.
- be an information and technology resource center for the transportation and related industries.

Vision

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

Beliefs and Values

The California State University Maritime Academy is defined, in part, by the system of beliefs that make us unique as an institution of higher education. They are:

- experiential learning
- ethics development, both personal and professional
- small residential campus environment
- student centered learning
- professional orientation
- having a niche to focus on in higher education
- campus civility and collegiality
- diverse living and learning community

Our values influence how we make and carry out decisions, and how we interact with our internal and external constituencies. At Cal Maritime they are *dedication, honor, integrity, respect, responsibility, and trust.*

Cal Maritime's Compass Points

Cal Maritime uses the four points of the compass to symbolize the four key elements of our mission commitment to our students. Namely, intellectual learning, applied technology, leadership development, and global awareness.

Intellectual learning begins with the acquisition of data and culminates in analysis, synthesis, and evaluation. The initial stage is the acquisition of key facts, terms, precepts, and methodologies in a discipline. When these are synthesized, internalized, and integrated, the learner is able to construct a conceptual framework of the field, then reason through new scenarios. One who has mastered such a process will be able to solve problems, apply and evaluate theories, and construct new and meaningful syntheses from facts within the field. The levels of mastery involved in this process will differ according to the student's level of development. The beginning student learns key facts and theories. The intermediate student applies this knowledge to ever more challenging problems.

Finally, the advanced student demonstrates the ability to think critically and learn independently, allowing him or her to acquire insights and make significant achievements throughout life.

Applied technology is the use of direct experiential methods, both in classes and through immersion in professional environments, with the objective of learning the skills, techniques and attitudes appropriate to a student's chosen profession, particularly those aspects of a profession that are difficult to learn through traditional academic coursework. Cal Maritime's intention is that applied technology augment, enrich and supplement traditional classroom lecture and discussion, the intellectual learning. The outcome of these activities builds graduates with professional abilities that allow them to step into their roles in the maritime industry, and also in other industries or government.

Leadership development is informed by the action-oriented, real-world demands of the maritime industry, into which the majority of our graduates enter. Cal Maritime cadets participate in and must complete the Edwards Leadership Development Program at Cal Maritime which is built on a "maritime model" embracing the history, tradition and importance of the seafaring chain of command, while promoting active participation in modern team management practices. The foundation of the program promotes a maritime leader who at all times "does good for the greater good." The maritime leader is a "loyal shipmate," who is ethical, responsive and goal-oriented, who strives for excellence, demonstrates integrity, and is confident, ever-learning, and adaptive. The California State University's emphasis on cultivating critical thinking skills and ethics in its student graduates has provided a vital inroad to more deeply defining effective leadership practices at Cal Maritime. Only active, goal-directed, yet flexible and fluid thinking will allow the Cal Maritime graduate to maintain a competitive edge while navigating his or her course into the future.

Global awareness is based on substantive and applicable knowledge of a wide range of international issues and cultural perspectives. In the international arena, this type of understanding includes an array of issues that can be broken down into broad categories that include international politics and economics, environmental and cultural awareness, and global dynamics. Numerous contemporary issues face the global community, many of which have significant implications for the greater maritime and transportation industries.

These issues range from environmental crises affecting all people to critical political, economic, and social problems that affect much of the world's population. Global dynamics refers to the understanding of how the world's complex political, economic, social, and technological systems interact and operate in conjunction with one another. The interdependence of the members of the international community, and its impact on our students and their future, requires an awareness of global dynamics. Consistent with how we approach the other three points of the mission, global awareness at Cal Maritime is significantly more than academic and classroom-based awareness of the issues facing the world today and the diversity of cultures of the greater society in which we live.

We are committed to an understanding and awareness of global issues experienced firsthand by all of our students. To this end, all students at Cal Maritime are required to spend time abroad as part of their education. This active, participatory and experiential approach to global awareness makes Cal Maritime unique among many institutions of higher education in the United States.

History of the Academy

Founded in 1929 as the "California Nautical School," the California State University Maritime Academy is in its ninth decade of service as a center for excellence in education and research in maritime trade and transportation.

This school was first located in Tiburon, on the Marin Peninsula north of San Francisco. In 1936, the U.S. Congress passed the Merchant Marine Act, which 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. Responding to this mandate, the federal government and the California state legislature began supporting the California Nautical School's mission. In the early days, only three-year deck engineering programs were offered.

In 1939, the school changed its name to California Maritime Academy. In 1940, with war looming, the Academy was relocated to San Francisco. With the start of World War II, the course of study accelerated to 17 months, and many

Academy graduates served in the war. In the midst of the war effort, a new permanent home for the academy was established in 1943 on a 67- acre site at Morrow Cove in Vallejo.

In 1973, California Maritime Academy became the first in the nation to enroll women in its licensed maritime program. In 1974, a four-year undergraduate program was established, laying the groundwork for accreditation by the Western Association of Schools and Colleges. Nautical Industrial Technology and Marine Engineering Technology were the four-year majors offered. In the late 1980s, majors in Mechanical Engineering and Business Administration were added, and the Nautical Industrial Technology program was replaced by Marine Transportation.

In 1995, Cal Maritime became a member campus of the California State University (CSU) system. In 1996, Cal Maritime introduced a Facilities Engineering Technology major. A new science and engineering lab building was completed in 1999. The curriculum further expanded in 2003, when the major in Global Studies and Maritime Affairs was introduced. Today, Global Studies and International Business and Logistics major programs are part of Cal Maritime's School of Maritime Policy and Management. Also in 2003, the Academy dedicated its new Technology Laboratory and Classroom Building.

The University has continued to expand its resources and enjoy expanding support from the private sector to meet new challenges. McAllister Hall, a new residence facility named for Robert McAllister (D'42) -the largest individual, private donor to the institution -opened in 2009. The Academy also opened a new state-of-the-art Marine Simulation Center, already one of the world's most advanced facilities for maritime teaching, training, and research. Maritime classification and engineering giant ABS made a $3 million grant to help further strengthen the School of Maritime Policy and Management, a portion of which has been used to create an enhanced and expanded classroom meeting facility.

The University recently constructed a new waterfront Dining Hall and Physical Education and Aquatics Center, featuring new gymnasiums, training rooms, and a maritime survival training center.

Enrollment at Cal Maritime has grown steadily in response to industry demand for skilled, motivated and well-trained graduates with a sense of purpose and global perspective. The future looks strong and bright with continued growth and support from alumni, industry, and friends.

The California State University

The California State University

Welcome to the California State University (CSU) - the nation's largest comprehensive higher education system with 23 unique campuses serving approximately 484,000 students with more than 50,800 faculty and staff. Each year, the university awards more than 120,000 degrees. CSU graduates are serving as leaders in the industries that drive California's economy, including business, agriculture, entertainment, engineering, teaching, hospitality and healthcare. Learn more at www.calstate.edu.

A Tradition of Excellence for More than Five Decades

Since 1961, the CSU has provided an affordable, accessible, and high-quality education to more than 3.4 million graduates throughout California. While each campus is unique based on its curricular specialties, location and campus culture, every CSU is distinguished for the quality of its educational programs. All campuses are fully accredited, provide a high-quality broad liberal educational program and offer opportunities for students to engage in campus life through the Associated Students, Inc., clubs and service learning. Through leading-edge programs, superior teaching and extensive workforce training opportunities, CSU students graduate with the critical thinking skills, industry knowledge and hands-on experience necessary for employment and career advancement.

Facts

- In 2015-16, the CSU received $579 million in research and education grants, and contracts by federal, state and regional agencies.
- Today, one of every 20 Americans with a college degree is a CSU graduate.
- 1 in every 10 employees in California is a CSU alumnus.
- The CSU awards 45 percent of the bachelor's degrees earned in California.
- More than half of all the nurses in the state earn their degrees from the CSU.
- The CSU awards 95 percent of the hospitality/tourism degrees in the state.
- Nearly half of all of the state's engineers earn their degrees from the CSU.
- The CSU is the leading provider of teacher preparation programs in the state.
- The CSU offers more than 124 fully online and 91 hybrid degree programs and concentrations.
- The CSU offers over 3,800 online courses per term, providing more educational options to students who may prefer an online format to a traditional classroom setting.
- The CSU's online concurrent enrollment program gives students the ability to enroll in courses offered by other campuses in the CSU.
- Over the past four years, the CSU has issued nearly 50,000 professional development certificates in education health services, business and technology, leisure and hospitality, manufacturing, international trade and many other industries.
- Nearly half of the CSU's 474,000 students are engaged in some type of community service, totaling 32 million hours of service annually.
- More than 13,000 students participate in STEM (science, technology engineering and mathematics) service-learning courses.
- For every $1 that the state invests in the CSU, the university generates $5.43 for California's economy.

Governance

The CSU is governed by the Board of Trustees, most of whom are appointed by the governor and serve with faculty and student representatives. The CSU Chancellor is the chief executive officer, reporting to the Board. The campus presidents serve as the campus-level chief executive officers. The Trustees, Chancellor and presidents develop systemwide educational policy. The presidents, in consultation with the Academic Senate CSU and other campus stakeholder groups, render and implement local policy decisions.

CSU Historical Milestones

The individual California State Colleges were established as a system with a Board of Trustees and a Chancellor in 1960 by the Donahoe Higher Education Act. In 1972, the system was designated as the California State University and Colleges, and in 1982 the system became the California State University. Today, the CSU is comprised of 23 campuses, including 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.

In 1963, the Academic Senate CSU was established to act as the official voice of CSU faculty in systemwide matters. Also, the California State College Student Presidents Association-which was later renamed the California State Student Association-was founded to represent each campus student association on issues affecting students.

Through its many decades of service, the CSU has continued to adapt to address societal changes, student needs and workforce trends. While the CSU's core mission has always focused on providing high-quality, affordable bachelor's and master's degree programs, over time the university has added a wide range of services and programs to support student success - from adding health centers and special programs for veterans to building student residential facilities to provide a comprehensive educational experience.

To improve degree completion and accommodate students working full- or part-time, the educational paradigm was expanded to give students the ability to complete upper-division and graduate requirements through part-time, late afternoon, and evening study. The university also expanded its programs to include a variety of teaching and school service credential programs, specially designed for working professionals.

The CSU marked another significant educational milestone when it broadened its degree offerings to include doctoral degrees. The CSU independently offers Doctor of Education (Ed.D.), Doctor of Physical Therapy (DPT), Doctor of Audiology (AuD) and Doctor of Nursing Practice (DNP) degree programs. A limited number of other doctoral degrees are offered jointly with the University of California and private institutions in California.

In 2010, in an effort to accommodate community college transfer students, the CSU, in concert with the California Community Colleges (CCC), launched the Associate Degree for Transfer (ADT), which guarantees CCC transfer students with an ADT admission to the CSU with junior status.

Always adapting to changes in technology and societal trends to support student learning and degree completion, the CSU achieved another milestone in 2013, when it launched Cal State Online, a systemwide collection of services that support the delivery of fully online programs from campuses. Now, full-time students have access to fully online courses offered at other CSU campuses.

By providing an accessible, hands-on education that prepares graduates for career success, the CSU has created a network of alumni that is so extensive and renowned that it spans across the globe. AS of 2016-17, more than 3.4 million CSU alumni are making a difference in the lives of the people of California and the world.

The CSU strives to continually develop innovative programs, services and opportunities that will give students the tools they need to meet their full potentital. In 2016, the university launched Graaduation Initiative 2025, a bold plan to support students, increase the number of California's graduates earning high-quality degrees and eliminate achievement and equity gaps for all students. Through this initiative, the CSU is ensurig that all students have the opportunity to graduate according to their personal goals, positively impacting their lives, families and communities. The CSU is committed to providing a quality higher education that prepares students to become the leaders in the changing workforce.

Trustees of the California State University

Ex Officio Trustees

The Honorable Edmund G. Brown, Jr.
Governor of California

The Honorable Gavin Newsom
Lieutenant Governor of California

The Honorable Anthony Rendon
Speaker of the Assembly

The Honorable Tom Torlakson
State Superintendent of Public Instruction

Dr. Timothy P. White
Chancellor of The California State University

Officers of the Trustees

The Honorable Edmund G. Brown, Jr. - President

Rebecca D. Eisen - Chair

Adam Day - Vice Chair

Andrew Jones - Secretary

Steve Relyea -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.

Silas Abrego (2021)

Jane W. Carney (2022)

Adam Day (2023)

Rebecca D. Eisen (2018)

Douglas Faigin (2017)

Debra S. Farar (2022)

Jean P. Firstenberg (2018)

Emily Hinton (2019)

Thelma Meléndez de Santa Ana (2017)

Hugo N. Morales (2020)

John Nilon (2018)

J. Lawrence Norton (2019)

Romey Sabalius (2019)

Jorge Reyes Salinas (2018)

Lateefah Simon (2019)

Correspondence with Trustees should be sent to:

c/o Trustees Secretariat
The California State University
401 Golden Shore
Long Beach, CA 90802-4210

The California State University Office of the Chancellor

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

Dr. Timothy P. White - Chancellor

Mr. Steve Relyea - Executive Vice Chancellor and Chief Financial Officer

Dr. Loren J. Blanchard - Executive Vice Chancellor, Academic and Student Affairs

Mr. Andrew Jones - Executive Vice Chancellor, General Counsel

Mr. Garrett P. Ashley - Vice Chancellor, University Relations and Advancement

Ms. Melissa Bard - Vice Chancellor, Human Resources

Mr. Larry Mandel - Vice Chancellor and Chief University Auditor

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. Erika D. Beck, President
805-437-8400
www.csuci.edu

California State University, Chico
400 West First Street
Chico, CA 95929
Dr. Gayle E. Hutchinson, President
530-898-4636
www.csuchico.edu

California State University, Dominguez Hills
1000 East Victoria Street
Carson, CA 90747
Dr. Willie Hagan, President
310-243-3696
www.csudh.edu

California State University, East Bay
25800 Carlos Bee Boulevard
Hayward, CA 94542
Dr. Leroy M. Morishita, President
510-885-3000
www.csueastbay.edu

California State University, Fresno
5241 North Maple Avenue
Fresno, CA 93740
Dr. Joseph I. Castro, President
559-278-4240
www.csufresno.edu

California State University, Fullerton
800 N. State College Boulevard
Fullerton, CA 92831-3599
Mr. Framroze Virjee, President
657-278-2011
www.fullerton.edu

Humboldt State University
1 Harpst Street
Arcata, CA 95521-8299
Dr. Lisa Rossbacher, President
707-826-3011
www.humboldt.edu

California State University, Long Beach
1250 Bellflower Boulevard
Long Beach, CA 90840-0115
Dr. Jane Close Conoley, President

California State University, Los Angeles
5151 State University Drive
Los Angeles, CA 90032
Dr. William A. Covino, President

562-985-4111
www.csulb.edu

323-343-3000
www.calstatela.edu

California State University Maritime Academy
200 Maritime Academy Drive
Vallejo, CA 94590-8181
Rear Admiral Thomas A. Cropper, President
707-654-1000
www.csum.edu

California State University, Monterey Bay
100 Campus Center
Seaside, CA 93955-8001
Dr. Eduardo M. Ochoa, President
831-582-3000
www.csumb.edu

California State University, Northridge
18111 Nordhoff Street
Northridge, CA 91330
Dr. Dianne F. Harrison, President
818-677-1200
www.csun.edu

California State Polytechnic University, Pomona
3801 W. Temple Avenue
Pomona, CA 91768
Dr. Soraya M. Coley, President
909-869-7659
www.cpp.edu

California State University, Sacramento
6000 J Street
Sacramento, CA 95819
Dr. Robert S. Nelsen, President
916-278-6011
www.csus.edu

California State University, San Bernardino
5500 University Parkway
San Bernardino, CA 92407-2318
Dr. Tomás D. Morales, President
909-537-5000
www.csusb.edu

San Diego State University
5500 Campanile Drive
San Diego, CA 92182
Ms. Sally Roush, President
619-594-5200
www.sdsu.edu

San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132
Dr. Leslie E. Wong, President
415-338-1111
www.sfsu.edu

San José State University
One Washington Square
San Jose, CA 95192-0001
Dr. Mary A. Papazian, President
408-924-1000
www.sjsu.edu

California Polytechnic State University, San Luis Obispo
One Grand Avenue
San Luis Obispo, CA 93407
Dr. Jeffrey D. Armstrong, President
805-756-1111
www.calpoly.edu

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

Sonoma State University
1801 East Cotati Avenue
Rohnert Park, CA 94928
Dr. Judy K. Sakaki, President
707-664-2880
www.sonoma.edu

California State University, Stanislaus
One University Circle
Turlock, CA 95382
Dr. Ellen N. Junn, President

209-667-3122
www.csustan.edu

Administrative Offices

Office of the President

President	RADM Thomas A. Cropper
President's Executive Assistant	Tari Houston-Collin
Associate Vice President, University Affairs & Chief of Staff	Brigham Timpson
Assistant Director, University Affairs & Special Assistant to the President	Jennifer Hembree

Office of the Provost and Vice President for Academic Affairs

Provost and Vice President for Academic Affairs	Susan Opp
Provost's Confidential Assistant	Jessica McGinley
Associate Vice President, Academic Affairs	Graham Benton
Director, International Studies	Ryan Dudley Wade
Director, Academic Simulation Programs	Samuel R. Pecota
Director, USCG Licensing Programs	Michael Kazek
Director, Institutional Research	Gary Moser

Academic Deans and Chairs

Dean, School of Engineering	Dr. Francelina Neto
Dean, School of Letters and Science	Dr. Kevin Mandernack
Dean, School of Maritime Tansportation, Logistics and Management	Dr. Donald Maier
Chair, Culture and Communication	Julianne Chisholm
Chair, Engineering Technology	Michael Strange
Chair, Global Studies and Maritime Affairs	Assis Malaquias
Chair, International Business and Logistics	Nipoli Kamdar
Chair, Marine Transportation	Steven D. Browne
Chair, Mechanical Engineering	Nader Bagheri
Chair and Officer-in-Charge, Naval Science	LT Dustin Mueller
Chair, Sciences and Mathematics	Cynthia Trevisan

Admissions and Outreach

Director	Marc McGee
Assistant Director	Michael Tressel

Financial Aid

Director	Priscilla Muha

Library

Dean	Michele Van Hoeck

Registrar's Office

Registrar	Julia L. Odom

Sponsored Projects and Extended Learning

Dean, Extended Learning	vacant
Director, MSSC and Extension Services	Veronica Boe
Director, Golden Bear Research Center	William Davidson
Associate Director, Golden Bear Research Center	Richard Muller

Office of the Vice President for Administration and Finance

Vice President for Administration and Finance and Chief Financial Officer	Franz Lozano
Executive Assistant	Catherine Beard

Enterprise Services

Associate Vice President, Enterprise Services	Mark Goodrich

Director, Conference and Events	Krysta Kasinski
Director, Dining Services	Orlando Torres
Associate Director, Dining Services	Mark Cosca
Manager, Bookstore	Andre Jimenez

Facilities Management

Associate Vice President, Facilities & Operations	vacant
Director, Facilities Management	Christopher Cohea
Director, Facilities Planning	Tom Van Pelt

Fiscal Services and Budget

Controller	vacant
Accounting Manager	vacant
Director, Contract Services and Procurement	Lorrie Dineen-Thackeray
Director, Safety and Risk Management	Marianne Spotorno
Director, Budget	Andrew Som
Senior Budget Analyst	Sylvia Kipp

Human Resources

Associate Vice President, Human Resources, Diversity & Inclusion, and Administration	Ingrid Williams, Ed.D.

Information Technology

Interim Chief Information Officer	Phoebe Kwan

Police Services

Police Chief and Director of Public Safety	Donny Gordon
Police Lieutenant	Tom Hart

Office of Marine Programs

Director, Marine Programs and Commanding Officer, Training Ship *Golden Bear*	Capt. Sam Pecota
Chief Engineer, Training Ship *Golden Bear*	John Coyle
Chief Mate, Training Ship *Golden Bear*	John Finch
Waterfront Manager	Robert Brown

Office of the Vice President for Advancement

Vice President for University Advancement	Robert Arp
Executive Assistant	Sharon Culpepper
Director, Public Affairs and Communications	Robert King
Director, University Special Events	Chelsea McClain
Director, Annual Giving and Alumni Relations	Eric Cooper
Director, Advancement Services	Katherine Baird
Senior Development Officer	Melissa Cohea

Office of the Vice President for Student Affairs

Interim Vice President for Student Affairs	Stan Hebert
Provost's Confidential Assistant	Jessica McGinley

Athletics

Director	Marvin Christopher
Associate Athletic Director	Patrick Hollister

Sports Coordinator and Head Men's Basketball Coach	Brendan Rooney
Aquatics Supervisor	Tina Marie Rossi

Student Development

Dean of Students	James Dalske
Assistant Dean, Student Engagement	Kristen Tener
Director, Student Activities	Josie Alexander
Judicial Officer	Roger Scranton

Career Services

Director	Wendy Higgins

Student Health Center

Director	Bruce Wilbur, MD
Counseling and Physiological Services	Ian Wallace, Ph.D.
Disability Services Coordinator	Siobhan Case
Associate Director, Educational Opportunity Program (EOP)	Elaine Kociolek
Coordinator, Community Engagement and Ambassador's Club	JoEllen Myslik
Office Manager	Gaema Obenchain

Office of the Commandant of Cadets

Commandant of Cadets	vacant

Academic Calendar 2018-2019

Fall Semester 2018 - Important Events

August 13	Academic Year begins
August 14-19	Move-in Day/Orientation Week
August 20	First Day of Instruction
August 31	Last Day to add/drop class
September 3	Labor Day Holiday (University Closed)
September 17	Census Date (20th Day of Instruction)
September 28	Last day to remove Incomplete Grades
October 6-7	Homecoming/Day on the Bay
October 10	Graduate Writing Exam (GWE)
October 22	Academic Advising begins for Spring Semester
October 27	Preview Day
November 12	Veterans Day Holiday (University Closed)
November 5 - 15	Registration for Spring Semester
November 19 - 23	Thanksgiving Holiday Recess
December 10	Last Day of Fall Instruction
December 12-15	Final Examination Period
December 18	Grades Due at Noon
December 21	End of Fall Semester

Spring Semester 2019 - Important Events

January 2	Spring Semester Begins
January 7-10	U.S. Coast Guard Examinations
January 7	First Day of Instruction
January 18	Last day to add/drop a class

January 21	Martin Luther King, Jr. Day Holiday (University Closed)
January 28-30	Summer Term Registration
February 4	Census Date (20th Day of Instruction)
February 20	Graduate Writing Exam (GWE)
February 22	Last Day to remove Incomplete Grades
March 4-8	Spring Break
March 9	Dockside Steaming (Faculty Workday)
March 11	Academic Advising begins for Fall Semester
March 25 - April 4	Registration for the Fall Semester (Continuing Students)
April 1	Cesar Chavez Day Holiday (University Closed)
April 13	Cal Maritime Day
April 24	Last Day of Instruction
April 26-27, 29-30	Final Examination Period
May 2	Grades Due by Noon
May 4	Commencement and Academic Year End

Summer Term 2019 - Important Events

May 5	TSGB Cruise Begins - Cadets Only
May 5 - August 11	Summer Term
May 6	Cruise Orientation - Faculty Begin
May 9	TGSB Departs
May 5 - July 9	Cruise 2019
July 9	TSGB Cruise Ends
August 13	Grades Due

University Faculty

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

Allen, Tom (1996)

Maritime Vocational Instructor III
Boatswain

Andrews, Michael (1997)

Maritime Vocational Instructor IV
B.S., Marine Engineering Technology, California Maritime Academy, 1976
Second Assistant Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower
Master Motor Vessels, 100 Ton

Bachkar, Khalid (2010)

Associate Professor
B.A., Business Administration, Hassan II University, Morocco, 1999
M.A., Information Systems, Shippensburg University, PA, 2005
Ph.D., Transportation and Logistics, North Dakota State University, 2010

Bagheri, Nader (1990)

Professor
Chair, Mechanical Engineering Department
B.S., Mechanical Engineering, California State University, Fresno, 1981
M.S., Mechanical Engineering, University of California, Davis, 1984
Ph.D., Mechanical Engineering, University of California, Davis, 1989
Professional Engineer, California

Brown, Robert J. (2005)

Maritime Vocational Lecturer
B.S., Nautical Industrial Technology, California Maritime Academy, 1986
Third Mate, Unlimited, Any Ocean
Master of Towing Vessels,1600-Ton Master, Any Ocean

Browne, Steven (2004)

Professor
Chair, Marine Transportation Department
B.A., Computer Studies, Northwestern University, 1989
M.E.M., Engineering Management, Northwestern University, 1997
Master Mariner, Unlimited, Any Ocean

Burback, Tamara C. (2015)

Maritime Vocational Instructor II
B.S., Marine Transportation, California Maritime Academy, 2007
Master Mariner, Unlimited, Any Ocean

Carmichael, Elisabeth (2010)

Lecturer
B.A., English, Texas Christian University, 1981
M.A., English, University of Maryland, 1986
Ph.D., English, University of Maryland, 1991

Chang-Siu, Evan (2014)

Assistant Professor
B.S., Mechanical Engineering, University of California, Berkeley, 2006
M.S., Mechanical Engineering, University of California, Berkeley, 2008
Ph.D., Mechanical Engineering, University of California, Berkeley, 2013

Chisholm, Julianne K. (2004)

Associate Professor
Interim Chair, Culture and Communication Department
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 and Creative Writing, University of Houston, 2002

Coates, Nelson E. (2014)

Assistant Professor
B.A. Physics, Minors: Mathematics, French, Macalester College, 2004
M.A., Physics, University of California, Santa Barbara, 2006
Ph.D., Physics, University of California, Santa Barbara, 2010

Cook, Lyle (1991)

Maritime Vocational Instructor IV
Chief Engineer, Steam, Motor, and Gas Turbine
Vessels, Unlimited Horsepower

Dewey, Colin D. (2013)

Assistant Professor
B.A., English, University of California, Berkeley, 2003
M.A., English, Cornell University, 2008
Ph.D., English, Cornell University, 2011
200-Ton Master, Near Coastal
1600-Ton Mate, Near Coastal
Able Bodied Seaman, Unlimited

Dudley Wade, Ryan (2006)

Associate Professor
Director, International Studies
B.S., Political Science, Santa Clara University, 1997
Ph.D., Political Science, University of California, Davis, 2009

Dudman, Matthew (2007)

Lecturer
Law Program Director
B.A., International Relations (Minor in French), University of California, Davis, 1990

M.B.A., University of California, Davis, 1993
J.D., Tulane Law School, New Orleans, LA, 1996
LL.M., Taxation, Golden Gate University, San Francisco, CA, 2000

Elliott, Britt T. (1996)

Maritime Vocational Instructor IV
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

Fairbanks, Matthew (2011)

Assistant Professor
B.A., Physics, Oberlin College, 2003
M.S., Physics, University of Oregon, 2007
Ph.D., Physics, University of Oregon, 2010

Fischer, Jonathan (2006)

Associate 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

Frick, Christopher (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

Gray, Roberta (2014)

Maritime Vocational Instructor I
B.S. Marine Engineering Technology, California Maritime Academy, 1985
First Assistant Engineer, Steam, Motor, and Gas
Turbine Vessels, Unlimited Horsepower

Green, Scott (1997)

Maritime Vocational Instructor III
B.S., Marine Engineering Technology, California Maritime Academy, 1986
Third Assistant Engineer, Steam, Motor, and Gas
Turbine Vessels, Unlimited Horsepower
USCG Train-the-Trainer Certification
Engine Room Resource/Crew Resource
Management Certification, Oxford Aviation Academy

Guo, Linda (2003)

Lecturer
B.A., French, Beijing Second Foreign Language Institute, Beijing, China, 1982
M.A., French, Arizona State University, Tempe, AZ, 1992

Gutierrez, Jim (2001)

Professor
B.S., Mechanical Engineering, California State University, Sacramento, 1985
M.S., Engineering, University of California, Davis, 1991
Ph.D., Engineering, University of California, Davis, 1998
Professional Engineer, Mechanical and Civil, California

Gutkina, Olga (2012)

Lecturer
B.S., Mathematics and Physics, Vitebsk, Belarus (USSR), 2005
M.A., Mathematics, San Francisco State University, 2011

Hanson, Margot (2013)

Sr. Assistant Librarian
B.A., English, University of California, Berkeley, 2003
M.L.I.S., Library and Information Science, University of Hawaii at Manoa, 2007

Hartman, Lauren (2015)

Lecturer
B.F. A., Columbus College of Art and Design, Columbus, OH, 2004
M.F. A., San Francisco Art Institute, 2010

Hasson-Snell, Antony (2001)

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

Hayes, Peter J. (2001)

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

Higdon, Nolan (2015)

Lecturer
B.A., History, University of California, Davis, 2009
M.A., History, San Diego State University, 2012

Hitchcock, Stanley (2010)

Maritime Vocational Lecturer
A.A., General Studies, Napa Valley College, 1982
B.S., Organizational Behavior, University of San Francisco, 1989
Journeyman Machinist

Holden, Michael (2007)

Professor
B.S., Aeronautical and Mechanical Engineering, English Minor, University of California, Davis, 1992
M.S., Aeronautics and Astronautics, Stanford University, 1994
Ph.D., Aeronautics and Astronautics, Stanford University, 1999

Holl McGowan, Valerie E. (2013)

Maritime Vocational Lecturer
B.S., Marine Transportation, California Maritime Academy, 2011
Third Mate, Unlimited, Any Ocean

Inoue, Taiyo (2009)

Assistant Professor
B.S., Mathematics, University of California, Davis, 2000
Ph.D., Mathematics, University of California, Berkeley, 2007

Jackson, Robert (2000)

Maritime Vocational Instructor IV
B.S., Marine Engineering, California Maritime Academy, 1976
Chief Engineer, Steam, Motor, and Gas Turbine
Vessels, Unlimited Horsepower

Janssen, Amber (2015)

Senior Assistant Librarian
B.A., Technical and Professional Writing, San Francisco State University, 2003
MLIS, Library and Information Science, San Jose State University, 2011

Johnson, Tracey (2013)

B.S., Physics and Mathematics, California State University, Chico, 1988
M.S., Physics, University of California, Davis, 1996

Kamdar, Nipoli (2010)

Professor
B.A., Economics and Statistics, St. Xavier's College, Bombay University, India, 1985
M.A., Economics, Syracuse University, 1992
Ph.D., Economics, Syracuse University, 1993

Kazek, Michael S. (2008)

Associate Professor (2015)
Lecturer (2008-2015)
Director, USCG Licensing Programs
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

Klapstein, Kevin (2012)

Lecturer
B.S., Physics, University of Alberta, 1988

M.S., Theoretical Physics, University of Alberta, 1994
Ph.D., Biomathematics, University of California, Los Angeles, 2004

Knudson, Destiny (2013)

Maritime Vocational Lecturer
B.S., Marine Transportation, California Maritime Academy, 2010
M.S., Transportation and Engineering Management, California Maritime Academy, 2013
Third Mate, Unlimited, Any Ocean

Lewis, Tony C. (2013)

Assistant Professor
B.A., Political Science, University of Minnesota-Duluth, 2003
M.B.A., Business Administration, University of Minnesota-Duluth, 2007
Ph.D., Management, University of Wisconsin-Milwaukee, 2013

Malaquias, Assis (2017)

Professor

Chair, Global Studies and Maritime Affairs

M.A., Economics, Dalhousie University, Canada, 1988

Ph.D., Political Science, Dalhousie University, Canada, 1996

Manheimer, Robert (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

Marocchino, Kathryn (1990)

Professor
B.A., Languages and Business Administration, Santorre di Santarosa Technical Institute, Turin, Italy, 1972
Ph.D., Modern Foreign Languages and Literature, University of Turin, 1979
Fellow in Thanatology: Death, Dying and Bereavement, 2005

Matusek, John J., LT, USN (2015)

Administrative Officer/Instructor
B.S., Mechanical Engineering, United States Naval Academy, 2009

McGroarty, Peter G. (1997)

Maritime Vocational Instructor IV
Master Home Trade, Unlimited Tonnage, United Kingdom, 1980

McNie, Elizabeth C. (2017)

Assistant Professor

B.S., Marine Transportation, CSU Maritime Academy, 1994

M.A., Psychology, Sonoma State University, 2001

Ph.D., Environmental Studies, University of Colorado, Boulder, 2008

Second Mate, Unlimited, Any Ocean

1600-Ton Master, Any Ocean

Meredith, Dianne (2012)

Associate Professor
B.A., Geography, University of California, Berkeley, 1995
M.A., Geography, University of California, Davis, 1997
Ph.D., Geography, University of California, Davis, 2003

Messer-Bookman, Tuuli (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

Metz, Jennifer (2008)

Lecturer
B.A., History, California State University, Sacramento, 2004
M.A., History, University of California, Davis, 2007
Fellow, National Endowment for the Humanities, Munson Institute in Maritime Studies, 2014

Moorhead, Keir (2015)

Maritime Vocational Instructor I
B.S., Mechanical Engineering, California Maritime Academy, 2004
Third Assistant Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Moradmand, Ali (2015)

Lecturer
Associate's Degree, Mississippi Gulf Coast Community College, 2004
B.S., Physics, University of South Alabama, 2007
M.S., Physics, Auburn University, 2010
Ph.D., Physics, Auburn University, 2013

Morris, Patrick (2011)

Maritime Vocational Lecturer
B.S., Marine Engineering, California Maritime Academy, 1974
Chief Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Mueller, Dustin, LT, USN (2015)

Officer in Charge
Chair, Naval Science Department
B.S., Engineering Management, University of Arizona, 2008

Neumann, Robert (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

Nincic, Donna (2001)

Professor Emerita
Director, ABS School of Maritime Policy and Management
Chair, Maritime Policy and Management Department
The Cropper Family Distinguished Professor
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

Nordenholz, Thomas R. (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

O'Brien, Douglas (2002)

Lecturer
B.S., Biology, San Diego State University, 1987
B.S., Public Health, Drew University of Medicine and Science, 1994
Physician Assistant Certification

Oppenheim, Tomas (2014)

Assistant Professor (2015)
Lecturer (2014)
B.S., Mechanical Engineering, Loyola Marymount University, 2007
Ph.D., BioNano/Engineering, University of Cambridge, 2011

Parker, Alexander E. (2013)

Assistant Professor
B.A., Biology, University of Colorado, 1995
Ph.D., Oceanography, University of Delaware, 2004

Parsons, Amy C. (2013)

Assistant Professor
B.A., English, Sonoma State University, 1995
M.A., English, University of California, Irvine, 1999
Ph.D., English, University of California, Irvine, 2007

Peter, Geoffrey J. (2015)

Lecturer
B.S. Mechanical Engineering (Honors), University of Wolverhampton, UK, 1979
M.Sc. Nuclear Reactor Science, University of London, 1981
M.S. Nuclear Engineering, University of Arizona, 1985
Ph.D., Material Science and Engineering, Oregon Health and Science University, 2001
Professional Engineer, Mechanical and Nuclear, Washington

Professional Engineer, Mechanical, Oregon
Fellow ASME, Fellow I.Mech.E

Pinisetty, Dinesh (2013)

Assistant Professor
B.Tech., Mechanical Engineering, Jawaharlal Nehru Technological University, India, 2002
M.S., Mechanical Engineering, Louisiana State University, Baton Rouge, 2005
Ph.D., Mechanical Engineering, Louisiana State University, Baton Rouge, 2011

Pohlmann, Brent G. (2009)

Assistant Professor (2012)
Lecturer (2009-2012)
B.A., Mathematics, Western State College of Colorado, 1994
Teaching Credential, San Francisco State University, 1998
M.A., Mathematics, San Diego State University, 2002
Ph.D., Mathematics, University of Colorado, Boulder, 2008

Portolos, Harry (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

Punglia, Jaya (1993)

Professor
M.S., Physics, Vikram University, Ujjain, India, 1964
Ph.D., Physics, University of London, 1972

Reiman, Fred (2014)

Maritime Vocational Lecturer
B.S., Business Administration, Seattle University, 1982
Master, 500 Tons, Any Ocean
Mate 1600 Tons, Any Ocean
First Class Pilot, Tanapag Harbor, Saipan

Rigg, Douglas (2011)

Maritime Vocational Lecturer
B.S., Marine Engineering, California Maritime Academy, 1979
Chief Engineer, Steam, Motor, and Gas Turbine Vessels, Unlimited Horsepower

Runyon, Steven T. (2010)

Assistant Professor
Chemistry Program Director
B.A., Molecular and Cell Biology, University of California, Berkeley, 1993
Ph.D., Chemistry, University of California, Santa Cruz, 2001

Saarheim, Scott (2000)

Maritime Vocational Instructor II
B.S., Marine Transportation, California Maritime Academy, 1991
Third Mate, Unlimited, Any Ocean

Sammler, Katherine (2016)

Assistant Professor

Schmid, William E. (2000)

Maritime Vocational Instructor IV
B.S., Nautical Science, Maine Maritime Academy, 1978
Master Mariner, Unlimited, Any Ocean
First Class Pilot, Hinchinbrook Entrance to Rocky Point, AK

Senk, Sarah (2016)

Assistant Professor

M.St., English, University of Oxford, United Kingdom 2004

Ph.D., Comparative Literature, Cornell University, 2011

Shackman, Joshua (2017)

Assistant Professor

B.A., Economics, University of Michigan, 1992

Ph.D., Economics, University of California, Los Angeles, 2001

Simons, Julie E. (2015)

Assistant Professor
B.A., Mathematics, University of California, Berkeley, 2004
M.A., Mathematics, University of Wisconsin-Madison, 2006
Ph.D., Mathematics, University of Wisconsin-Madison, 2010

Stewart, Robert (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

Storz, Ryan (2014)

Assistant Professor
B.S., Facilities Engineering Technology, California Maritime Academy, 2007
M.S., Transportation and Engineering Management, California Maritime Academy, 2013

Strange, Michael (2008)

Associate Professor
Chair, Engineering Technology Department
B.S., Mechanical Engineering, San Diego State University, 1984
M.S., Mechanical Engineering, Stanford University, 1986

Strickland, Joanne (2005)

Lecturer
B.S., Mechanical Engineering, University of Virginia, 1984
M.S., Computer Information Systems, University of Phoenix, 2004

Trevisan, Cynthia S. (2008)

Professor
Chair, Sciences and Mathematics Department
M.S., Physics, Universidad de Buenos Aires, Argentina, 1994
Ph.D., Physics, University of London, University College London, United Kingdom, 2002

Tsai, William (2013)

Assistant Professor
B.S., Mechanical Engineering, University of California, Berkeley, 2003
M.S., Mechanical Engineering, University of California, Berkeley, 2006
Ph.D., Mechanical Engineering, University of California, Berkeley, 2009

Tsuma, Clive (2015)

Lecturer
B.A., International Relations, United States International University, 1999
M.A., International Relations (Diplomacy), United States International University, 2004
Ph.D., Public Policy Analysis, Southern University, A&M College, Baton Rouge, LA, 2011

Ward, Jeffrey S. (2002)

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

Watanabe, Monique (2014)

Maritime Vocational Lecturer
B.S., Marine Transportation, California Maritime Academy, 2010
Third Mate, Unlimited, Any Ocean

Weinstock, Daniel (1996)

Professor
B.S., Nautical Industrial Technology, California Maritime Academy, 1984
M.S., Education, Dowling College, 1995
Master Mariner, Unlimited, Any Ocean

West, James A. (2013)

Maritime Vocational Lecturer
A.A., Business Administration, Cañada College, 1981

Master of Towing Vessels
1600-Ton Master

Yip, Frank (2012)

Assistant Professor
A.B., Chemistry, Princeton University, 2002
M.S., Chemistry, University of California, Berkeley, 2004
Ph.D., Theoretical Chemistry, University of California, Berkeley, 2008

Professor Emeriti

Kitazono, Lloyd - Sciences and Mathematics

Law, Brian - Marine Transportation

Mampaey, Carl - Sciences and Mathematics

McLemore, Albert S. - Engineering Technology

Nincic, Donna - Maritime Policy and Management

Paine-Clemes, Bunny - Culture and Communication

Sears, David - Marine Transportation

Viargues, A. René - Culture and Communication

Wheeler, James - Sciences and Mathematics

Academic Programs

Academic Departments

Athletics

For complete information on the Athletics Department please visit the department website.

Intercollegiate Athletics

Intercollegiate athletics at Cal Maritime provides an active link with other college campuses and is an important part of our co-curricular education program. A variety of sports are available for men and women. Men's teams compete in basketball, crew, golf, rugby, sailing, soccer, and water polo. Women's teams compete in basketball, crew, sailing, and water polo.

The athletic teams are known as the Keelhaulers, an old sailing term. 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 one fourth 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 GPA of 2.0 or higher.

A new state-of-the-art physical education complex was completed and opened in October 2014. The Bodnar athletic field has been renovated, with the addition of a turf field, two-lane running track, and updated lighting.

In addition to a staff of dedicated coaches, Cal Maritime has a National Athletic Trainers' Association (NATA) certified athletic trainer who oversees a recently expanded training room with state-of-the-art equipment.

Cal Maritime is a member of the National Association of Intercollegiate Athletics (NAIA) and competes as a charter member of the California Pacific Conference. 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.

Physical Education Program

As time and academic schedules allow, students participate in a variety of physical education classes in swimming, sailing, weight lifting, and the martial arts.

Classes are also offered to help students improve their 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 part of life at Cal Maritime. Activities include competition between divisions in 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.

Available facilities include: playing fields, sports courts, an outdoor 50-meter Olympic-sized swimming pool, a gymnasium for basketball and volleyball, an Olympic free-weight and circuit training room, and cardio room.

The outdoor heated pool is available to students several hours a week with a certified lifeguard present, as are the weight training and cardio rooms for use with supervision.

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 equipped with a variety of bicycle and rowing ergometers and weight machines, along with mirrors and a TV monitor for viewing exercise videos.

Club Sports

The director of Athletics and Recreation also oversees clubs sponsored by the Associated Student Body. These include lacrosse, volleyball, cycling, and fencing.

Department of Culture and Communication

Faculty

Professor:
Kathryn D. Marocchino

Associate Professor:
Julie K. Chisholm (Interim Chair)

Assistant Professors:
Colin D. Dewey; Amy C. Parsons

Lecturers:
Elisabeth A. Carmichael; Natalia Clarke; Christopher L. Frick; Linda J. Guo; Lauren Hartman; Nolan Higdon; Robert D. Manheimer

Professors Emeriti:
Bunny Paine-Clemes, A. René Viargues

The Department of Culture and Communication hosts Cal Maritime's writing program, foreign language offerings, and courses that have traditionally been hosted by humanities and arts departments. The writing program is an integral component of the ABS School of Maritime Policy and Management, and it provides CSU depth and breadth requirements in General Education areas A, C, and E.

The department serves Cal Maritime's mission through its commitment to intellectual learning. To be successful and 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 student learning objectives in the study of culture are to:

- develop global awareness and international preparedness through learning about the cultures, ethnic groups, and languages of other peoples and civilizations, and through direct participation with these cultures
- cultivate affective and cognitive faculties through studying great works of the human imagination; establish relevancy between art and one's personal values, ethical behavior, and aesthetic judgment; read and think critically about psychological, social, aesthetic, and cultural processes and how they are constructed and articulated within a variety of human institutions

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 write and speak well are the hallmarks of an educated person. The objectives of the study of communication are to:

- write and speak effectively, with emphasis on mechanics, content, organization, purpose, audience awareness, and appropriate documentation style
- use print and online research tools needed to support oral and written communication

In addition to an interdisciplinary commitment to cultural awareness and communication, this program also strives to instill the following habits, traits, and affective dimensions:

- learn independently and take responsibility for one's own learning, exhibit intellectual curiosity, develop a commitment to lifelong learning and growth, and make judicious use of mentors, teamwork, and other resources where needed
- use ethical reasoning to foster self-awareness, truthfulness, integrity, and service to the community
- cultivate successful attitudes, such as self-confidence, self-discipline, respect for self and others, and cooperation with a group or team
- commit to critical and creative thinking and expression and be able to apply these skills flexibly to new situations

Department of Engineering Technology

Faculty

Associate Professors:
Jonathan Fischer; Michael Kazek; Michael Strange (Chair)

Assistant Professors:
Evan Chang-Siu; Dinesh Pinisetty; Ryan Storz

Maritime Vocational Instructor IV:
Michael Andrews; Lyle Cook; Robert Jackson

Maritime Vocational Instructor III:
Scott Green

Maritime Vocational Instructor I:
Roberta Gray; Kenneth LeVan; Keir Moorhead

Maritime Vocational Lecturers:
Stan Hitchcock; Patrick Morris; Douglas Rigg

Lecturers:
David Grover, Albert Jefferson; Geoffrey Peter

Professor Emeritus:
Albert S. McLemore

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 to the engineering sciences of materials, solid and fluid mechanics, thermodynamics, electricity, electronics, system controls and power engineering. General education courses in written, oral, and digital communications, humanities and social sciences round out the curriculum.

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 through coursework in engineering graphics, machine shop, and welding.

Students gain practical experience as leaders in small working groups in the classroom, laboratory, and power plant simulators, and also as members of watch teams aboard ship,. 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 GOLDEN BEAR, and international exchange programs, afford the students opportunities 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 Engineering Technology Accreditation Commission (ETAC) of ABET. Marine Engineering Technology graduates will have met all training and sea service requirements of Cal Maritime's USCG approved Engine Program. Through the practical training, leadership development, and qualifying professional

examinations included in both curricula, graduates of the two Engineering Technology majors are "work ready" upon graduation.

Bachelor of Science

Facilities Engineering Technology, B.S.

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 systems 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 analyze, design, and develop 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 with effective 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, and have a commitment to safety, quality and productivity

The FET curriculum includes three practical training experiences: one sea training period aboard the Training Ship *Golden Bear*, and two industry co-operative educational opportunities.

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 GPA 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. Professional societies that sponsor local 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).

Facilities Engineering Technology Major Curriculum

(Subject to Change)

TOTAL UNITS: 154

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 110 - General Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 110L
This course is an in-depth introduction to fundamental chemical principles and scientific thought. Topics covered include scientific method, scientific calculations, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, thermochemistry, gases, solutions, and radioactivity.
SM

CHE 110L - General Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): CHE 110
As a co-requisite, this course is designed to expand upon and reinforce chemical concepts introduced in CHE 110 . It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, error analysis, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, acid/base titration, gas stoichiometry, thermochemistry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

- American Institutions Elective Units: 3 [1&2]
- Humanities Elective (Lower Division) Units: 3 [1&2]

ENG 100 - Engineering Graphics

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None

Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 125L - Introduction to Marine Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Co-requisite(s): EPO 125, EPO 110
This lab studies primary engineering systems aboard the *Training Ship GOLDEN BEAR*. Topics of study include shipboard familiarization; measurement methods; main engine jacket water system; fuel oil storage - transfer and supply; fuel oil injection systems; lube oil system; gear train and clutch; cooling water systems; environmental protection systems; starting air system; distillation plant; and basic shipboard firefighting and safety. Students are given engineering system tracing assignments including main engine jacket water system, main engine fuel supply system, main engine lubricating oil system, central fresh water cooling system, and main engine starting air system.
ET

EPO 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

ET 110 - Introduction to Engineering Technology

Class Hours: 1, Units: 1
Prerequisite(s): 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

MTH 100 - College Algebra and Trigonometry

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 17.0

Spring (Freshman Year)

CHE 205 - Chemistry of Power Plant Processes

Class Hours: 3, Units: 3
Prerequisite(s): CHE 110, CHE 110L
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

DL 105 - Marine Survival

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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 higher 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.
MT

DL 105L - Marine Survival Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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.
MT | Graded: Credit/No Credit

DL 105X - USCG Lifeboatman'S Exam

Units: 0
MT | Graded: Credit/No Credit

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

- Humanities Elective (Lower Division) Units: 3 [3&4]

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 125L - Introduction to Marine Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Co-requisite(s): EPO 125, EPO 110
This lab studies primary engineering systems aboard the *Training Ship GOLDEN BEAR*. Topics of study include shipboard familiarization; measurement methods; main engine jacket water system; fuel oil storage - transfer and supply; fuel oil injection systems; lube oil system; gear train and clutch; cooling water systems; environmental protection systems; starting air system; distillation plant; and basic shipboard firefighting and safety. Students are given engineering system tracing assignments including main engine jacket water system, main engine fuel supply system, main engine lubricating oil system, central fresh water cooling system, and main engine starting air system.
ET

EPO 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

LIB 100 - Information Fluency in the Digital World

Class Hours: 2, Units: 2
Prerequisite(s): 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

MTH 210 - Calculus I

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): MTH 100 or equivalent with a C- or higher
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral.
SM

NAU 104 - VPDSD (Vessel Personnel Designated with Security Duties)

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): None
Required for seafarers, VPDSD (Vessel Personnel Designated with Security Duties), a mid-level security course, addresses knowledge needed for mariners with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code,

and Section A-VI/6 and Table -VI/6-2 of the STCW Code, as amended.
MT

Total 18.0 OR 19.0

Summer Cruise (Freshman Year)

CRU 150 - Sea Training I (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 105, DL 105L, DL 105X, EPO 110, EPO 125
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

EPO 220 - Diesel Engineering I

Class Hours: 2, Units: 2
Prerequisite(s): 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

Total 10.0

Fall (Sophomore Year)

COM 220L - Programming Applications for Engineering Technology Majors Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Data representation, data analysis, and programming using Microsoft Excel. Advanced operations of the TI-89 calculator. Prepares Engineering Technology students for advanced level coursework.
ET

- Critical Thinking Elective Units: 3

EPO 210 - Plant Operations II

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 214 - Boilers

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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 230 - Steam Plant System Operations

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 150, 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

MTH 211 - Calculus II

Class Hours: 4, Units: 4
Prerequisite(s): MTH 210 with a C- or higher
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

PHY 200 - Engineering Physics I

Class Hours: 3, Units: 3
Prerequisite(s): MTH 210
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 210
Co-requisite(s): PHY 200
Laboratory physics course designed to enhance conceptual learning of physics by adding a hands-onlearning 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

Total 18.0

Spring (Sophomore Year)

EGL 110 - Speech Communication (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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 selfunderstanding, 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.
CC

- American Institutions Elective Units: 3 [3&4]

EPO 235 - Steam Plant Watch Team Management

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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 312 - Turbines

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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

ET 230 - Properties of Materials

Class Hours: 2, Units: 2
Prerequisite(s): CHE 110, CHE 110L, MTH 210
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 232 - Statics

Class Hours: 3, Units: 3
Prerequisite(s): 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

LIB 100 - Information Fluency in the Digital World

Class Hours: 2, Units: 2
Prerequisite(s): 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

PHY 205 - Engineering Physics II

Class Hours: 4, Units: 4
Prerequisite(s): 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

Total 18.0 OR 19.0

Summer Co-Op (Sophomore Year)

CEP 270 - FET Co-Op I

Units: 3
Prerequisite(s): 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

Total 3.0

Fall (Junior Year)

- Humanities Elective (Upper Division) Units: 3

EPO 319 - Facilities Engineering Diagnostics Lab

Lab Hours: 2, Units: 1
Prerequisite(s): 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

ET 230L - Properties of Materials Lab

Lab Hours: 2, Units: 1
Prerequisite(s): CHE 110, CHE 110L, ET 230, MTH 210
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 250 - Electrical Circuits

Class Hours: 3, Units: 3
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): ET 250
Application of circuit elements and principles from ET 250 in laboratory measurements and analysis.
ET

ET 330 - Dynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): MTH 211, ET 232
Co-requisite(s): ET 230L
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 344 - Thermodynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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

Total 18.0

Spring (Junior Year)

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

EPO 310 - Plant Operations III

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET

EPO 315 - Manufacturing Processes II

Lab Hours: 3, Units: 1
Prerequisite(s): EPO 215
A continuation of EPO 215 - Manufacturing Processes I, emphasizing work on metal lathes and vertical milling machines.
ET

EPO 321 - Introduction to Power Generation Plants

Lab Hours: 2, Units: 1
Prerequisite(s): EPO 220
The student will be given an introduction to the operation, performance and maintenance of simple cycle gas turbine and medium-speed reciprocating power generation systems, combined cycle gas turbine and steam turbine power plants. The course consists of lecture and practical training in engineering systems and proper operating procedures. This course will expose the student to gas and liquid fired reciprocating engines, simple cycle gas turbine as well as combined cycle plants. The emphasis of this course is Power Plant Management and will train the students in common power plant systems and how they interact with each other.
ET

ET 340 - Fluid Mechanics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): ET 340
ET

ET 342 - Refrigeration and Air Conditioning

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): ET 344
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 344

Co-requisite(s): ET 342
ET

ET 370 - Electronics

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): COM 220, COM 220L, ET 250, ET 250L
Co-requisite(s): 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 electromechanical systems.
ET

ET 370L - Electronics Lab

Lab Hours: 2, Units: 1
Prerequisite(s): COM 220, COM 220L, ET 250, ET 250L
Co-requisite(s): ET 370
Application of the principles from ET 370 in laboratory measurements and analysis, followed by a comprehensive team project.
ET

Total 14.0

Summer Co-Op (Junior Year)

CEP 370 - FET Co-Op II

Units: 3
Prerequisite(s): 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

Total 3.0

Fall (Senior Year)

- American Institutions Elective Units: 3

ENG 470 - Engineering Management

Class Hours: 3, Units: 3
Prerequisite(s): 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

ET 350 - Electrical Machinery

Class Hours: 3, Units: 3
Prerequisite(s): ET 250, ET 250L
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): ET 250, ET 250L
Co-requisite(s): ET 350
Application of the principles from ET 350 in laboratory measurements and analysis.
ET

ET 400 - Instrumentation and Measurement

Class Hours: 3, Units: 3
Prerequisite(s): ET 370, ET 370L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 370, ET 370L
Co-requisite(s): 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, Units: 2
Prerequisite(s): ET 342, ET 342L

Co-requisite(s): 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 Fundamentals of Engineering (FE) and United States Coast Guard (USCG) exams.
ET

ET 442L - Heating, Ventilation, and Air Conditioning Lab

Lab Hours: 2: Units: 1
Prerequisite(s): ET 342, ET 342L
Co-requisite(s): ET 442
ET

Total 17.0

Spring (Senior Year)

- Social Science Elective (Upper Division) Units: 3

ENG 472 - Facilities Management

Class Hours: 3, Units: 3
Prerequisite(s): 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.
ET

ET 460 - Automation

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): ET 400, ET 400L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 400, ET 400L
Co-requisite(s): 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, Units: 3
Prerequisite(s): ET 344, ET 350, ET 350L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 344, ET 350, ET 350L
Co-requisite(s): ET 490
In the Power Laboratory, students will perform thermodynamic analyses of operating power generation equipment.
ET

HUM 310 - Engineering Ethics

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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

Total 17.0

Total Units: 154

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.

[1&2] Divisions 1&2 cadets take course
[3&4] Divisions 3&4 cadets take course
► Courses in Major (CGPA = 2.0 is required)

Marine Engineering Technology with Third Assistant Engineer's/OICEW License, B.S.

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 become professionals as licensed engineers, and hold other respected positions in the maritime industry
- graduates will have the knowledge and ability to manage and lead technical activities
- graduates will have the knowledge and ability to function effectively as leaders on professional teams
- graduates will have the knowledge and ability to communicate with effective 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, and have a a commitment to safety, quality and productivity

The MET curriculum includes three 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 obtain a Third Assistant Engineer, Steam, Motor and Gas Turbine Vessels, Unlimited Horsepower license.

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 GPA 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. Professional societies that sponsor local 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).

Marine Engineering Technology Major Curriculum

(Subject to Change)

TOTAL UNITS: 159

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 110 - General Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 110L
This course is an in-depth introduction to fundamental chemical principles and scientific thought. Topics covered include scientific method, scientific calculations, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, thermochemistry, gases, solutions, and radioactivity.
SM

CHE 110L - General Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): CHE 110
As a co-requisite, this course is designed to expand upon and reinforce chemical concepts introduced in CHE 110 . It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, error analysis, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, acid/base titration, gas stoichiometry, thermochemistry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

- ELEC 8 - American Institutions Elective Units: 3 [1&2]
- ELEC 21 - Humanities Elective (Lower Division) Units: 3 [1&2]

ENG 100 - Engineering Graphics

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None

Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 125L - Introduction to Marine Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Co-requisite(s): EPO 125, EPO 110
This lab studies primary engineering systems aboard the *Training Ship GOLDEN BEAR*. Topics of study include shipboard familiarization; measurement methods; main engine jacket water system; fuel oil storage - transfer and supply; fuel oil injection systems; lube oil system; gear train and clutch; cooling water systems; environmental protection systems; starting air system; distillation plant; and basic shipboard firefighting and safety. Students are given engineering system tracing assignments including main engine jacket water system, main engine fuel supply system, main engine lubricating oil system, central fresh water cooling system, and main engine starting air system.
ET

EPO 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

ET 110 - Introduction to Engineering Technology

Class Hours: 1, Units: 1
Prerequisite(s): 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

MTH 100 - College Algebra and Trigonometry

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 17.0

Spring (Freshman Year)

DL 105 - Marine Survival

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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 higher 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.
MT

DL 105L - Marine Survival Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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.
MT | Graded: Credit/No Credit

DL 105X - USCG Lifeboatman'S Exam

Units: 0
MT | Graded: Credit/No Credit

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

- ELEC 8 - American Institutions Elective Units: 3 [3&4]
- ELEC 21 - Humanities Elective (Lower Division) Units: 3 [3&4]

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 125L - Introduction to Marine Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Co-requisite(s): EPO 125, EPO 110
This lab studies primary engineering systems aboard the *Training Ship GOLDEN BEAR*. Topics of study include shipboard familiarization; measurement methods; main engine jacket water system; fuel oil storage - transfer and supply; fuel oil injection systems; lube oil system; gear train and clutch; cooling water systems; environmental protection systems; starting air system; distillation plant; and basic shipboard firefighting and safety. Students are given

engineering system tracing assignments including main engine jacket water system, main engine fuel supply system, main engine lubricating oil system, central fresh water cooling system, and main engine starting air system.
ET

EPO 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

LIB 100 - Information Fluency in the Digital World

Class Hours: 2, Units: 2
Prerequisite(s): 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

MTH 210 - Calculus I

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): MTH 100 or equivalent with a C- or higher
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral.
SM

NAU 104 - VPDSD (Vessel Personnel Designated with Security Duties)

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): None
Required for seafarers, VPDSD (Vessel Personnel Designated with Security Duties), a mid-level security course, addresses knowledge needed for mariners with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and Section A-VI/6 and Table -VI/6-2 of the STCW Code, as amended.
MT

Total 18.0

Summer Cruise (Freshman Year)

CRU 150 - Sea Training I (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 105, DL 105L, DL 105X, EPO 110, EPO 125
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

EPO 220 - Diesel Engineering I

Class Hours: 2, Units: 2
Prerequisite(s): 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

Total 10.0

Fall (Sophomore Year)

COM 220L - Programming Applications for Engineering Technology Majors Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Data representation, data analysis, and programming using Microsoft Excel. Advanced operations of the TI-89 calculator. Prepares Engineering Technology students for advanced level coursework.
ET

- ELEC 20 - Critical Thinking Elective Units: 3

EPO 210 - Plant Operations II

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 214 - Boilers

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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 230 - Steam Plant System Operations

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 150, 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

MTH 211 - Calculus II

Class Hours: 4, Units: 4
Prerequisite(s): MTH 210 with a C- or higher
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

PHY 200 - Engineering Physics I

Class Hours: 3, Units: 3
Prerequisite(s): MTH 210
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 210
Co-requisite(s): PHY 200
Laboratory physics course designed to enhance conceptual learning of physics by adding a hands-onlearning 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

Total 18.0

Spring (Sophomore Year)

EGL 110 - Speech Communication (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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 selfunderstanding, 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.
CC

EPO 235 - Steam Plant Watch Team Management

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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 312 - Turbines

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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

ET 230 - Properties of Materials

Class Hours: 2, Units: 2
Prerequisite(s): CHE 110, CHE 110L, MTH 210
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 232 - Statics

Class Hours: 3, Units: 3
Prerequisite(s): 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

PHY 205 - Engineering Physics II

Class Hours: 4, Units: 4
Prerequisite(s): 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

Total 16.0

Summer Cruise (Sophomore Year)

CRU 250 - Sea Training II (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): 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

Total 8.0

Fall (Junior Year)

- ELEC 22 - Humanities Elective (Upper Division) Units: 3

ET 230L - Properties of Materials Lab

Lab Hours: 2, Units: 1
Prerequisite(s): CHE 110, CHE 110L, ET 230, MTH 210
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 250 - Electrical Circuits

Class Hours: 3, Units: 3
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): ET 250
Application of circuit elements and principles from ET 250 in laboratory measurements and analysis.
ET

ET 330 - Dynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): MTH 211, ET 232
Co-requisite(s): ET 230L
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 344 - Thermodynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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

FF 200 - Basic/Advanced Marine Firefighting

Units: 0
STCW Requirement: ♦
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning.
XL | Graded: Credit/No Credit

Total 17.0

Spring (Junior Year)

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

EPO 310 - Plant Operations III

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET

EPO 315 - Manufacturing Processes II

Lab Hours: 3, Units: 1
Prerequisite(s): EPO 215
A continuation of EPO 215 - Manufacturing Processes I, emphasizing work on metal lathes and vertical milling machines.
ET

EPO 322 - Diesel Engineering II/ Simulator

Class Hours: 1, Units: 1
Prerequisite(s): EPO 220
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): EPO 220

Co-requisite(s): 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

ET 340 - Fluid Mechanics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): ET 340
ET

ET 342 - Refrigeration and Air Conditioning

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): ET 344
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 344
Co-requisite(s): ET 342
ET

ET 370 - Electronics

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): COM 220, COM 220L, ET 250, ET 250L
Co-requisite(s): 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 electromechanical

systems.
ET

ET 370L - Electronics Lab

Lab Hours: 2, Units: 1
Prerequisite(s): COM 220, COM 220L, ET 250, ET 250L
Co-requisite(s): ET 370
Application of the principles from ET 370 in laboratory measurements and analysis, followed by a comprehensive team project.
ET

FF 200 - Basic/Advanced Marine Firefighting

Units: 0
STCW Requirement: ♦
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning.
XL | Graded: Credit/No Credit

Total 15.0

Summer Cruise (Junior Year)

CRU 350 - Sea Training III (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): CRU 250 or CRU 275, EPO 310, EPO 322, EPO 322L, ET 250 or ENG 250, ET 250L or ENG 250L, FF 200, EPO 235
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

Total 8.0

Fall (Senior Year)

- ELEC 9 - American Institutions Elective Units: 3

ENG 430 - Naval Architecture

Class Hours: 3, Units: 3
STCW Requirement: ♦

Prerequisite(s): Prerequisite for ET Students: ET 332, ET 340 Prerequisite 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 470 - Engineering Management

Class Hours: 3, Units: 3
Prerequisite(s): 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

ET 350 - Electrical Machinery

Class Hours: 3, Units: 3
Prerequisite(s): ET 250, ET 250L
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): ET 250, ET 250L
Co-requisite(s): ET 350
Application of the principles from ET 350 in laboratory measurements and analysis.
ET

ET 400 - Instrumentation and Measurement

Class Hours: 3, Units: 3
Prerequisite(s): ET 370, ET 370L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 370, ET 370L

Co-requisite(s): 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

Total 17.0

Spring (Senior Year)

- ELEC 32 - Social Science Elective (Upper Division) Units: 3

EPO 217 - Shipboard Medical

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

ET 460 - Automation

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): ET 400, ET 400L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 400, ET 400L
Co-requisite(s): 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, Units: 3
Prerequisite(s): ET 344, ET 350, ET 350L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 344, ET 350, ET 350L
Co-requisite(s): ET 490
In the Power Laboratory, students will perform thermodynamic analyses of operating power generation equipment.
ET

HUM 310 - Engineering Ethics

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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

Total 15.0

Total Units: 159

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.

[1&2] Divisions 1&2 cadets take course

[3&4] Divisions 3&4 cadets take course

► Courses in Major (CGPA = 2.0 is required)

♦ STCW Courses (Must receive a "C-" or higher, or "CR")

Department of Global Studies and Maritime Affairs

Faculty

Professors:
Assis Malaquias, Chair

Associate Professors:
Dianne Meredith, Ryan Dudley Wade

Assistant Professors:
Katherine Sammler

Lecturers:
Jennifer Metz

Professor Emerita:
Donna Nincic

The Department of Global Studies and Maritime Affairs offers the Bachelor of Arts in Global Studies and Maritime Affairs.

The department also offers a minor in Global Studies and Maritime Affairs.

Students in the degree program 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.

Bachelor of Arts

Global Studies and Maritime Affairs, B.A.

Department of Global Studies and Maritime Affairs

Program Description

The Global Studies and Maritime Affairs (GSMA) program leads to a Bachelor of Arts degree. Students in the major develop a solid theoretical background in the social sciences, applied to the needs of the greater maritime and transportation industries.

Students also develop applied knowledge relevant to government agencies, non-profit organizations, international organizations, and businesses dealing with maritime issues. Specifically, students acquire 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.

Students gain the intellectual tools necessary to understand maritime policy issues in an increasingly globalized world. These include critical thinking, quantitative and non-quantitative research capability, leadership skills, and cultural and diversity awareness.

The GSMA major emphasizes four maritime policy areas:

- **International Maritime Security**
  This policy area focuses on maritime issues from a security perspective. These issues include the different threats in the coastal and near-coastal zones, in international waters, and on the high seas. Topics covered include: 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 focuses on maritime environmental issues. 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 policy area focuses 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, the International Maritime Bureau, 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.

Student Learning Objectives

Students in the Global Studies and Maritime Affairs program:

- gain an understanding of the key issues in maritime policy and international business and logistics.
- understand the importance of the environment and geography to the maritime policy and business worlds.
- think critically about the key issues in the maritime policy field and transportation industry.
- acquire the ability to analyze and develop new and innovative solutions to emerging challenges in the maritime world.
- have the ability to use and understand mathematical and statistical tools relevant to the maritime policy and management fields.
- analyze and solve complex problems within the maritime policy and transportation fields.
- assess and analyze the appropriateness of information within maritime policy and management fields.
- articulate and analyze, both verbally and in writing, the current issues facing the maritime policy and management fields, and can develop appropriate solutions.
- select and use appropriate technologies in research projects and presentations, and understand the importance of technology in their future careers.
- develop an ethical awareness of key social, business and policy issues and hold themselves to high personal and professional ethical standards.
- understand the importance of cultural diversity and cross-cultural understanding, and develop a sense of civic responsibility and global stewardship.
- develop teamwork and leadership skills.

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 typically pursue careers with:

- 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 and the International Maritime Bureau
- 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 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

The curriculum path outlined below leads to completion of all requirements in four years. Students are encouraged to consult with their major advisor on a regular basis to ensure that they are on track.

Fall (Freshman Year)

ECO 100 - Macroeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

EGL 101 - Stretch English Composition I

Class Hours: 3 Units: 3
Prerequisite(s): None
First semester of a year-long developmental composition course which introduces and prepares students for academic reading, writing, and critical thinking tasks encountered throughout the undergraduate career.
egl Graded: CR/NC

OR

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.

Prerequisite(s): 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.
CC

- Mathematics/Quantitative Reasoning (GE Area B4) Units: 4
- Foreign Language I Units: 3

GMA 105 - Ocean Politics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

LIB 100 - Information Fluency in the Digital World

Class Hours: 2, Units: 2
Prerequisite(s): 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

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 15.0 or 18.0

Spring (Freshman Year)

- American Institutions Elective Units: 3
- Critical Thinking Elective Units: 3
- Physical Science Elective Units: 3
- Physical Science Lab Elective Units: 1
- Foreign Language II Units: 3

GMA 100 - Introduction to International Relations

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

MTH 107 - Elementary Statistics

Class Hours: 3, Units: 3
Prerequisite(s): 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

Total 16.0

Fall (Sophomore Year)

- Area C2-(Lower Division)

GMA 215 - Introduction to Comparative Politics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GOV 200 - American Government

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division; American Institutions II (government)
Prerequisite(s): 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.)
GSMA

Total 12.0

Spring (Sophomore Year)

EGL 110 - Speech Communication (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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 selfunderstanding, 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.
CC

Area D-(Lower Division)

GMA 220 - Comparative Maritime Policies

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 190 - TSGB/International Experience Program

Class Hours: 1, Units: 1
A one-unit course offered in the spring term to Global Studies students prior to participation in their Training Ship *Golden Bear* (TSGB) cruise or an international experience. As part of the course, students will complete all necessary pre-trip plans, including document collection, medical information training, language primers, and associated tasks. Students 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.
GSMA

- Major Elective Units: 3 ►►

Total 13.0

Summer Cruise or International Experience (Sophomore Year)

CRU 190 - Basic Safety Training

Class Hours: 12; Lab Hours: 12 Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

- CRU 999 - TSGB/International Experience Participation Units: 0

MPM 195 - TSGB/International Experience Special Topics

Class Hours: 3, Units: 3
Prerequisite(s): MPM 190
This course is a special topics course to be taught to Business students participating in their Training Ship *Golden Bear* (TSGB) cruise or their international experience. Topics will be related to the specific destinations, and reflect the expertise and interest of the instructor as well as the nature of the itinerary.
IBL

Total 3.0

Fall (Junior Year)

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

- Life Science Elective Units: 3

GMA 300 - U.S. Foreign Policy

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): GMA 100, GOV 200
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.
GSMA

GMA 350 - Political Geography

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): GMA 100 or GMA 215 or Permission of the Instructor
A study of the geographical influences on political actions as well as their consequences, particularly boundarymaking, boundary disputes, and geopolitical power. Location, distance, the distribution of natural and human resources have significant influences on geo-politics, both within and between regions and states. Concepts of territoriality include airborne, space-based, and waterborne possession and acquisition. Focus topics also include popular geopolitical narratives, place-based identity, environmental politics, and political ecology.
GSMA

- Major Elective Units: 3 ►►

Total 12.0

Spring (Junior Year)

- Lifelong Learning and Self-development Elective Units: 3
- IBL Elective Units: 3 ►

GMA 330 - Maritime Security

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): GMA 100 or GMA 105
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.
GSMA

HIS 300 - Maritime History of the U.S. (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area D Social Science - upper division
Prerequisite(s): 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.)
GSMA

HUM 325 - Globalization of Culture

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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.
CC

Total 15.0

Summer Co-Op (Junior Year)

CEP 330 - GSMA Co-Op

Units: 3
Prerequisite(s): 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 MPM Department Chair.
MPM

Total 3.0

Fall (Senior Year)

GMA 405 - International Maritime Organizations

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

GMA 460 - Senior Thesis

Class Hours: 3, Units: 3
Prerequisite(s): Senior standing or by instructor permission.
Co-requisite(s): 460L
Formulating a research question, selecting methodology and sources, writing outlines and sequential drafts; culminates in a final 40-page thesis at the end of the semester, with in-class presentations of work at appropriate intervals.
(Formerly GMA 401) GSMA

GMA 460L - Senior Thesis Research Lab

Class Hours: 1, Units: 1
Co-requisite(s): GMA 460
GMA 460L will provide hands-on instruction and practice in research methods for Global Studies, in support of completion of the GSMA Senior Thesis of GMA 460.
(Formerly GMA 401L) LIB

- Major Elective Units: 3 ►►
- Major Elective Units: 3 ►►

Total 13.0

Spring (Senior Year)

GMA 230 - U.S. Maritime Policy

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 461 - Senior Qualifying Exams

Class Hours: 3, Units: 3
Prerequisite(s): Senior standing or by instructor permission.
Preparation for comprehensive written and oral exams on sub-fields and basic concepts in the major; team learning communities work on directed reading, discipline-specific research, and mock responses under direction of the instructor.
(Formerly GMA 400) GSMA

HUM 400 - Ethics (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 12
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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. Students will volunteer for at least twelve hours of active engagement at one of many nonprofit organizations serving the community.
CC

- Major Elective Units: 3 ►►
- Major Elective Units: 3 ►►

Total 15.0

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.

■ Be sure to 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 course for TSGB/International Experience will be determined by the itinerary and instructor expertise

+ Required course when choosing TSGB participation

Minor

Global Studies and Maritime Affairs Minor

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Global Studies and Maritime Affairs, the student will have completed a minimum of 15 units from the following curriculum:

All students must complete the following courses:

GMA 105 - Ocean Politics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

HIS 300 - Maritime History of the U.S. (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area D Social Science - upper division
Prerequisite(s): 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.)
GSMA

GMA 100 - Introduction to International Relations

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

Plus at least two of the following courses:

- Any GMA-designated course Units: 3

ECO 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

LAW 200 - Environmental Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

LAW 300 - International Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
IBL

Minor Advisor:

Dr. Dianne Meredith

Department of International Business and Logistics

Faculty

Professors:
Nipoli Kamdar, Chair

Associate Professors:
Khalid Bachkar

Assistant Professors:
Tony C. Lewis

Lecturers:
Matthew Dudman; Robert Neumann; Harry Portolos

The Department of International Business and Logistics offers the Bachelor of Science in Business Administration / International Business and Logistics.

The department also offers two minors to Cal Maritime students, Business Administration and Law.

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. Using a practical balance of theoretical knowledge and experiential learning, the degree program prepares students for general management positions in international business as well as careers in the more specialized fields of logistics, transportation management and port operations.

Bachelor of Science

Business Administration, B.S.

The mission of the program in Business Administration 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 a close involvement in international maritime affairs, unique educational platforms, vibrant industrial partnerships, and a diversity of faculty, staff and cadets.

Several worldwide trends in business have affected the content of the courses offered at the Cal Maritime. Among these are the growth of global markets, the use of low-cost offshore locations, and the need for businesses to restructure themselves to operate globally. To respond to these important changes we have developed specialized courses in International Business, Logistics, Supply Chain Management, and International Trade and Transportation to supplement traditional business courses in Accounting, Economics, Finance, Marketing, and Management. Recognizing that we have a comparative advantage in maritime matters, the unique curriculum is designed to ensure that students gain expertise on issues that affect broad segments of the maritime, logistics and transportation industries.

The Business Administration program leads to a Bachelor of Science degree. The program is accredited by the International Assembly for Collegiate Business Education (IACBE), located at 11374 Strang Line Road in Lenexa, Kansas, USA. www.iacbe.org

Business Administration Objectives

Students in the Business Administration program:

- will demonstrate knowledge of core business principles in the areas of Accounting, Business Law, Business Leadership, Economics, Ethics, Finance, Information Management Systems, International Business, Marketing, Management and Quantitative Research Techniques.
- will demonstrate teamwork and leadership skills.
- will demonstrate effective professional communication skills.
- will be able to use technological tools and demonstrate critical thinking and quantitative reasoning skills to make effective and consistent business decisions.
- will demonstrate knowledge of the global business environment and develop intercultural competencies necessary to conduct business in a global context.

Career Opportunities for Majors

The institution enjoys an excellent reputation among employers; graduates of the business program work primarily, but not exclusively, for global businesses and in the logistics and transportation industries. Recent employers of our graduates include Maersk, C.H. Robinson, General Dynamics NASSCO, GlobeRunners, Norwegian Cruise Lines, Divine Intermodal, Enterprise, APL, Tokio Marine Insurance and the Ports of Oakland, Seattle and Tacoma.

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 Modern Business

Class Hours: 3, Units: 3
General Education: Area E Lifelong Learning and Self Development
Prerequisite(s): None
A survey course to introduce the student to the various components and issues relating to modern business. Topics to be covered include: management, human resources, marketing, financial management, 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 today. Business career opportunities will also be addressed during each segment of the course.
IBL

COM 100 - Introduction to Computers

Class Hours: no class hours Lab Hours: 2 lab hours Units: 2
Prerequisite(s): None
Provides students with a basic understanding of word processing, presentation software, spreadsheet software and simple database operations.
SM

ECO 100 - Macroeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

- Foreign Language I Elective Units: 3

MTH 100 - College Algebra and Trigonometry

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 16.0

Spring (Freshman Year)

BUS 165 - Business Decision Analysis

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

ECO 101 - Microeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): MTH 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.
IBL

- Critical Thinking Elective Units: 3
- Physical Science Elective Units: 3
- Physical Science Lab Elective Units: 1
- Foreign Language II Elective Units: 3

Total 16.0

Fall (Sophomore Year)

BUS 100 - Accounting Principles I: Financial

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

EGL 110 - Speech Communication (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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 selfunderstanding, 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.
CC

- American Institutions Elective Units: 3

MGT 205 - Organizational Behavior and Labor Relations

Class Hours: 3, Units: 3
Prerequisite(s): None
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.
IBL

MTH 205 - Calculus for Business

Class Hours: 3, Units: 3
Prerequisite(s): MTH 100 with a C- or higher
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

Total 15.0

Spring (Sophomore Year)

BUS 101 - Accounting Principles II: Managerial

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 300 - International Business

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

- ELEC 8 - American Institutions Elective Units: 3

MGT 305 - Information Systems Management

Class Hours: 3, Units: 3
Prerequisite(s): COM 100 or Equivalent Course
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.
IBL

MPM 190 - TSGB/International Experience Preparation

Class Hours: 1, Units: 1
Prerequisite(s): None
A one-unit course offered in the spring term to Business students prior to participation in their Training Ship *Golden Bear* (TSGB) cruise or an international experience. As part of the course, students will complete all necessary pre-trip plans, including document collection, medical information training, language primers, and associated tasks. Students 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.
IBL

MTH 107 - Elementary Statistics

Class Hours: 3, Units: 3
Prerequisite(s): 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

Total 16.0

Summer Cruise or International Experience (Sophomore Year)

CRU 190 - Basic Safety Training

Class Hours: 12; Lab Hours: 12 Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

- CRU 999 - T.S.G.B./International Experience Participation Units: 0

MPM 195 - TSGB/International Experience Special Topics

Class Hours: 3, Units: 3
Prerequisite(s): MPM 190
This course is a special topics course to be taught to Business students participating in their Training Ship *Golden Bear* (TSGB) cruise or their international experience. Topics will be related to the specific destinations, and reflect the

expertise and interest of the instructor as well as the nature of the itinerary.
IBL

Total 3.0

Fall (Junior Year)

BUS 200 - Introduction to Marketing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 310 - Financial Management

Class Hours: 3, Units: 3
Prerequisite(s): BUS 101, MTH 107, 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.
IBL

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

LAW 100 - Business Law

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

MGT 340 - Global Logistics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 100
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.
IBL

MGT 410 - Quantitative Managerial Methods

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107
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.
IBL

Total 15.0

Spring (Junior Year)

- Life Science Elective Units: 3
- Major Elective Units: 3 ►►

LAW 300 - International Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
IBL

MGT 415 - Operations Management

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107
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.
IBL

Total 12.0

Summer Co-Op (Junior Year)

CEP 300 - Business Industry Co-Op I

Units: 3
Prerequisite(s): Permission of the Chair
This course allows the student to spend time in a domestic work environment that has been setup by the Maritime Policy and Management 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

Total 3.0

Fall (Senior Year)

BUS 405 - Leadership and Group Dynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

- Major Elective Units: 3 ►►

MGT 400 - Strategic Management

Class Hours: 3, Units: 3
Prerequisite(s): Senior Class Standing
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.
IBL

MGT 420 - Supply Chain Management

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107
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.
IBL

Total 12.0

Spring (Senior Year)

BUS 301 - International Business II - Country Research Analysis and Global Marketing

Class Hours: 3, Units: 3
Prerequisite(s): Senior Class Standing or Chair Approval
The course follows on material introduced in BUS 200 and BUS 300, and examines major examples of country research analysis, including the reports of the U. S. Commercial Service and major international institutions and organizations that perform country research analysis or contribute standard statistical indicators. Such entities include the Organization for Economic Cooperation and Development (OECD), the International Bank for Reconstruction and Development (IBRD), the International Monetary Fund (IMF), and private sector entities. The course explicates the problems of conducting market research in or about foreign markets, including a contrast of primary versus secondary research methods, and the subsequent transformation of the research into marketing strategy.
IBL

- Humanities Elective (Upper Division) Units: 3

HUM 400 - Ethics (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 12
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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. Students will volunteer for at least twelve hours of active engagement at one of many nonprofit organizations serving the community.
CC

MGT 440 - Logistics Case Analysis

Class Hours: 3, Units: 3
Prerequisite(s): MGT 340, MGT 420
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.
IBL

Total 12.0

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.

► Required Courses in Major (CGPA = 2.0 is required)

►► Elective Courses in Major (CGPA = 2.0 is required)

⇔ Special Topics course for TSGB/International Experience will be determined by the itinerary and instructor expertise

+ Required course when choosing TSGB participation

Minor

Business Administration Minor

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Business Administration, the student will have completed a minimum of 18* units from the following curriculum:

All students must complete the following courses**:

BUS 100 - Accounting Principles I: Financial

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 200 - Introduction to Marketing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

MTH 107 - Elementary Statistics

Class Hours: 3, Units: 3
Prerequisite(s): 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

Plus three of the following courses:

BUS 101 - Accounting Principles II: Managerial

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 300 - International Business

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 310 - Financial Management

Class Hours: 3, Units: 3
Prerequisite(s): BUS 101, MTH 107, 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.
IBL

ECO 101 - Microeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): MTH 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.
IBL

LAW 100 - Business Law

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

MGT 205 - Organizational Behavior and Labor Relations

Class Hours: 3, Units: 3
Prerequisite(s): None
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.
IBL

MGT 340 - Global Logistics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 100
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.
IBL

Note:

* 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." If any Business Administration minor course is required by the student's major, the student must replace that course requirement with an elective course of the same number of credits.

** Course substitutions to the above requirements are to be considered by the minor advisor and department chair only upon written request from the student and documentation of comparable experience.

Minor Advisor:

Dr. Tony Lewis

Law Minor

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Law, the student will have completed a minimum of 15* units from the following curriculum:

All students must complete the following courses**:

LAW 100 - Business Law

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

LAW 200 - Environmental Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

LAW 300 - International Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
IBL

LAW 315 - Admiralty Law

Class Hours: 2, Units: 2
Prerequisite(s): 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.
IBL

Plus 4* units from the following courses:

MGT 315 - Internship

Units: 2-3
Prerequisite(s): 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.
IBL

LAW 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

Note:

* 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." If any Law minor course is required by the student's major, the student must replace that course requirement with an elective course of the same number of credits.

** Course substitutions to the above requirements are to be considered by the minor advisor and department chair only upon written request from the student and documentation of comparable experience.

*** LAW 395 will offer rotating topics and can be completed up to three times for credit.

Minor Advisor:

Mr. Matthew Dudman

Library

Faculty and Staff

Library Dean:
Michele Van Hoeck

Faculty Librarians:
Margot Hanson; Amber Janssen

Library Technologist:
Mark Stackpole

Library Services Specialists:
Jennifer Haupt; Larry Stevens

Cal Maritime's Library facilitates student success by offering instruction and collections that address Cal Maritime's unique curriculum and develop savvy information users and life-long learners.

The Library provides a variety of spaces for quiet study, collaborative group work, research, reflection, and productivity. Its building, with views of the Carquinez Strait and San Pablo Bay, offers an inviting environment. It is equipped with many tools to facilitate research and study, including desktop and laptop computers, charging stations, wireless printing, cameras, mobile white boards, and calculators.

Instruction Program

The Library's instruction program plays a key role in helping students achieve one of the Western Association of Schools and Colleges' five core competencies: information literacy. This program includes credit-based courses, curriculum-integrated instruction, online tutorials and research guides, and one-on-one consultations. Instruction librarians collaborate with other faculty to address specific information literacy learning outcomes throughout the curriculum of each major and department.

Information Resources

The library's website, http://library.csum.edu, is the portal for discovering the resources available to the campus community. The library's physical collection consists of approximately 50,000 books and media items, and is particularly strong in maritime topics. The library's online subscriptions include over 50 research databases with access to millions of full-text articles and eBooks covering the general education and discipline-specific curriculum and research interests of students and faculty.

Librarians recommend and organize resources via course and subject research guides online, and make course materials directly available for students through the campus' online course-management software.

To develop a collection relevant to our users, the library welcomes acquisition requests from students, faculty, and staff.

Interlibrary Borrowing

Students, faculty, and staff may borrow books and media from a shared collection of over 29 million titles via CSU+, a resource sharing service made up of the 23 California State University libraries. CSU+ allows users to easily and independently discover and request materials not available at Cal Maritime. These materials are usually delivered in two to four business days. For material not available within our CSU network, the library facilitates requests via the national WorldCat service.

Research Assistance

Students and faculty have many options to get help with their research. Librarians and staff are available in-person on a drop-in or appointment basis, or by email or phone. Students may also access many instructional and research guides via the library's website.

Campus History Collection

The library preserves the heritage of the California State University Maritime Academy through documents, photographs, and artifacts in its Campus History Collection (CHC), in both print and digital form. This collection is available by appointment for research and display.

Department of Marine Transportation

Faculty

Professors:
Steven D. Browne (Chair); Peter J. Hayes; Tuuli Messer-Bookman; Robert Stewart; Daniel Weinstock

Associate Professor:
Scott M. Powell

Maritime Vocational Instructor IV:
Britt T. Elliott; Peter G. McGroarty; William E. Schmid

Maritime Vocational Instructor III:
Tom Allen

Maritime Vocational Instructor II:
Tamara Burback; Scott Saarheim

Maritime Vocational Lecturers:
Robert Brown; Valerie Holl McGowan; Destiny Knudson; Fred Reiman; Monique Watanabe; James West

Lecturer:
Douglas O'Brien

Professor Emeriti:
Brian Law; Paul Leyda; David Sears

The Marine Transportation degree program includes significant academic breadth and extensive technical expertise. Through experiences in the classroom, laboratories, simulators, and aboard the Training Ship GOLDEN BEAR 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 to be an effective leader
- provide opportunities for obtaining various additional maritime professional certifications

Bachelor of Science

Marine Transportation with Third Mate's/OICNW License, B.S.

The student choosing a career as a licensed deck officer (mate) or a shoreside maritime manager will typically major in Marine Transportation. This major provides a breadth of maritime industry training as 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 maritime sectors like vessel operations, ship's agency, marine insurance, stevedoring, charter brokering, and federal employment, as well as shipboard employment opportunities.

The MT curriculum includes three 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 MT program also requires satisfactory completion of a qualifying examination administered by the U.S. Coast Guard to obtain a Third Mate, Unlimited, Any Ocean license, which is essential to gaining employment as a licensed deck officer on a commercial vessel.

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

An elevation in rank is dependent upon the graduate's ability to accumulate sea time, typically one year of 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 cruise addresses the skills required of the 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 of the 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, 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. For more information, the student should see the special prerequisites listed under the CRU 200 course description.

CRU 300 Sea Training III

This cruise addresses the skills required of the 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 a full mission simulator afterward.

Marine Transportation Major Curriculum

(Subject to Change)

TOTAL UNITS: 159

Third Mate's/OICNW 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)

COM 100 - Introduction to Computers

Class Hours: no class hours Lab Hours: 2 lab hours Units: 2
Prerequisite(s): None
Provides students with a basic understanding of word processing, presentation software, spreadsheet software and simple database operations.
SM

DL 105 - Marine Survival

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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 higher 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.
MT

DL 105L - Marine Survival Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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.
MT | Graded: Credit/No Credit

DL 105X - USCG Lifeboatman'S Exam

Units: 0
MT | Graded: Credit/No Credit

DL 109 - Industrial Equipment and Safety

Lab Hours: 2, Units: 1
Prerequisite(s): 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.
MT

DL 115 - Marlinspike

Lab Hours: 3, Units: 1
Prerequisite(s): None
Besides acquiring a thorough working knowledge of rope-work, rigging and safety procedures, students will learn knots.
MT

MTH 100 - College Algebra and Trigonometry

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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

NAU 103 - Introduction to Marine Transportation

Class Hours: 3, Units: 3
Prerequisite(s): 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 Cal Maritime 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 104 - VPDSD (Vessel Personnel Designated with Security Duties)

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): None
Required for seafarers, VPDSD (Vessel Personnel Designated with Security Duties), a mid-level security course, addresses knowledge needed for mariners with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and Section A-VI/6 and Table -VI/6-2 of the STCW Code, as amended.
MT

NAU 105 - Ship Structure

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): None
A survey course of ship design and construction, emphasizing nomenclature and structural components, hull strength and vessel performance characteristics.
MT

NAU 106 - Merchant Mariner Fundamentals

Class Hours: 2, Units: 2
Prerequisite(s): None
This course presents to the new Marine Transportation students an overview of relationships between the U.S. Merchant Marine, the U.S. Navy, and Military Sealift Command; IMO and SOLAS conventions (e.g. ISM, ISPS). This survey course covers several specific subject areas of concern to the professional mariner.
MT

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not

take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 18.0

Spring (Freshman Year)

CHE 105 - Introductory Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 105L
This course is an introduction to fundamental chemical principles and scientific thought intended for nonengineering majors. Topics covered include scientific method, measurement, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, nomenclature of inorganic and organic compounds, heat and energy, gases, solutions, radioactivity and chemical safety. This course does not satisfy the degree requirement for Mechanical Engineering, Marine Engineering Technology or Facilities Engineering Technology.
SM

CHE 105L - Introductory Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): CHE 105
As a co-requisite, this course is designed to expand upon as well as reinforce chemical concepts introduced in CHE 105. It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, gas stoichiometry, calorimetry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

DL 100 - Small Craft Operations

Lab Hours: 3, Units: 1
Prerequisite(s): DL 105, DL 105L, and must pass PE 101 or PE 102
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.
MT

DL 110 - Ship Operations I

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

DL 120 - Cargo Operations

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT

ECO 100 - Macroeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

- ELEC 31 - Social Science Elective (Lower Division) Units: 3

NAU 110 - Seamanship

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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

Total 19.0

Summer Cruise (Freshman Year)

CRU 100 - Sea Training I (Deck)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 100, DL 105, DL 105L, DL 105X, DL 109, DL 110, DL 115, DL 120, NAU 105, NAU 110
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 topics.
MT | Graded: Credit/No Credit

Total 8.0

Fall (Sophomore Year)

DL 111 - Ship Operations II

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

DL 325 - RADAR/ARPA

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): CRU 100, NAU 102, NAU 102L (may be taken concurrently), NAU 305 (may be taken concurrently), MTH 100, Sophomore class standing
Co-requisite(s): 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

DL 325L - RADAR/ARPA Lab

Lab Hours: 4, Units: 2
STCW Requirement: ♦
Co-requisite(s): DL 325
MT | Graded: Credit/No Credit

- ELEC 20 - Critical Thinking Elective Units: 3

NAU 102 - Navigation I

Class Hours: 3, Units: 4
STCW Requirement: ♦
Prerequisite(s): MTH 100
Co-requisite(s): 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, Units: 0
Prerequisite(s): Same as NAU 102
Co-requisite(s): NAU 102
MT

NAU 305 - Rules of the Road

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): Prerequisites: CRU 100, 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

PHY 100 - Physics I

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): MTH 100
Co-requisite(s): 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, Units: 1
General Education: Area B3 Laboratory Activity
Prerequisite(s): MTH 100
Co-requisite(s): 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

Total 14.0 OR 18.0

Spring (Sophomore Year)

DL 240 - Global Maritime Distress Safety System (GMDSS)

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): MTH 100, PHY 100, PHY 100L
Co-requisite(s): DL 240L
A comprehensive STCW 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.
MT | Note: Additional fee required

DL 240L - Global Maritime Distress Safety System (GMDSS) Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Same as for DL 240
Co-requisite(s): DL 240
A comprehensive STCW 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 325 - RADAR/ARPA

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): CRU 100, NAU 102, NAU 102L (may be taken concurrently), NAU 305 (may be taken concurrently), MTH 100, Sophomore class standing
Co-requisite(s): 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

DL 325L - RADAR/ARPA Lab

Lab Hours: 4, Units: 2
STCW Requirement: ♦
Co-requisite(s): DL 325
MT | Graded: Credit/No Credit

- ELEC 9 - American Institutions Elective Units: 3

NAU 205 - Ship Stability

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): MTH 100, NAU 105, PHY 100 (may be taken concurrently), PHY 100L (may be taken concurrently)
e 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 310 - Electricity and Electronics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 100, PHY 100, PHY 100L
Co-requisite(s): 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, Units: 1
Prerequisite(s): Same as NAU 310
Co-requisite(s): 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

Total 13.0 OR 17.0

Summer Cruise (Sophomore Year)

CRU 200 - Sea Training II (Deck)

Units: 5
Prerequisite(s): CRU 100, DL 111, DL 240, DL 240L, DL 325, DL 325L, EGL 100, NAU 102, NAU 102L, NAU 205 and NAU 305
Co-requisite(s): CRU 200L
This course is the student's second at-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 a minimum period of time, as specified in Cal Maritime's program approval letter, to meet Coast Guard sea service requirements. 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 (Deck)

Units: 3
Prerequisite(s): Same as for CRU 200
Co-requisite(s): CRU 200
This course exposes students to the type of observations and tasks required by STCW. As a basis for grading this course, the student completes a comprehensive check list that parallels the STCW standards for which they will be certified on CRU 300. This check list parallels STCW competencies but does not provide certification or equivalency.
MT | Graded: Credit/No Credit

Total 8.0

Fall (Junior Year)

DL 301 - Navigation Piloting Lab

Lab Hours: 3, Units: 1
Prerequisite(s): CRU 200, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Practical instruction in terrestrial and electronic navigational techniques aboard academy power-driven vessels while underway in San Francisco Bay in actual piloting situations. Voyage planning and navigation accuracy cross-checking are emphasized in real-time transit.
MT

DL 310 - Marine Supervisory Lab

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT

EGL 110 - Speech Communication (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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 selfunderstanding, 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.
CC

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

- ELEC 21 - Humanities Elective (Lower Division) Units: 3 [1&2]

FF 200 - Basic/Advanced Marine Firefighting

Units: 0
STCW Requirement: ♦
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning.
XL | Graded: Credit/No Credit

NAU 302 - Advanced Navigation

Class Hours: 2, Units: 3
Prerequisite(s): NAU 102, NAU 102L
Co-requisite(s): 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, Units: 0
Prerequisite(s): Same as NAU 302
Co-requisite(s): NAU 302
MT

NAU 320 - Tank Vessel Operations

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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 330 - Meteorology

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 2
STCW Requirement: ♦
Prerequisite(s): DL 325, DL 325L, MTH 100, NAU 102, NAU 102L, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): Same as for NAU 335
Co-requisite(s): 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

Total 16.0 OR 17.0

Spring (Junior Year)

DL 301 - Navigation Piloting Lab

Lab Hours: 3, Units: 1
Prerequisite(s): CRU 200, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Practical instruction in terrestrial and electronic navigational techniques aboard academy power-driven vessels while underway in San Francisco Bay in actual piloting situations. Voyage planning and navigation accuracy cross-checking are emphasized in real-time transit.
MT

DL 311 - Marine Management Lab

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT

DL 320 - Introduction to Bridge Simulation

Class Hours: 2, Lab Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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

- ELEC 21 - Humanities Elective (Lower Division) Units: 3 [3&4]

FF 200 - Basic/Advanced Marine Firefighting

Units: 0
STCW Requirement: ♦
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning.
XL | Graded: Credit/No Credit

NAU 120 - Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): 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.
MT

NAU 202 - Celestial Navigation

Class Hours: 3, Units: 4
Prerequisite(s): NAU 102, NAU 102L
Co-requisite(s): 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, Units: 0
Prerequisite(s): Same as NAU 202
Co-requisite(s): NAU 202
MT

NAU 325 - Cargo Vessel Operations

Class Hours: 3, Units: 3
STCW Requirement: ♦

Prerequisite(s): 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 335 - Electronic Chart Display and Information Systems (ECDIS)

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): DL 325, DL 325L, MTH 100, NAU 102, NAU 102L, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): Same as for NAU 335
Co-requisite(s): 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

Total 16.0 OR 17.0

Summer Cruise (Junior Year)

CRU 300 - Sea Training III (Deck)

Units: 8
STCW Requirement: ♦
Prerequisite(s): 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
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 STCW selected topics.
MT | Graded: Credit/No Credit

Total 8.0

Fall (Senior Year)

DL 305 - Tug and Barge

Lab Hours: 3, Units: 1
Prerequisite(s): CRU 200 , DL 100 , DL 240, DL 325, NAU 120 and NAU 305
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.
MT

DL 405 - Shipboard Medical

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Senior class standing
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): Senior class standing
Co-requisite(s): DL 405
MT

DL 410 - Ship Handling

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 200, CRU 200L
Practical experience in ship handling 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.
MT

DL 420 - Watchstanding Simulation

Class Hours: 2, Lab Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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 OICNW level.
MT | Graded: Credit/No Credit

- ELEC 8 - American Institutions Elective Units: 3
- ELEC 22 - Humanities Elective (Upper Division) Units: 3

HUM 400 - Ethics (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 12
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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. Students will volunteer for at least twelve hours of active engagement at one of many nonprofit organizations serving the community.
CC

NAU 108 - Operational Command at Sea

Class Hours: 2, Units: 2
Prerequisite(s): None
Introduction to controlling the operation of the ship and care for persons on board at the operational level. Working knowledge of shipboard personnel management and training. A knowledge of related international maritime conventions and recommendations, and national legislation. Applying task and workload management. Effective knowledge of resource management and decisionmaking techniques.
MT

NAU 410 - License Seminar

Class Hours: 1, Units: 2
Prerequisite(s): Senior class standing, NAU 202, NAU 202L, NAU 205, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently), NAU 320, NAU 325
Co-requisite(s): NAU 410L
This comprehensive course is designed to prepare candidates for the USCG OICNW exams. Unlike any other course, it requires the candidate to synthesize and apply myriad professional subjects learned in previous subject-specific courses, and perform with both precision and accuracy under time pressure. New topics and material pertinent only to USCG testing will be covered, advanced material will be reviewed in the context of USCG requirements (which differ from practical requirements), and theories and methods of knowledge retention and test-taking strategies will be explored. Rules of the Road, navigation, seamanship, deck safety, environmental protection, cargo, watchstanding and other professional subjects are covered as they pertain specifically to USCG licensing. Course subject matter and strategy necessarily change as the USCG exams continually evolve.
MT

NAU 410L - License Seminar Lab

Lab Hours: 2, Units: 0
Prerequisite(s): Same as NAU 410: Senior class standing, NAU 202, NAU 202L, NAU 205, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently), NAU 320, NAU 325
Co-requisite(s): NAU 410
MT

Total 16.0 OR 18.0

Spring (Senior Year)

DL 125 - Graphics

Lab Hours: 2, Units: 1
Prerequisite(s): 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 305 - Tug and Barge

Lab Hours: 3, Units: 1
Prerequisite(s): CRU 200 , DL 100 , DL 240, DL 325, NAU 120 and NAU 305
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.
MT

DL 405 - Shipboard Medical

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Senior class standing
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): Senior class standing
Co-requisite(s): DL 405
MT

DL 410 - Ship Handling

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 200, CRU 200L
Practical experience in ship handling 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.
MT

- ELEC 22 - Humanities Elective (Upper Division) Units: 3

LAW 315 - Admiralty Law

Class Hours: 2, Units: 2
Prerequisite(s): 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.
IBL

MGT 310 - Port and Terminal Management and Operations

Class Hours: 3, Units: 3
Prerequisite(s): ECO 100, MGT 100 or MGT 105 or NAU 108
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.
IBL

NAU 415 - Transportation Security

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): Prerequisite 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 industryrecognized security certificates.
MT

Take This or Both of These

NAU 400 - Advanced Maritime Topics

Class Hours: 3, Units: 3
Prerequisite(s): CRU 200, CRU 200L, DL 410 (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

or

NAU 430 - Liquefied Gas Cargos

Class Hours: 2, Units: 2
Prerequisite(s): Prerequisite for MT Students: NAU 320 Prerequisite for MET & ME Students: CEP 350, ENG 430
Co-requisite(s): NAU 430L
A study of the ocean transportation of liquefied gas cargos, which includes liquefied natural gas (LNG) and liquefied 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 - Liquefied Gas Cargos Lab

Lab Hours: 2, Units: 1
Prerequisite(s): Prerequisite for MT Students: NAU 320 Prerequisite for MET & ME Students: CRU 350, ENG 430
Co-requisite(s): 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 liquefied gas carriers.
MT | Graded: Credit/No Credit

Total 16.0 OR 18.0

Total Units: 159

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.

[1&2] Divisions 1&2 cadets take course

[3&4] Divisions 3&4 cadets take course

♦ STCW Courses (Must receive a "C-" or higher, or "CR")

► Courses in Major (CGPA = 2.0 is required)

NOTE: Course content/curriculum may be modified to meet STCW or other regulatory requirements.

Department of Mechanical Engineering

Faculty

Professors:
Nader Bagheri (Chair); Jim Gutierrez; Michael Holden; Antony Hasson-Snell; Thomas R. Nordenholz

Assistant Professors:
Tomas Oppenheim; William Tsai

Professor Emeritus:
Stephen Pronchick

The mission of the Mechanical Engineering program is to produce entry-level professionals capable of applying their knowledge of science and engineering to 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.

Bachelor of Science

Mechanical Engineering with Third Assistant Engineer's License option, B.S.

Mechanical Engineering (ME) Major

The Mechanical Engineering curriculum provides a sound foundation for the practice of engineering through instruction in sciences and mathematics, computer applications, design, laboratory experiences, communication, the humanities, and the social sciences. The curriculum requires a core set of mechanical engineering courses in each of the two stems: energy design and mechanical design stems. A required two-course capstone design experience starts in the fall of the senior year. Computer applications and design experiences are integrated into several required courses and stem-specific electives.

Excellent facilities in circuits, instrumentation and measurements, controls, electromechanical machinery, 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 department's web page https://www.csum.edu/web/academics/me/assessment for a description of its assessment system. The assessment system includes a Program Educational Objectives (PEO) process and a Student Outcomes (SO) process.

Program Educational Objectives (PEO)

The PEO process includes assessment tools such as industry advisory board assessment, alumni survey assessment, employer survey assessment, and Western Association of Schools and Colleges (WASC) assessment.

Mechanical Engineering graduates of the California State University 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 of 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 Cal Maritime 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
E. personally assume and actively encourage peers to uphold the professional, ethical, social and environmental responsibilities of their profession

Student Outcomes (SO)

The SO process includes 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's educational mission and constituency needs are met. The results are further used to develop and improve the program.

Mechanical Engineering graduates will have:

1. an ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create collaborative and inclusive environment, establish goals, plan tasks and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data and use engineering judgement to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Options Within the Mechanical Engineering Program

The ME program at Cal Maritime has two options that students may follow to obtain their degree: a license option and a non-license option. Both options result in a Bachelor of Science degree in Mechanical Engineering, and provide students with strong, hands-on experiences, along with an international experience to complement their engineering education. Both options have the same core ME curriculum, and were defined to maintain the mission of Cal Maritime 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.

License Option

The ME license option is designed for students who wish to use their engineering degree as a licensed marine engineer. The curriculum consists of the core ME courses, 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 Training Ship *Golden Bear*, and one aboard a commercial vessel.

In addition, students in the license option must pass a qualifying examination, administered by the U.S. Coast Guard, to obtain a Third Assistant Engineer, Steam, Motor and Gas Turbine Vessels, Unlimited Horsepower license.

This is clearly a very demanding option. Nonetheless, many of the ME students at Cal Maritime choose this option. For these students, sailing is the reason they choose to study at Cal Maritime, and this option serves them well.

Mechanical Engineering Major Third Assistant Engineer's License Option Curriculum

(Subject to Change)

TOTAL UNITS: 179

Third Assistant Engineer's/OICEW (Officer In Charge of Engineering Watch) License required for graduation.

Third Assistant Engineer's License Courses are **bolded**.

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 110 - General Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 110L
This course is an in-depth introduction to fundamental chemical principles and scientific thought. Topics covered include scientific method, scientific calculations, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, thermochemistry, gases, solutions, and radioactivity.
SM

CHE 110L - General Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): CHE 110
As a co-requisite, this course is designed to expand upon and reinforce chemical concepts introduced in CHE 110 . It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, error analysis, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, acid/base titration, gas stoichiometry, thermochemistry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

- ELEC 21 - Humanities Elective (Lower Div.) Units: 3 [1&2]

ENG 110 - Introduction to Engineering and Technology

Class Hours: 1, Units: 1
Prerequisite(s): 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

EGL 120 - Technical Communication

Class Hours: 3 Units: 3
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): None
Focuses on the communication aspects (oral, visual, graphical and written) germane to the engineering profession.
(Formerly ENG 120) CC

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

MTH 210 - Calculus I

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.

Prerequisite(s): MTH 100 or equivalent with a C- or higher
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral.
SM

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 17.0 OR 19.0

Spring (Freshman Year)

DL 105 - Marine Survival

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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 higher 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.
MT

DL 105L - Marine Survival Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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.
MT | Graded: Credit/No Credit

DL 105X - USCG Lifeboatman'S Exam

Units: 0
MT | Graded: Credit/No Credit

- ELEC 20 - Critical Thinking Elective Units: 3
- ELEC 21 - Humanities Elective (Lower Div.) Units: 3 [1&2]

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

MTH 211 - Calculus II

Class Hours: 4, Units: 4
Prerequisite(s): MTH 210 with a C- or higher
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

NAU 104 - VPDSD (Vessel Personnel Designated with Security Duties)

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): None
Required for seafarers, VPDSD (Vessel Personnel Designated with Security Duties), a mid-level security course, addresses knowledge needed for mariners with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and Section A-VI/6 and Table -VI/6-2 of the STCW Code, as amended.
MT

PHY 200 - Engineering Physics I

Class Hours: 3, Units: 3
Prerequisite(s): MTH 210
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 210
Co-requisite(s): PHY 200
Laboratory physics course designed to enhance conceptual learning of physics by adding a hands-onlearning 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

Total 19.0 OR 17.0

Summer Cruise (Freshman Year)

CRU 150 - Sea Training I (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 105, DL 105L, DL 105X, EPO 110, EPO 125
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

EPO 220 - Diesel Engineering I

Class Hours: 2, Units: 2
Prerequisite(s): 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

Total 10.0

Fall (Sophomore Year)

ENG 210 - Engineering Computer Programming

Class Hours: 2, Units: 2
Prerequisite(s): 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

EPO 210 - Plant Operations II

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 215 - Manufacturing Processes I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

ME 220 - Computer Aided Engineering

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
Prerequisite(s): CHE 110
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, Units: 3
Prerequisite(s): 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

MTH 212 - Calculus III

Class Hours: 4, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
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

PHY 205 - Engineering Physics II

Class Hours: 4, Units: 4
Prerequisite(s): 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

Total 20.0

Spring (Sophomore Year)

ENG 250 - Electrical Circuits and Electronics

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): PHY 205
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): PHY 205
Co-requisite(s): 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

- **EPO 214 - Boilers Units: 3 ♦**
- **EPO 230 - Steam Plant System Operations Units: 1 ♦**

ME 240 - Engineering Thermodynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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

MTH 215 - Differential Equations

Class Hours: 4, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
Introduces first-order differential equations and secondorder 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

Total 21.0

Summer Cruise (Sophomore Year)

CRU 250 - Sea Training II (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): 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

Total 8.0

Fall (Junior Year)

ENG 300 - Engineering Numerical Modeling & Analysis

Class Hours: 3, Units: 3
Prerequisite(s): ME 220, ME 332
Applications of the Finite Element Method to engineering and solid mechanics problems will be covered using a commercially available finite element code. Topics include solid modeling of classical structural and heat transfer problems such as plane stress, plane strain, asymmetry, general 3-D solid mechanics problems, geometric non-linearity, material non-linearity, parametric design studies, steady-state and transient heat transfer, and multi-physics problems. Additionally, topics in numerical integration and numerical solutions to a system of differential equations will be covered.
ME

- **EPO 235 - Steam Plant Watch Team Mgmt Units 1 ♦**
- **EPO 312 - Turbines Units: 3 ♦**
- **EPO 322 - Diesel Engr II/Simulator Units: 1**
- **EPO 322L - Diesel Engr II/Simulator Lab Units: 1 ♦**
- **FF 200 - Basic/Adv Marine Firefighting Units: 0 ♦**[1&2]

ME 340 - Engineering Fluid Mechanics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 212, ME 232
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 350 - Electromechanical Machinery

Class Hours: 3, Units: 3
Prerequisite(s): ENG 250, ENG 250L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ENG 250, ENG 250L
Co-requisite(s): ME 350
Supports instruction and theory of ME 350 using handson motor operation and analysis.
ME

ME 360 - Instrumentation and Measurement Systems

Class Hours: 2, Units: 2
Prerequisite(s): ENG 210, ENG 250, ENG 250L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ENG 210, ENG 250, ENG 250L
Co-requisite(s): 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

Total 19.0

Spring (Junior Year)

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

EPO 310 - Plant Operations III

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET

FF 200 - Basic/Advanced Marine Firefighting

Units: 0
STCW Requirement: ♦
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning.
XL | Graded: Credit/No Credit

ME 339 - Material/Mechanical Lab

Class Hours: 1, Units: 2
Prerequisite(s): ME 332, ME 360
Co-requisite(s): 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 344 - Heat Transfer

Class Hours: 3, Units: 3
Prerequisite(s): 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 392 - Mechanical Design

Class Hours: 3, Units: 3
Prerequisite(s): 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 460 - Automatic Feedback Control

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): MTH 215, ME 360, ME 360L
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 215, ME 360, ME 360L
Co-requisite(s): 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, Units: 3
Prerequisite(s): ME 332, ME 340, ME 360
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

- STEM 1 - Stem Course (See below) Units: 3 ►

Total 19.0

Summer Cruise (Junior Year)

CRU 350 - Sea Training III (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): CRU 250 or CRU 275, EPO 310, EPO 322, EPO 322L, ET 250 or ENG 250, ET 250L or ENG 250L, FF 200, EPO 235
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

Total 8.0

Fall (Senior Year)

- Elec 8 - American Institutions Electives Units: 3
- ELEC 31 - Social Science Elective (Lower Div.) Units: 3
- **ENG 430 - Naval Architecture Units: 3 ♦►**

ME 349 - Fluid/Thermal Lab

Class Hours: 1, Units: 2
Prerequisite(s): ME 344, ME 360
Co-requisite(s): 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 394 - Fluid/Thermal Design

Class Hours: 3, Units: 3
Prerequisite(s): 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 492 - Project Design I

Class Hours: 3, Units: 3
Prerequisite(s): ME 490
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

- STEM 2 - Stem Course (See below) Units: 3 ►

Total 20.0

Spring (Senior Year)

- ELEC 9 - American Institutions Elective Units: 3
- ELEC 22 - Humanities Elective (Upper Div.) Units: 3
- **EPO 217 - Shipboard Medical Units: 1 ♦**

HUM 310 - Engineering Ethics

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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

ME 429 - Manufacturing Processes Lab

Class Hours: 1, Lab Hours: 2 Units: 2
Prerequisite(s): EPO 215, ME 220
Co-requisite(s): 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

ME 494 - Project Design II

Class Hours: 2, Lab Hours: 2, Units: 3
Prerequisite(s): ME 492
In this course students will perform tasks to complete the preliminary designs initiated in ME 492 - Project Design I, 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

- STEM 3 - Stem Course (See below) Units: 3 ►

Total 18.0

Stem Courses

Select stem courses from either the Energy Design or Mechanical Design list below:

Energy Design Stem

1 - ME 342 - Refrigeration and Air Conditioning ►

OR

1 - ME 440 - Advanced Fluid Mechanics and Thermodynamics ►
2 - ME 442 - Heating, Ventilation, and Air Conditioning Design ►
3 - ME 444 - Energy Systems Design ►

Mechanical Design Stem

1 - ME 436 - Mechatronic System Design ►
2 - ME 430 - Mechanical Vibrations ►
3 - ME 432 - Machinery Design ►

Total Units: 179

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.

[1&2] Divisions 1&2 cadets take course

[3&4] Divisions 3&4 cadets take course

► Courses in Major (CGPA = 2.0 is required)

♦ STCW Courses (Must receive a "C-" or higher, or "CR")

Mechanical Engineering, B.S.

Mechanical Engineering (ME) Major

The Mechanical Engineering curriculum provides a sound foundation for the practice of engineering through instruction in sciences and mathematics, computer applications, design, laboratory experiences, communication, the humanities, and the social sciences. The curriculum requires a core set of mechanical engineering courses in each of the two stems: energy design and mechanical design stems. A required two-course capstone design experience starts in the fall of the senior year. Computer applications and design experiences are integrated into several required courses and stem-specific electives.

Excellent facilities in circuits, instrumentation and measurements, controls, electromechanical machinery, 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 department's web page https://www.csum.edu/web/academics/me/assessment for a description of its assessment system. The assessment system includes a Program Educational Objectives (PEO) process and a Student Outcomes (SO) process.

Program Educational Objectives (PEO)

The PEO process includes assessment tools such as industry advisory board assessment, alumni survey assessment, employer survey assessment, and Western Association of Schools and Colleges (WASC) assessment.

Mechanical Engineering graduates of the California State University 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 of 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 Cal Maritime 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
E. personally assume and actively encourage peers to uphold the professional, ethical, social and environmental responsibilities of their profession

Student Outcomes (SO)

The SO process includes 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's educational mission and constituency needs are met. The results are further used to develop and improve the program.

Mechanical Engineering graduates will have:

1. an ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create collaborative and inclusive environment, establish goals, plan tasks and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data and use engineering judgement to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Options Within the Mechanical Engineering Program

The ME program at Cal Maritime has two options that students may follow to obtain their degree: a license option and a non-license option. Both options result in a Bachelor of Science degree in Mechanical Engineering, and provide students with strong, hands-on experiences, along with an international experience to complement their engineering education. Both options have the same core ME curriculum, and were defined to maintain the mission of Cal Maritime 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.

Non-License Option

The ME non-license option is intended for students who are not specifically interested in pursuing a career in the merchant marine as a licensed engineer. Students take the core ME 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 non-license option.

Mechanical Engineering Major ME Non-License Option Curriculum

(Subject to Change)

TOTAL UNITS: 153

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 110 - General Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 110L
This course is an in-depth introduction to fundamental chemical principles and scientific thought. Topics covered include scientific method, scientific calculations, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, thermochemistry, gases, solutions, and radioactivity.
SM

CHE 110L - General Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): CHE 110
As a co-requisite, this course is designed to expand upon and reinforce chemical concepts introduced in CHE 110 . It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, error analysis, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, acid/base titration, gas stoichiometry, thermochemistry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

- ELEC 21 - Humanities Elective (Lower Division) Units: 3 [1&2]

ENG 110 - Introduction to Engineering and Technology

Class Hours: 1, Units: 1
Prerequisite(s): 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

EGL 120 - Technical Communication

Class Hours: 3 Units: 3
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): None
Focuses on the communication aspects (oral, visual, graphical and written) germane to the engineering profession.
(Formerly ENG 120) CC

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

MTH 210 - Calculus I

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): MTH 100 or equivalent with a C- or higher
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral.
SM

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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

Total 17.0 OR 19.0

Spring (Freshman Year)

DL 105 - Marine Survival

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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 higher 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.
MT

DL 105L - Marine Survival Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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.
MT | Graded: Credit/No Credit

DL 105X - USCG Lifeboatman'S Exam

Units: 0
MT | Graded: Credit/No Credit

- ELEC 20 - Critical Thinking Elective Units: 3
- ELEC 21 - Humanities Elective (Lower Division) Units: 3 [3&4]

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

MTH 211 - Calculus II

Class Hours: 4, Units: 4
Prerequisite(s): MTH 210 with a C- or higher
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

NAU 104 - VPDSD (Vessel Personnel Designated with Security Duties)

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): None
Required for seafarers, VPDSD (Vessel Personnel Designated with Security Duties), a mid-level security course, addresses knowledge needed for mariners with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and Section A-VI/6 and Table -VI/6-2 of the STCW Code, as amended.
MT

PHY 200 - Engineering Physics I

Class Hours: 3, Units: 3
Prerequisite(s): MTH 210
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 210
Co-requisite(s): PHY 200
Laboratory physics course designed to enhance conceptual learning of physics by adding a hands-onlearning 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

Total 19.0 OR 17.0

Summer Cruise (Freshman Year)

CRU 150 - Sea Training I (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 105, DL 105L, DL 105X, EPO 110, EPO 125
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

EPO 220 - Diesel Engineering I

Class Hours: 2, Units: 2
Prerequisite(s): 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

Total 10.0

Fall (Sophomore Year)

ENG 210 - Engineering Computer Programming

Class Hours: 2, Units: 2
Prerequisite(s): 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

EPO 215 - Manufacturing Processes I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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

ME 220 - Computer Aided Engineering

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
Prerequisite(s): CHE 110
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, Units: 3
Prerequisite(s): 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

MTH 212 - Calculus III

Class Hours: 4, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
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

PHY 205 - Engineering Physics II

Class Hours: 4, Units: 4
Prerequisite(s): 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

Total 19.0

Spring (Sophomore Year)

ENG 250 - Electrical Circuits and Electronics

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): PHY 205
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): PHY 205
Co-requisite(s): 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

ME 240 - Engineering Thermodynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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

MTH 215 - Differential Equations

Class Hours: 4, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
Introduces first-order differential equations and secondorder 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

Total 17.0

Summer Co-Op (Sophomore Year)

CEP 250 - ME Co-Op I

Units: 3
Prerequisite(s): 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

Total 3.0

Fall (Junior Year)

ENG 300 - Engineering Numerical Modeling & Analysis

Class Hours: 3, Units: 3
Prerequisite(s): ME 220, ME 332
Applications of the Finite Element Method to engineering and solid mechanics problems will be covered using a commercially available finite element code. Topics include solid modeling of classical structural and heat transfer problems such as plane stress, plane strain, asymmetry, general 3-D solid mechanics problems, geometric non-linearity, material non-linearity, parametric design studies, steady-state and transient heat transfer, and multi-physics problems. Additionally, topics in numerical integration and numerical solutions to a system of differential equations will be covered.
ME

ME 340 - Engineering Fluid Mechanics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 212, ME 232
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 350 - Electromechanical Machinery

Class Hours: 3, Units: 3
Prerequisite(s): ENG 250, ENG 250L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ENG 250, ENG 250L
Co-requisite(s): ME 350
Supports instruction and theory of ME 350 using handson motor operation and analysis.
ME

ME 360 - Instrumentation and Measurement Systems

Class Hours: 2, Units: 2
Prerequisite(s): ENG 210, ENG 250, ENG 250L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ENG 210, ENG 250, ENG 250L
Co-requisite(s): 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

Total 13.0

Spring (Junior Year)

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

ME 339 - Material/Mechanical Lab

Class Hours: 1, Units: 2
Prerequisite(s): ME 332, ME 360
Co-requisite(s): 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 344 - Heat Transfer

Class Hours: 3, Units: 3
Prerequisite(s): 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 392 - Mechanical Design

Class Hours: 3, Units: 3
Prerequisite(s): 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 460 - Automatic Feedback Control

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): MTH 215, ME 360, ME 360L
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 215, ME 360, ME 360L
Co-requisite(s): 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, Units: 3
Prerequisite(s): ME 332, ME 340, ME 360
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

- STEM 1 - Stem Course (See Box) Units:3 ►

Total 18.0

Summer Co-Op (Junior Year)

CEP 350 - ME Co-Op II

Units: 3
Prerequisite(s): 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

Total 3.0

Fall (Senior Year)

- ELEC 8 - American Institutions Elective Units: 3
- ELEC 31 - Social Science Elective (Lower Division) Units: 3

ME 349 - Fluid/Thermal Lab

Class Hours: 1, Units: 2
Prerequisite(s): ME 344, ME 360
Co-requisite(s): 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 394 - Fluid/Thermal Design

Class Hours: 3, Units: 3
Prerequisite(s): 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 492 - Project Design I

Class Hours: 3, Units: 3
Prerequisite(s): ME 490
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

- STEM 2 - Stem Course (See Box) Units: 3 ►

Total 17.0

Spring (Senior Year)

- ELEC 9 - American Institutions Elective Units: 3
- ELEC 22 - Humanities Elective (Upper Division) Units: 3

HUM 310 - Engineering Ethics

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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

ME 429 - Manufacturing Processes Lab

Class Hours: 1, Lab Hours: 2 Units: 2
Prerequisite(s): EPO 215, ME 220
Co-requisite(s): 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

ME 494 - Project Design II

Class Hours: 2, Lab Hours: 2, Units: 3
Prerequisite(s): ME 492
In this course students will perform tasks to complete the preliminary designs initiated in ME 492 - Project Design I, 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

- STEM 3 - Stem Course (See Box) Units: 3 ►

Total 17.0

Stem Courses

Energy Design Stem

1 - ME 342 - Refrigeration and Air Conditioning ►

OR

1 - ME 440 - Advanced Fluid Mechanics and Thermodynamics ►
2 - ME 442 - Heating, Ventilation, and Air Conditioning Design ►
3 - ME 444 - Energy Systems Design ►

Mechanical Design Stem

1 - ME 436 - Mechatronic System Design ►
2 - ME 430 - Mechanical Vibrations ►
3 - ME 432 - Machinery Design ►

Total Units: 153

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.

[1&2] Divisions 1&2 cadets take course
[3&4] Divisions 3&4 cadets take course
► Courses in Major (CGPA = 2.0 is required)

Minor

Power Generation Minor

Students who pursue the ME non-license option may also, if they choose, acquire a minor in Power Generation.

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Power Generation, the student will have completed 15 units of the courses listed.

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.

Courses required for the Power Generation minor:

ENG 440 - Power Engineering

Class Hours: 3, Units: 3
Prerequisite(s): 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 440L - Power Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): ENG 440
Experimental study of several of the electrical power generation systems studied in Power Engineering. Students will operate several power generation systems in the Power Lab (including a gas turbine, combined cycle plant, wind turbine, and solar photovoltaic and thermal systems) under controlled loads, obtain measurements, and evaluate performance. Hybrid and battery charging systems will also be examined.
ME

EPO 210 - Plant Operations II

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 214 - Boilers

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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 230 - Steam Plant System Operations

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 150, 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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 312 - Turbines

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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 319 - Facilities Engineering Diagnostics Lab

Lab Hours: 2, Units: 1
Prerequisite(s): 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 - Introduction to Power Generation Plants

Lab Hours: 2, Units: 1
Prerequisite(s): EPO 220
The student will be given an introduction to the operation, performance and maintenance of simple cycle gas turbine and medium-speed reciprocating power generation systems, combined cycle gas turbine and steam turbine power plants. The course consists of lecture and practical training in engineering systems and proper operating procedures. This course will expose the student to gas and liquid fired reciprocating engines, simple cycle gas turbine as well as combined cycle plants. The emphasis of this course is Power Plant Management and will train the students in common power plant systems and how they interact with each other.
ET

Minor Advisor:

Dr. Thomas Nordenholz

Naval Science

Faculty and Staff

Officer-in-Charge and Chair:
LT Dustin Mueller, USN

Admin. Officer/Instructor:
LT John Matusek, USN

Administrative Assistant:
Toni Vasquez

The Department of Naval Science administers the Naval Science courses on campus as well as Cal Maritime's Strategic Sealift Officer Program (SSOP) unit. Naval Science courses 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.

About SSOP DET-71

The Strategic Sealift Officer Program, Detachment 71, is an officer accessions training unit that produces Strategic Sealift Officers for the U.S. Navy Reserve. Participating license-track students may be eligible for:

- 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 the U.S. Navy

Become a part of a proud tradition by joining SSOP DET-71! Learn more at:
http://www.csum.edu/web/admissions/military-options

Minor

Naval Science Minor

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Naval Science, the student will have completed at least 15 units from the following curriculum:

All students must complete the following courses:

NSC 200 - Naval Science for the Merchant Marine Reservist I

Class Hours: 3, Units: 3
Prerequisite(s): 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 400 - Leadership, Ethics, and Naval Science for the Merchant Marine Reservist II

Class Hours: 4, Units: 4
Prerequisite(s): 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

Plus at least 8 units from the following courses:

NSC 100 - Naval Science for the Merchant Marine Officer/Strategic Sealift Officer

Class Hours: 3, Units: 3
An introduction to the organization of the U.S. Navy, with a discussion of the Strategic Sealift Officer Program and Naval Reserve commissioning options, which 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 historical merchant marine- Navy interface in common seapower objectives. 70% of available lecture time is spent covering the history of seapower. The remaining 30% is spent covering miscellaneous organizations/government agencies which support defense objectives and have ties to the merchant marine.
NS

NSC 255 - Midshipman Naval Training Cruise

Units: 3
Prerequisite(s): Sophomore Class Standing and must be sworn into the MMR program.
Co-requisite(s): May be concurrently taken with CRU 200/CRU 250 on board 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 320 - Naval Operations

Class Hours: 3, Units: 4
Prerequisite(s): NSC 200, NSC 315, NSC 315L, U.S. citizenship
Co-requisite(s): NSC 320L
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. It 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 is presented. The course is required for all Naval Science minors and recommended for those students pursuing a Naval Reserve commission.
Formerly NSC 310. NS

and

NSC 320L - Naval Operations Lab

Lab Hours: 2, Units: 0
Co-requisite(s): NSC 320
Formerly NSC 310L. NS

NSC 315 - Navigation (For Engineers)

Class Hours: 3, Units: 4
Prerequisite(s): NSC 100
Co-requisite(s): 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

and

NSC 315L - Navigation Lab (For Engineers)

Lab Hours: 2, Units: 0
Co-requisite(s): NSC 315
NS

NSC 390 - 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.
NS

NSC 450 - Advanced Midshipman Naval Training

Units: 1
Prerequisite(s): 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

Minor Advisor:

LT John Matusek

Department of Sciences and Mathematics

Faculty

Professors:
Jaya Punglia; Cynthia Trevisan (Chair)

Associate Professors:
Taiyo Inoue; Alexander Parker; Steven Runyon; Frank Yip

Assistant Professors:
Nelson Coates; Matthew Fairbanks; Abigail Higgins; Brent Pohlmann; Julie Simons

Lecturers:
Olga Gutkina; Tracey Johnson; Ali Moradmand; JoAnne Strickland

Professor Emeriti:
Lloyd Kitazono; Carl L. Mampaey; James Wheeler

Department Mission Statement

The mission of the Department of Sciences and Mathematics is the advancement of knowledge in sciences and mathematics. To further this goal, we teach our students the principles necessary for sophisticated scientific and quantitative reasoning, and we engage in scholarly research to inspire our students and advance our knowledge of the natural world.

In our increasingly complex world, a genuine understanding of science and mathematics is required to engage humanity's biggest problems and progress toward our most profound objectives. To these ends, we focus on empowering students with knowledge and strengthening the global intellectual community.

Minor

Marine Science Minor

The Marine Science minor is designed for students who are interested in pursuing a career working on research vessels, continuing their studies in marine sciences, or who are otherwise interested in marine sciences.

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Marine Science, the student will have completed at least 15 units from the following curriculum:

All students must complete the following course:

MSC 380 - Directed Research

Class Hours: 3, Units: 3
General Education: Area B2 Life Science
Prerequisite(s): Prerequisites: MSC 100, MSC 105

A requirement for students completing the Marine Science Minor. Working with a faculty mentor, students develop and conduct a marine science research project. Students demonstrate competence in hypothesis testing, gathering and analyzing oceanographic data. The project culminates with a written or oral presentation.
SM

Plus at least 9 units of the following oceanography courses:

MSC 100 - Introduction to Geological and Chemical Oceanography

Units: 3
General Education: Area B1: Physical Science
Prerequisite(s): 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, Units: 3
General Education: Area B2 Life Science
Prerequisite(s): 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 200 - Oceanographic Instruments and Analysis

Units: 2
General Education: Area B1: Physical Science
Co-requisite(s): MSC 200L
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 205 - Marine Biology

Class Hours: 3, Units: 3
General Education: Area B2 Life Science
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 205L - Marine Biology Laboratory

Lab Hours: 2, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): MSC 205
As a co-requisite, Marine Biology Laboratory provides students with the opportunity to more fully explore the concepts

introduced in MSC 205. Students will be introduced to the use of stereo and compound microscopes, and use plankton nets for the collection and enumeration of phytoplankton and zooplankton. Students will perform invertebrate and vertebrate dissections, and explore unique northern California marine ecosystems such as salt marshes, estuaries, the intertidal, and marine mammal breeding grounds.
SM

MSC 395 - Special Topics

Units: 1 - 3
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Additional courses from the following may be used to make a total of at least 15 units for the minor:

GMA 105 - Ocean Politics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

NAU 330 - Meteorology

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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

Minor Advisor:

Dr. Alexander Parker

Mathematics Minor

The mathematics minor is open to students of all majors. It is designed for students interested in becoming mathematically sophisticated at levels beyond what is required by their major. Applications of mathematics to human understanding of the physical world are emphasized.

In addition to the general requirements for earning a minor at Cal Maritime, and to receive a transcript notation of having completed the specific requirements for a minor in Mathematics, the student will have completed 22 units earning a grade of C- or better from the following curriculum:

Required for Minor:

MTH 210 - Calculus I

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): MTH 100 or equivalent with a C- or higher
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral.
SM

MTH 211 - Calculus II

Class Hours: 4, Units: 4
Prerequisite(s): MTH 210 with a C- or higher
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, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
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, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
Introduces first-order differential equations and secondorder 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 250 - Introduction to Linear Algebra

Class Hours: 4, Units: 3
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.

Prerequisite(s): MTH 211 with a C- or higher
Theory and applications of linearity, including vectors, matrices, systems of linear equations, dot and cross products, determinants, linear transformations in Euclidean space, linear independence, bases, eigenvalues, eigenvectors, and diagonalization.
Formerly MTH 310. SM

MTH 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Minor Advisors:

Dr. Taiyo Inoue, Dr. Brent Pohlmann, and Dr. Julie Simons

Graduate Studies

Throught the Department of Sponsored Projects and Extended Learning (SPEL) Cal Maritime offers a Master of Science in Transportation and Engineering Management.

Master of Science

Transportation and Engineering Management - Engineering Management Concentration, M.S.

The Graduate Program

Master of Science in Transportation and Engineering Management

Cal Maritime is committed to the development of outstanding industry leaders through a graduate degree program that requires students to integrate critical thinking and best practices in a manner that enables them to face real-world challenges with poise, and to contribute to the body of knowledge and practice in their industry.

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

The Office of Graduate Studies administers the policies and procedures established by Cal Maritime and the California State University. This catalog section presents these policies and procedures as related to graduate students in Cal Maritime's graduate degree program.

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC) 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001 www.wascsenior.org.

Program Learning Objectives

Students in this program will meet educational outcomes in three areas.

Project Leadership

Graduates will:

- Be able to create and lead a project team or multiple project teams, develop project proposals (including budgets and timelines) and manage the entire project life cycle.
- Have expertise in systems analysis and operations research to support project development and management.
- Apply decision making, technical, and human resource principles to manage projects in a dynamic business and global economic context.

Global Context

Graduates will:

- Understand their organization's role in a global context; including environmental issues, and political, social, and ethical norms.
- Appreciate the security, economic, and legal dimensions that affect global supply chain management.

Management Components

Graduates will:

- Have the ability to advance to higher levels of institutional responsibility with an increased understanding of organizational, financial, human resource and information systems management.
- Recognize and appreciate one's own ability to lead, direct, and advance the goals and vision of the organization.

Graduate Program Curriculum

Students enroll in one of three areas of specialization. The choices include Transportation, Engineering Management, and Humanitarian Disaster Management. Before taking courses in their area of specialization students will complete 5 courses in a core management curriculum. They will then complete 4 courses in their area of specialization. The final course, the Capstone course, will give students the opportunity to demonstrate their learning through an extensive project. Successful completion of the 10 courses is required to earn the degree.

Format

The Graduate Program is offered in a fully-online asynchronous format using the Moodle platform. It is expected that the online graduate student will fully participate in the various aspects of this distance-learning program, such as reading and working extensively on his or her own and using the Internet to communicate about their learning. Discussion forums, papers, presentations, and exams are used to evaluate student progress. Students will also be

required to participate in web conferences, chat forums, and other group activities on the Internet. It is the student's responsibility to be able to use these tools effectively. The Graduate Program website features tutorials and written instruction on using the features of the Internet course delivery platform used for this program. Students also have access to IT personnel for support and guidance.

Online instruction is available to the student 24/7 during the semesters in which he or she is enrolled. Participation is measured through the completion of assignments, through postings in discussion forums, and as otherwise specified in individual course syllabi.

Cohort Model

The program is laid out in a sequential manner, with each course building on the one before it. Students proceed through the courses as a cohort, and belong to the same group throughout the duration of the program. The cohort model has been proven to be particularly effective for learning in an online environment. For this reason, each cohort begins together in the Fall semester, and completes the five semesters together.

Course Descriptions

Core Courses

Students complete all the core courses except TEM 900 - Capstone before beginning coursework in their area of specialization.

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Areas of Concentration

Engineering Management

TEM 700 - Systems Engineering Management

Introduces students to the principles and processes of systems engineering, from concept development through system integration, testing and life cycle support. The course explores a disciplined approach to identifying user needs, translating those needs into a complete system specification, and verifying that requirements are met. A team project related to deployment of a large-scale complex system is used to demonstrate the integrated nature of systems engineering.

TEM 705 - Strategic Management

Topics include the managing and resolution of complex problems in engineering management; the process of crafting strategy; evaluating a company's external environment, resources and competitive position; integration and outsourcing; diversification, acquisitions and new ventures; competing in foreign markets; strategy, ethics, and social responsibility; and effective strategy execution.

TEM 710 - Technology Management

Focuses on managing advanced technology in industry. Topics include: Human factors; quality control; reliability and maintainability; integrated logistic support; sales and marketing for engineers; legal issues and entrepreneurship; and managing risk.

TEM 720 - Energy Resource Management

Course participants will learn the background knowledge, concepts and management techniques necessary to create and sustain an effective energy management program within their organization, resulting in an efficient use of energy to maximize profit and minimize cost. This course will examine supply side cost structures, auditing of energy demand, strategies to reduce energy costs, energy efficient technologies, and economic analysis of energy efficiency upgrades for decision making.

Calendar

There are three semesters a year in the graduate degree program: Fall, Spring and Summer. These semesters conform with the undergraduate program's Fall and Spring semesters as designated on the campus academic calendar and posted online at https://www.csum.edu/web/registrar/calendar. A 12-week Summer semester is scheduled during the months between the Fall and Spring semesters.

Transportation and Engineering Management - Humanitarian Disaster Management Concentration, M.S.

The Graduate Program

Master of Science in Transportation and Engineering Management

Cal Maritime is committed to the development of outstanding industry leaders through a graduate degree program that requires students to integrate critical thinking and best practices in a manner that enables them to face real-world challenges with poise, and to contribute to the body of knowledge and practice in their industry.

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

The Office of Graduate Studies administers the policies and procedures established by Cal Maritime and the California State University. This catalog section presents these policies and procedures as related to graduate students in Cal Maritime's graduate degree program.

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC) 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001 www.wascsenior.org.

Program Learning Objectives

Students in this program will meet educational outcomes in three areas.

Project Leadership

Graduates will:

- Be able to create and lead a project team or multiple project teams, develop project proposals (including budgets and timelines) and manage the entire project life cycle.
- Have expertise in systems analysis and operations research to support project development and management.
- Apply decision making, technical, and human resource principles to manage projects in a dynamic business and global economic context.

Global Context

Graduates will:

- Understand their organization's role in a global context; including environmental issues, and political, social, and ethical norms.
- Appreciate the security, economic, and legal dimensions that affect global supply chain management.

Management Components

Graduates will:

- Have the ability to advance to higher levels of institutional responsibility with an increased understanding of organizational, financial, human resource and information systems management.
- Recognize and appreciate one's own ability to lead, direct, and advance the goals and vision of the organization.

Graduate Program Curriculum

Students enroll in one of three areas of specialization. The choices include Transportation, Engineering Management, and Humanitarian Disaster Management. Before taking courses in their area of specialization students will complete 5 courses in a core management curriculum. They will then complete 4 courses in their area of specialization. The final course, the Capstone course, will give students the opportunity to demonstrate their learning through an extensive project. Successful completion of the 10 courses is required to earn the degree.

Format

The Graduate Program is offered in a fully-online asynchronous format using the Moodle platform. It is expected that the online graduate student will fully participate in the various aspects of this distance-learning program, such as reading and working extensively on his or her own and using the Internet to communicate about their learning. Discussion forums, papers, presentations, and exams are used to evaluate student progress. Students will also be required to participate in web conferences, chat forums, and other group activities on the Internet. It is the student's responsibility to be able to use these tools effectively. The Graduate Program website features tutorials and written instruction on using the features of the Internet course delivery platform used for this program. Students also have access to IT personnel for support and guidance.

Online instruction is available to the student 24/7 during the semesters in which he or she is enrolled. Participation is measured through the completion of assignments, through postings in discussion forums, and as otherwise specified in individual course syllabi.

Cohort Model

The program is laid out in a sequential manner, with each course building on the one before it. Students proceed through the courses as a cohort, and belong to the same group throughout the duration of the program. The cohort model has been proven to be particularly effective for learning in an online environment. For this reason, each cohort begins together in the Fall semester, and completes the five semesters together.

Course Descriptions

Core Courses

Students complete all the core courses except TEM 900 - Capstone before beginning coursework in their area of specialization.

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Areas of Concentration

Humanitarian/Disaster Management

TEM 800 - The Global Humanitarian System

This course considers in greater depth the humanitarian system as a whole and the resulting tensions. It compares and contrasts the actions and activities with those found in the commercial and military counterparts that will be found operating alongside the humanitarian logistic network, and focuses on the issue of the development and maintenance of inter-personal and inter-organizational trust as a critical success factor within the post-disaster response.

TEM 810 - Rapid and Slow Onset Disaster Management

This course underpins the Humanitarian Logistics track through an introduction to the disaster response cycle and a high level discussion of the key stakeholders. It considers the role of the humanitarian logistician and discusses five of the most significant challenges facing those working in this field.

TEM 820 - Humanitarian Project Management

On the basis that the whole area of the preparation and response to a natural disaster falls into the Rittel and Webber's categorization of a "wicked problem", based on academic approaches to the "taming" of such problems, this course will consider alternate ways of managing the humanitarian logistic challenge. These will be drawn from a number of fields including those of project management and procurement as well as the area of general management.

TEM 830 - National and International Humanitarian Logistics

It is recognized that there are significant differences in the philosophical approach, and consequential policies, processes and procedures adopted by different countries in their preparation and response to national and international disasters. The aim of this course is to consider the differences in such approaches, the implications for international cooperation and the extent to which best practice can be synthesized.

Calendar

There are three semesters a year in the graduate degree program: Fall, Spring and Summer. These semesters conform with the undergraduate program's Fall and Spring semesters as designated on the campus academic calendar and posted online at https://www.csum.edu/web/registrar/calendar. A 12-week Summer semester is scheduled during the months between the Fall and Spring semesters.

Transportation and Engineering Management - Transportation Concentration, M.S.

The Graduate Program

Master of Science in Transportation and Engineering Management

Cal Maritime is committed to the development of outstanding industry leaders through a graduate degree program that requires students to integrate critical thinking and best practices in a manner that enables them to face real-world challenges with poise, and to contribute to the body of knowledge and practice in their industry.

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

The Office of Graduate Studies administers the policies and procedures established by Cal Maritime and the California State University. This catalog section presents these policies and procedures as related to graduate students in Cal Maritime's graduate degree program.

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC) 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001 www.wascsenior.org.

Program Learning Objectives

Students in this program will meet educational outcomes in three areas.

Project Leadership

Graduates will:

- Be able to create and lead a project team or multiple project teams, develop project proposals (including budgets and timelines) and manage the entire project life cycle.
- Have expertise in systems analysis and operations research to support project development and management.
- Apply decision making, technical, and human resource principles to manage projects in a dynamic business and global economic context.

Global Context

Graduates will:

- Understand their organization's role in a global context; including environmental issues, and political, social, and ethical norms.
- Appreciate the security, economic, and legal dimensions that affect global supply chain management.

Management Components

Graduates will:

- Have the ability to advance to higher levels of institutional responsibility with an increased understanding of organizational, financial, human resource and information systems management.
- Recognize and appreciate one's own ability to lead, direct, and advance the goals and vision of the organization.

Graduate Program Curriculum

Students enroll in one of three areas of specialization. The choices include Transportation, Engineering Management, and Humanitarian Disaster Management. Before taking courses in their area of specialization students will complete 5 courses in a core management curriculum. They will then complete 4 courses in their area of specialization. The final course, the Capstone course, will give students the opportunity to demonstrate their learning through an extensive project. Successful completion of the 10 courses is required to earn the degree.

Format

The Graduate Program is offered in a fully-online asynchronous format using the Moodle platform. It is expected that the online graduate student will fully participate in the various aspects of this distance-learning program, such as reading and working extensively on his or her own and using the Internet to communicate about their learning. Discussion forums, papers, presentations, and exams are used to evaluate student progress. Students will also be required to participate in web conferences, chat forums, and other group activities on the Internet. It is the student's responsibility to be able to use these tools effectively. The Graduate Program website features tutorials and written instruction on using the features of the Internet course delivery platform used for this program. Students also have access to IT personnel for support and guidance.

Online instruction is available to the student 24/7 during the semesters in which he or she is enrolled. Participation is measured through the completion of assignments, through postings in discussion forums, and as otherwise specified in individual course syllabi.

Cohort Model

The program is laid out in a sequential manner, with each course building on the one before it. Students proceed through the courses as a cohort, and belong to the same group throughout the duration of the program. The cohort model has been proven to be particularly effective for learning in an online environment. For this reason, each cohort begins together in the Fall semester, and completes the five semesters together.

Course Descriptions

Core Courses

Students complete all the core courses except TEM 900 - Capstone before beginning coursework in their area of specialization.

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Areas of Concentration

Transportation

TEM 600 - Global Logistics and Supply Chain Management

Logistics is the science of movement of materials from raw material to the customer in the globalized economy; Supply Chain Management focuses on understanding techniques and strategic issues in the successful movement of products from their origins as raw materials to their final destinations as finished products, including the impact of culture, strategic planning, organization, and management control. Specific topics include customer service, e-commerce, facilities location, routing and pricing, storage, transportation, emerging technologies, and re-engineering the supply chain. Emphasis will be placed throughout on the maritime component, with frequent use of case studies.

TEM 610 - International Transportation Law

Explores legal issues in transportation, logistics and supply chain management in a globalized economy. Topics include freight charges liability; loss, damage and delay claims, billing disputes, over-charge and undercharge claims; bills of lading; freight classification system; cargo insurance; applicable international legal treaties and conventions; and the current state of international transportation law.

TEM 620 - International Trade and Finance

This course focuses on trade and finance in a globalized economy. Trade topics include the current structure of the international trading system, global trade treaties and agreements, and the impact of e-commerce on traditional trade constructs. Financial topics include raising capital in the global economy, the management of investment and exchange risk, and global financial treaties and agreements.

TEM 630 - Port and Terminal Management

An advanced course dealing with 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.

Calendar

There are three semesters a year in the graduate degree program: Fall, Spring and Summer. These semesters conform with the undergraduate program's Fall and Spring semesters as designated on the campus academic calendar and posted online at https://www.csum.edu/web/registrar/calendar. A 12-week Summer semester is scheduled during the months between the Fall and Spring semesters.

Extended Learning

The Department of Sponsored Programs and Extended Learning offers a number of courses.

Academic Programs

Cal Maritime has three schools:The School of Letters and Sciences, the School of Engineering and the School of Maritime Transportation, Logistics, and Management.

The mission of the School of Letters and Sciences is to play a formative role in every student's baccalaureate degree. As the intellecutral foundation of the university, our programs encourage intellectual, professional and ethical growth in each student We seet to cultivate habits of inquiry through collaboration, creativity and discovery in and beyond the classroom. We view environmental stewardship, cultural awareness and political responsiblity as essential to developing the probel-solving skills, scientifc reasoning, and leadership qualities vital to student success in an ever changing, global community.

The mission of the School of Engineering is to provide each student with a world class education and experiential training in engineering and applied technology. The School of Engineering prepares studetns for a lifetime of learning and successful careers in engineering and maritime related fileds while instilling values, vision, and skills to enable them to become future leaders and problem solvers in order to advance the science and technology of the engineering profession.

The mission of the School of Maritime Transportation, Logistics, and Management is to instill students with the necessary knowledge, practical skills, judgement and chracter needed to broaden their horizons and become ethical leaders in the global maritime marketplace. Students will learn through a balance of theoretical knowledge and experiential learning and benefit from unique educational platforms and experienced faculty who are recognized experts in their fields.

Cal Maritime offers rigorous academic programs in the areas listed below. The catalog links lead to program descriptions, learning outcomes and courses required for each offerring.

Bachelor of Arts

- Global Studies and Maritime Affairs, B.A.

Bachelor of Science

- Business Administration, B.S.
- Facilities Engineering Technology, B.S.
- Marine Engineering Technology with Third Assistant Engineer's/OICEW License, B.S.
- Marine Transportation with Third Mate's/IOCNW License, B.S.
- Mechanical Engineering, B.S.
- Mechanical Engineering with Third Assistant Engineer's License option, B.S.

Minor

- Business Administration Minor
- Global Studies and Maritime Affairs Minor
- Law Minor
- Marine Science Minor
- Mathematics Minor
- Naval Science Minor
- Power Generation Minor

Master of Science

- Transportation and Engineering Management - Engineering Management Concentration, M.S.
- Transportation and Engineering Management - Humanitarian Disaster Management Concentration, M.S.
- Transportation and Engineering Management - Transportation Concentration, M.S.

License

- Cal Maritime offers licensed programs for the Third Mate or Third Assistant Engineer license of the United States Coast Guard. Licenses are issued at graduation upon successfully completing the appropriate baccalaureate degree and passing the United States Coast Guard licensing examination.
- Admission into programs leading to licensure and credentialing does not guarantee that students will obtain a license or credential. Licensure and credentialing requirements are set by agencies that are not controlled by or affiliated with the CSU and requirements can change at any time. For example, licensure or credentialing requirements can include evidence of the right to work in the United States (e.g., social security number or tax payer identification number) or successfully passing a criminal background check. Students are responsible for determining whether they can meet licensure or credentialing requirements. The CSU will not refund tuition, fees, or any associated costs, to students who determine subsequent to admission that they cannot meet licensure or credentialing requirements. Information concerning licensure and credentialing requirements are available from the Coordinator of the STCW Program, Student Services Building, (707) 654-1297.

Certificate

- Engineering students who pass the Fundamentals of Engineering examination receive an Engineer-In-Training Certificate.

- Students completing ET 342 are eligible to take a written exam for professional certification as EPA Universal Technicians.

Course Descriptions

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. US Coast Guard license program students must achieve a grade of C- or higher 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
BA	Business Administration
CC	Culture & Communication
ET	Engineering Technology
XL	Extended Learning
GSMA	Global Studies and Maritime Affairs
LIB	Library
MT	Marine Transportation
MPM	Maritime Policy and Management
ME	Mechanical Engineering
NS	Naval Science
SM	Sciences & Mathematics

The academic department designation with the course description determines the department that hosts the course.

All courses are graded using the A–F system unless otherwise specified.

Course Numbering System

0 – 99: remedial courses prior to Fall 2018
100 – 299: .lower division
300 – 499: upper division

Electives

Scheduled general electives can be found in the searchable online class schedule. In the Class Search criteria, enter "ELEC" under Course Attribute to search for all electives. Additionally, use Course Attribute value for individual electives. These electives are also identified according to their designation within the five areas of the CSU General Education requirements.

- Elec 8 American Institutions Electives
- Elec 9 American Institutions Electives
- Elec 20 Critical Thinking Electives
- Elec 21 Humanities Electives (Lower Division)
- Elec 22 Humanities Electives (Upper Division)
- Elec 31 Social Science Electives (Lower Division)
- Elec 32 Social Science Electives (Upper Division)
- Elec 45 Lifelong Understanding Electives
- Elec 62/62L Life Science Electives
- Elec 63/63L Physical Sciences Electives
- Elec 70 Mathematics Electives
- Elec 81 Foreign Language Electives
- Elec 82 Foreign Language Electives
- Elec 90/91 Major Electives

Business

BUS 100 - Accounting Principles I: Financial

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 101 - Accounting Principles II: Managerial

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 120 - The Environment of Modern Business

Class Hours: 3, Units: 3
General Education: Area E Lifelong Learning and Self Development
Prerequisite(s): None
A survey course to introduce the student to the various components and issues relating to modern business. Topics to be covered include: management, human resources, marketing, financial management, 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 today. Business career opportunities will also be addressed during each segment of the course.
IBL

BUS 165 - Business Decision Analysis

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 195 - Cruise Special Topics

Class Hours: 3, Units: 3
Prerequisite(s): BUS 190
Co-requisite(s): 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.
IBL

BUS 200 - Introduction to Marketing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 300 - International Business

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 301 - International Business II - Country Research Analysis and Global Marketing

Class Hours: 3, Units: 3
Prerequisite(s): Senior Class Standing or Chair Approval
The course follows on material introduced in BUS 200 and BUS 300, and examines major examples of country research analysis, including the reports of the U. S. Commercial Service and major international institutions and organizations that perform country research analysis or contribute standard statistical indicators. Such entities include the Organization for Economic Cooperation and Development (OECD), the International Bank for Reconstruction and Development (IBRD), the International Monetary Fund (IMF), and private sector entities. The course explicates the problems of conducting market research in or about foreign markets, including a contrast of primary versus secondary research methods, and the subsequent transformation of the research into marketing strategy.
IBL

BUS 302 - Principles of Research Design, Implementation & Analysis

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107, or an equivalent sophomore level statistics course from transfer credits or another Cal Maritime department.
Co-requisite(s): 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.
IBL

BUS 302L - Principles of Research Design, Implementation & Analysis Lab

Lab Hours: 2, Units: 1
Prerequisite(s): Same as BUS 302
Co-requisite(s): BUS 302
IBL

BUS 310 - Financial Management

Class Hours: 3, Units: 3
Prerequisite(s): BUS 101, MTH 107, 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.
IBL

BUS 390 - 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.
IBL

BUS 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

BUS 400 - Business and Society

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

BUS 405 - Leadership and Group Dynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

Chemistry

CHE 105 - Introductory Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 105L
This course is an introduction to fundamental chemical principles and scientific thought intended for nonengineering majors. Topics covered include scientific method, measurement, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, nomenclature of inorganic and organic compounds, heat and energy, gases, solutions, radioactivity and chemical safety. This course does not satisfy the degree requirement for Mechanical Engineering, Marine Engineering Technology or Facilities Engineering Technology.
SM

CHE 105L - Introductory Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity

Co-requisite(s): CHE 105
As a co-requisite, this course is designed to expand upon as well as reinforce chemical concepts introduced in CHE 105. It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, gas stoichiometry, calorimetry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

CHE 110 - General Chemistry

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): None
Co-requisite(s): CHE 110L
This course is an in-depth introduction to fundamental chemical principles and scientific thought. Topics covered include scientific method, scientific calculations, properties of matter, periodic trends, atomic and molecular structure, chemical reactions and stoichiometry, thermochemistry, gases, solutions, and radioactivity.
SM

CHE 110L - General Chemistry Lab

Lab Hours: 3, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): CHE 110
As a co-requisite, this course is designed to expand upon and reinforce chemical concepts introduced in CHE 110 . It will also introduce students to chemical experimentation including the processes, instrumentation, and techniques employed in a chemistry laboratory environment. Topics addressed during experiments include the scientific method, scientific measurement and uncertainty, error analysis, density, electrolytes and solutions, qualitative chemical analysis, reaction stoichiometry, acid/base titration, gas stoichiometry, thermochemistry, atomic spectroscopy, visible spectroscopy and laboratory safety.
SM

CHE 195 - Special Topics

SM

CHE 205 - Chemistry of Power Plant Processes

Class Hours: 3, Units: 3
Prerequisite(s): CHE 110, CHE 110L
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 390 - 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.
SM

CHE 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Community Service Learning

CSL 120 - Community Service Learning

Class Hours: 3 Units: 3 Community Service Hours: 30
General Education: Area D Social Science - lower division; Area E Lifelong Learning and Self Development (may only be used to satisfy one of Area D or Area E)
Prerequisite(s): 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.
CC

CSL 195 - Special Topics

CC

CSL 210 - Dying: The Final Stage of Living

Class Hours: 3 Units: 3 Community Service Hours: 10
General Education: Area D Social Science - lower division; Area E Lifelong Learning and Self Development (may be used to satisfy only one of Area D or Area E).
Prerequisite(s): None
Co-requisite(s): 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.
CC

CSL 390 - 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.
CC

CSL 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
CC

Computing

COM 100 - Introduction to Computers

Class Hours: no class hours Lab Hours: 2 lab hours Units: 2
Prerequisite(s): None
Provides students with a basic understanding of word processing, presentation software, spreadsheet software and simple database operations.
SM

COM 195 - Special Topics

SM

COM 220L - Programming Applications for Engineering Technology Majors Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Data representation, data analysis, and programming using Microsoft Excel. Advanced operations of the TI-89 calculator. Prepares Engineering Technology students for advanced level coursework.
ET

COM 390 - 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.
SM

COM 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Cooperative Education

CEP 195 - Special Topics

ME, ET, MPM

CEP 250 - ME Co-Op I

Units: 3
Prerequisite(s): 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

Units: 3
Prerequisite(s): 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

Units: 3
Prerequisite(s): Permission of the Chair
This course allows the student to spend time in a domestic work environment that has been setup by the Maritime Policy and Management 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

Units: 3
Prerequisite(s): 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 MPM Department Chair.
MPM

CEP 350 - ME Co-Op II

Units: 3
Prerequisite(s): 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

Units: 3
Prerequisite(s): 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 390 - 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.
ME, ET, MPM

CEP 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ME, ET, MPM

CEP 400 - Business Industry Co-op II

Units: 3
This elective course allows the student to spend time in an overseas 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 foreign company and improve language skills in conversation language and business language.
MPM

Cruise

CRU 100 - Sea Training I (Deck)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 100, DL 105, DL 105L, DL 105X, DL 109, DL 110, DL 115, DL 120, NAU 105, NAU 110
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 topics.
MT | Graded: Credit/No Credit

CRU 150 - Sea Training I (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): DL 105, DL 105L, DL 105X, EPO 110, EPO 125
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 190 - Basic Safety Training

Class Hours: 12; Lab Hours: 12 Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

CRU 195 - Introduction to Maritime Operations (Non-License Program Course)

Class Hours: 1, Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

CRU 200 - Sea Training II (Deck)

Units: 5
Prerequisite(s): CRU 100, DL 111, DL 240, DL 240L, DL 325, DL 325L, EGL 100, NAU 102, NAU 102L, NAU 205 and NAU 305
Co-requisite(s): CRU 200L
This course is the student's second at-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 a minimum period of time, as specified in Cal Maritime's program approval letter, to meet Coast Guard sea service requirements. 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 (Deck)

Units: 3
Prerequisite(s): Same as for CRU 200
Co-requisite(s): CRU 200
This course exposes students to the type of observations and tasks required by STCW. As a basis for grading this course, the student completes a comprehensive check list that parallels the STCW standards for which they will be certified on CRU 300. This check list parallels STCW competencies but does not provide certification or equivalency.
MT | Graded: Credit/No Credit

CRU 225 - USCG Sea Training II (Deck)

Units: 5
Prerequisite(s): Same as for CRU 200 Must be fully accepted as a candidate in the CMAPPP Program
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)

Units: 3
Prerequisite(s): Same as for CRU 200L
Co-requisite(s): CRU 225
This course exposes students to the type of observations and tasks required for ensigns in the Coast Guard in accordance with the Personnel Qualification Standard (PQS) and IMO STCW 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 standards for which they will be certified in CRU 300. This workbook parallels but does not certify nor is equivalent to STCW competencies.
MT | Graded: Credit/No Credit

CRU 250 - Sea Training II (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): 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)

Units: 8
Prerequisite(s): 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)

Units: 8
STCW Requirement: ♦
Prerequisite(s): 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
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 STCW selected topics.
MT | Graded: Credit/No Credit

CRU 350 - Sea Training III (Engine)

Units: 8
STCW Requirement: ♦
Prerequisite(s): CRU 250 or CRU 275, EPO 310, EPO 322, EPO 322L, ET 250 or ENG 250, ET 250L or ENG 250L, FF 200, EPO 235
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 390 - 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.
ET, MT

CRU 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ET, MT

Deck Labs

DL 100 - Small Craft Operations

Lab Hours: 3, Units: 1
Prerequisite(s): DL 105, DL 105L, and must pass PE 101 or PE 102
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.
MT

DL 105 - Marine Survival

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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 higher 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.
MT

DL 105L - Marine Survival Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Must pass PE 101 or PE 102
Co-requisite(s): 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.
MT | Graded: Credit/No Credit

DL 105X - USCG Lifeboatman'S Exam

Units: 0
MT | Graded: Credit/No Credit

DL 109 - Industrial Equipment and Safety

Lab Hours: 2, Units: 1
Prerequisite(s): 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.
MT

DL 110 - Ship Operations I

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

DL 111 - Ship Operations II

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT | Graded: Credit/No Credit

DL 115 - Marlinspike

Lab Hours: 3, Units: 1
Prerequisite(s): None
Besides acquiring a thorough working knowledge of rope-work, rigging and safety procedures, students will learn knots.
MT

DL 120 - Cargo Operations

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT

DL 125 - Graphics

Lab Hours: 2, Units: 1
Prerequisite(s): 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 195 - Special Topics

MT

DL 240 - Global Maritime Distress Safety System (GMDSS)

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): MTH 100, PHY 100, PHY 100L
Co-requisite(s): DL 240L
A comprehensive STCW 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.
MT | Note: Additional fee required

DL 240L - Global Maritime Distress Safety System (GMDSS) Lab

Lab Hours: 2, Units: 1
STCW Requirement: ♦
Prerequisite(s): Same as for DL 240
Co-requisite(s): DL 240
A comprehensive STCW 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 301 - Navigation Piloting Lab

Lab Hours: 3, Units: 1
Prerequisite(s): CRU 200, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Practical instruction in terrestrial and electronic navigational techniques aboard academy power-driven vessels while underway in San Francisco Bay in actual piloting situations. Voyage planning and navigation accuracy cross-checking are emphasized in real-time transit.
MT

DL 305 - Tug and Barge

Lab Hours: 3, Units: 1
Prerequisite(s): CRU 200 , DL 100 , DL 240, DL 325, NAU 120 and NAU 305
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.
MT

DL 310 - Marine Supervisory Lab

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT

DL 311 - Marine Management Lab

Lab Hours: 3, Units: 1
Prerequisite(s): 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.
MT

DL 320 - Introduction to Bridge Simulation

Class Hours: 2, Lab Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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, Units: 2
STCW Requirement: ♦
Prerequisite(s): CRU 100, NAU 102, NAU 102L (may be taken concurrently), NAU 305 (may be taken concurrently), MTH 100, Sophomore class standing
Co-requisite(s): 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

DL 325L - RADAR/ARPA Lab

Lab Hours: 4, Units: 2
STCW Requirement: ♦
Co-requisite(s): DL 325
MT | Graded: Credit/No Credit

DL 335 - Integrated Bridge-Engine Room Watch Management

Lab Hours: 2, Units: 1
General Education: Area E Lifelong Learning and Self Development
Prerequisite(s): CRU 200
The nature of this course is very flexible from the perspective of a Marine Transportation student. As it is designed as a platform to gain experience in handling complex situations involving the engine plant and how they affect vessel operation as a whole, students may be permitted to enroll more than once. The course runs concurrently with various sessions of EPO 235 Steam Plant Watch Team Management (for MET and ME License cadets), and in those courses, no two vessels ever experience exactly the same problems or situations. This means that a student enrolled in this course could conceivably work with multiple vessels. Assignment to one specific vessel is the minimum, but students may participate in other sections as well. Enrollment during later semesters may be permitted upon consultation with ET and MT faculty.
MT | Graded: Credit/No Credit

DL 390 - 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.
MT

DL 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
MT

DL 405 - Shipboard Medical

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): Senior class standing
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): Senior class standing
Co-requisite(s): DL 405
MT

DL 410 - Ship Handling

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 200, CRU 200L
Practical experience in ship handling 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.
MT

DL 420 - Watchstanding Simulation

Class Hours: 2, Lab Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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 OICNW level.
MT | Graded: Credit/No Credit

Economics

ECO 100 - Macroeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

ECO 101 - Microeconomics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): MTH 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.
IBL

ECO 195 - Special Topics

IBL

ECO 200 - Economic Geography

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division

Prerequisite(s): None
Commercial regions of the world, the pattern of production, distribution, and consumption, as well as contemporary industrial and commercial development are discussed.
IBL

ECO 305 - Managerial Economics

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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 decisionmaking criteria for strategic business decisions.
IBL

ECO 390 - 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.
IBL

ECO 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

Engineering

ENG 100 - Engineering Graphics

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
Prerequisite(s): 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 195 - Special Topics

ET, ME

ENG 210 - Engineering Computer Programming

Class Hours: 2, Units: 2
Prerequisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): PHY 205
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): PHY 205
Co-requisite(s): 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 Modeling & Analysis

Class Hours: 3, Units: 3
Prerequisite(s): ME 220, ME 332
Applications of the Finite Element Method to engineering and solid mechanics problems will be covered using a commercially available finite element code. Topics include solid modeling of classical structural and heat transfer problems such as plane stress, plane strain, asymmetry, general 3-D solid mechanics problems, geometric non-linearity, material non-linearity, parametric design studies, steady-state and transient heat transfer, and multi-physics problems. Additionally, topics in numerical integration and numerical solutions to a system of differential equations will be covered.
ME

ENG 390 - 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.
ET, ME

ENG 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ET, ME

ENG 430 - Naval Architecture

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): Prerequisite for ET Students: ET 332, ET 340 Prerequisite 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, Units: 3
Prerequisite(s): 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 440L - Power Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): ENG 440
Experimental study of several of the electrical power generation systems studied in Power Engineering. Students will operate several power generation systems in the Power Lab (including a gas turbine, combined cycle plant, wind turbine, and solar photovoltaic and thermal systems) under controlled loads, obtain measurements, and evaluate performance. Hybrid and battery charging systems will also be examined.
ME

ENG 470 - Engineering Management

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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.
ET

Engineering Plant Operations

EPO 110 - Plant Operations I

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 125 - Introduction to Marine Engineering

Class Hours: 3, Units: 3
Prerequisite(s): None
Co-requisite(s): EPO 125L (MET & FET only), EPO 110
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 125L - Introduction to Marine Engineering Lab

Lab Hours: 2, Units: 1
Prerequisite(s): None
Co-requisite(s): EPO 125, EPO 110
This lab studies primary engineering systems aboard the *Training Ship GOLDEN BEAR*. Topics of study include shipboard familiarization; measurement methods; main engine jacket water system; fuel oil storage - transfer and supply; fuel oil injection systems; lube oil system; gear train and clutch; cooling water systems; environmental protection systems; starting air system; distillation plant; and basic shipboard firefighting and safety. Students are given engineering system tracing assignments including main engine jacket water system, main engine fuel supply system, main engine lubricating oil system, central fresh water cooling system, and main engine starting air system.
ET

EPO 135 - Historic Vessel Preservation

Lab Hours: VARIABLE, Units: 1
Prerequisite(s): None
This course will provide students with an opportunity to apply their academic knowledge and technical skills in the preservation, maintenance, and operation of a historic maritime vessel. By donating their time and talent in this endeavor, students will provide an important service to the maritime community. For reasons related to safety and liability, currently only the following listed sites are approved for this course: Mare Island Historic Park Foundation SS "Red Oak Victory" USS Potomac SS "Jeremiah O'Brien"
ET | Graded: Credit/No Credit

EPO 195 - Special Topics

ET

EPO 210 - Plant Operations II

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET | Graded: Credit/No Credit

EPO 213 - Welding Lab

Lab Hours: 3, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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, Units: 2
Prerequisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): CRU 150, 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): 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.
ET

EPO 312 - Turbines

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 1
Prerequisite(s): 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, Units: 1
Prerequisite(s): 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 - Introduction to Power Generation Plants

Lab Hours: 2, Units: 1
Prerequisite(s): EPO 220
The student will be given an introduction to the operation, performance and maintenance of simple cycle gas turbine and medium-speed reciprocating power generation systems, combined cycle gas turbine and steam turbine power plants. The course consists of lecture and practical training in engineering systems and proper operating procedures. This course will expose the student to gas and liquid fired reciprocating engines, simple cycle gas turbine as well as combined cycle plants. The emphasis of this course is Power Plant Management and will train the students in common power plant systems and how they interact with each other.
ET

EPO 322 - Diesel Engineering II/ Simulator

Class Hours: 1, Units: 1
Prerequisite(s): EPO 220
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): EPO 220
Co-requisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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 390 - 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.
ET

EPO 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ET

EPO 413 - Advanced Welding and Fabrication

Lab Hours: 3, Units: 1
Prerequisite(s): 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

EPO 343 - Refrigeration & A/C

Class Hours: 1 Lab Hours: 1 Units: 1
Prerequisite(s): None
Introduction to refrigeration and air conditioning systems on merchant vessels. Basic thermodynamics theories of refrigeration systems: compressors, condensers, evaporators, control devices; environmental regulations, requirements; operational procedures: maintenance, troubleshooting and repair.

ET 110 - Introduction to Engineering Technology

Class Hours: 1, Units: 1
Prerequisite(s): 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 195 - Special Topics

ET

ET 230 - Properties of Materials

Class Hours: 2, Units: 2
Prerequisite(s): CHE 110, CHE 110L, MTH 210
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, Units: 1
Prerequisite(s): CHE 110, CHE 110L, ET 230, MTH 210
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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): ET 250
Application of circuit elements and principles from ET 250 in laboratory measurements and analysis.
ET

ET 330 - Dynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): MTH 211, ET 232
Co-requisite(s): ET 230L
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, Units: 3
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 211, PHY 205
Co-requisite(s): ET 340
ET

ET 342 - Refrigeration and Air Conditioning

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): ET 344
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 344
Co-requisite(s): ET 342
ET

ET 344 - Thermodynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): ET 250, ET 250L
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): ET 250, ET 250L
Co-requisite(s): ET 350
Application of the principles from ET 350 in laboratory measurements and analysis.
ET

ET 370 - Electronics

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): COM 220, COM 220L, ET 250, ET 250L
Co-requisite(s): 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 electromechanical systems.
ET

ET 370L - Electronics Lab

Lab Hours: 2, Units: 1
Prerequisite(s): COM 220, COM 220L, ET 250, ET 250L
Co-requisite(s): ET 370
Application of the principles from ET 370 in laboratory measurements and analysis, followed by a comprehensive team project.
ET

ET 390 - 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.
ET

ET 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ET

ET 400 - Instrumentation and Measurement

Class Hours: 3, Units: 3
Prerequisite(s): ET 370, ET 370L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 370, ET 370L
Co-requisite(s): 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, Units: 2
Prerequisite(s): ET 342, ET 342L
Co-requisite(s): 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 Fundamentals of Engineering (FE) and United States Coast Guard (USCG) exams.
ET

ET 442L - Heating, Ventilation, and Air Conditioning Lab

Lab Hours: 2: Units: 1
Prerequisite(s): ET 342, ET 342L
Co-requisite(s): ET 442
ET

ET 460 - Automation

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): ET 400, ET 400L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 400, ET 400L
Co-requisite(s): 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, Units: 3
Prerequisite(s): ET 344, ET 350, ET 350L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ET 344, ET 350, ET 350L
Co-requisite(s): 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, Units: 3
Prerequisite(s): 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.
CC or XL | Graded: A, B, C, NC

EGL 100 - English Composition

Class Hours: 3, Units: 3
General Education: Area A2 Written Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

EGL 101 - Stretch English Composition I

Class Hours: 3 Units: 3
Prerequisite(s): None
First semester of a year-long developmental composition course which introduces and prepares students for academic reading, writing, and critical thinking tasks encountered throughout the undergraduate career.
egl Graded: CR/NC

EGL 102 - STRETCH ENGLISH COMPOSITION II

Class Hours: 3 Units: 3
Prerequisite recommended: EGL-101
Second semester of a year-long developmental composition course which introduces and prepares students for academic reading, writing, and critical thinking tasks encountered throughout the undergraduate career.

EGL 105 - English as a Second Language

Class Hours: 3, Units: 3
Prerequisite(s): 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.
XL | Graded: A, B, C, NC

EGL 110 - Speech Communication (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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 selfunderstanding, 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.
CC

EGL 120 - Technical Communication

Class Hours: 3 Units: 3
General Education: Area A1 Oral Communication - must meet minimum grade of C- or better in order to earn

General Education credit.
Prerequisite(s): None
Focuses on the communication aspects (oral, visual, graphical and written) germane to the engineering profession.
(Formerly ENG 120) CC

EGL 195 - Special Topics

CC

EGL 200 - Introduction to Literature

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): None
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.
CC

EGL 220 - Critical Thinking

Class Hours: 3, Units: 3
General Education: Area A3 Critical Thinking - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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.
CC

EGL 300 - Advanced Writing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
CC

EGL 305 - Twentieth-Century American Literature

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): EGL 220
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.
CC

EGL 309 - British Literature of the Sea

Units: 3
Survey of maritime literature of the British Empire from its colonial origins in the early Atlantic world to the modern period.
CC

EGL 310 - U.S. Literature of the Sea

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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.
CC

EGL 315 - World Literature of the Sea

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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,
CC

EGL 320 - Literature of the Fantastic

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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.
CC

EGL 325 - Creative Writing

Class Hours: 1-3, Units: 1-3
General Education: Area C1 Arts - upper division
Prerequisite(s): 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.
CC

EGL 330 - Literature and Psychology

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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.
CC

EGL 340 - Multicultural Literature in America

Class Hours: 3, Units: 3
Prerequisite(s): EGL 220
Introduction to the ethnic writing making up much of American literature, and the issues involved in defining the American canon.
CC

EGL 345 - Literature and the Environment

Class Hours: 3 Units: 3
Prerequisite(s): EGL 220
Examines major trends that shape how Anglophone writers understand and write about their environments, and considers how those trends influence human feeling towards the more-than-human world.
CC

EGL 350 - Literature and Technology

Class Hours: 3, Units: 3
Prerequisite(s): EGL 220
Survey of literature exploring the criteria that have defined humanity and humanity's relation to technology from 1700 to the present.
CC

EGL 390 - 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.
CC

EGL 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
CC

Firefighting

FF 200 - Basic/Advanced Marine Firefighting

Units: 0
STCW Requirement: ♦
This course is a requirement for all students enrolled in a USCG license program, although it is administered by Extended Learning.
XL | Graded: Credit/No Credit

Global Studies and Maritime Affairs

GMA 100 - Introduction to International Relations

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 105 - Ocean Politics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 190 - TSGB/International Experience Program

Class Hours: 1, Units: 1
A one-unit course offered in the spring term to Global Studies students prior to participation in their Training Ship *Golden Bear* (TSGB) cruise or an international experience. As part of the course, students will complete all necessary pre-trip plans, including document collection, medical information training, language primers, and associated tasks. Students 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.
GSMA

GMA 195 - Special Topics

General Education: Area D Social Science - lower division
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities, the expertise of visiting faculty, or off-campus educational programs may afford a unique and worthwhile learning experience.
GSMA

GMA 215 - Introduction to Comparative Politics

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 220 - Comparative Maritime Policies

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 225 - Southeast Asia: Maritime and Mainland

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): None
GMA 225 takes an in-depth area study of the region of Southeast Asia, including the historical-political development of Myanmar, Vietnam, Cambodia, Laos, Thailand, Malaysia, Brunei, Singapore, The Philippines, and Indonesia. Throughout history, Southeast Asia has most often been defined by the sea. This course focuses on environmental opportunities and constraints, natural resources and natural hazards, demographics, historical sea and land empires, contemporary ethnic conflicts, politics and war, urbanization, and global connections.
GSMA

GMA 230 - U.S. Maritime Policy

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

GMA 235 - GIS Mapping & Spatial Analysis

Class Hours: 3 Units: 3
Prerequisite(s): None
Develops a powerful skill set using geographic information science (GIS) to visualize and analyse data trends in geopolitics, logistics, marine spatial planning, ocean science, Introduced to ArcGIS software, the industry standard, for hands-on training in the creation of digital maps.

GMA 235 - GIS Mapping and Spatial Analysis

Units: 3
Develops a powerful skill set using geographic information science (GIS) to visualize and analyse data trends in geopolitics, logistics, marine spatial planning, and ocean science. Introduction to ArcGIS software, the industry standard, for hands-on training in the creation of digital maps.
GSMA

GMA 240 - World Geography

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): None
Systematic study of global regions: Middle East, Africa, Russia, Europe, South and East Asia, The Americas, and Oceania, including natural environments, population demographics, migration, political geography, religion, language, ethnicity, urban/rural patterns, and economic livelihoods. Regions are studied both alone and in the context of their global interactions, with a special focus on sea, straits, ports, and maritime affairs.
Formerly GMA102 GSMA

GMA 250 - Environmental Policy

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): None
GMA 250 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.
Formerly GMA 120 GSMA

GMA 300 - U.S. Foreign Policy

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): GMA 100, GOV 200
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.
GSMA

GMA 310 - The Geopolitics of Energy

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

GMA 315 - China and Its Neighbors

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): None
Ancient roots and cultural traditions, revolution and reform, natural environments and hazards, urban and rural patterns, geographical pivots, powerful transformations, and ongoing territorial disputes. This course focuses primarily on China's historical and contemporary geopolitical relationships with Japan, the Korean Peninsula, and the Russian Far East. These regions and states are also examined in their own light to better understand regional commonalities and contrasts which provide the foundation and context for understanding current issues in the East Asia region.
GSMA

GMA 320 - Ocean Environmental Management

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): None
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.
GSMA

GMA 330 - Maritime Security

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): GMA 100 or GMA 105
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.
GSMA

GMA 335 - Maritime California

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): None
An examination of maritime issues and infrastructure in the State of California. Key topics include California's ports, interconnected waterway system, state maritime institutions, marine protected areas, coastal and exclusive economic zone management, and marine environmental issues, among others. The course focuses on the most significant contemporary maritime issues in California, and students will analyze the underlying structures of California's maritime system in the context of the opportunities and challenges facing "maritime California" today and into the future.
GSMA

GMA 340 - International Migration

Units: 3
Factors of human migration: why people migrate, where human populations migrate to and from, the economic, political, and social implication. Migration theory as applied to historical and modern day migration events, mass migration movements and their effects.
GSMA

GMA 345 - Asian Security

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
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.
GSMA

GMA 350 - Political Geography

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): GMA 100 or GMA 215 or Permission of the Instructor
A study of the geographical influences on political actions as well as their consequences, particularly boundarymaking, boundary disputes, and geopolitical power. Location, distance, the distribution of natural and human resources have significant influences on geo-politics, both within and between regions and states. Concepts of territoriality include airborne, space-based, and waterborne possession and acquisition. Focus topics also include popular geopolitical narratives, place-based identity, environmental politics, and political ecology.
GSMA

GMA 355 - Cross-Cultural Competence

Units: 3
A comprehensive practical, and interactive class to develop cross-cultural skills and global competence. Teaches how to navigate global differences in worldview, religion, language, ethnicity, family structure, cuisine, music, and more.

GMA 360 - Globalization

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

GMA 365 - Polar Politics

Units: 3
Examines the political, social, economic and environmental issues in the Arctic and Antarctic regions focusing particularly on the international interests in Arctic oil, mineral and natural gas resources, political implications of changing sea-ice patterns in response to climate change with respect to new trade routes, strategic competition, and the environmental security of Arctic peoples - with all the geopolitical rivalries these topics entail.

GMA 386 - Panetta Institute Elective

GSMA

GMA 390 - 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.
GSMA

GMA 395 - Special Topics

General Education: Area D Social Science - upper division
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
GSMA

GMA 405 - International Maritime Organizations

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

GMA 450 - Special Topics in Maritime Policy

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

GMA 460 - Senior Thesis

Class Hours: 3, Units: 3
Prerequisite(s): Senior standing or by instructor permission.
Co-requisite(s): 460L
Formulating a research question, selecting methodology and sources, writing outlines and sequential drafts; culminates

in a final 40-page thesis at the end of the semester, with in-class presentations of work at appropriate intervals.
(Formerly GMA 401) GSMA

GMA 460L - Senior Thesis Research Lab

Class Hours: 1, Units: 1
Co-requisite(s): GMA 460
GMA 460L will provide hands-on instruction and practice in research methods for Global Studies, in support of completion of the GSMA Senior Thesis of GMA 460.
(Formerly GMA 401L) LIB

GMA 461 - Senior Qualifying Exams

Class Hours: 3, Units: 3
Prerequisite(s): Senior standing or by instructor permission.
Preparation for comprehensive written and oral exams on sub-fields and basic concepts in the major; team learning communities work on directed reading, discipline-specific research, and mock responses under direction of the instructor.
(Formerly GMA 400) GSMA

Government

GOV 195 - Special Topics

GSMA

GOV 200 - American Government

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division; American Institutions II (government)
Prerequisite(s): 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.)
GSMA

GOV 390 - 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.
GSMA

GOV 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
GSMA

Graduate Courses

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation,

logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 600 - Global Logistics and Supply Chain Management

Logistics is the science of movement of materials from raw material to the customer in the globalized economy; Supply Chain Management focuses on understanding techniques and strategic issues in the successful movement of products from their origins as raw materials to their final destinations as finished products, including the impact of culture, strategic planning, organization, and management control. Specific topics include customer service, e-commerce, facilities location, routing and pricing, storage, transportation, emerging technologies, and re-engineering the supply chain. Emphasis will be placed throughout on the maritime component, with frequent use of case studies.

TEM 610 - International Transportation Law

Explores legal issues in transportation, logistics and supply chain management in a globalized economy. Topics include freight charges liability; loss, damage and delay claims, billing disputes, over-charge and undercharge claims; bills of lading; freight classification system; cargo insurance; applicable international legal treaties and conventions; and the current state of international transportation law.

TEM 620 - International Trade and Finance

This course focuses on trade and finance in a globalized economy. Trade topics include the current structure of the international trading system, global trade treaties and agreements, and the impact of e-commerce on traditional trade constructs. Financial topics include raising capital in the global economy, the management of investment and exchange risk, and global financial treaties and agreements.

TEM 630 - Port and Terminal Management

An advanced course dealing with 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.

TEM 700 - Systems Engineering Management

Introduces students to the principles and processes of systems engineering, from concept development through system integration, testing and life cycle support. The course explores a disciplined approach to identifying user needs, translating those needs into a complete system specification, and verifying that requirements are met. A team project related to deployment of a large-scale complex system is used to demonstrate the integrated nature of systems engineering.

TEM 705 - Strategic Management

Topics include the managing and resolution of complex problems in engineering management; the process of crafting strategy; evaluating a company's external environment, resources and competitive position; integration and outsourcing; diversification, acquisitions and new ventures; competing in foreign markets; strategy, ethics, and social responsibility; and effective strategy execution.

TEM 710 - Technology Management

Focuses on managing advanced technology in industry. Topics include: Human factors; quality control; reliability and maintainability; integrated logistic support; sales and marketing for engineers; legal issues and entrepreneurship; and managing risk.

TEM 720 - Energy Resource Management

Course participants will learn the background knowledge, concepts and management techniques necessary to create and sustain an effective energy management program within their organization, resulting in an efficient use of energy to maximize profit and minimize cost. This course will examine supply side cost structures, auditing of energy demand, strategies to reduce energy costs, energy efficient technologies, and economic analysis of energy efficiency upgrades for decision making.

TEM 800 - The Global Humanitarian System

This course considers in greater depth the humanitarian system as a whole and the resulting tensions. It compares and contrasts the actions and activities with those found in the commercial and military counterparts that will be found operating alongside the humanitarian logistic network, and focuses on the issue of the development and maintenance of inter-personal and inter-organizational trust as a critical success factor within the post-disaster response.

TEM 810 - Rapid and Slow Onset Disaster Management

This course underpins the Humanitarian Logistics track through an introduction to the disaster response cycle and a high level discussion of the key stakeholders. It considers the role of the humanitarian logistician and discusses five of the most significant challenges facing those working in this field.

TEM 820 - Humanitarian Project Management

On the basis that the whole area of the preparation and response to a natural disaster falls into the Rittel and Webber's categorization of a "wicked problem", based on academic approaches to the "taming" of such problems, this course will consider alternate ways of managing the humanitarian logistic challenge. These will be drawn from a number of fields including those of project management and procurement as well as the area of general management.

TEM 830 - National and International Humanitarian Logistics

It is recognized that there are significant differences in the philosophical approach, and consequential policies, processes and procedures adopted by different countries in their preparation and response to national and international disasters. The aim of this course is to consider the differences in such approaches, the implications for international cooperation and the extent to which best practice can be synthesized.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

History

HIS 100 - U.S. History (to 1877)

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division; American Institutions I (history).
Prerequisite(s): 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.)
GSMA

HIS 101 - U.S. History (from 1877)

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division; American Institutions I (history).
Prerequisite(s): 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.)
GSMA

HIS 195 - Special Topics

GSMA

HIS 210 - History of Latin America

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
GSMA

HIS 300 - Maritime History of the U.S. (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 10
General Education: Area D Social Science - upper division
Prerequisite(s): 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.)
GSMA

HIS 305 - The World Since 1500: A Global History

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.)
GSMA

HIS 315 - World Maritime History I: Antiquity to Age of Discovery

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

HIS 316 - World Maritime History II: Age of Exploration through the Nuclear Age

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

HIS 350 - Race, Class and Gender in the Maritime World

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
GSMA

HIS 360 - Bay Area Maritime History

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): HIS 100 or HIS 101, EGL 100 or Equivalent

An investigation of the history and maritime heritage of the San Francisco Bay Area. Topics include: 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.
GSMA

HIS 390 - 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.
GSMA

HIS 395 - Special Topics

General Education: Area D Social Science - upper division
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
GSMA

Humanities

HUM 100 - Humanities

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

HUM 101 - Perspectives in Culture: The Ancient World through the Renaissance

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

HUM 102 - Perspectives in Culture: Post-Renaissance to the Present

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

HUM 110 - World Culture Journeys

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

HUM 115 - Maritime Arts

Class Hours: 3, Units: 3
A study of maritime art forms used by sailors, and various traditions of coastal communities. Examines processes and art mediums through hands-on projects and literature.
CC

HUM 130 - Creativity

Class Hours: 3, Units: 3
General Education: Area C1 Arts - lower division; Area E Lifelong Learning and Self Development (may be used to satisfy only one of Area C1 or Area E).
Prerequisite(s): 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.
CC

HUM 195 - Special Topics

Class Hours: 3 Units: 3
General Education: Area C2 Humanities - lower division
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities, the expertise of visiting faculty, or off-campus educational programs may afford a unique and

worthwhile learning experience.
CC, ET, ME

HUM 300 - Art of the Cinema

Class Hours: 4, Units: 3
General Education: Area C1 Arts - upper division
Prerequisite(s): 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.
CC

HUM 305 - Comparative World Religions

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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.
CC

HUM 310 - Engineering Ethics

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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 325 - Globalization of Culture

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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.
CC

HUM 350 - Maritime Culture

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - upper division
Prerequisite(s): EGL 100
This is a course about maritime culture, and over the semester we will define and explore three things: "culture" in general, meaning the ways people understand and live their lives, "maritime," which most simply means any human interaction with, understanding of, or profitable use of navigable water, and "maritime culture," as a subset of our inherited and evolving "western" culture. We will examine culture through a variety of its products: representations in literature, visual arts like painting and film, and the more intimate products of maritime culture formerly restricted to coteries of seafarers themselves: chantey songs, tattoos, and crafts like scrimshaw and fancy-work. This course takes an interdisciplinary approach to examining culture; some of the skills and techniques to which you will be introduced include formal analysis of prose and poetry, technical and stylistic scrutiny of paintings, prints, drawings and objects, and the careful observation and description of content presented in films and music.
CC

HUM 390 - 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.
CC, ET, ME

HUM 395 - Special Topics

General Education: Area C2 Humanities - upper division
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
CC, ET, ME

HUM 400 - Ethics (CSL)

Class Hours: 3, Units: 3 Community Service Hours: 12
General Education: Area C2 Humanities - upper division
Prerequisite(s): 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. Students will volunteer for at least twelve hours of active engagement at one of many nonprofit organizations serving the community.
CC

Languages

LAN 110 - Spanish I

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division

Prerequisite(s): 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.
CC

LAN 115 - Spanish II

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

LAN 120 - Chinese I

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

LAN 125 - Chinese II

Class Hours: 3, Units: 3
General Education: Area C2 Humanities - lower division
Prerequisite(s): 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.
CC

LAN 195 - Special Topics

CC

LAN 390 - 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.
CC

LAN 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
CC

Law

LAW 100 - Business Law

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

LAW 195 - Special Topics

IBL

LAW 200 - Environmental Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - lower division
Prerequisite(s): 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.
IBL

LAW 300 - International Law

Class Hours: 3, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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.
IBL

LAW 315 - Admiralty Law

Class Hours: 2, Units: 2
Prerequisite(s): 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.
IBL

LAW 390 - 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.
IBL

LAW 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

Leadership

LDR 195 - Special Topics

IBL

LDR 210 - Foundations of Leadership

Class Hours: 3 Units: 3
General Education: Area D Social Science - lower division; Area E Lifelong Learning and Self Development (may be used to satisfy only one of Area D or Area E).
Prerequisite(s): 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.
IBL

LDR 390 - 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.
IBL

LDR 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

Library

LIB 100 - Information Fluency in the Digital World

Class Hours: 2, Units: 2
Prerequisite(s): 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

Management

MGT 105 - Management and Organizational Behavior

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

MGT 195 - Special Topics

IBL

MGT 205 - Organizational Behavior and Labor Relations

Class Hours: 3, Units: 3
Prerequisite(s): None
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.
IBL

MGT 300 - Advanced Management Techniques

Class Hours: 3, Units: 3
Prerequisite(s): None
Gives the student a basic understanding of quantitative methods and their application to business decisionmaking. 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)
IBL

MGT 305 - Information Systems Management

Class Hours: 3, Units: 3
Prerequisite(s): COM 100 or Equivalent Course
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.
IBL

MGT 310 - Port and Terminal Management and Operations

Class Hours: 3, Units: 3
Prerequisite(s): ECO 100, MGT 100 or MGT 105 or NAU 108
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.
IBL

MGT 315 - Internship

Units: 2-3
Prerequisite(s): 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.
IBL

MGT 325 - Principles of Purchasing

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

MGT 335 - Advanced Information Systems

Class Hours: 3, Units: 3
Prerequisite(s): 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.
IBL

MGT 340 - Global Logistics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 100
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.
IBL

MGT 390 - 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.
IBL

MGT 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

MGT 400 - Strategic Management

Class Hours: 3, Units: 3
Prerequisite(s): Senior Class Standing
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.
IBL

MGT 410 - Quantitative Managerial Methods

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107
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.
IBL

MGT 415 - Operations Management

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107
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.
IBL

MGT 420 - Supply Chain Management

Class Hours: 3, Units: 3
Prerequisite(s): MTH 107
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.
IBL

MGT 440 - Logistics Case Analysis

Class Hours: 3, Units: 3
Prerequisite(s): MGT 340, MGT 420
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.
IBL

Marine Science

MSC 100 - Introduction to Geological and Chemical Oceanography

Units: 3
General Education: Area B1: Physical Science
Prerequisite(s): 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 100L - Introduction to Oceanography Laboratory

Units: 1
General Education: Area B3: Laboratory Activity
Quantitative problem-solving in oceanography using a combination of simulation laboratory exercises, application of real, open source oceanographic data. Opportunity to sample ocean conditions in the San Francisco Estuary.
SM

MSC 105 - Introduction to Biological and Physical Oceanography

Class Hours: 3, Units: 3
General Education: Area B2 Life Science
Prerequisite(s): 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 195 - Special Topics

SM

MSC 200 - Oceanographic Instruments and Analysis

Units: 2
General Education: Area B1: Physical Science
Co-requisite(s): MSC 200L
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

Units: 1
General Education: Area B3: Laboratory Activity
Co-requisite(s): MSC 200
SM

MSC 205 - Marine Biology

Class Hours: 3, Units: 3
General Education: Area B2 Life Science
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 205L - Marine Biology Laboratory

Lab Hours: 2, Units: 1
General Education: Area B3 Laboratory Activity
Co-requisite(s): MSC 205
As a co-requisite, Marine Biology Laboratory provides students with the opportunity to more fully explore the concepts introduced in MSC 205. Students will be introduced to the use of stereo and compound microscopes, and use plankton nets for the collection and enumeration of phytoplankton and zooplankton. Students will perform invertebrate and vertebrate dissections, and explore unique northern California marine ecosystems such as salt marshes, estuaries, the intertidal, and marine mammal breeding grounds.
SM

MSC 210 - Marine Ecology

Units: 3
General Education: Area B2: Life Science
Co-requisite(s): MSC 210L
Introduction to marine ecology of diverse habitats including the estuarine, intertidal, neritic, epipelagic, and deep sea, coral reefs and polar ecosystems.
SM

MSC 210L - Marine Ecology Laboratory

Units: 1
General Education: Area B3: Laboratory Activity
Co-requisite(s): MSC 210
Laboratory/field-based course working in local marine environments, including estuarine, wetland, rocky intertidal and beach communities, to understand marine ecology. Service-learning course that will partner with state, federal, or nongovernmental agencies to collect and interpret ecological data.
SM

MSC 380 - Directed Research

Class Hours: 3, Units: 3
General Education: Area B2 Life Science
Prerequisite(s): Prerequisites: MSC 100, MSC 105
A requirement for students completing the Marine Science Minor. Working with a faculty mentor, students develop and conduct a marine science research project. Students demonstrate competence in hypothesis testing, gathering and analyzing oceanographic data. The project culminates with a written or oral presentation.
SM

MSC 390 - Independent Study

General Education: Area B2 Life Science
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.
SM

MSC 395 - Special Topics

Units: 1 - 3
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Maritime Policy & Management

MPM 190 - TSGB/International Experience Preparation

Class Hours: 1, Units: 1
Prerequisite(s): None
A one-unit course offered in the spring term to Business students prior to participation in their Training Ship *Golden Bear* (TSGB) cruise or an international experience. As part of the course, students will complete all necessary pre-trip plans, including document collection, medical information training, language primers, and associated tasks. Students 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.
IBL

MPM 195 - TSGB/International Experience Special Topics

Class Hours: 3, Units: 3
Prerequisite(s): MPM 190
This course is a special topics course to be taught to Business students participating in their Training Ship *Golden Bear* (TSGB) cruise or their international experience. Topics will be related to the specific destinations, and reflect the expertise and interest of the instructor as well as the nature of the itinerary.
IBL

MPM 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
IBL

Mathematics

MTH 001 - Intermediate Algebra

Class Hours: 4, Units: 4
Prerequisite(s): 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 99L - College Algebra and Trigonometry Support Lab

Units: 1
This is a co-requisite course for students needing support in MTH 100. Content will include just-in-time skill development needed for topics in MTH 100, as well as focused support for the learning of topics in MTH 100.
SM Graded: A, B, C, NC

MTH 100 - College Algebra and Trigonometry

Class Hours: 4, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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: 3, Units: 3
Prerequisite(s): 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 195 - Special Topics

SM

MTH 200L - Algebra for Calculus

Units: 1
Covers the basic algebra needed for Calculus. Topics include equations and inequalities, polynomials, rational expressions, ration exponents, roots, radicals, quadratic equations, graphing equations, and functions.
SM Graded: Credit/No Credit

MTH 205 - Calculus for Business

Class Hours: 3, Units: 3
Prerequisite(s): MTH 100 with a C- or higher
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, Units: 4
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): MTH 100 or equivalent with a C- or higher
Introduction of functions and limits, differentiation, applications of differentiation, integration, and applications of the definite integral.
SM

MTH 211 - Calculus II

Class Hours: 4, Units: 4
Prerequisite(s): MTH 210 with a C- or higher
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, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
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, Units: 4
Prerequisite(s): MTH 211 with a C- or higher
Introduces first-order differential equations and secondorder 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 250 - Introduction to Linear Algebra

Class Hours: 4, Units: 3
General Education: Area B4 Mathematics/Quantitative Reasoning - must meet minimum grade of C- or better in order to earn General Education credit.
Prerequisite(s): MTH 211 with a C- or higher
Theory and applications of linearity, including vectors, matrices, systems of linear equations, dot and cross products, determinants, linear transformations in Euclidean space, linear independence, bases, eigenvalues, eigenvectors, and diagonalization.
Formerly MTH 310. SM

MTH 390 - 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.
SM

MTH 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Mechanical Engineering

ME 195 - Special Topics

ME

ME 220 - Computer Aided Engineering

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
Prerequisite(s): CHE 110

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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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, Units: 2
Prerequisite(s): ME 332, ME 360
Co-requisite(s): 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(s): ME 339
ME

ME 340 - Engineering Fluid Mechanics

Class Hours: 3, Units: 3
Prerequisite(s): MTH 212, ME 232
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, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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, Units: 2
Prerequisite(s): ME 344, ME 360
Co-requisite(s): 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(s): ME 349
ME

ME 350 - Electromechanical Machinery

Class Hours: 3, Units: 3
Prerequisite(s): ENG 250, ENG 250L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ENG 250, ENG 250L
Co-requisite(s): ME 350
Supports instruction and theory of ME 350 using handson motor operation and analysis.
ME

ME 360 - Instrumentation and Measurement Systems

Class Hours: 2, Units: 2
Prerequisite(s): ENG 210, ENG 250, ENG 250L
Co-requisite(s): 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, Units: 1
Prerequisite(s): ENG 210, ENG 250, ENG 250L
Co-requisite(s): 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 390 - 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.
ME

ME 392 - Mechanical Design

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ME

ME 429 - Manufacturing Processes Lab

Class Hours: 1, Lab Hours: 2 Units: 2
Prerequisite(s): EPO 215, ME 220
Co-requisite(s): 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

ME 430 - Mechanical Vibrations

Class Hours: 3, Units: 3
Prerequisite(s): 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: 3, Units: 3
Prerequisite(s): ME 330, ME 332
This course will cover kinematics and dynamics of machinery and the synthesis of mechanisms to perform desired motions and tasks of mechanisms using linkages, gears, cams, and actuators. Analysis of mechanisms will be studied to determine their rigid-body dynamic behavior. Position, velocity, and acceleration of mechanisms and force analysis of mechanisms will be covered. ProE Mechanism, which is a virtual prototyping tool for mechanism analysis and design, will be demonstrated. Students will use ProE/Creo to design, animate, analyze, and optimize complex threedimensional mechanisms.
ME

ME 436 - Mechatronic System Design

Class Hours: 3, Units: 3
Prerequisite(s): ENG 250, ME 330
Introduction to a multidisciplinary field that combines electronics, control systems, mechanical design and simulation. Simulation and design of mechatronic systems with sensors, electronic controllers and mechanical actuators. Selection and mathematical modeling of system elements including common sensors, actuators and various electronic controllers.
ME

ME 440 - Advanced Fluid Mechanics and Thermodynamics

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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: 3, Units: 3
Prerequisite(s): ME 344
Applications of fundamentals of thermodynamics, fluid mechanics, heat transfer in design, analysis, and selection of power production systems including steam power plants, gas turbines, and auxiliary power units; and heat exchange systems. Topics also include economic evaluation and preliminary cost of estimation of energy systems. A term paper that requires oral presentation and written report on a topic related to energy is also required.
ME

ME 460 - Automatic Feedback Control

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): MTH 215, ME 360, ME 360L
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 215, ME 360, ME 360L
Co-requisite(s): 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, Units: 3
Prerequisite(s): ME 332, ME 340, ME 360
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, Units: 3
Prerequisite(s): ME 490
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, Units: 3
Prerequisite(s): ME 492
In this course students will perform tasks to complete the preliminary designs initiated in ME 492 - Project Design I, 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, Units: 4
STCW Requirement: ♦
Prerequisite(s): MTH 100
Co-requisite(s): 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, Units: 0
Prerequisite(s): Same as NAU 102
Co-requisite(s): NAU 102
MT

NAU 103 - Introduction to Marine Transportation

Class Hours: 3, Units: 3
Prerequisite(s): 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 Cal Maritime 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 104 - VPDSD (Vessel Personnel Designated with Security Duties)

Class Hours: 1, Units: 1
STCW Requirement: ♦
Prerequisite(s): None
Required for seafarers, VPDSD (Vessel Personnel Designated with Security Duties), a mid-level security course, addresses knowledge needed for mariners with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and Section A-VI/6 and Table -VI/6-2 of the STCW Code, as amended.
MT

NAU 105 - Ship Structure

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): None
A survey course of ship design and construction, emphasizing nomenclature and structural components, hull strength and vessel performance characteristics.
MT

NAU 106 - Merchant Mariner Fundamentals

Class Hours: 2, Units: 2
Prerequisite(s): None
This course presents to the new Marine Transportation students an overview of relationships between the U.S. Merchant Marine, the U.S. Navy, and Military Sealift Command; IMO and SOLAS conventions (e.g. ISM, ISPS). This survey course covers several specific subject areas of concern to the professional mariner.
MT

NAU 108 - Operational Command at Sea

Class Hours: 2, Units: 2
Prerequisite(s): None
Introduction to controlling the operation of the ship and care for persons on board at the operational level. Working knowledge of shipboard personnel management and training. A knowledge of related international maritime conventions and recommendations, and national legislation. Applying task and workload management. Effective knowledge of resource management and decisionmaking techniques.
MT

NAU 110 - Seamanship

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
Prerequisite(s): 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.
MT

NAU 195 - Special Topics

MT

NAU 202 - Celestial Navigation

Class Hours: 3, Units: 4
Prerequisite(s): NAU 102, NAU 102L
Co-requisite(s): 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, Units: 0
Prerequisite(s): Same as NAU 202
Co-requisite(s): NAU 202
MT

NAU 205 - Ship Stability

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): MTH 100, NAU 105, PHY 100 (may be taken concurrently), PHY 100L (may be taken concurrently)
e 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, Units: 3
Prerequisite(s): NAU 102, NAU 102L
Co-requisite(s): 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, Units: 0
Prerequisite(s): Same as NAU 302
Co-requisite(s): NAU 302
MT

NAU 305 - Rules of the Road

Class Hours: 2, Units: 2
STCW Requirement: ♦
Prerequisite(s): Prerequisites: CRU 100, 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, Units: 3
Prerequisite(s): MTH 100, PHY 100, PHY 100L
Co-requisite(s): 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, Units: 1
Prerequisite(s): Same as NAU 310
Co-requisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 3
STCW Requirement: ♦
Prerequisite(s): 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, Units: 2
STCW Requirement: ♦
Prerequisite(s): DL 325, DL 325L, MTH 100, NAU 102, NAU 102L, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently)
Co-requisite(s): 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, Units: 1
STCW Requirement: ♦
Prerequisite(s): Same as for NAU 335
Co-requisite(s): 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 390 - 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.
MT

NAU 395 - Special Topics

Co-requisite(s): NAU 395L
Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
MT

NAU 400 - Advanced Maritime Topics

Class Hours: 3, Units: 3
Prerequisite(s): CRU 200, CRU 200L, DL 410 (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, Units: 2
Prerequisite(s): Senior class standing, NAU 202, NAU 202L, NAU 205, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently), NAU 320, NAU 325
Co-requisite(s): NAU 410L
This comprehensive course is designed to prepare candidates for the USCG OICNW exams. Unlike any other course, it requires the candidate to synthesize and apply myriad professional subjects learned in previous subject-specific courses, and perform with both precision and accuracy under time pressure. New topics and material pertinent only to USCG testing will be covered, advanced material will be reviewed in the context of USCG requirements (which differ from practical requirements), and theories and methods of knowledge retention and test-taking strategies will be explored. Rules of the Road, navigation, seamanship, deck safety, environmental protection, cargo, watchstanding and other professional subjects are covered as they pertain specifically to USCG licensing. Course subject matter and strategy necessarily change as the USCG exams continually evolve.
MT

NAU 410L - License Seminar Lab

Lab Hours: 2, Units: 0
Prerequisite(s): Same as NAU 410: Senior class standing, NAU 202, NAU 202L, NAU 205, NAU 302 (may be taken concurrently), NAU 302L (may be taken concurrently), NAU 320, NAU 325
Co-requisite(s): NAU 410
MT

NAU 415 - Transportation Security

Class Hours: 3, Units: 3
STCW Requirement: ♦
Prerequisite(s): Prerequisite 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 industryrecognized security certificates.
MT

NAU 420 - Maritime Casualty Seminar

Class Hours: 3, Units: 3
General Education: Area E Lifelong Learning and Self Development
Prerequisite(s): CRU 200 or CRU 250 or CEP 250 or CEP 270 or CEP 300
Comprehensive study of commercial maritime casualties that impacted domestic regulatory schemes and international conventions. Focus will be on the human element, and how diverse cultures, languages, and management styles aboard international commercial vessels impact human interactions with each other, with equipment, within watch teams, and with the vessels and agencies of other nations.
MT

NAU 430 - Liquefied Gas Cargos

Class Hours: 2, Units: 2
Prerequisite(s): Prerequisite for MT Students: NAU 320 Prerequisite for MET & ME Students: CEP 350, ENG 430
Co-requisite(s): NAU 430L
A study of the ocean transportation of liquefied gas cargos, which includes liquefied natural gas (LNG) and liquefied 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 - Liquefied Gas Cargos Lab

Lab Hours: 2, Units: 1
Prerequisite(s): Prerequisite for MT Students: NAU 320 Prerequisite for MET & ME Students: CRU 350, ENG 430
Co-requisite(s): 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 liquefied gas carriers.
MT | Graded: Credit/No Credit

Naval Science

NSC 100 - Naval Science for the Merchant Marine Officer/Strategic Sealift Officer

Class Hours: 3, Units: 3
An introduction to the organization of the U.S. Navy, with a discussion of the Strategic Sealift Officer Program and Naval Reserve commissioning options, which 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 historical merchant marine- Navy interface in common seapower objectives. 70% of available lecture time is spent covering the history of seapower. The remaining 30% is spent covering miscellaneous organizations/government agencies which support defense objectives and have ties to the merchant marine.
NS

NSC 195 - Special Topics

NS

NSC 200 - Naval Science for the Merchant Marine Reservist I

Class Hours: 3, Units: 3
Prerequisite(s): 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

Units: 3
Prerequisite(s): Sophomore Class Standing and must be sworn into the MMR program.
Co-requisite(s): May be concurrently taken with CRU 200/CRU 250 on board 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 315 - Navigation (For Engineers)

Class Hours: 3, Units: 4
Prerequisite(s): NSC 100
Co-requisite(s): 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, Units: 0
Co-requisite(s): NSC 315
NS

NSC 320 - Naval Operations

Class Hours: 3, Units: 4
Prerequisite(s): NSC 200, NSC 315, NSC 315L, U.S. citizenship
Co-requisite(s): NSC 320L
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. It 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 is presented. The course is required for all Naval Science minors and recommended for those students pursuing a Naval Reserve commission.
Formerly NSC 310. NS

NSC 320L - Naval Operations Lab

Lab Hours: 2, Units: 0
Co-requisite(s): NSC 320
Formerly NSC 310L. NS

NSC 390 - 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.
NS

NSC 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
NS

NSC 400 - Leadership, Ethics, and Naval Science for the Merchant Marine Reservist II

Class Hours: 4, Units: 4
Prerequisite(s): 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

Units: 1
Prerequisite(s): 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 195 - Special Topics

CC

PA 390 - 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.
CC

PA 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
CC

Physical Education and Athletics

PE 101 - Swim Competency Exam

Units: 0
Swim assessments, completed during Orientation, indicate which of our new cadets may participate in Marine Safety and Survival Programs immediately, and let us know which members of the incoming class require PE 102 - Beginning/Intermediate Swimming before they can begin more intensive training. Swim assessments should be considered a "challenge exam" that if passed fulfills the prerequisite requirement for many of the classes offered at the Academy. Students who pass the assessment will receive a "CR" grade. Students who do not pass the exam or do not take the test will be required to enroll in PE 102 - Beginning/Intermediate Swimming.
ATH | Graded: Credit/No Credit must take PE 102)

PE 102 - Beginning/Intermediate Swimming

Lab Hours: 2, Units: 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, Units: 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, Units: 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 learns how to change his or her body composition and promote an overall feeling of wellness. The student also learns 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, Units: 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, Units: 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, Units: 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, Units: 1
Classroom and practical instruction in sailing theory and skills for individuals with little to no sailing experience. Successful course completion leads to eligibility to take the CA Boater Card exam.
ATH | Graded: Credit/No Credit

PE 165 - Sail Training for the Merchant Marine Reserve

Class Hours: 1, Lab Hours: 2, Units: 2
Co-requisite(s): 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 195 - Special Topics

ATH

PE 260 - Intermediate Sailing

Lab Hours: 2, Units: 1
Prerequisite(s): 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 390 - 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.
ATH

PE 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
ATH

Intercollegiate Sports

PE 210 - Intercollegiate Soccer

Units: 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)

Units: 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 226 - Intercollegiate Water Polo (Women)

Units: 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

Units: 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 (Men)

Units: 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 236 - Intercollegiate Crew (Women)

Units: 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)

Units: 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 241 - Intercollegiate Basketball (Women)

Units: 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

Units: 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

Units: 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

PE 270 - Intercollegiate Cross Country (Women)

Units: 1
Intercollegiate cross country running is a sport which takes place outside on terrains of different lay-outs and complexities in which teams and individuals attempt to complete a course faster than one another. Cross country has both men and women categories. The NAIA courses are 5 kilometers for the women and 8 kilometers for the men. Practices are daily with meets scheduled on the weekends. All athletes must pass a complete physical and must be certified by the Play NAIA player eligibility center. Athletes must be registered as full time students at the California State University Maritime Academy and maintain a 2.0 GPA. Practices include strength training, plyometrics, core conditioning, interval training and long distance running. Practices will be held on Bodnar Field track and at select off campus locations. All intercollegiate athletes are expected to participate in all practices and competitions. Athletes are also required to sign a contract acknowledging all of the specifics including time commitment and school representation. The Coach/Instructor will use multi-media aids, lecture and lab to instruct the Student Athlete. Athletes are expected to dress for running with the appropriate shoes to be discussed by the Coach.
ATH | Graded: Credit/No Credit

PE 271 - Intercollegiate Cross Country (Men)

Units: 1
Intercollegiate cross country running is a sport which takes place outside on terrains of different lay-outs and complexities in which teams and individuals attempt to complete a course faster than one another. Cross country has both men and women categories. The NAIA courses are 5 kilometers for the women and 8 kilometers for the men. Practices are daily with meets scheduled on the weekends. All athletes must pass a complete physical and must be certified by the Play NAIA player eligibility center. Athletes must be registered as full time students at the California State University Maritime Academy and maintain a 2.0 GPA. Practices include strength training, plyometrics, core conditioning, interval training and long distance running. Practices will be held on Bodnar Field track and at select off campus locations. All intercollegiate athletes are expected to participate in all practices and competitions. Athletes are also required to sign a contract acknowledging all of the specifics including time commitment and school representation. The Coach/Instructor will use multi-media aids, lecture and lab to instruct the Student Athlete. Athletes are expected to dress for running with the appropriate shoes to be discussed by the Coach.
ATH | Graded: Credit/No Credit

Physics

PHY 100 - Physics I

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science
Prerequisite(s): MTH 100
Co-requisite(s): 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, Units: 1
General Education: Area B3 Laboratory Activity
Prerequisite(s): MTH 100
Co-requisite(s): 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, Units: 4
Prerequisite(s): PHY 100
Fundamental principles of electrostatics, direct and alternating currents, electromagnetism, optics, quantum physics and nuclear processes, with problem solving.
SM

PHY 120 - Physics for Future Leaders

Class Hours: 3, Units: 3
General Education: Area B1 Physical Science

Prerequisite(s): None
Co-requisite(s): None
Intended primarily for nonscientists, this course covers topics relevant to leaders, policy makers, and citizens confronted with science and technology issues. Topics include energy production and utilization; atoms and heat; radioactivity and nuclear reactions; nuclear bombs; light and radio waves for communication and navigation; climate change; quantum physics.
SM

PHY 120L - Physics for Future Leaders Lab

Lab Hours: 2, Units: 1
General Education: Area B3 Laboratory Activity
Prerequisite(s): None
Co-requisite(s): PHY 120
This lab is paired with the lecture series "Physics for Future Leaders." Intended primarily for nonscientists, this course covers topics relevant to leaders, policy makers, and citizens confronted with science and technology issues. Topics include energy production and utilization; atoms and heat; radioactivity and nuclear reactions; nuclear bombs; light and radio waves for communication and navigation; climate change; quantum physics.
SM

PHY 195 - Special Topics

SM

PHY 200 - Engineering Physics I

Class Hours: 3, Units: 3
Prerequisite(s): MTH 210
Co-requisite(s): 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, Units: 1
Prerequisite(s): MTH 210
Co-requisite(s): PHY 200
Laboratory physics course designed to enhance conceptual learning of physics by adding a hands-onlearning 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, Units: 4
Prerequisite(s): 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 390 - 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.
SM

PHY 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
SM

Transportation

TRA 195 - Special Topics

MPM

TRA 300 - Transportation Carrier Management

Class Hours: 3, Units: 3
Prerequisite(s): ECO 100
This course will introduce the student to the field of transportation management with an emphasis on basic economic principles, and efficient and costeffective 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, Units: 3
General Education: Area D Social Science - upper division
Prerequisite(s): 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, Units: 2
Prerequisite(s): 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 390 - 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.
MPM

TRA 395 - Special Topics

Special topic courses are intended to enable each department to offer an elective course of study when faculty scholarship activities or the expertise of visiting faculty may afford a unique and worthwhile learning experience. Check the course schedule for current offerings.
MPM

TRA 400 - Transportation of Hazardous Materials

Class Hours: 3, Units: 3
Prerequisite(s): 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, Units: 3
Prerequisite(s): BUS 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, Units: 3
Prerequisite(s): 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

Baccalaureate Degree Requirements

Baccalaureate Degree Definition

A baccalaureate degree is the academic title that Cal Maritime confers upon successful completion of all coursework, including General Education requirements, major requirements, and any elective coursework, as specified by Title 5 of the California Code of Regulations. Cal Maritime offers two baccalaureate degrees, a Bachelor of Arts (B.A.) degree and a Bachelor of Science (B.S.) degree. Specific coursework required for each major can be found in the Academic Programs area of this catalog.

A candidate for a Bachelor of Arts or Bachelor of Science degree at Cal Maritime must have completed the academic program with a cumulative rade point average of not less than 2.00 in each of three separate assessments:

- 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.

Baccalaureate Degree Requirements

The California Code of Regulations sets forth basic requirements for a baccalaureate degree:

- 48 units of General Education (G.E.) Breadth Requirements;
- Major coursework (at least 24 units for a B.A., at least 36 units for a B.S.);
- Upper Division coursework: at least 40 units of upper division, of which 12 (for a B.A.) or 18 (for a B.S.) will be in your chosen major;
- US History, Constitution, and American Ideals Requirement;
- Satisfaction of the University Writing Skills Requirement;

Requirements in United States History, Constitution and American Ideals

The California Code of Regulations requires that students demonstrate competencies in U.S. History, the U.S. Constitution, and California State and local government 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

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.

General Education Program

Description of Program

The California State University Maritime Academy embraces the principles of general education for the California State University as outlined in the California State University Executive Order 1100: "CSU General Education Breadth requirements have been designed to complement the major program and electives completed by each baccalaureate candidate, to assure that graduates have made noteworthy progress toward becoming truly educated persons." Whenever possible, Cal Maritime subscribes to the breadth and depth requirements, but given the number of high-unit professional and licensure major degree programs, some exceptions may apply. Specific information on exceptions and curricular paths can be found in those catalog sections devoted to specific majors.

General Education Requirements

- Every baccalaureate candidate who has not completed either the IGETC or UC-campus pathway shall complete the CSU General Education Breadth requirements totaling a minimum of 48 semester units.
- A grade of C- or better is required of each CSU or transfer student completing courses in written communication in the English language, oral communication in the English language, critical thinking, and mathematics or quantitative reasoning.
- At least nine of these semester units must be upper-division level, taken no sooner than the term in which upper-division status (completion of 60 semester units) is attained.
- At least nine of the 48 semester units must be earned at Cal Maritime.
- Through a process of campus-wide curriculum review and approval, Cal Maritime permits the "double counting" of courses for General Education Breadth with major requirements and prerequisites only after giving careful consideration to the impact of such actions on general education programs.
- Cal Maritime permits up to six semester units taken to meet the United States History, Constitution, and American Ideals Requirement to be credited toward also satisfying General Education Breadth Requirements.

General Education Subject Area Distribution

Instruction approved to fulfill the following subject-area distribution requirements should recognize the contributions to knowledge and civilization that have been made by members of diverse cultural groups and by women as well as men.

Area A: English Language Communication and Critical Thinking
A minimum of nine semester units or twelve quarter units in communication in the English language, to include both oral communication (subarea A1) and written communication (subarea A2), and in critical thinking (Area A3), to include consideration of common fallacies in reasoning.

Area B: Scientific Inquiry and Quantitative Reasoning
A minimum of twelve semester units to include inquiry into the physical universe and its life forms, with some immediate participation in a related laboratory activity, and into mathematical concepts and quantitative reasoning and their applications. In subareas B1-B3, students develop knowledge of scientific theories, concepts, and data about both living and non-living systems. Courses in subarea B4 have an explicit intermediate algebra prerequisite, and students develop skills and understanding beyond the level of intermediate algebra.

Area C: Arts and Humanities
A minimum of twelve semester units among the arts, literature, philosophy and foreign languages. Across the disciplines in their Area C coursework, students cultivate intellect, imagination, sensibility and sensitivity. Students respond subjectively as well as objectively to aesthetic experiences and will develop an understanding of the integrity of both emotional and intellectual responses.

Area D: Social Sciences
A minimum of twelve semester units dealing with human social, political, and economic institutions and behavior and

their historical background.

.

Area E: Lifelong Learning and Self-Development

A minimum of three semester units in study designed to equip learners for lifelong understanding and development of themselves as integrated physiological, social, and psychological beings.

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 successfully complete the Graduate Writing Examination (GWE).

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 of 1997, "Students shall be matriculated at the CSU campus where they satisfy the Graduation Writing Assessment Requirement (GWAR)." 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 of roughly 600 to 800 words and use that reading as a basis for their written commentary. Students are expected to answer a question (or questions) in a 700-word essay with clarity, quality of thought, sound writing mechanics and completeness, as well as unity and development of concepts. Students have three (3) hours in which to complete the handwritten exam and they 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 GWAR or the GWE at Cal Maritime, contact Dr. Amy Parsons at aparsons@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 license-track graduates of Cal Maritime who

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

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

- apply to the U.S. Coast Guard to sit for the license exam in the last semester of attendance
- pay appropriate U.S. Coast Guard fees, and
- complete all Cal Maritime STCW/USCG license requirements

Admission into programs leading to licensure and credentialing does not guarantee that students will obtain a license or credential. Licensure and credentialing requirements are set by agencies that are not controlled by or affiliated with the CSU and requirements can change at any time. For example, licensure or credentialing requirements can include evidence of the right to work in the United States (e.g., social security number or tax payer identification number) or

successfully passing a criminal background check. Students are responsible for determining whether they can meet licensure or credentialing requirements. The CSU will not refund tuition, fees, or any associated costs, to students who determine subsequent to admission that they cannot meet licensure or credentialing requirements. Information concerning licensure and credentialing requirements are available from the USCG Licensing Program Coordinator.

Sea Training Requirements

Three training cruises, established by the U.S. Coast Guard, are required of all students seeking a license as Third Mate or Third Assistant Engineer. 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, 1978, as amended. 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.

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 or the U.S. Merchant Marine Academy will be evaluated on a case by case basis for completion of Cal Maritime's approved program, including sea time equivalency.

Military, merchant mariner sea time external to Cal Maritime's approved program, and volunteer/observer sea time may not be used in meeting the sea service requirements.

A student's major will normally determine the type of sea training. The required amount of sea training for each major is as follows:

- Business Administration - one sea training or international experience
- Facilities Engineering Technology - one sea training experience as an engineering student
- Global Studies and Maritime Affairs - one sea training or international experience
- Marine Engineering Technology - three sea training experiences as an engineering student
- Marine Transportation - three sea training experiences as a marine transportation student
- Mechanical Engineering with license - three sea training experiences as an engineering student
- Mechanical Engineering - one sea training experience

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 by the end of the following fall semester. Students are expected to apply for graduation by the deadlines published on the Office of the Registrar website. The Registrar will then determine eligibility to participate in commencement. The degree and any appropriate license will be awarded upon completion of all degree requirements.

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 (CSU IP) has

contributed to this effort by providing qualified students an affordable opportunity to continue their studies abroad for a full academic year. More than 20,000 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 study center abroad. CSU IP serves the needs of students in more than 100 designated academic majors. Affiliated with more than 50 recognized universities and institutions of higher education in 18 countries, CSU IP also offers a wide selection of study abroad destinations and learning environments.

AUSTRALIA - Griffith University, Macquarie University, Queensland University of Technology, University of Queensland, Western Sydney University

CANADA - Concordia University

CHILE - Pontificia Universidad Católica de Chile

CHINA - Peking University (Beijing)

DENMARK - Danish Institute for Study Abroad

FRANCE - Institut Catholique de Paris, Institut Supérieur d'Electronique de Paris, Université d'Aix-Marseille (Aix-en-Provence), Université de Cergy-Pontoise, Universités de Paris I, III, IV, VI, VII, VIII, X, XI, XII, XIII, Université Paris-Est Marne-la-Vallée, Université d'Evry Val d'Essonne, and Université de Versailles Saint-Quentin-en-Yvelines

GERMANY - University of Tübingen and a number of institutions of higher education in the Federal state of Baden-Württemberg

GHANA - University of Ghana

ISRAEL - University of Haifa

ITALY - CSU Florence Study Center, Accademia di Belle Arti Firenze

JAPAN - Waseda University, University of Tsukuba

MEXICO - Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Querétaro

SOUTH AFRICA - Nelson Mandela Metropolitan University

SOUTH KOREA - Yonsei University

SPAIN - Universidad Complutense de Madrid, Universidad de Granada, Universidad de Jaén

SWEDEN - Uppsala University

TAIWAN - National Taiwan University

UNITED KINGDOM - University of Bradford, University of Bristol, University of Hull, Kingston University, Swansea University

Students participating in CSU IP pay CSU tuition and program fees, and are responsible for airfare, accommodations, meals and other personal expenses. Financial aid, with the exception of Federal Work-Study, is available to qualified students and limited scholarship opportunities are also available. All programs require students to maintain good academic and disciplinary standing; many programs are open to sophomores or Graduate students. California Community College transfer students are eligible to apply (to select programs) directly from their community colleges. Students must possess a current cumulative grade point average of 2.75 or 3.0, depending on the program, and must fulfill all coursework prerequisites. Additional program information and application instructions can be found on our website at www.calstatele.edu/ip.

Catalog Home

We hope you find our new, interactive catalog easy to navigate. The links to your left will take you to various sections of the catalog, and the Catalog Search feature can help you find what you are looking for. The "?" at the top right of any page offers additional information on how to use this catalog. If you have suggestions on how we could improve the catalog, please e-mail your ideas to the catalog editor at catalog@csum.edu.

Changes in Rules and Policies

Although every effort has been made to ensure 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 affect the information contained in this publication.

To prepare its students to pass licensing examinations, Cal Maritime modifies its curriculum to include the most recent 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 Cal Maritime website, and 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 Cal Maritime or the California State University. The relationship of the students to Cal Maritime and the California State University is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the Presidents and their duly authorized designees.

Undergraduate Information

Undergraduate Admission Procedures & Policies

• Importance of Filing Complete, Accurate, and Authentic Application Documents	• Use of Social Security Number

• Undergraduate Application Procedures
  ○ Impacted Programs
  ○ Supplementary Admission Criteria
  ○ Application Filing Periods
  ○ Application Acknowledgment
  ○ Hardship Petitions
	• Undergraduate Admission Requirements
	  ○ Freshman Requirements
	  ○ Eligibility Index Tables
	  ○ Provisional Admission
	  ○ California Promise
	  ○ High School Students
	  ○ Adult Students

• Transfer Policies of CSU Campuses
  ○ Transfer Requirements
  ○ Lower-division Transfer Requirements
  ○ Upper Division Transfer Requirements
  ○ Associate Degrees for Transfer
  ○ Provisional Admission
	• Test Requirements
	  ○ English Language Requirement
	  ○ Assessment of Academic Preparation and Placement
	  ○ Early Start Program

• CSU Immunization Requirements	• Reservation

• Evaluation of Academic Records
  ○ Advanced Placement (AP) Exam
  ○ International Baccalaureate (IB) Exam
  ○ Credit by Examination
  ▪ Course Challenge Exam
  ▪ College-Level Examination Program (CLEP) Tests
  ○ Credit for Non-collegiate Instruction
  ○ Credit for Prior Learning
	• Appeal of Admission Decision

Requirements for admission to California State University Maritime Academy are in accordance with Title 5, Chapter 1, Subchapter 3, of the California Code of Regulations. Complete information is available at www.calstate.edu/apply.

All CSU applications must be submitted online at www.calstate.edu/apply. An acknowledgement will be sent to the applicant when the online application has been submitted.

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, residency 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 registration or 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). The University uses the social security number to identify students and their records including identification for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution. Also, the Internal Revenue Service requires the University to file information returns that include the student's social security number 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 help determine whether a student, or a person claiming a student as a dependent, may take a credit or deduction to reduce federal income taxes.

UNDERGRADUATE APPLICATION PROCEDURES

Prospective students applying for part-time or full-time undergraduate programs of study must submit a completed undergraduate application. The $55 nonrefundable application fee should be paid online at the time of application via

credit card, e-check, or PayPal and may not be transferred or used to apply to another term. An alternate major may be requested on the application if desired from the campus. The applications of persons denied admission to an impacted campus may be redirected to another campus at no cost, but only if the applicant is CSU eligible.

IMPACTED PROGRAMS

The CSU designates programs as impacted when more applications from regularly eligible applicants 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 that they are offered; others are impacted only at a few campuses. Candidates for admission must meet all of the campus' specified supplementary admission criteria if applying to an impacted program or campus.

The CSU will announce during the fall filing period those campuses or programs that are impacted. Detailed information on campus and program impaction will be available www2.calstate.edu/attend/impaction-at-the-csu.

Campuses will communicate supplementary admission criteria for all impacted programs to high schools and community colleges in their application service area and will disseminate this information to the public through appropriate media. This information will also be published on the CSU campus website and made available at www.calstate.edu.

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 admission consideration.

SUPPLEMENTARY ADMISSION CRITERIA

Each campus with impacted programs or class-level 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 verification of Associate in Arts for Transfer (AA-T) or Associate in Science for Transfer (AS-T) degrees, the overall transfer grade point average (GPA), 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, regardless of GPA. For fall admission, applicants should take tests as early as possible, but no later than November or December of the preceding year.

The supplementary admission criteria used by individual campuses to screen applicants are made available by the campuses to all applicants seeking admission to an impacted program.

Up to date information on impacted programs at Cal Maritime can be found at the Office of Admission website.

APPLICATION FILING PERIODS

TERMS	APPLICATIONS FIRST ACCEPTED	INITIAL FILING PERIOD	FILING PERIOD DURATION
Fall Semester or Quarter	October 1	October 1 - November 30	Each non-impacted campus accepts applications until capacities are reached. Many

TERMS	APPLICATIONS FIRST ACCEPTED	INITIAL FILING PERIOD	FILING PERIOD DURATION
Winter Quarter	June 1	June 1 - 30	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.
Spring Semester or Quarter	August 1	August 1 - 31	
Summer Semester or Quarter **(Most campuses do not admit students to summer term)**	February 1	February 1 - 28	

APPLICATION ACKNOWLEDGMENT

On-time applicants may expect to receive an acknowledgment from the campuses to which they have applied within two to four weeks of filing the application. The notice may also include a request that applicants submit additional records necessary to evaluate academic qualifications. Applicants may be assured of admission if the evaluation of relevant qualifications indicates that applicants meet CSU admission requirements, and in the case of admission impaction, supplemental criteria for admission to an impacted program. Unless specific written approval/confirmation is received, an offer of admission is not transferable to another term or to another campus.

HARDSHIP PETITIONS

The campus has established procedures for consideration of qualified applicants who would be faced with extreme hardship if not admitted. Petitioners should write the campus Admission Offices regarding specific policies governing hardship admission.

UNDERGRADUATE ADMISSION REQUIREMENTS

FRESHMAN REQUIREMENTS

- Generally, applicants will qualify for consideration for first-time freshman admission if they meet the following requirements:
- Have graduated from high school, have earned a Certificate of General Education Development (GED) or have passed the California High School Proficiency Examination (CHSPE);
- Have a qualifiable minimum eligibility index (see Eligibility Index); and
- Have completed with grades of C or better each of the courses in the comprehensive pattern of college preparatory subject requirements also known as the "a-g" pattern (see "Subject Requirements").

Eligibility Index - The Eligibility Index is the combination of the high school GPA and scores on either the ACT or the SAT. GPA is based on grades earned in courses taken during the final three years of high school. Included in

calculation of GPA are grades earned in all college preparatory "a-g" subject requirements, and bonus points for approved honors courses. 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 can be calculated by multiplying your GPA by 800 and adding the total score on the SAT exam *(mathematics and critical reading on the old SAT, or mathematics and Evidence-Based Reading and Writing on the new SAT)*. For students who took the ACT, multiply the GPA by 200 and add 10 times the ACT composite score. Persons who are California high school graduates (or residents of California for tuition purposes) need a minimum index of 2900 using the old SAT or 2950 using the new SAT or 694 using the ACT. The Eligibility Index Table illustrates several combinations of required test scores and averages. The University has no current plans to include the writing scores from either of the admissions tests in the computation of the CSU Eligibility Index.

Persons who neither graduated from a California high school nor are a resident of California for tuition purposes, need a minimum index of 3502 using the old SAT, 3570 using the new SAT or 842 using the ACT. Graduates of secondary schools in foreign countries must be judged to have academic preparation and abilities equivalent to applicants eligible under this section. An applicant with a grade point average of 3.00 or above (3.61 for non-residents) is not required to submit test scores. However, all applicants for admission are **urged to take the SAT or ACT and provide the scores of such tests to each CSU to which they seek admission**. Campuses use these test results for advising and placement purposes and may require them for admission to impacted majors or programs. Impacted CSU campuses require SAT or ACT scores of all applicants for **freshman admission**.

SAT and ACT Eligibility Index Tables 2017-18

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 coursework for the senior year. The campus will monitor the final terms of study to ensure that admitted students complete their secondary school studies satisfactorily, including the required college preparatory subjects, and graduate from high school. Students are required to submit an official transcript after graduation to certify that all course work has been satisfactorily completed. Official high school transcripts must be received prior to deadline set by the University. 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. A campus may rescind admission decisions, cancel financial aid awards, withdraw housing contracts and cancel any University registration for students who are found to be ineligible after the final transcript has been evaluated.

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

The CSU uses only the ACT composite score, the *mathematics and critical reading scores on the old SAT, or the mathematics and Evidence-Based Reading and Writing scores on the new SAT* in its admission eligibility equation. The SAT or ACT writing scores are not currently used by CSU campuses.

Subject requirements - The CSU requires that first-time freshman applicants complete, with grades of C or better, a comprehensive pattern of college preparatory study totaling 15 units. A "unit" is 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; four years recommended)
- 2 years of laboratory science (1 biological & 1 physical, both must have laboratory instruction)
- 2 years in 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

CALIFORNIA PROMISE

The California Promise Program enables a specific number of CSU campuses to establish pledge programs for entering first-time students who are both interested and able to complete baccalaureate degrees in 4 years. Many campuses have also established programs for students with Associate Degrees for Transfer from any California Community College to complete their baccalaureate degrees in 2-years. The program is limited to students who are residents of California.

Students who commit to enter either the 4-year or 2-year pledge will be given a priority registration appointment for each state-supported enrollment period and will be provided with routine and thorough academic advisement. In order to remain in the program, students must meet with their advisors as prescribed, develop an enrollment plan, and complete 30 semester units or the quarter equivalent within each academic year, including summer. Participating campuses may stipulate other important requirements as well. Interested students entering the CSU should contact the campus offices or visit www2.calstate.edu/apply/freshman/getting_into_the_csu/pages/the-california-promise-program.aspx.

HIGH SCHOOL STUDENTS

High school students may be considered for enrollment in certain special programs if recommended by the principal and the appropriate campus department chair and if preparation is equivalent to that required of eligible California high school graduates. Such admission is only for a given specific program and does not constitute a right to continued enrollment.

TRANSFER POLICIES OF CSU CAMPUSES

Most commonly, college level credits earned from an institution of higher education accredited by a regional accrediting agency are accepted for transfer to campuses of the CSU; however, authority for decisions regarding the transfer of undergraduate credits is delegated to each CSU campus.

California Community Colleges and other authorized certifying institutions can certify up to 39 semester (58.5 quarter) units of General Education-Breadth (GE-Breadth) or 37 semester (55.5 quarter) units of the Intersegmental General Education Transfer Curriculum (IGETC) for transfer students to fulfill lower-division general education requirements for any CSU campus prior to transfer.

"Certification" is the official notification from a California Community College or authorized institution that a transfer student has completed courses fulfilling lower-division general education requirements. The CSU GE-Breadth and the Intersegmental General Education Transfer Curriculum (IGETC) certification course lists for particular community colleges can be accessed at www.assist.org.

CSU campuses may enter into course-to-course or program-to-program articulation agreements with other CSU campuses, any or all of the California Community Colleges, and other regionally accredited institutions. Established CSU and California Community College articulations may be found on www.assist.org. Students may be permitted to transfer no more than 70 semester (105 quarter) units to a CSU campus from an institution that does not offer bachelor's degrees or their equivalents, for example, community colleges. Given the university's 30-semester (45-

quarter) unit residency requirement, no more than a total of 90-semester (135-quarter) units may be transferred into the University from all sources.

TRANSFER REQUIREMENTS

Applicants who have completed fewer than 60 transferable semester college units (fewer than 90 quarter units) are considered lower-division transfer students. Applicants who have completed 60 or more transferable semester college units (90 or more quarter units) are considered upper-division transfer students. Applicants who complete college units during high school or through the summer immediately following high school graduation are considered first-time freshmen and must meet the CSU minimum eligibility requirements for first-time freshman admission. 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

Due to increased enrollment demands, most CSU campuses do not admit lower-division transfer applicants.

Generally, applicants will qualify for CSU admission consideration as a lower-division transfer if they have a cumulative GPA of at least 2.0 in all transferable units attempted, are in good standing at the last college or university attednded, and meet any of the following standards:

1. Will meet the freshman admission requirements (GPA and subject requirements) in effect for the term to which they are applying (see "Freshman Requirements"); or
2. Were eligible as a freshman at the time of high school graduation except for missing college preparatory subject requirements, have been in continuous attendance in an accredited college since high school graduation, and have made up the missing subject requirements with a 2.0 or better GPA.

Applicants who graduated from high school prior to 1988 should contact the admission office to inquire about alternative admission programs.

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, e.g., SAT subject tests.

Please consult with the CSU campus admission office, to which you are applying for further information about alternative ways to satisfy the subject requirements.

UPPER-DIVISION TRANSFER REQUIREMENTS

Generally, applicants will qualify for consideration for upper-division transfer admission if they meet all of the following requirements:

1. Cumulative grade point average of at least 2.0 in all transferable units attempted;
2. In good standing at the last college or university attended; and
3. Completed at least sixty (60) transferable semester (90 quarter) units of college level 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 at least 30 units of courses, that meet CSU general education requirement, including all of the general education requirements in communication in the English language (both oral and written) and critical thinking 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.

ASSOCIATE DEGREES FOR TRANSFER (AA-T OR AS-T)

The Associate in Arts for Transfer (AA-T) and the Associate in Science for Transfer (AS-T) degrees offered at the California Community Colleges (CCC) are designed to provide California Community College students the optimum transfer preparation and clear admission pathway to the CSU degree majors. T

CCC students who earn an Associate Degree for transfer (AA-T or AS-T) are guaranteed admission with junior standing to the a CSU and given prority admission over other transfer applicants when applying to a local CSU campus or non-impacted CSU program. AA-T or AS-T admission applicatns are given limited priority consderation based on their eligibility ranking to an impacted campus/program or to campuses/programs that have deemed similar to the degree completed at the community college. Students who have completed an AA-T/AS-T in a program deemed similar to a CSU major are able to complete remaining requirements for graduation within 60 semester (90 quarter units). It is the responsibility of the student who has earned an AA-T/AS-T to provide documentation of the degree to the CSU campus. Because several CSU campuses are receiving more transfer applications from eligible students than can be accommodated, these campuses have declared impaction resulting in higher admission criteria. See more on impaction at www.calstate.edu/SAS/impactioninfo.shtml. However, transfer students who earn the AA-T or AS-T degrees, are given priority admission over other transfer applicants when applying to a non-impacted CSU campus or to a non-impacted program from a community college within the local admission area of the campus. These students are also given priority

Those students who earn associate degrees for transfer and apply to a CSU campus but cannot be admitted due to impaction will be redirected to another CSU campus and offered admission for the same term. In order to qualify for the priority admission guarantee, transfer applicants must be conferred an approved Associate Degree for Transfer (AA- T/AS-T) by a California Community College, must apply for admission to California State University campuses for an open term by the published deadline, submit all requested transcripts and documents, meet CSU admission eligibility requirements for the campus and/or program, and must comply with any other prescribed admission requirements. It is the responsibility of these transfer students to provide documentation about the completion of the degree to each CSU campus that has received an application for admission.

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. Campuses may rescind admission for any student who is found to be ineligible 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.

TEST REQUIREMENTS

Freshman and transfer applicants who have fewer than 60 semester or 90 quarter units of transferable college credit are strongly encouraged to submit scores, unless exempt (see "Eligibility Index"), from either the ACT or the SAT of the College Board. Persons who apply to an impacted program may be required to submit test scores and should take the test no later than November or December. Test scores also are used for advising and placement purposes. Registration forms and dates for the SAT or ACT are available from school or college counselors or from a CSU campus testing office. Or students may contact:

The College Board (SAT) Registration Unit
Box 6200
Princeton, New Jersey 08541-6200
(609) 771-7588
www.collegeboard.org

ACT Registration Unit
P.O. Box 414
Iowa City, Iowa 52240
(319) 337-1270
www.act.org

ENGLISH LANGUAGE REQUIREMENT

All undergraduate applicants whose native language is not English, and who have not attended schools at the secondary level or above for at least three years full time where English is the principal language of instruction, must present a score of 61-INTERNET/500-PAPER or above on the Test of English as a Foreign Language (TOEFL). Some majors may require a score higher than 61-INTERNET/500-PAPER; or, a score of 6.0 or above on the International English Language Testing System (IELTS). Some majors and some campuses may require a higher score. A few campuses may also use alternative methods of assessing English fluency: Pearson Test of English Academic (PTE Academic), and the International Test of English Proficiency (ITEP). Each campus will post the tests it accepts on its website and will notify students after they apply about the tests it accepts and when to submit scores. Please see the Office of Admission website for current information.

ASSESSMENT OF ACADEMIC PREPRATION AND PLACEMENT

The California State University requires all admitted first-year freshmen to demonstrate academic preparation for general education (GE) written communication and mathematics/quantitative reasoning through approved multiple measures, which utilize a broad set of qualifiers including standardized test scores, high school cumulative and math GPAs, and completion of approved college preparatory coursework, and some combinations thereof. Though not a condition for admission, these evaluative measures determine the best first-year course placement for entering students and identify students requiring additional development and support.

Successful completion of GE written communication and math/quantitative reasoning courses in the first year of CSU enrollment establishes a foundation for continuous learning. Freshmen shall enroll in these courses appropriate to each student's major and skill level, as demonstrated by applicable system-wide standards utilized in the review of academic preparation (unless otherwise fulfilled, in which case students will advance to their next-level English and/or math course as determined by their major).

Students identified as requiring additional development (as determined by approved multiple measures) shall enroll in appropriate college-level, baccalaureate credit-bearing courses with embedded supportive instruction to facilitate skills development. Supportive course models may include, among others, co-requisite approaches, supplemental instruction, or year-long "stretch" formats that extend a course beyond one academic term. In these approaches, instructional

content considered pre-baccalaureate may carry a maximum of one unit if offered concurrently with a college-level, baccalaureate credit-bearing course.

MULTIPLE MEASURES ASSESSMENT FOR GENERAL EDUCATION COURSES

Freshmen shall enroll in appropriate general education (GE) written communication and math/quantitative reasoning courses during their first academic year (unless otherwise fulfilled) based on the following system-wide GE course placement standards.

PLACEMENT IN GE ENGLISH, AREA A2 WRITTEN COMMUNICATION (ALL MAJORS)

Fulfilled GE English Requirement: Enroll in the next English course per your major requirement if you satisfy at least one of the following:

- Advanced Placement (AP) test score of 3+ for AP Composition and Literature *OR* AP Language and Composition
- College transfer coursework (minimum C-) satisfying CSU GE area A2 written communication requirement

Enroll in GE English Course: Enroll in GE A2 written communication course if you satisfy at least one of the following:

- CAASPP Smarter Balanced Summative Assessment result of "Standard Exceeded" (Level 4) for English/Language Arts
- CAASPP Smarter Balanced Summative Assessment result of "Standard Met" (Level 3) for English/Language Arts *AND* completed 12th grade approved year-long English course* (minimum C-)
- ACT English Test score of 22+
- ACT English Test score of 19-21 *AND* completed 12th grade approved year-long English course* (minimum C-)
- SAT Evidence-Based Reading & Writing Test score of 550+
- SAT Evidence-Based Reading & Writing Test score of 510-540 *AND* completed 12th grade approved year-long English course* (minimum C-)
- Weighted cumulative high school GPA greater than or equal to 3.3
- Weighted cumulative high school GPA of 3.0 *AND* completed 12th grade approved year-long English course* (minimum C-)
- Weighted cumulative high school GPA of 3.0 *AND* completed 5+ years of high school English
- Weighted cumulative high school GPA of 3.0 *AND* completed Honors English course

Enroll in Supported GE English Course: Enroll in a supported GE area A2 written communication course if you satisfy at least one of the following:

- ACT English Test score of 19-21 *AND* completed four years of standard high school English

- SAT English Test score of 510-540 *AND* completed four years of standard high school English
- Weighted cumulative high school GPA greater than or equal to 3.0 *AND* completed four years of standard high school English

Enroll in Supported GE English Course (Early Start Required): Enroll in a supported GE area A2 written communication course if you do not satisfy any above criteria (only CA residents required to participate in Early Start Program)

***12th grade approved year-long English courses:** AP English, CSU Expository Reading & Writing Course, Weighted Honors English

PLACEMENT IN GE MATH, AREA B4 MATH/QUANTITATIVE REASONING (STEM MAJORS)

Fulfilled GE Math Requirement: Enroll in the next math/quantitative reasoning course per your major requirement if you satisfy at least one of the following:

- Advanced Placement (AP) test score of 3+ for AP Calculus AB/BC, AP Computer Science Principles, *OR* AP Statistics
- International Baccalaureate (IB) test score of 4+ on Math Higher Level (HL)
- College Level Examination Program (CLEP) score of 50+ for Calculus, College Algebra, College Algebra-Trigonometry, Pre-Calculus, *OR* Trigonometry
- College transfer coursework (minimum C-) satisfying CSU GE area B4 math/quantitative reasoning requirement

Enroll in GE Math Course: Enroll in GE B4 math/quantitative reasoning course if you satisfy at least one of the following:

- CAASPP Smarter Balanced Summative Assessment result of "Standard Exceeded" (Level 4) for mathematics
- CAASPP Smarter Balanced Summative Assessment result of "Standard Met" (Level 3) for mathematics *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- ACT Math Test score of 23+
- ACT Math Test score of 20-22 *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- SAT Math Test score of 570+
- SAT Math Test score of 550+ on Subject Test in Math Level 1 or 2
- SAT Math Test score of 520-560 *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- Weighted cumulative high school GPA greater than or equal to 3.7
- Weighted math GPA of 3.5 *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- Weighted math GPA greater than or equal to 3.5 *AND* completed 5+ years of math/quantitative reasoning

Enroll in Supported GE Math Course: Enroll in a supported GE area B4 math/quantitative reasoning course if you satisfy the following:

- Weighted math GPA greater than or equal to 3.3 (no additional preparation)

Enroll in Supported GE Math Course (Early Start Required): Enroll in a supported GE area B4 math/quantitative reasoning course if you do not satisfy any above criteria (only CA residents required to participate in Early Start Program)

PLACEMENT IN GE MATH, AREA B4 MATH/QUANTITATIVE REASONING (NON-STEM MAJORS)

Fulfilled GE Math Requirement: Enroll in the next math/quantitative reasoning course per your major requirement if you satisfy at least one of the following:

- Advanced Placement (AP) test score of 3+ for AP Calculus AB/BC, AP Computer Science Principles, *OR* AP Statistics
- International Baccalaureate (IB) test score of 4+ on Math Higher Level (HL)
- College Level Examination Program (CLEP) score of 50+ for Calculus, College Algebra, College Algebra-Trigonometry, Pre-Calculus, *OR* Trigonometry
- College transfer coursework (minimum C-) satisfying CSU GE area B4 math/quantitative reasoning requirement

Enroll in GE Math Course: Enroll in GE B4 math/quantitative reasoning course if you satisfy at least one of the following:

- CAASPP Smarter Balanced Summative Assessment result of "Standard Exceeded" (Level 4) for mathematics
- CAASPP Smarter Balanced Summative Assessment result of "Standard Met" (Level 3) for mathematics *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- CAASPP Smarter Balanced Summative Assessment result of "Standard Met" (Level 3) for mathematics *AND* completed 4+ years of high school math/quantitative reasoning
- ACT Math Test score of 23+
- ACT Math Test score of 20-22 *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- SAT Math Test score of 570+
- SAT Math Test score of 550+ on Subject Test in Math Level 1 or 2
- SAT Math Test score of 520-560 *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)

- Weighted cumulative high school GPA greater than or equal to 3.7
- Weighted cumulative high school GPA of 3.5 *AND* completed 4+ years of math/quantitative reasoning
- Weighted math GPA greater than or equal to 3.0 *AND* completed 12th grade approved year-long math course beyond Algebra II (minimum C-)
- Weighted math GPA greater than or equal to 3.0 *AND* completed 5+ years of math/quantitative reasoning

Enroll in Supported GE Math Course: Enroll in a supported GE area B4 math/quantitative reasoning course if you satisfy at least one of the following:

- Weighted math GPA greater than or equal to 3.3 (no additional preparation)
- Weighted math GPA greater than or equal to 3.0 (no additional preparation)

Enroll in Supported GE Math Course (Early Start Required): Enroll in a supported GE area B4 math/quantitative reasoning course if you do not satisfy any above criteria (only CA residents required to participate in Early Start Program)

CSU EARLY START

CSU Early Start provides skill development opportunities for admitted students not yet demonstrating requisite English and math proficiency for placement into unsupported GE written communication and math/quantitative reasoning courses. The program affords students opportunities to improve reading, writing, and reasoning skills necessary for successfully completing their degree programs. Students required to participate (as determine through approved multiple measures) may register for in-person, online, or hybrid classes at any California State University campus for English and/or math during the summer prior to their first fall semester at a CSU campus. Earned baccalaureate credit will transfer to the student's destination campus.

The goals of the Early Start Program are to:

- Better prepare students in written communication and mathematics/quantitative reasoning before the start of the fall semester of the freshman year;
- Add an important and timely assessment tool in preparing students for college; and
- Improve the opportunity for students to successfully complete their college degrees.

ADULT STUDENTS

As an alternative to regular admission criteria for non-impacted programs, an applicant who is 25 years of age or older may be considered for admission as an adult student if he or she meets all of the following conditions:

1. Possesses a high school diploma (or has established equivalence through either the General Educational Development or California High School Proficiency Examinations)

2. Has not been enrolled in college as a full-time student for more than one term during the past five years
3. If there has been any college attendance in the last five years, has earned a 2.00 GPA or better in all college work attempted

Consideration will be based upon a judgment as to whether the applicant is as likely to succeed as a regularly admitted freshman or transfer student and will include an assessment of basic skills in the English language and mathematical computation.

GRADUATION REQUIREMENT IN WRITING PROFICIENCY

All students must demonstrate competency in writing skills as a requirement for graduation. Information on currently available ways to meet this graduation requirement may be obtained from Dr. Amy Parsons.

RETURNING STUDENTS

Students who were previously enrolled and are now requesting to return to Cal Maritime are required to submit an Application for Re-entry/Readmission. Additional documents and an application fee may be required before your application can be reviewed. Please visit the Office of the Registrar for details.

An academically disqualified student may seek readmission to Cal Maritime, but not before one full semester has passed. Complete information on the readmission process may be found on the Registrar's Office website. Application for readmission must be completed in full no later than November 1 for readmission to the spring semester, and May 1 for readmission for the fall semester. Any student out of attendance for more than 2 consecutive semesters must apply for readmission.

In no case will an academically disqualified student be allowed to participate in the annual Training Cruise, Commercial Cruise, or Co-ops.

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, F, IC, or WU 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 college for at least one semester (or two quarters) per academic year.

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

INTERNATIONAL (FOREIGN) STUDENT 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 (see the section on the English Language Requirement for undergraduate applicants), financial resources,

and academic performance are each important considerations for admission. Academic records from foreign institutions must be on file prior to the first term and, if not in English, must be accompanied by certified English translations.

INTRASYSTEM AND INTERSYSTEM ENROLLMENT PROGRAMS

Fully matriculated students enrolled at any CSU campus have access to courses at other CSU campuses on a space available basis unless those campuses/programs are impacted. This access is offered without students being required to be formally admitted to the host campus and in most cases without paying additional fees. Students should consult their home campus academic advisors to determine how such courses may apply to their specific 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. Additional information about these programs is available from the Office of the Registrar.

CSU Fully Online Courses - Matriculated students in good standing may request enrollment in one course per term, offered by a CSU host campus. Enrollment requests will be granted based on available space, as well as completion of any stated prerequisites. Credit earned at the host campus is electronically reported to the student's home campus to be included on the student's transcript at the home campus.

CSU Visitor Enrollment - Matriculated students in good standing enrolled at one CSU campus may enroll at another CSU campus for one term. 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 - Matriculated CSU, UC, or community college students may enroll on a "space available" basis for one course per term at another CSU, UC, or community college and request that a transcript of record be sent to the home campus.

CSU IMMUNIZATION REQUIREMENTS

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.

Measles and Rubella: All new and readmitted students 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 4 to 6 months period. If you need further details or have special circumstances, please consult Student Health Services.

Meningococcal Disease Information: Each incoming freshman who will be residing in on-campus housing will be required to return a form indicating that they have received information about meningococcal disease and the availability of the vaccine to prevent contracting the disease and indicating whether or not the student has chosen to receive the vaccination.

The immunization requirements are not admission requirements, but are required of students as conditions of enrollment in CSU.

Note: The CSU anticipates a policy change to the immunization requirements for the 2018-2019 academic year.

RESERVATION

The University reserves the right to select its students and deny admission to the University or any of its programs as the University, in its sole discretion, determines appropriate based on an applicant's suitability and the best interests of the University.

EVALUATION OF ACADEMIC RECORDS

ADVANCED PLACEMENT

Cal Maritime grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of the College Board. Students who present scores of three or better will be granted up to six semester units (nine quarter units) of college credit. The chart below outlines scores needed for specific Cal Maritime credit.

College Board Advanced Placement Courses (AP)	Passing Score	Minimum Semester Credits Earned[1]	Cal Maritime Equivalency	Semester Credits Toward GE Breadth Certification	American Institutions and/or GE Breadth Area[2]
AP Art History	3	6	n/a	3	C1 or C2
AP Biology	3	6	n/a	4	B2+B3
AP Calculus AB[4]	3	3	MTH 210	3	B4
AP Calculus BC[4]	3	6	MTH 210 & MTH 211	3	B4
AP Calculus BC/AB Subscore[4]	3	3	MTH 210 & MTH 211	3	B4
AP Chemistry	3	6	CHE 110/110L	4	B1+B3
AP Chinese Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Comparative Government & Politics	3	3	GMA 215	3	D8
AP Computer Science A[4]	3	3	n/a	0	n/a
AP Computer Science AB[4]	3	6	n/a	0	n/a
AP Computer Science Principles[4]	3	6	n/a	0	n/a

AP English Language	3	6	EGL 100	3	A2
AP English Literature	3	6	EGL 100	6	A2+C2
AP Environmental Science[5]	3	4	n/a	4	B1+B3
AP European History	3	6	n/a	3	C2 or D6
AP French Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP German Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Human Geography	3	3	n/a	3	D5
AP Italian Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Japanese Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Latin	3	3	Language Semester 1 and 2	3	C2
AP Macroeconomics	3	3	ECO 100	3	D
AP Microeconomics	3	3	ECO 101	3	D
AP Physics 1[6]	3	4	PHY 100/100L	3	B1+B3
AP Physics 2[6]	3	4	n/a	4	B1+B3
AP Physics C (electricity/magnetism)[6]	3	4	PHY 205	4	B1
AP Physics C (mechanics)[6]	3	4	PHY 200/200L	4	B1+B3
AP Psychology	3	3	n/a	3	D
AP Spanish Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Spanish Literature	3	6	n/a	3	C2
AP Statistics	3	3	MTH 107	3	B4
AP Studio Art - 2D	3	3	n/a	0	n/a

AP Studio Art - 3D	3	3	n/a	0	n/a
AP Studio Art - Drawing	3	3	n/a	0	n/a
AP U.S. Government & Politics	3	3	American Institutions II	3	D+US-2
AP U.S. History	3	6	American Institutions I	3	(C2 or D)+US-1
AP World History	3	6	n/a	3	C2 or D

[1]These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for Academic Affairs Coded Memo AA-2011-12 for details.

[2]Areas of GE Breadth (A1 through E) are defined in EO 1033. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 405, and at assist.org.

[4]If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.

[5]Students who pass AP Environmental Science earn 4 units of credit. Tests prior to Fall 2009 may apply to either B1+B3 or B2+B3 of GE Breadth. Fall of 2009 or later, those credits may only apply to B1+B3.

[6]If a student passes more than one AP exam in physics, only six units of credit may be applied to the baccalaureate, and only four units of credit may be applied to a certification in GE Breadth.

INTERNATIONAL BACCALAUREATE (IB) EXAMS

International Baccalaureate (IB)	Passing Score	Minimum Semester Credits Earned[1]	Cal Maritime Equivalency	Semester Credits Toward GE Breadth Certification	American Institutions and/or GE Breadth Area[2]
IB Biology HL	5	6	n/a	3	B2
IB Chemistry HL	5	6	CHE 110	3	B1
IB Economics HL	5	6	n/a	3	D
IB Geography HL	5	6	n/a	3	D
IB History (any region) HL	5	6	n/a	3	C2 or D
IB Language A[1] (any language) HL	4	6	n/a	3	C2

IB Language A[2] (any language) HL	4	6	n/a	3	C2
IB Language B (any language) HL[8]	4	6	n/a	0	n/a
IB Mathematics HL	4	6	n/a	3	B4
IB Physics HL	5	6	n/a	3	B1
IB Psychology HL	5	3	n/a	3	D
IB Theatre HL	4	6	n/a	3	C1

*These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

**Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org.

***The IB curriculum offers language at various levels for native and non-native speakers. Language B courses are offered at the intermediate level for nonnatives. Language A1 and A2 are advanced courses in literature for native and non-native speakers, respectively.

CREDIT BY EXAMINATION

Students may challenge courses by taking examinations developed at Cal Maritime. Credit shall be awarded to those who pass them successfully. Please visit the Student Forms & Resources page to access the **Course Challenge** form.

In addition, students may receive credit for College-Level Examination Program (CLEP) tests, as outlined below.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP) TESTS

College-Level Examination Program (CLEP)	Passing Score	Minimum Semester Credits Earned[1]	Cal Maritime Equivalency	Semester Credits Toward GE Breadth Certification	American Institutions and/or GE Breadth Area[2]
CLEP American Government	50	3	n/a	3	D
CLEP American Literature	50	3	n/a	3	C2
CLEP Analyzing and Interpreting Literature	50	3	n/a	3	C2

CLEP Biology	50	3	n/a	3	B2
CLEP Calculus	50	3	MTH 210	4	B4
CLEP Chemistry	50	3	CHE 110	3	B1
CLEP College Algebra	50	3	n/a	3	B4
CLEP College Algebra - Trigonometry	50	4	MTH 100	3	B4
CLEP English Composition (No Essay)	50	0	n/a	0	n/a
CLEP English Composition with Essay	50	0	n/a	0	n/a
CLEP English Literature	50	3	n/a	3	C2 (before F11)
CLEP Financial Accounting	50	3	n/a	0	n/a
CLEP French[1] Level I	50	6	Language Semester 1 and 2	0	n/a
CLEP French[1] Level II	59	9	Language Semester 1 and 2	3	C2
CLEP Freshman College Composition	50	0	n/a	0	n/a
CLEP German[1] Level I	50	6	Language Semester 1 and 2	0	n/a
CLEP German[1] Level II	60	9	Language Semester 1 and 2	3	C2
CLEP History, United States I	50	3	American Institutions I	3	D+US-1
CLEP History, United States II	50	3	American Institutions 1	3	D+US-1
CLEP Human Growth and Development	50	3	n/a	3	E
CLEP Humanities	50	3	n/a	3	C2
CLEP Information Systems and Computer Applications	50	3	COM 100	0	n/a

CLEP Introduction to Educational Psychology	50	3	n/a	0	n/a
CLEP Introductory Business Law	50	3	n/a	0	n/a
CLEP Introductory Psychology	50	3	n/a	3	D
CLEP Introductory Sociology	50	3	n/a	3	D
CLEP Natural Sciences	50	3	n/a	3	B1 or B2
CLEP Pre-Calculus	50	3	MTH 100	3	B4
CLEP Principles of Accounting	50	3	n/a	0	n/a
CLEP Principles of Macroeconomics	50	3	ECO 100	3	D
CLEP Principles of Management	50	3	n/a	0	n/a
CLEP Principles of Marketing	50	3	n/a	0	n/a
CLEP Principles of Microeconomics	50	3	ECO 101	3	D
CLEP Social Sciences and History	50	3	n/a	3	n/a
CLEP Spanish[1] Level I	50	6	Language Semester 1 and 2	0	n/a
CLEP Spanish[1] Level II	63	9	Language Semester 1 and 2	3	C2
CLEP Trigonometry	50	3	n/a	3	B4 (before F06)
CLEP Western Civilization I	50	3	n/a	3	C2 or D
CLEP Western Civilization II	50	3	n/a	3	D

*These units count toward eligibility for admission. The units may not all apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

[**]Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org.

[1]For CLEP tests in the same language other than English:

- Only one exam score may be applied towards the CSU degree.
- A passing score of 50 is considered "Level I" and earns six units of baccalaureate credit.
- A passing score higher than 50 is considered "Level II" and earns additional units of credit and placement in Area C2 of GE Breadth.

CREDIT FOR NON-COLLEGIATE INSTRUCTION

Cal Maritime grants undergraduate degree credit for successful completion of non-collegiate instruction, either military or civilian, appropriate to the baccalaureate degree, which has been recommended by the Commission on Educational Credit and Credentials of the American Council on Education. The numbers of units allowed are those recommended in the Guide to the Evaluation of Educational Experience in the Armed Services and the National Guide to Educational Credit for Training Programs.

CREDIT FOR PRIOR LEARNING

Cal Maritime does not grant credit for prior learning or work experience. The student may apply to challenge the appropriate course that parallels the prior learning or work experience. Please visit the Student Forms & Resources page to access the Course Challenge form.

APPEAL OF ADMISSION DECISION

Section 89030.7 of the California Education Code requires that the California State University establishes specific requirements for appeal procedures for a denial of admission. Each CSU campus must publish appeal procedures for applicants denied admission to the University. The procedure is limited to addressing campus decisions to deny an applicant admission to the University.

Admissions appeal procedures must address the basis for appeals, provide 15 business days for an applicant to submit an appeal, stipulate a maximum of one appeal per academic term, provide specific contact information for the individual or office to which the appeal should be submitted, and indicate a time estimate for when the campus expects to respond to an appeal. The appeal procedures must be included in all denial of admission notifications to students, and must also be published on the campus website.

Please visit the Cal Maritime Admission Decision Appeal Process page for further information.

Academic Regulations and Policies

Academic Awards and Honors

Cal Maritime recognizes matriculated students who have demonstrated academic excellence through the following programs:

President's List

The President's List is published at the end of every semester to honor those students who have earned the highest academic achievement. For the spring semester, grades are calculated based on the academic semester - cruise and co-op grades are not included in this calculation. The student must meet the following criteria:

- have a minimum semester GPA of 3.75
- have no grade lower than a C
- have a minimum of 12 graded units (excluding CR grades)
- have no incomplete grades

Dean's List

The Dean's List is published at the end of every semester to honor those students who have excelled academically. For the spring semester, grades are calculated based on the academic semester - cruise and co-op grades are not included in this calculation.

The student must meet the following criteria:

- have a minimum semester GPA of 3.25
- have no grade lower then a C
- have a minimum of 12 graded units (excluding CR grades)
- have no incomplete grades

Honors

At commencement, Cal Maritime recognizes academically-outstanding students who are 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 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 Title 5 § 41301.

Academic Dishonesty

Cheating and academic dishonesty include all student behaviors intended to gain unearned academic advantage or to interfere with another's academics by fraudulent 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):

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.

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

Plagiarizing

- unauthorized copying of all or parts of an article, paper, book, published work, or other proprietary source, including documents from the Internet, 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

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.

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.

Academic 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 Cal Maritime. 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).

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

The Chair of the Committee on Academic Integrity will provide a written report of findings and recommendations to the Provost. The Provost will ensure procedures were followed in accordance with the policy and procedures, and forward the results to involved student(s), course instructor, the Department Chair, the Academic Dean, and the Student Conduct Administrator. The Chair of the Committee will also forward a copy of the Committee's findings to the Student Conduct Administrator. The Student Conduct Administrator is NOT to conduct separate or additional hearings on academic issues already adjudicated by the Committee on Academic Integrity. The Student Conduct Administrator may, however, 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 lying, stealing, breaking-and-entering, or other conduct unbecoming a student, and therefore also fall within the purview of the policies governing the Student Conduct Administrator.

Imposition of Sanctions

After verifying that the hearings were conducted in accordance with Cal Maritime policy, the Provost will issue the letter to the involved student(s) setting forth the final disposition of the case and the terms of any disciplinary sanctions, with copies sent to the Chair of the Committee on Academic Integrity and the Student Conduct Administrator for inclusion in the student's file.

Student Rebuttal and Appeals

Within three work days of receipt of the Committee's findings, the charged student may submit a written rebuttal/comment to the Provost to be included and considered with the Committee report. Within three work days of receipt of the letter from the Provost stating the final disposition of the case, the student may appeal to the President. Appeals to the President must be in writing using the Appeals Petition Form available from the Student Conduct Administrator.

Sanction Guidelines

One or more of the following sanctions may be imposed upon any student whose conduct falls short of Cal Maritime'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 acknowledgment 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 Cal Maritime 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 Cal Maritime may be denied to any student found to have violated the provisions of Cal Maritime's policy on Inappropriate Student Academic Conduct (see California Code of Regulations, Title 5, Section 41303.

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 campus of the California State University system, for the period during which sanctions apply (see California Code of Regulations, Title 5, Section 40601(g)).

Record of Discipline

All actions involving probation, suspension, or expulsion shall be made part of the student's permanent academic record.

Academic Standing

Students must maintain a cumulative GPA of 2.00 to be considered in good academic standing.(see section on 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 GPA 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 credits.

To improve their GPA, students on academic probation are expected to repeat, within the probationary term(s), specific courses in which grades of D, F, IC, WU or NC were previously earned.

Additionally, they are expected to complete a minimum of 12 units with no grades of F, and to earn a 2.00 semester GPA or raise their cumulative GPA above 2.00.

Students with a cumulative GPA below 2.00 will be allowed to continue on probation if their semester GPAs are at least 2.00, and they have completed 12 credits or more with no grades of IC, F or WU in any course taken. Students who fail to meet the above terms of probation will be academically disqualified. Except in extraordinary circumstances, students on academic probation for the spring semester must meet the terms of probation during the normal 15-week academic semester. Cruise or co-op grades at the end of the spring semester will not be used in the determination of a student's academic standing.

Academic Disqualification

If, after a semester of academic probation, a student's cumulative GPA is still below 2.00 and the terms of probation are not met, the student will be academically disqualified. In addition, a student who has failed a course three times will be subject to academic disqualification. Students who have been academically disqualified will be notified by email as soon as this determination has been made. If a student feels there are extenuating circumstances that contributed to poor academic performance, an appeal must be made in writing to the Academic Dean (through the Registrar's Office), within 10 days of the notification, explaining these circumstances. Written appeals will be reviewed by the Academic Dean and the Department Chair within 10 working days of receipt.

Readmission

An academically disqualified student may seek readmission to Cal Maritime, but not before one full semester has passed. Complete information on the readmission process may be found on the Registrar's Office website. Application for readmission must be completed in full no later than November 1 for readmission to the spring semester, and May 1 for readmission for the fall semester. Any student out of attendance for more than 2 consecutive semesters must apply for readmission.

In no case will an academically disqualified student be allowed to participate in the annual Training Cruise, Commercial Cruise, or Co-ops.

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, F, IC, or WU 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 college for at least one semester (or two quarters) per academic year.

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

Administrative Academic Probation or Disqualification

A student may be placed on probation or may be disqualified by appropriate campus authorities for unsatisfactory scholastic progress regardless of cumulative GPA 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 of the CSU.

The following reasons constitute grounds for being placed on administrative probation:

- withdrawal from all or a substantial portion of their courses in two successive terms or in any three terms
- repeated failure to progress toward a degree or other program objective, when such failure is due to circumstances within the control of the student
- 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 disqualification and dismissal.

Academic Transcript Policy

Cal Maritime has partnered with the National Student Clearinghouse for collecting orders for transcripts. Transcripts are processed and mailed typically within 3-10 business days after the request is received at the Office of the Registrar. Visit the Registrar's Office website, and select 'Transcripts' to initiate an order.

Students and alumni may request that transcripts are not sent until grades are processed for the current semester, or the degree has been posted.

Transcript requests will be canceled for any student who has an outstanding obligation (e.g. financial holds) to Cal Maritime. Students will be informed of this cancellation and will be required to resubmit a new request once their outstanding obligations are resolved. Students' credit cards will not be charged for requests canceled for this reason.

For additional information, contact the Office of the Registrar at registrar@csum.edu or call 707-654-1203 between 8 am and 4 pm PST.

Adding and Dropping of Courses

Students may add or drop courses up to a specific deadline in each semester.

Adding a Course

During published registration periods, students may add a course to their schedule. Faculty approval may be required if course capacity has been reached or if students are requesting to be added from a waitlist.

Dropping a Course

During published registration periods, students may drop courses online with no grade recorded on their transcript. Students are responsible for attending all courses for which they have registered. Non-attendance does not constitute a drop or withdrawal.

Withdrawals

Withdrawals after the first two weeks of instruction and prior to the last three weeks of instruction may be allowed only for serious and compelling reasons (e.g. illness, accident, or death in the immediate family).

Students will 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, major 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 GPA or progress points. Students withdrawing without a serious and compelling reason may receive a grade of WU in the course. Appeals may be made to the Provost and Vice President of 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 the assignment of an Incomplete is not practical.

Change of Major

Students wishing to request a change of major are advised to refer to the guidelines on the Registrar's Office website. Students must be in good academic standing for this approval to be granted.

Additional Course Guidelines

Course Challenge

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

- students must demonstrate substantial knowledge and background in the areas they are challenging
- approval must be obtained for each challenge from the instructor and department chair. Applications are available at the Registrar's Office
- the instructor must be presented with a receipt for the required fee, which must be paid prior to the challenge examination.

- a course may be challenged only once
- challenges will not be approved for courses in which any grade has been assigned, including F, IC, WU, or W.
- 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
- challenges are not allowed in certain cases, such as the GWE Exam and certain STCW classes

Repetition of Courses

In accordance with CSU Executive Order No. 1037, it is the policy of Cal Maritime that students may repeat a course only if they earned grade lower than a C in that course. Up to 16 semester units may be repeated with 'grade forgiveness' wherein the new grade replaces the former grade for the purpose of the calculation of the student's GPA. Although no longer used in GPA calculations, the previous grade remains on the student's academic transcript.

Students may repeat an individual course with grade forgiveness no more than two times. Grade forgiveness shall not apply 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 grade after repeating shall not replace the original grade for GPA calculations. Instead, both grades shall be calculated into the student's GPA.

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

Students repeating a course at another accredited college are expected to adhere to Cal Maritime's course transfer requirements. When a course is repeated elsewhere, the student will be given course credit toward meeting graduation requirements, and the overall GPA will be affected. However, the Cal Maritime GPA will not be affected.

Credit for Work Experience

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

Credit by Examination

Cal Maritime grants credit to those students who pass certain approved examinations. 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).

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.

Independent Study

An independent study course is substantial study above and beyond the regular offerings in the Cal Maritime academic catalog. One to three units of credit, determined prior to registration, will be granted for independent study. The student must arrange with a faculty member to be the student's independent study advisor. Grading is typically by letter grade, although the student may request a CR/NC grading basis. An approved application for Independent Study must be on file in the Registrar's Office by the end of the normal add period.

Individual Study

Individual study applies to any course listed in the Cal Maritime academic 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 approved application for individual study must be on file in the Registrar's Office by the end of the normal add period.

Course Transfer and Academic Class Level

Course Transfer

The Associate Registrar or designee 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 to initiate the approval. 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 Registrar's 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 GPA but are included in the student's overall GPA.

Academic Level

Students are classified according to the number of overall units of baccalaureate-level course work completed (all college-level work, including that at Cal Maritime) for purposes of financial aid determination. Academic level distinctions are not applicable to watchstanding, 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

Credit Hour

As of July 1, 2011 federal law (Title 34, Code of Federal Regulations, sections 600.2 and 600.4) requires all accredited institutions to comply with the federal definition of the credit hour. For all CSU degree programs and courses bearing academic credit, the "credit hour" is defined as "the amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

- One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately 15 weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
- At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution, including laboratory work, internships, practicals, studio work, and other academic work leading to the award of credit hours."

A credit hour is assumed to be a 50-minute period. In courses in which "seat time" does not apply, a credit hour may be measured by an equivalent amount of work, as demonstrated by student achievement.

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
- 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 grades will be used in evaluating student performance, including appropriate participation in the learning experiences as well as in formal testing.

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.poor, such that course requirements have not been met.
WU	Withdrawal Unauthorized. Equivalent to an "F" (see Grade Explanations).
IC	Incomplete Charged. Equivalent to an "F" (see Grade Explanations)
W	Withdrawal. Student may withdraw from no more than 18 semester units (see Grade Explanations).
CR	Credit. A credit grade equates to a grade of "C" or higher (see Grade Explanations); also used for course challenges.
NC	No Credit. A no credit grade equates to a grade below "C" (see Grade Explanations).
AU	Audit. An AU earns neither academic nor degree credit (see Grade Explanations).
I	Incomplete. Course must be completed by the sixth week of the following semester (may be extended in extraordinary cases) (see Grade Explanations).
RD	Report delayed.

Grade Explanations

- **Withdrawal Unauthorized:** The "WU" grade 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 were insufficient to make normal evaluation of academic performance possible. For purposes of GPA and progress point computations, this grade is equivalent to an "F". It is the student's responsibility to formally withdraw from a course for which they have registered but have never attended or have stopped attending.
- **Credit/No Credit courses in general:** Some courses are offered only on a CR/NC basis. Grades of credit or no credit are neutral to the calculation of the student's GPA even if the final grade is "NC".
- **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 "NC", the course must be repeated until the "CR" grade is earned.
- **Credit/No Credit option:** A CR/NC grade option may be selected by the student in courses for which the A-F system is the norm. But no course that is necessary to fulfill a student's graduation requirement may be taken on a CR/NC basis except as described above.
- The following rules apply when a student selects a CR/NC grading option when the course is not normally offered on that basis:
    - the student must submit an application to the Registrar's Office, which must be approved by the course instructor and the student's department chair
    - the deadline for applying for CR/NC grading is the fifth day of the applicable semester
    - once the application for CR/NC grading has been made, the student may not change the grading option for that course
    - 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 Registrar's 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 requirements.
- **Audit option:** An auditor is a student who enrolls in a course for informational purposes only. A student must petition the Registrar's Office to audit a class. Enrollment as an auditor is subject to permission of the instructor. Enrollment of auditors 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 before the last day to add classes in that term. Likewise, a student who is enrolled for credit may not change to an auditor 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.

- **Incomplete:** The grade "I" 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 I grade. A final grade is assigned when the work agreed upon has been completed and evaluated.

  An "I" grade 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" grade (which is equivalent to an "F").

  An Incomplete shall be converted to the appropriate grade or symbol within one year following the end of the term during which it was assigned. Where campus policy requires assignment of final grades on the basis of numerous demonstrations of competency by the student, it may be appropriate for a faculty member to submit a letter grade to be assigned in the event the Incomplete is not made up within one year. If the Incomplete is not converted within the prescribed time limit, it shall be counted as a failing grade in calculating grade point average and progress points unless the faculty member has assigned a grade in accordance with campus policy.

- **Incomplete Charged:** 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, unless the faculty member assigns a specific letter grade at the time the Incomplete is assigned, which would replace the "I" in the student's record at the end of the calendar year deadline. If the Incomplete is not converted within the prescribed time limit, it shall be counted as a failing grade (if the course was registered as a graded course) in calculating grade point average and progress points unless the faculty member has assigned a grade in accordance with campus policy. If the course was registered as CR/NC, a "NC" will be assigned as the final grade.
- **Withdrawal:** The grade "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 of the appropriate campus officials. It carries no connotation of quality of student performance and is not used in calculating the student's GPA or progress points. Students may withdraw from no more than 18 semester units.

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 15 weeks. It is the standard quantity used for measurement of college and university work.

- **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.
- **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

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 a full time student.

Registration Procedures

The Office of the Registrar handles all forms, procedures, and deadlines for registration. Registration for the fall normally occurs in the middle of the previous spring semester, registration for the spring/cruise semester occurs in the middle of the previous fall, and registration for the summer occurs during the spring semester.

All students must see their academic advisor prior to registration. Students are not permitted to attend any classes for which they are not formally registered.

Priority registration is offered to currently enrolled students by class, based on date of entry. Registration typically extends over a two-week period. Currently enrolled students not registering by the end of the registration period are subject to a $100 late fee and will be prevented from registering until the first day of the semester.

Incoming freshmen, and students accepted for readmission, register in a separate timeframe and after currently enrolled students have registered.

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 -- STCW-approved courses. Students failing to adhere to the attendance requirements established by the course instructor or Cal Maritime may be dropped from the class.

Grade Change Procedures

Academic Senate Policy #546 Student Originated Request for Change of Grade 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 the completed Form SP 546-1 Student Originated 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 in 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 students, Cal Maritime will accept withdrawals under such circumstances 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 with the Registrar's Office. 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 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 two weeks of instruction may do so by completing the required paperwork in the Registrar's 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 two weeks of instruction may do so without penalty. Approval to withdraw during this period must be granted by the student's course instructors, major Department Chair, and Academic Dean. If a petition is approved, a grade of W will be posted on the student's academic transcript. Students who have been granted such approval to withdraw must still follow all established procedures for formal withdrawal from Cal Maritime.

Students withdrawing after the first two weeks of instruction without a serious and compelling reason may receive a grade of WU in all classes.

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 practical.

Students may either request a leave of absence for up to one year or withdraw if their return within one year is not anticipated. They are responsible for notifying the Registrar's Office during the semester or during any break if they do not plan to return to school for the upcoming semester.

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 all of the following provisions:

- 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
- at least five calendar years must have elapsed since the course work was attempted
- from when 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
- the student provides 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
- 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

Graduate Information

Graduate Program Admission Requirements, Fees and Policies

- Importance of Filing Complete, Accurate, and Authentic Application Documents
- Graduate Student Admission Requirements
- International (Foreign) Student Admission Requirements
- Fees and Payment Schedule
- Returning Students
- Continuous Enrollment
- Eligibility for a Master's Degree
- Use of Social Security Number
- Graduate - Post-Baccalaureate English Language Requirement
- Admission Application
- Program Policies and Expectations
- Enrollment in the Capstone Course
- Standard of Integrity and Civility
- Commencement Participation

Requirements for admission to California State University Maritime Academy are in accordance with Title 5, Chapter 1, Subchapter 3, of the California Code of Regulations. Complete information is available at www.calstate.edu/apply.

Electronic versions of the CSU applications are accessible at www.calstate.edu/apply.

Applying online via www.calstate.edu/apply is expected unless electronic submission is impossible. An acknowledgment will be sent when an online application has been submitted. Application in "hard copy" form may be obtained online via www.calstate.edu/apply as a portable data format (PDF). Application forms (in PDF) may also be downloaded from www.calstate.edu/sas/publications. Paper applications should be mailed to:

Cal Maritime Office of Graduate Studies
CSU Maritime Academy
200 Maritime Academy Drive
Vallejo, CA 94590

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, residency 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 registration or 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). The University uses the social security number to identify students and their records including identification for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution. Also, the Internal Revenue Service requires the University to file information returns that include the student's social security number 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 help determine whether a student, or a person claiming a student as a dependent, may take a credit or deduction to reduce federal income taxes.

ADMISSION REQUIREMENTS

Graduate and post-baccalaureate applicants may apply for a degree objective, a credential or certificate objective, or where approved, 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 earned a grade point average of at least 2.5 on the last degree completed by the candidate or have attained a grade point average of at least 2.5 (A=4.0) in the last 60 semester (90 quarter) units attempted; and
4. satisfactorily meet the professional, personal, scholastic, and other standards for graduate study, including qualifying examinations, as evidenced by:

- Minimum of five (5) years of professional experience beyond the bachelor's degree, at least three (3) of which must be at the supervisory or managerial level. Full-time work experience with written evidence documenting the nature and duration of the work experience is required.

OR

- Adequate performance on the Graduate Record Examination (GRE) General Test or the Graduate Management Admissions Test (GMAT) may be substituted for professional experience requirements.

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:

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; 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

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

Post-Baccalaureate Unclassified - To enroll in undergraduate courses as preparation for advanced degree programs or 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. Admission in this status does not constitute admission to, or assurance of consideration for admission to, any graduate degree or credential program. (Most CSU campuses do not offer admission to unclassified post-baccalaureate students).

THESE AND OTHER CSU ADMISSION REQUIREMENTS ARE SUBJECT TO CHANGE AS POLICIES ARE REVISED AND LAWS ARE AMENDED. THE CSU WEBSITE www.calstate.edu AND THE CSU ADMISSIONS PORTAL www.calstate.edu/apply ARE GOOD SOURCES OF THE MOST UP-TO-DATE INFORMATION.

GRADUATE-POST-BACCALAUREATE ENGLISH LANGUAGE 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 minimum score of 575 (paper based), 240 (computer based) or 90 (Internet based) on the Test of English as a Foreign Language (TOEFL). Some programs require a higher score. Several CSU campuses may use alternative methods for assessing fluency in English including Pearson Test of English Academic (PTE Academic), the International English Language Testing System (IELTS), and the International Test of English Proficiency (ITEP).

INTERNATIONAL (FOREIGN) STUDENT 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 (see the section on the English Language Requirement for undergraduate applicants), financial resources, and academic performance are each important considerations for admission. Academic records from foreign institutions must be on file in advance of the first term and, if not in English, must be accompanied by certified English translations.

ADMISSION APPLICATION

The following are required for a complete application:

- Application for Admission. The application can be accessed at www.csum.edu/web/industry/graduate-studies/forms.
- $55 non-refundable application fee. Checks should be made payable to California State University, Maritime. Cash and credit cards are also accepted.
- One original copy each of all official transcripts. Applicants should have the equivalent of a four-year U.S. bachelor's degree, with a grade-point average of at least 2.5 (with A = 4.0) during the last two years (60 semester units or 90 quarter units) of coursework in the degree program. Copies of official transcripts should be sent to the address below from all colleges, universities, military training and vocational training attended other than Cal Maritime.
- Evidence of Readiness for Graduate Studies. Submit one of the following:
    - Official test results on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) General Test. These tests are administered at test centers throughout the world. To register for the GRE visit: http://www.ets.org/gre. To register for the GMAT visit: http://www.mba.com.
    - Two letters of recommendation demonstrating a minimum of five (5) successful years of professional experience beyond the bachelor's degree, at least three (3) of which must be at the supervisory or managerial level. These letters should come from supervisors and business associates who can discuss knowledgeably your leadership, management, and academic abilities.

The completed application, the non-refundable $55 application fee and all supporting documents can be completed online or mailed to the address below.

The Office of Graduate Studies
The California State University, Maritime
200 Maritime Academy Drive
Vallejo, CA 94590

FEES AND PAYMENT SCHEDULE

The total student cost for the program is $27,000.00 and includes all fees and books required for the 5-semester program. This fixed price will be guaranteed provided the student stays on track and completes the degree within the expected time frame.

An initial $1,000.00 non-refundable security deposit will be required to secure a space once a student has been admitted. That amount will be subtracted from the total program cost, leaving a $26,000.00 balance. That remaining amount is divided into 5 equal payments of $5,200.00 each. Payments will be due before the beginning of each term. In the event that a student withdraws, semester fees are non-refundable once a student has logged into that semester's course or courses.

Federal loans and other programs have been identified and set up for students to make application. Employers may also assist students with the cost of the program. Students should contact the Financial Aid department atwww.csum.edu/web/financial-aid/graduate-students or their employers for more information.

PROGRAM POLICIES AND EXPECTATIONS

Where no separate policy for graduate students is stated, the equivalent policy for Cal Maritime undergraduate students prevails. A clear understanding of program requirements and procedures as outlined in this catalog and at the Graduate Studies website will guide the student and will help avoid final semester problems and graduation delays. It is ultimately the graduate student's responsibility to be aware of all academic requirements and administrative deadlines of the program.

Satisfactory Academic Progress

Students admitted to graduate programs are expected to make systematic and successful progress towards the completion of their programs. The following policies are designed to assist the student in that endeavor.

Students must take the prescribed number and sequence of courses for their area of specialization. Students' work must give evidence of Graduate level writing proficiency.

A grade point average of 3.0 or better in all courses taken must be achieved and maintained to satisfy the requirements of the degree per CSU Masters Degree Requirements policy. This standard applies to all graduate students, including candidates in graduate-level certificate programs. A student is considered in probationary status and subject to dismissal if the cumulative scholarship in all work attempted in graduate status falls below a 'B' (3.0), or if the student's work in any two consecutive terms falls below a 'B' (3.0) average. The Dean of Graduate Studies determines a student's eligibility to continue in the program if he or she has been placed on academic probation. If allowed to continue in probationary status, the student is required to make steady progress toward improvement in scholarship.

Grading System

Student's work is graded using the A - F system. Grade point average computation is made using the following computation: A=4.0, B=3.0, C=2.0, D=1.0 and F=0.0. Course syllabi shall include a discussion of each individual instructor's grading policy and how it applies to his or her particular course. In cases where the letter grade is modified by a + or -, the resulting numeric grade will reflect the appropriate fractional adjustment in the GPA.

Academic Probation

A graduate student will be placed on academic probation when the student's GPA falls below 3.0 in any given semester. Consistent with guidelines issued by the Chancellor of The California State University, a graduate student may also be placed on probation for repeated withdrawal from the program, failure to progress toward an educational objective, and noncompliance with the graduate department's program requirements.

A student placed on academic probation will be notified in writing via letter or e-mail and will be provided with the conditions to be met for removal from academic probation, as well as the circumstances which will lead to disqualification. Students shall be removed from academic probation once they have met the terms and conditions established in the notification of academic probation letter, and their cumulative graduate GPA is at least 3.0 or higher. Students not meeting those terms and conditions within the specified time frame will be disqualified from continuing in the program.

Academic Suspension and Removal From the Program

Students who are subject to academic probation and fail to meet the conditions established by their terms of probation in the notification of academic probation within the specified period of time will be subject to academic suspension and/or academic disqualification from the program. A student placed on academic suspension or removal from the program will be notified in writing via letter or e-mail and will be provided with the reasons which lead to his or her disqualification.

Withdrawal of Registration During a Semester

In the event that a graduate student withdraws his or her registration during a semester, semester fees are non-refundable once the student has logged into their courses except in unusual circumstances which have been approved by the Dean of Graduate Studies or when doing so conflicts with the required return of student financial aid funds from federal, state, institutional, or other external sources. A recipient of such returnable funds withdrawing from the graduate program during an academic term may be subject to University repayment provisions in the amount of the funds returned to the lender.

Non- refundable fees in any circumstances include but are not limited to the application fee and the initial enrollment deposit of $1,000.

RETURNING STUDENTS

Reinstatement

In order to be considered for reinstatement, a disqualified student must demonstrate academic ability by completing conditions determined by the Dean of Graduate Studies. The student may then petition the Department of Graduate Studies for reinstatement. The student must submit the petition for reinstatement no later than three weeks before the beginning of the semester that the student intends to return. The Department of Graduate Studies will only consider the petition for reinstatement of students who have remained outside of the university for at least one regular (Fall, Spring or Summer) semester after their dismissal. Students who are disqualified, reinstated, and become disqualified a second time will not be granted a second reinstatement.

Leave of Absence

Students called to or engaged in public service for reasons beyond their control will not lose registration priority, academic credit, or degree status. Such activities may include military service, fire fighting, or public security. 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 Office of Graduate Studies. An approved leave will ensure that they retain their catalog rights and that they can register for subsequent terms without reapplying for admission.

ENROLLMENT IN THE CAPSTONE COURSE

In order to enroll in the graduate program's Capstone course, students must have completed all required courses in the program with passing grades and resolved any outstanding Incomplete grades. Students who are on academic probation

or who have an unresolved Incomplete in any course may not pursue the Capstone course without prior written approval from the Dean of Graduate Studies.

Procedure for an Unqualified Student to Petition for Permission to Enroll in the Capstone Course

Permission for an unqualified student to enroll in the Capstone course may be granted in the rare occasion that a student has only one outstanding course to retake or one outstanding Incomplete to resolve, and has demonstrated via an approved action plan the ability to successfully resolve those issues within a stated period of time not to exceed the period of time necessary for completion of the Capstone project. The student must pay full tuition for the semester(s) during which this resolution is addressed and will not be eligible to pay the lower Continuous Enrollment Fee.

CONTINUOUS ENROLLMENT

Unless granted a formal leave of absence, graduate students are expected to register every term following their initial enrollment through its completion, including the term in which their degree or certificate is to be awarded. Students who have taken the Capstone course and whose project is either not filed or not approved by the end of the Capstone course semester are required to be continuously enrolled (including the Summer semester) until the project is completed and approved.

Qualifying for the Continuous Enrollment Fee

If a student has completed all requirements for a degree except the filing and/or approval of the Capstone project, the student may be eligible to pay a Continuous Enrollment Fee during the following semester(s) instead of registering at the full semester fee rate. This exception may apply to no more than the semester immediately following the semester during which the student was enrolled in the Capstone course.

Four conditions must be satisfied for the student to be eligible for this fee:

- All formal requirements for the degree except for filing and/or approval of the finished Capstone project must be completed before the first day of the semester for which the Continuous Enrollment Fee is being requested;
- Since the last day of the previous qualifying semester and up to the first day of the semester for which the Continuous Enrollment Fee is being sought, the combined use of Cal Maritime faculty and staff time must not exceed 12 hours;
- During the semester in which the Capstone course was taken and the project was begun, the Capstone committee suggested only stylistic and/or typographical changes in the Capstone project rather than a change of the project itself; and
- The student must have been enrolled at the full semester fee during the qualifying semester.

Procedure for Student to Establish Eligibility to Pay the Continuous Enrollment Fee

The student must complete a Continuous Enrollment Fee application signed by all members of his or her Capstone Committee certifying that all the above requirements have been met. Forms for this purpose are available in the Office of Graduate Studies. The student should submit the completed form to the Office of Graduate Studies for approval by

the Dean of Graduate Studies. If the Dean of Graduate Studies approves the Continuous Enrollment Fee application, the student will be billed for the amount of the Continuous Enrollment Fee rather than at the full semester rate. Otherwise, the full semester fee will be charged.

Important Notes Regarding Continuous Enrollment

Students paying the Continuous Enrollment Fee are not eligible for the privileges normally accorded regularly registered students other than the use of the library and e-mail resources, and the attention of the Capstone Committee members necessary for consultation and final approval of the Capstone project. If, after paying the Continuous Enrollment Fee in any one semester, a student should find it necessary to use the educational facilities of the University in any way other than usage of library or e-mail resources or requiring the attention of the Capstone Committee sufficient for a final reading of the Capstone project, then the student must resume registration at the full student enrollment fee rate. If this should occur during a semester in which the student has already paid the Continuous Enrollment Fee, the student will be billed for the balance of the usual semester fees.

- A student may not use the Continuous Enrollment Fee for the purpose of taking course work of any kind.
- The Continuous Enrollment Fee is not a substitute for enrollment for purposes of deferring student loans, nor does it guarantee eligibility for financial aid.
- The Continuous Enrollment Fee will not be refunded if the Capstone project is not filed or passed.

Since Continuous Enrollment does not bear academic credit, it may not appear on a student's transcript.

STANDARD OF INTEGRITY AND CIVILITY

California Maritime Academy has and enforces regulations which forbid cheating, plagiarism, and other forms of inappropriate and unethical academic conduct. Students found guilty of these inappropriate actions will not be permitted to continue in the Graduate Program.

Conduct within the online environment as exemplified by postings in the course discussion forums and email communication is expected to exhibit a level of courtesy consistent with a professional interchange.

ELIGIBILITY FOR A MASTER'S DEGREE

To be eligible for the Master's Degree, the candidate shall have completed the following minimum requirements:

- The successful completion of the specified course of study approved by the Curriculum Committee at Cal Maritime consisting of thirty semester units of approved graduate work. An overall minimum grade point average of 3.0 (B) is required.
- Satisfactory completion of a capstone project. No more than two semesters shall be allowed for the capstone project.

COMMENCEMENT PARTICIPATION

In order to participate in the Spring commencement ceremony, students must have successfully completed all degree requirements and fulfilled all financial obligations toCal Maritime. In limited situations,students whose Capstone project will be accepted and approved in the Summer semester immediately following commencement may be eligible to participate in the commencement ceremony as a "Walk Only" candidate if they have received prior written approval to participate from the Dean of Graduate Studies. Under no circumstances will a student who has outstanding financial obligations to Cal Maritime be permitted to participate in commencement.

Procedure for an Unqualified Student to Participate in Commencement

Students who will complete their degree requirements by completing the Capstone project in the summer semester following commencement may be eligible to participate in the May commencement ceremony as a "Walk Only" candidate provided they file a Declaration of Intent to Graduate form showing project approval as achievable by the August immediately following commencement. The Declaration of Intent to Graduate form must be approved by the student's Capstone Committee and the Dean of Graduate Studies.

Graduate Programs and Courses

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

Graduate Studies

Throught the Department of Sponsored Projects and Extended Learning (SPEL) Cal Maritime offers a Master of Science in Transportation and Engineering Management.

Master

Transportation and Engineering Management - Engineering Management Concentration, M.S.

The Graduate Program

Master of Science in Transportation and Engineering Management

Cal Maritime is committed to the development of outstanding industry leaders through a graduate degree program that requires students to integrate critical thinking and best practices in a manner that enables them to face real-world challenges with poise, and to contribute to the body of knowledge and practice in their industry.

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

The Office of Graduate Studies administers the policies and procedures established by Cal Maritime and the California State University. This catalog section presents these policies and procedures as related to graduate students in Cal Maritime's graduate degree program.

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC) 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001 www.wascsenior.org.

Program Learning Objectives

Students in this program will meet educational outcomes in three areas.

Project Leadership

Graduates will:

- Be able to create and lead a project team or multiple project teams, develop project proposals (including budgets and timelines) and manage the entire project life cycle.
- Have expertise in systems analysis and operations research to support project development and management.
- Apply decision making, technical, and human resource principles to manage projects in a dynamic business and global economic context.

Global Context

Graduates will:

- Understand their organization's role in a global context; including environmental issues, and political, social, and ethical norms.
- Appreciate the security, economic, and legal dimensions that affect global supply chain management.

Management Components

Graduates will:

- Have the ability to advance to higher levels of institutional responsibility with an increased understanding of organizational, financial, human resource and information systems management.
- Recognize and appreciate one's own ability to lead, direct, and advance the goals and vision of the organization.

Graduate Program Curriculum

Students enroll in one of three areas of specialization. The choices include Transportation, Engineering Management, and Humanitarian Disaster Management. Before taking courses in their area of specialization students will complete 5 courses in a core management curriculum. They will then complete 4 courses in their area of specialization. The final course, the Capstone course, will give students the opportunity to demonstrate their learning through an extensive project. Successful completion of the 10 courses is required to earn the degree.

Format

The Graduate Program is offered in a fully-online asynchronous format using the Moodle platform. It is expected that the online graduate student will fully participate in the various aspects of this distance-learning program, such as reading and working extensively on his or her own and using the Internet to communicate about their learning. Discussion forums, papers, presentations, and exams are used to evaluate student progress. Students will also be

required to participate in web conferences, chat forums, and other group activities on the Internet. It is the student's responsibility to be able to use these tools effectively. The Graduate Program website features tutorials and written instruction on using the features of the Internet course delivery platform used for this program. Students also have access to IT personnel for support and guidance.

Online instruction is available to the student 24/7 during the semesters in which he or she is enrolled. Participation is measured through the completion of assignments, through postings in discussion forums, and as otherwise specified in individual course syllabi.

Cohort Model

The program is laid out in a sequential manner, with each course building on the one before it. Students proceed through the courses as a cohort, and belong to the same group throughout the duration of the program. The cohort model has been proven to be particularly effective for learning in an online environment. For this reason, each cohort begins together in the Fall semester, and completes the five semesters together.

Course Descriptions

Core Courses

Students complete all the core courses except TEM 900 - Capstone before beginning coursework in their area of specialization.

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Areas of Concentration

Engineering Management

TEM 700 - Systems Engineering Management

Introduces students to the principles and processes of systems engineering, from concept development through system integration, testing and life cycle support. The course explores a disciplined approach to identifying user needs, translating those needs into a complete system specification, and verifying that requirements are met. A team project related to deployment of a large-scale complex system is used to demonstrate the integrated nature of systems engineering.

TEM 705 - Strategic Management

Topics include the managing and resolution of complex problems in engineering management; the process of crafting strategy; evaluating a company's external environment, resources and competitive position; integration and outsourcing; diversification, acquisitions and new ventures; competing in foreign markets; strategy, ethics, and social responsibility; and effective strategy execution.

TEM 710 - Technology Management

Focuses on managing advanced technology in industry. Topics include: Human factors; quality control; reliability and maintainability; integrated logistic support; sales and marketing for engineers; legal issues and entrepreneurship; and managing risk.

TEM 720 - Energy Resource Management

Course participants will learn the background knowledge, concepts and management techniques necessary to create and sustain an effective energy management program within their organization, resulting in an efficient use of energy to maximize profit and minimize cost. This course will examine supply side cost structures, auditing of energy demand, strategies to reduce energy costs, energy efficient technologies, and economic analysis of energy efficiency upgrades for decision making.

Calendar

There are three semesters a year in the graduate degree program: Fall, Spring and Summer. These semesters conform with the undergraduate program's Fall and Spring semesters as designated on the campus academic calendar and posted online at https://www.csum.edu/web/registrar/calendar. A 12-week Summer semester is scheduled during the months between the Fall and Spring semesters.

Transportation and Engineering Management - Humanitarian Disaster Management Concentration, M.S.

The Graduate Program

Master of Science in Transportation and Engineering Management

Cal Maritime is committed to the development of outstanding industry leaders through a graduate degree program that requires students to integrate critical thinking and best practices in a manner that enables them to face real-world challenges with poise, and to contribute to the body of knowledge and practice in their industry.

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

The Office of Graduate Studies administers the policies and procedures established by Cal Maritime and the California State University. This catalog section presents these policies and procedures as related to graduate students in Cal Maritime's graduate degree program.

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC) 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001 www.wascsenior.org.

Program Learning Objectives

Students in this program will meet educational outcomes in three areas.

Project Leadership

Graduates will:

- Be able to create and lead a project team or multiple project teams, develop project proposals (including budgets and timelines) and manage the entire project life cycle.
- Have expertise in systems analysis and operations research to support project development and management.
- Apply decision making, technical, and human resource principles to manage projects in a dynamic business and global economic context.

Global Context

Graduates will:

- Understand their organization's role in a global context; including environmental issues, and political, social, and ethical norms.
- Appreciate the security, economic, and legal dimensions that affect global supply chain management.

Management Components

Graduates will:

- Have the ability to advance to higher levels of institutional responsibility with an increased understanding of organizational, financial, human resource and information systems management.
- Recognize and appreciate one's own ability to lead, direct, and advance the goals and vision of the organization.

Graduate Program Curriculum

Students enroll in one of three areas of specialization. The choices include Transportation, Engineering Management, and Humanitarian Disaster Management. Before taking courses in their area of specialization students will complete 5 courses in a core management curriculum. They will then complete 4 courses in their area of specialization. The final course, the Capstone course, will give students the opportunity to demonstrate their learning through an extensive project. Successful completion of the 10 courses is required to earn the degree.

Format

The Graduate Program is offered in a fully-online asynchronous format using the Moodle platform. It is expected that the online graduate student will fully participate in the various aspects of this distance-learning program, such as reading and working extensively on his or her own and using the Internet to communicate about their learning. Discussion forums, papers, presentations, and exams are used to evaluate student progress. Students will also be required to participate in web conferences, chat forums, and other group activities on the Internet. It is the student's responsibility to be able to use these tools effectively. The Graduate Program website features tutorials and written instruction on using the features of the Internet course delivery platform used for this program. Students also have access to IT personnel for support and guidance.

Online instruction is available to the student 24/7 during the semesters in which he or she is enrolled. Participation is measured through the completion of assignments, through postings in discussion forums, and as otherwise specified in individual course syllabi.

Cohort Model

The program is laid out in a sequential manner, with each course building on the one before it. Students proceed through the courses as a cohort, and belong to the same group throughout the duration of the program. The cohort model has been proven to be particularly effective for learning in an online environment. For this reason, each cohort begins together in the Fall semester, and completes the five semesters together.

Course Descriptions

Core Courses

Students complete all the core courses except TEM 900 - Capstone before beginning coursework in their area of specialization.

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Areas of Concentration

Humanitarian/Disaster Management

TEM 800 - The Global Humanitarian System

This course considers in greater depth the humanitarian system as a whole and the resulting tensions. It compares and contrasts the actions and activities with those found in the commercial and military counterparts that will be found operating alongside the humanitarian logistic network, and focuses on the issue of the development and maintenance of inter-personal and inter-organizational trust as a critical success factor within the post-disaster response.

TEM 810 - Rapid and Slow Onset Disaster Management

This course underpins the Humanitarian Logistics track through an introduction to the disaster response cycle and a high level discussion of the key stakeholders. It considers the role of the humanitarian logistician and discusses five of the most significant challenges facing those working in this field.

TEM 820 - Humanitarian Project Management

On the basis that the whole area of the preparation and response to a natural disaster falls into the Rittel and Webber's categorization of a "wicked problem", based on academic approaches to the "taming" of such problems, this course will consider alternate ways of managing the humanitarian logistic challenge. These will be drawn from a number of fields including those of project management and procurement as well as the area of general management.

TEM 830 - National and International Humanitarian Logistics

It is recognized that there are significant differences in the philosophical approach, and consequential policies, processes and procedures adopted by different countries in their preparation and response to national and international disasters. The aim of this course is to consider the differences in such approaches, the implications for international cooperation and the extent to which best practice can be synthesized.

Calendar

There are three semesters a year in the graduate degree program: Fall, Spring and Summer. These semesters conform with the undergraduate program's Fall and Spring semesters as designated on the campus academic calendar and posted online at https://www.csum.edu/web/registrar/calendar. A 12-week Summer semester is scheduled during the months between the Fall and Spring semesters.

Transportation and Engineering Management - Transportation Concentration, M.S.

The Graduate Program

Master of Science in Transportation and Engineering Management

Cal Maritime is committed to the development of outstanding industry leaders through a graduate degree program that requires students to integrate critical thinking and best practices in a manner that enables them to face real-world challenges with poise, and to contribute to the body of knowledge and practice in their industry.

Cal Maritime's Office of Graduate Studies, a division of the Department of Sponsored Projects and Extended Learning, offers a Master of Science degree in Transportation and Engineering Management, with areas of specialization in Transportation Management, Engineering Management, and Humanitarian Disaster Management.

The Office of Graduate Studies administers the policies and procedures established by Cal Maritime and the California State University. This catalog section presents these policies and procedures as related to graduate students in Cal Maritime's graduate degree program.

Accreditation

Cal Maritime is accredited by the Western Association of Schools and Colleges (WASC) 985 Atlantic Avenue, Suite 100, Alameda, CA 94501, 510-748-9001 www.wascsenior.org.

Program Learning Objectives

Students in this program will meet educational outcomes in three areas.

Project Leadership

Graduates will:

- Be able to create and lead a project team or multiple project teams, develop project proposals (including budgets and timelines) and manage the entire project life cycle.
- Have expertise in systems analysis and operations research to support project development and management.
- Apply decision making, technical, and human resource principles to manage projects in a dynamic business and global economic context.

Global Context

Graduates will:

- Understand their organization's role in a global context; including environmental issues, and political, social, and ethical norms.
- Appreciate the security, economic, and legal dimensions that affect global supply chain management.

Management Components

Graduates will:

- Have the ability to advance to higher levels of institutional responsibility with an increased understanding of organizational, financial, human resource and information systems management.
- Recognize and appreciate one's own ability to lead, direct, and advance the goals and vision of the organization.

Graduate Program Curriculum

Students enroll in one of three areas of specialization. The choices include Transportation, Engineering Management, and Humanitarian Disaster Management. Before taking courses in their area of specialization students will complete 5 courses in a core management curriculum. They will then complete 4 courses in their area of specialization. The final course, the Capstone course, will give students the opportunity to demonstrate their learning through an extensive project. Successful completion of the 10 courses is required to earn the degree.

Format

The Graduate Program is offered in a fully-online asynchronous format using the Moodle platform. It is expected that the online graduate student will fully participate in the various aspects of this distance-learning program, such as reading and working extensively on his or her own and using the Internet to communicate about their learning. Discussion forums, papers, presentations, and exams are used to evaluate student progress. Students will also be required to participate in web conferences, chat forums, and other group activities on the Internet. It is the student's responsibility to be able to use these tools effectively. The Graduate Program website features tutorials and written instruction on using the features of the Internet course delivery platform used for this program. Students also have access to IT personnel for support and guidance.

Online instruction is available to the student 24/7 during the semesters in which he or she is enrolled. Participation is measured through the completion of assignments, through postings in discussion forums, and as otherwise specified in individual course syllabi.

Cohort Model

The program is laid out in a sequential manner, with each course building on the one before it. Students proceed through the courses as a cohort, and belong to the same group throughout the duration of the program. The cohort model has been proven to be particularly effective for learning in an online environment. For this reason, each cohort begins together in the Fall semester, and completes the five semesters together.

Course Descriptions

Core Courses

Students complete all the core courses except TEM 900 - Capstone before beginning coursework in their area of specialization.

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Areas of Concentration

Transportation

TEM 600 - Global Logistics and Supply Chain Management

Logistics is the science of movement of materials from raw material to the customer in the globalized economy; Supply Chain Management focuses on understanding techniques and strategic issues in the successful movement of products from their origins as raw materials to their final destinations as finished products, including the impact of culture, strategic planning, organization, and management control. Specific topics include customer service, e-commerce, facilities location, routing and pricing, storage, transportation, emerging technologies, and re-engineering the supply chain. Emphasis will be placed throughout on the maritime component, with frequent use of case studies.

TEM 610 - International Transportation Law

Explores legal issues in transportation, logistics and supply chain management in a globalized economy. Topics include freight charges liability; loss, damage and delay claims, billing disputes, over-charge and undercharge claims; bills of lading; freight classification system; cargo insurance; applicable international legal treaties and conventions; and the current state of international transportation law.

TEM 620 - International Trade and Finance

This course focuses on trade and finance in a globalized economy. Trade topics include the current structure of the international trading system, global trade treaties and agreements, and the impact of e-commerce on traditional trade constructs. Financial topics include raising capital in the global economy, the management of investment and exchange risk, and global financial treaties and agreements.

TEM 630 - Port and Terminal Management

An advanced course dealing with 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.

Calendar

There are three semesters a year in the graduate degree program: Fall, Spring and Summer. These semesters conform with the undergraduate program's Fall and Spring semesters as designated on the campus academic calendar and posted online at https://www.csum.edu/web/registrar/calendar. A 12-week Summer semester is scheduled during the months between the Fall and Spring semesters.

Graduate Courses

TEM 500 - Project Management

Students understand and gain experience in using modern methods and practices for managing projects from small to extremely extensive. Students work individually and in teams to experience managing a project, analyze case studies on specific topics in the field, and practice problem solving using the important concepts, methods and software for scheduling and resource management. Topics include: Organizing and managing projects; selection of alternate projects using financial viability, suitability of the end product, time of delivery, and quality as criteria; defining scope; scheduling and resource management; budgeting and control; ending projects and learning from them for the future. Examples will be drawn from operations such as engineering and supply chains, including a maritime link.

TEM 510 - International Transportation Economics

Students learn to apply microeconomic principles, especially in the field of freight transportation, with special attention to international transport and maritime related scenarios. Students use classical and behavioral microeconomic methods and practices to illuminate the management of enterprises and assets in transportation markets, as well as in their global settings and in the presence of external influences such as regulation and political and social concerns. Students work individually and in teams to analyze case studies on specific topics in the field, and practice issue diagnosis and explanation using the important concepts and methods covered. Topics include: Modern theories of transport supply and demand, the firm and costs, industrial organization in markets, externalities, regulation, and models of social welfare. Examples will be drawn primarily from freight transportation scenarios, including a maritime link.

TEM 520 - Organizational Behavior and Management

This course explores 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.

TEM 530 - Financial Management

A course of study in the principles of finance at the level of the business unit. Students will learn the core fundamentals, concepts and techniques of finance. Topics include security valuation, time value of money, financial statement analysis, capital budgeting, and working capital management. Students will gain an appreciation of the capital markets and application to real world investing.

TEM 540 - Information Systems

Students learn some elementary systems analysis principles, and investigate the structure and operations of large, complex modern computer networks. Students survey the major systems used for decision making and data management in international logistics and engineering oriented concerns, and obtain a working knowledge of the functions and data required for each, and how the pieces fit together into a strategy for getting the right information to the right decision maker at the right time. Special emphasis placed on systems particularly important in transportation, logistics, and maritime related firms, and those important in supply chain command and control. Students also learn how to participate in or lead a system design and implementation project.

TEM 600 - Global Logistics and Supply Chain Management

Logistics is the science of movement of materials from raw material to the customer in the globalized economy; Supply Chain Management focuses on understanding techniques and strategic issues in the successful movement of products from their origins as raw materials to their final destinations as finished products, including the impact of culture, strategic planning, organization, and management control. Specific topics include customer service, e-commerce, facilities location, routing and pricing, storage, transportation, emerging technologies, and re-engineering the supply chain. Emphasis will be placed throughout on the maritime component, with frequent use of case studies.

TEM 610 - International Transportation Law

Explores legal issues in transportation, logistics and supply chain management in a globalized economy. Topics include freight charges liability; loss, damage and delay claims, billing disputes, over-charge and undercharge claims; bills of lading; freight classification system; cargo insurance; applicable international legal treaties and conventions; and the current state of international transportation law.

TEM 620 - International Trade and Finance

This course focuses on trade and finance in a globalized economy. Trade topics include the current structure of the international trading system, global trade treaties and agreements, and the impact of e-commerce on traditional trade constructs. Financial topics include raising capital in the global economy, the management of investment and exchange risk, and global financial treaties and agreements.

TEM 630 - Port and Terminal Management

An advanced course dealing with 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.

TEM 700 - Systems Engineering Management

Introduces students to the principles and processes of systems engineering, from concept development through system integration, testing and life cycle support. The course explores a disciplined approach to identifying user needs, translating those needs into a complete system specification, and verifying that requirements are met. A team project related to deployment of a large-scale complex system is used to demonstrate the integrated nature of systems engineering.

TEM 705 - Strategic Management

Topics include the managing and resolution of complex problems in engineering management; the process of crafting strategy; evaluating a company's external environment, resources and competitive position; integration and outsourcing; diversification, acquisitions and new ventures; competing in foreign markets; strategy, ethics, and social responsibility; and effective strategy execution.

TEM 710 - Technology Management

Focuses on managing advanced technology in industry. Topics include: Human factors; quality control; reliability and maintainability; integrated logistic support; sales and marketing for engineers; legal issues and entrepreneurship; and managing risk.

TEM 720 - Energy Resource Management

Course participants will learn the background knowledge, concepts and management techniques necessary to create and sustain an effective energy management program within their organization, resulting in an efficient use of energy to maximize profit and minimize cost. This course will examine supply side cost structures, auditing of energy demand, strategies to reduce energy costs, energy efficient technologies, and economic analysis of energy efficiency upgrades for decision making.

TEM 800 - The Global Humanitarian System

This course considers in greater depth the humanitarian system as a whole and the resulting tensions. It compares and contrasts the actions and activities with those found in the commercial and military counterparts that will be found operating alongside the humanitarian logistic network, and focuses on the issue of the development and maintenance of inter-personal and inter-organizational trust as a critical success factor within the post-disaster response.

TEM 810 - Rapid and Slow Onset Disaster Management

This course underpins the Humanitarian Logistics track through an introduction to the disaster response cycle and a high level discussion of the key stakeholders. It considers the role of the humanitarian logistician and discusses five of the most significant challenges facing those working in this field.

TEM 820 - Humanitarian Project Management

On the basis that the whole area of the preparation and response to a natural disaster falls into the Rittel and Webber's categorization of a "wicked problem", based on academic approaches to the "taming" of such problems, this course will consider alternate ways of managing the humanitarian logistic challenge. These will be drawn from a number of fields including those of project management and procurement as well as the area of general management.

TEM 830 - National and International Humanitarian Logistics

It is recognized that there are significant differences in the philosophical approach, and consequential policies, processes and procedures adopted by different countries in their preparation and response to national and international disasters. The aim of this course is to consider the differences in such approaches, the implications for international cooperation and the extent to which best practice can be synthesized.

TEM 900 - Capstone

(To be taken upon the successful completion of all other courses) Students scope, develop, plan and execute an indepth practical project to deliver value in transportation management, engineering management or humanitarian/ disaster management, usually for an organization familiar to them. They work in consultation with the course instructor, and other faculty and representatives as appropriate in a committee selected by the student and instructor. Using knowledge acquired in the program, they devise and present workable solutions to resolve problems in their respective target enterprise.

Student Resources

Fee Policy

Fee Policy Academic Year 208-19

Schedule of Tuition and Fees - 2018-19

The California State University (CSU) makes every effort to keep student costs to a minimum. Tuition and fees listed in published schedules or student accounts may need to be increased when public funding is inadequate. Therefore, CSU reserves the right, even after initial payments are made, to increase or modify any listed tuition or fees. All listed feeds, other than mandatory systemwide tuition, are subject to change 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, the Chancellor, or the Presidents, as appropriate. Changes in mandatory systemwide tuition will be made in accordance with the requirements of the Working Families Student Fee Transparency and Accountability Act (Sections 66028 - 66028.6 of the Education Code).

The following reflects applicable systemwide tuition and fees for both semester and quarter campuses. **These rates are subject to change.**

All Students

Application Fee (nonrefundable), payable online at the tie of application via credit card, e-check ro PayPal: $55

2018-19 Basic Tuition

Undergraduate	Semester	Quarter
6.1 or more units	**$2,871**	**$1,914**
0 to 6.0 units	**$1,665**	**$1,110**

Post-Baccalaureate	Semester	Quarter
6.1 or more units	**$3,588**	**$2,392**
0 to 6.0 units	**$2,082**	**$1,388**

Nonresident Students (U.S. and Foreign)

Nonresident Tuition (in addition to basic tuition and other systemwide fees charged all students) for all campuses:

	Semester	Quarter
Charge Per Unit	$396	$264

The total nonresident tuition paid per term will be determined by the number of units taken.

Mandatory systemwide tuition is waived for those individuals who qualify for such exemption under the provisions of the California Education Code (see section on **fee waivers**).

Students are charged campus fees in addition to tuition and systemwide fees. Information on campus fees can be found by viewing information at https://www.csum.edu/web/fiscal-services/fees-tuition-and-charges

Credit Cards:

If you wish to pay by credit/debit card, the campus has contracted with CASHNet SmartPay to accept your credit/debit card payments. CASHNet SmartPay accepts VISA, MasterCard, American Express and Discover credit cards. SmartPay charges a 2.75% service fee on all credit and debit card payment transactions.

Student Involvement and Representation Fee

On January 28, 2015 the CSU Board of Trustees adopted the Student Involvement and Representation Fee (SIRF), which goes into effect in Fall 2015. Submitted to the CSU by the California State Student Association (CSSA), this proposal aims to create a more stable, independent, and expanded statewide student association. Through a $2 per-term voluntary fee assessed to each CSU student, this new funding model will replace CSSA's long-standing revenue sources that included Associated Students membership dues, fundraising, and Chancellor's Office grants.

The campus is required to charge this fee to all students enrolled in a degree program, but it is voluntary for students to pay the fee. If the student chooses to opt out, the deadline is the semester census date (20th day of instruction) for each term. After census, students will no longer be able to opt out for the semester. If a student chooses to, they must opt out each fall and spring semester after fees are posted to the student account. This is the only systemwide fee that is non-mandatory and has the option to opt out. View information about opting out at: https://www.csum.edu/web/fiscal-services/sirf

Campus-based fees

In addition to tuition fees and other systemwide fees, students enrolled in a degree program at Cal Maritime pay the following fees: Housing, Food Service, Health Services, Health Facility, Parking, Associated Student Body, Instructionally Related Activity, Campus Document, Recreation, Medical Insurance A & B and specific course and laboratory fees determined by courses taken. Current charges for registration related fees can be viewed each year in the Schedule of Fees document posted at: https://www.csum.edu/web/fiscal-services/fees-tuition-and-charges.

In addition, there may be other fees charged by third parties for licenses and exams that are requirements of degree programs. Also, certain departments may make assessments of varying amounts for equipment and facilities, loss, damage, breakage, waste of materials and for late payments or late registration.

Medical Insurance is a requirement for all students enrolled in a degree program at Cal Maritime. All students meeting the enrollment eligibility requirements are charged for Medical Insurance A & B. 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 Cal Maritime may complete a medical insurance fee waiver online to request a waiver for Part A. Medical Insurance B cannot be waived. Visit the Student Health Center page for more information. There are strict deadlines for this request.

If the Medical Insurance A fee waiver is approved, a credit to the student's account will be made. Students who withdraw from Cal Maritime by the policy's deadline and who have not used the Cal Maritime policy prior to withdrawal will also receive a credit for this fee. Students who request a refund or withdraw after the Cal Maritime policy deadline will be referred to Student Health Services at 707-654-1170.

Housing and Meal Plan

It is the policy of Cal Maritime that students enrolled in its degree programs maintain residence on campus and participate in a meal plan. Enrollment obligates student 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.

Students are required to purchase approved uniforms. Please contact the Cal Maritime Bookstore at 707-654-1186 or visit the bookstore website for information regarding cost and availability.

Fee Waivers and Exemptions

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

Section 66025.3 - Dependents eligible to received assistance under Article 2 of Chapter 4 of Division 4 of the Military and Veterans Code; child of any veteran of the United States military who has a service-connected disability, has been killed in service, or has died of a service-connected disability, and meets specified income provisions; dependent, or surviving spouse who has not remarried of any memer of the California Natinoal Guard wo, in the lined of duty, and while in the active service of the state, was killed, died of a disability resulting form an event that occurred while inthe active service of state, or is permanently disabled as a result of an event that occurred while in the active service of the state; and undergraduate student who is a recipient of a Medal of Honor, or undergraduate student who is a child of a recipient of a Medal of Hnor who is no more than 27 years old, meets the income restriction and California residency requirement. The waiver of tuition or fees under this section applies only to a person who is determined to be a resident of California pursuant to Chapter 1 (commencing with Section 68000) of Part 41.

Section 66602 - A qualifying student from the California State University is appointed by the Governor to serve as Trustee of the California State University for the duration of his or her term of office.

Section 68120 - Surviving spouse or child of a deceased California resident who was employed by a public agency, or was a contractor or an employee of a contractor or an employee of a contractor, performing service for a public agency, and was killed in the performance of his/her principal duties of active law enforcement or fire suppression and prevention duties (referred to as Alan Pattee Scholarships). A person qualifies for the waiver under this section as a surviving child of a contractor or of an employee of a contractor, who performed services for a public agency must have enrolled as an undergraduate student at the California State Univesity and meets income restriction requirement.

Section 68121 - A qualifying student enrolled in an undergraduate program who is 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. Student who may qualify for these benefits should contact the Admissions/Registrar's Office for further information and/or an eligibility determination.

The California Education Code provides for the following nonresident tuition exemptions:

Section 68075.7_- A nonresident students is exempt from paying nonresident tuition or any other fee that is exclusively applicable to nonresident students if the student (1) resides in California, (2) meets the definition of "covered individual" as defined in either: (A) Section 3679(c)(2)(A) or (B)(ii)(l) of Title 38 of the United States Code, as that provision read on January 1, 2017; or (B) Section 3679(c)(2)(B)9(i) or (ii)(II) or Title 38 of the United States Code, as

that provision read on January 1, 2017; and (3) is eligible for education benefits under either the federal Montgomery GI Bill-Active Duty program or the Post-9/11 GI Bill program as each read on January 1, 2017.

Section 68122 - A student who is a victim of trafficking, domestic violence, and other serious crimes who has been granted T or U visa status are exempt from paying nonresident tuition if they (1) attended high school in California for three or more years; (2) graduated from a California high school or attained the equivalent; and (3) registered as an entering student or are currently enrolled at a CSU campus.

Section 68130.5 - A student, other than a nonimmigrant alien, who is not a resident of California is exempt from paying nonresident tuition if the student meets the requirements of (1) through (4), below:

(1) Satisfaction of the requirements of either subparagraph (A) or subparagraph (B):

(A) A total attendance of, or attainment of credits earned while in California equivalent to, three or more years of full-time attendance or attainment of credits at any of the following:

(i) California high schools.

(ii) California high schools established by the State Board of Education.

(iii) California adult schools established by a county office of education, a unified school district or high school district, or the Department of Corrections and Rehabilitation (subject to the class hours' requirement).

(iv) Campuses of the California Community Colleges (subject to the credit requirements).

(v) A combination of those schools set forth in clauses (i) to (iv), inclusive.

(B) Three or more years of full-time high school coursework, and a total of three or more years of attendance in California elementary schools, California secondary schools, or a combination of California elementary and secondary schools.

(2) Satisfaction of any of the following:

(A) Graduation from a California high school or attainment of the equivalent thereof.

(B) Attainment of an associate degree from a campus of the California Community Colleges.

(C) Fulfillment of the minimum transfer requirements established for the California State University for students transferring from a campus of the California Community Colleges.

(3) Registration as an entering student at, or current enrollment at, an accredited institution of higher education in California not earlier than the fall semester or quarter of the 2001-02 academic year.

(4) In the case of a person without lawful immigration status, the filing of an affidavit with the institution of higher education stating that the student has filed an application to legalize his or her immigration status, or will file an application as soon as he or she is eligible to do so.

Students who believe they may qualify for these benefits should contact the Registrar's Office for further information and an eligibility determination.

Payment of Fees and Other University Charges

Students will receive an email notification at their official campus email address when a fee statement is posted to their account. The email will provide 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.

Students may view their account balance and details of all charges at their Student Center in Self Service or by logging into the online payment site at: https://commerce.cashnet.com/csumpay

Fee due dates for each semester and other fee information can be viewed at: https://www.csum.edu/web/fiscal-services/fees-tuition-and-charges

All fees must be submitted to the campus Cashier's Office by the published semester fee due date. After this date, all new fees and other charges posted to the student account are due within 24 hours after assessment.

Students adding courses after the semester's posted "Last Day to Add" period may be required to remit payment before registering for new courses.

Payment Options

- E-check (electronic check) payments are made online by following the link on Cal Maritime's website (https://commerce.cashnet.com/csumpay) or through Online Services. There is no fee to make a payment online by e-check.
- Credit/Debit Card payments are accepted online only by following the link (https://commerce.cashnet.com/csumpay) 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. Visa, MasterCard, American Express and Discover bank credit cards may be used for payment of student fees.
- Check or money order payments mailed should be addressed to:
  CSU 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.

- Check, money order or cash payments are accepted at the campus Cashier's Office.
- An approved Installment Payment Plan may be submitted with the required deposit and administrative fee each semester by the published due date. An application form and eligibility requirements are available from Cal Maritime's web site.
- Payment for the amount of fees equal to the anticipated financial aid for the semester may be deferred. 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 anticipated aid is not sufficient to cover all fees, the student must remit payment for the remainder by the fee due date.

A student requesting deferred payment on the basis of anticipated financial aid but who is not certified by the Financial Aid office by the fee due date may have his/her enrollment canceled. Upon completion of Financial Aid certification, the student may re-enroll, subject to class availability, when registration re-opens for the semester. A late registration and late payment fee will be assessed. If a financial aid award or other third party sponsorship is changed or disallowed, the student is immediately responsible for payment in full.

- 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 online by credit card.

Fees and Debts Owed to the Institution

Should a student or former student fail to pay a fee or a debt owed to the institution, Cal Maritime 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).

Students and prospective students who register for courses offered by the university are obligated for the payment of fees associated with registration for those courses. Failure to cancel registration in any course for an academic term prior to the first day of the academic term gives rise to an obligation to pay student fees including any tuition for the reservation of space in the course.

The institution may withhold permission to register or to receive official transcripts of grades or other services offered by the institution from anyone owing fees or another debt to the institution. The institution may also report the debt to a credit bureau, offset the amount due against any future state tax refunds due the student, refer the debt to an outside collection agency and/or charge the student actual and reasonable collection costs, including reasonable attorney fees if litigation is necessary, in collecting any amount not paid when due.

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. The Accounting Office will review all pertinent information provided by the person and available to the campus and will advise the person of its conclusions. In all cases, it is important to act in a timely manner when requesting a review of debts and possible refunds.

Consequences of Non-Compliance

Fees must be submitted to the Cashier's Office using one of the approved payment methods listed under Payment Options by the fee due date. After the due date, students with outstanding balances are subject to cancellation of their enrollment. The student may re-enroll when registration re-opens for the semester, subject to class availability. A late registration and late payment fee will be assessed. 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 that meal service was suspended.

If a student on an Installment Payment Plan misses a scheduled payment, the student is subject to a late payment fee and will be subject to cancellation of enrollment. Also, the student will not be eligible for future installment payment plans.

In accordance with Title 5, California Code of Regulations, Section 42380 and 42381, it is the policy of Cal Maritime 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.

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

In addition, Cal Maritime may offset refunds to financial aid recipients if funds are required to be returned to the financial aid programs as a result of dropped units or a withdrawal from Cal Maritime.

Cancellation of Registration or Withdrawal from Cal Maritime

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 formal University 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 Office of the Registrar, Student Services Building, (707) 654-1201.

Students who receive financial aid funds must consult with the Financial Aid Office, Student Services Building, prior to withdrawing from the university regarding any required return or repayment of grant or loan assistance received for that academic term or payment period. Students who have received financial aid and withdraw from the institution during the academic term or payment period may need to return or repay some or all of the funds received, which may result in a debt owed to the institution.

The most current information can be found at the Office of the Registrar website or the Office of Financial Aid website.

Refund Policy

Refund of Tuition and Mandatory Fees, Including Non-resident Tuition

Regulations governing the refund of mandatory fees, including nonresident tuition, for students enrolling at the California State University are included in Section 41802 of Title 5, California Code of Regulations. For purposes of the refund policy, mandatory fees are defined as those systemwide and campus fees that are required to be paid in order to enroll in state-supported academic programs at the California State University. Refunds of fees and tuition charges for self-support, special session, and extended education programs or courses at the California State University are governed by a separate policy established by the University, available at the Office of Sponsored Programs and Extended Learning.

In order to receive a full refund of mandatory fees, less an administrative charge established by the campus, including nonresident tuition, a student must cancel registration or drop all courses prior to the first day of instruction for the term. Information on procedures and deadlines for canceling registration and dropping classes is available at the Office of the Registrar.

For state-supported semesters, quarters, and nonstandard terms or courses of four (4) weeks or more, a student who withdraws during the term in accordance with the university's established procedures or drops all courses prior to the campus-designated drop period will receive a refund of tuition and mandatory fees, including nonresident tuition, based on the portion of the term during which the student was enrolled. **No student withdrawing after the 60 percent point in the term will be entitled to a refund of any mandatory fees or non-resident tuition.**

A student who, within the campus designated drop period and in accordance with campus procedures, drops units resulting in a lower tuition and/or mandatory fee obligation shall be entitled to a refund of applicable tuition and mandatory fees less an administrative charge established by the campus.

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

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

- The tuition and fees were assessed or collected in error;

- The course for which the tuition and fees were assessed or collectins was cancelled by the university.
- The university makes a delayed decision that the student was not eligible to enroll in the term for which tuition and mandatory fees were assessed and collected and the delayed decision was not due to incomplete or inaccurate information provided by the student; or
- The student was activated for compulsory military service.

Students who are not entitled to a refund as described above may petition the university for a refund demonstrating exceptional circumstances and the chief financial officer of the University or designee may authorize a refund if he or she determines that the fees and tuition were not earned by the university.

Information concerning any aspect of the refund of fees may be obtained from the Cashier's Office at cashier@csum.edu or 707-654-1030.

When a student requests a refund or withdraws from Cal Maritime, an audit is made on the account to verify the actual amount that should be returned. Any refund due back to 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 Cal Maritime. Any remaining balance may be returned to the student or to the parents if the balance is the result of a parent's PLUS loan.

Credit balances of less than $10.00 will not be refunded, unless those balances are the result of a federal financial aid distribution. Information concerning any aspect of the refund of tuition and fees may be obtained from the Accounting office.

Refund of tuition and fees does not constitute formal withdrawal from Cal Maritime. To withdraw formally, a student must contact the Registrar's Office in writing with their intent to withdraw.

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. Pro-rata 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 are covered by separate policies detailed under Course Fee Refunds section below. 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 Cal Maritime policy deadline will be referred to Student Health Services.

Uniform Deposits are collected on behalf of the Cal Maritime 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 who are not entitled to a refund as described above may petition for a refund under exceptional circumstances. The Chief Financial Officer (CFO) of Cal Maritime or a designee may authorize a refund if it is determined that the fees and tuition were not earned by Cal Maritime.

Course Fee Refunds

All course fee refunds require the student to officially drop the course either through Online Services or the Registrar's Office. Any fees owed to Cal Maritime and any returns to financial aid will first be deducted 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 Course Fee Refunds

Refunds for Firefighting will be made as follows:

- Up to 7 calendar days before the start of the class-full refund
- Less than 7 days before the start of the class-less an administrative charge of $25
- After the start of the class-no refund

Cruise Course Fee Refunds

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

- Refunds are made only for students who did not attend cruise and who formally drop the course. There are no refunds for students who leave the ship once the cruise period begins. Requests for refunds for unforeseeable circumstances beyond the control of the student should be made to the campus CFO.
- The Registrar's Office must certify that the student did not attend cruise.

Refunds will be made as follows:

- Cal Maritime students who formally dropped the course and did not attend cruise:
  - Up to 30 calendar days before the start of cruise-full refund
  - From 30 to 15 calendar days before start of cruise-less an administrative charge of $50
  - Less than 15 days before the start of cruise-less an administrative charge of $100
  - After the start of cruise during the following 60-day period-less an administrative charge of $250
  - More than 60 days after the start of cruise- no refund
- Visiting students enrolled through Extended Learning and Concurrent Enrollment who officially drop the course and do not attend cruise:
  - Non-refundable fees include drug testing and document fee

International Experience Course Fee Refunds

Refunding fees are made in accordance with the following principles:

- Refunds are made only for students who formally drop the course prior to the published course drop deadline for the term. Requests for refunds after the deadline for unforeseeable circumstances beyond the control of the student should be made to Cal Maritime's CFO who will consult with the appropriate academic officers to make a determination based on the merits of each specific case.
- The Registrar's Office must receive a formal drop request following that department's drop policies by the published course drop deadline.
- Refund requests will be audited by the Registrar's Office, Financial Aid Office, and Accounting Office before refunds are processed.
- Any outstanding debts owed to Cal Maritime will first be deducted from any refund.
- Accounts charged in error will be refunded in full, if requested by the deadline.

Welding and Manufacturing Lab Fee Refunds

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

MT Lab Fee Refund

Refunds are made only for students who did not attend cruise and who formally 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.

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 the Housing office.

Determination of Residency for Tuition Purposes

University requirements for establishing residency for tuition purposes are independent from those of other types of residency, such as for tax purposes, or other state or institutional residency. These regulations were promulgated not to determine whether a student is a resident or non-resident of California, but rather to determine whether a student should pay University fees on an in-state or out-of- state basis. A resident for tuition purposes is someone who meets the requirements set forth in the Uniform Student Residency Requirements. These laws governing residency for tuition purposes at the California State University are California Education Code sections 68000-68085, 68120-68133, and 89705-89707.5, and California Code of Regulations, Title 5, Subchapter 5, Article 4, sections 41900- 41916. Residency material can be viewed by accessing the California State University's website at www.calstate.edu/GC/resourcs.shtml.

Each campus' Admissions Office is responsible for determining the residency status of all new and returning students based on the Application for Admission, Residency Questionnaire, Reclassification Request Form, and, as 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 non-resident.

Generally, establishing California residency for tuition purposes requires a combination of physical presence and intent to remain indefinitely in the State of California. An adult who, at least 366 days prior to the residency determination date for the term in which enrollment is contemplated, can demonstrate both physical presence in the state combined with evidence of intent to remain in California indefinitely may establish California residency for tuition purposes. A minor normally derives residency from the parent(s) with whom he/she resides with or most recently resided.

Evidence demonstrating intent may vary from case to case but will include, and is not limited to, the absence of residential ties to any other state, California voter registration and voting in California elections, maintaining California vehicle registration and driver's license, maintaining active California bank accounts, filing California income tax returns and listing a California address on federal tax returns, owning residential property or occupying or renting a residence where permanent belongings are kept, maintaining active memberships in California professional or social organizations, and maintaining a permanent military address and home of record in California.

A Non-resident students seeking reclassification is required to complete a supplemental questionnaire that includes questions concerning his/her financial independence. Financial independence is required, in addition to physical presence and intent to remain indefintely, to be eligible for reclassification. Financial independence is established if in

the calendar year the reclassification application is made and in any of the three calendar years preceding the reclassification application the student:

- Has not and will not be claimed as an exemption for state and federal tax purposes by his/her parent(s);
- Has not and will not receive more than $750 per year in financial assistance from his/her parent(s); and
- Has not lived and will not live longer than six (6) weeks in the home of his/her parent(s).

A non-resident student who has been appointed as a graduate student teaching assistant, a graduate student research assistant, or a graduate student teaching associate on any CSU campus and is employed on a 0.49 or more time basis is exempt from the financial independence requirement.

Non-citizens establish residency in the same manner as citizens, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States.

Exceptions to the general residency requirements are contained in California Education Code sections 68070-68085 and California Code of Regulations, Title 5, Subchapter 5, Article 4, sections 41906- 41906.6, 41910 Whether an exception applies to a particular student can only be determined after the submission of an application for admission and, as necessary, additional supporting documentation. Because neither campus nor Chancellor's Office staff may give advice on the application of these laws, applicants are strongly urged to review the material for themselves and consult with a legal advisor.

Residency determination dates are set each term. They are:

QUARTER TERM CAMPUSES		**SEMESTER TERM CAMPUSES**	
Fall	September 20	Fall	September 20
Winter	January 5	Winter*	January 5
Spring	April 1	Spring	January 25
Summer	July 1	Summer	June 1

Applies only to winter term at CSU Stanislaus

CalState TEACH operates on a trimester system. The residency determination dates for CalState TEACH are as follows:

Fall	September 20
Spring	January 5
Summer	June 1

Students classified as non-residents may appeal a final campus decision within 30 days of notification by the campus. Information on the appeal process may be found at http://www.calstate.edu/sas/residency/appeals.shtml. A campus residency classification appeal must be in submitted via the InfoReady online Residence Appeal Form to the California State University Chancellor's Office at https://calstate.infoready4.com/#compeitionDetail/1760156:

Appeals via e-mail, fax and U.S. mail will not be accepted. A student with a documented disablity that prohibits the student from submitting an appeal through the InfoReady site should contact Student Academic Services:

California State University

Attn: Student Academic Services

401 Golden Shore, 6th Floor

Long Beach, CA 90802-4210

Email: residencyappeals@calstate.edu

The Chancellor's Office can either decide the appeal or send the matter back to the campus for further review. Students incorrectly classified as residents or incorrectly granted an exception from non-resident tuition are subject to reclassification as non-residents and payment of non-resident 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 non-residents or who no longer meet the criteria for an exception must immediately notify the Admissions Office. Changes may have been made in the rate of non-resident tuition and in the statutes and regulations governing residency for tuition purposes in California between the time this information is published and the relevant residency determination date. Students are urged to review the statutes and regulations stated above.

Average Support Cost & Source of Funds per Full-time Equivalent Student

The total support cost per full-time equivalent student (FTES) 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 FTES. The total CSU 2017/18 budget amounts were $3,390,564,000 from state General Fund (GF) appropriations and before adding $39.3 million CalPERS retirement adjustment, $2,477,015,000 from gross tuition revenue and $594,397,000 from other fee revenues for a total of $6,461,976,000. The 2017/18 resident FTES target is 364,131 and the non-resident FTES based on past-year actual is 24,398 for a total of 388,529 FTES. The GF appropriation is applicable to resident students only whereas fee revenues are collected from resident and non-resident students. FTES is determined by dividing the total academic student load (e.g. 15 units per semester) (the figure used here to define a full-time student's academic load).

The 2017/18 average support cost per FTES based on GF appropriation and tuition revenue only is $15,687 and when including all three sources as indicated below is $17,217, which includes all fee revenue (e.g. tuition , application fees, and other campus mandatory fees) in the CSU Operating Fund. Of this amount, the average tuition and other fee revenue per FTES is $7,905.

2017/18	AMOUNT	AVERAGE COST PER FTES	PERCENTAGE
State Appropriation (GF)[1]	3,390,564,000	9,311	54.1%
Gross Tuition Revenue[2]	2,477,015,000	6,375	37.0%
Other Fees Revenue[2]	594,397,000	1,530	8.9%

2017/18	AMOUNT	AVERAGE COST PER FTES	PERCENTAGE
TOTAL SUPPORT COST	6,461,976,000	17,217	100%

[1]Represents state GF appropriation in the Budget Act of 2017/18; GF is divisible by resident students only (361,131 FTES)

[2]Represents CSU Operation Fund, Tuition Fee,gross tuition and other fees revenue amounts submitted in campus August 2017/18 final budgets. Revenues are divisible by resident and non-resident students (388,529 FTES).

The average CSU 2017/18 academic year, resident, undergraduate student basic tuition and other mandatory fees required to apply to, enroll in, or attend the university is $7,216 ($5,742 tuition fee plus $1,474 average campus-based fees). However, the costs paid by individual students will vary depending on campus, program, and whether a student is part-time, full-time, resident, or non-resident.

Financial Aid

Financial aid is available to all students to assist with the cost of education, without regard to family income. Cal Maritime encourages all students to apply for financial aid. It is the student's responsibility to apply for and complete all requirements for financial aid, and we are here to help. Additional information can be obtained from the Financial Aid office (707) 654-1287 or finaid@csum.edu and online at: http://www.csum.edu/web/financial-aid/home

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, with support from our philanthropic donors, Cal Maritime directly. Types 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.

Applying for Financial Aid

To apply for financial aid, students should submit a Free Application for Federal Student Aid (FAFSA). The FAFSA is the basic application required for most federal, state, and institutional financial aid. Applications can be submitted beginning October 1 before the start of the academic year (i.e., October 1, 2018, for the 2019-2020 school year). You can apply online at www.fafsa.gov.

You can also request a paper application by calling 1-800-4FED-AID. An FSA ID is necessary to sign the FAFSA. If the FAFSA is filed before the parent or student files tax returns for the year, that person may fill out the FAFSA and submit corrections upon completion of their tax returns. **Priority for grants is given to those students who submit their FAFSA by March 2.**

Scholarships

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

Continuing students may apply on-line for California State University Maritime Academy Foundation scholarships in late December. Applicants are chosen based on merit (cumulative GPA), need (the expected family contribution from the FAFSA application), leadership, and community service. There may be other determining factors, depending on the

donor's wishes. Students are notified before the end of the spring semester of their scholarship award for the next academic year.

Athletic Scholarships

Athletics scholarships are awarded to incoming students who show prowess in targeted areas of Cal Maritime's athletics program. Due to budgetary constraints, these scholarships are limited in number. These awards are initiated by the Department of Athletics.

Western Undergraduate Exchange (WUE) Scholarships

Cal Maritime participates in the Western Undergraduate Exchange (WUE) program administered by the Western Interstate Commission of Higher Education (WICHE). This program is designed to permit students from participating states to attend Cal Maritime at reduced tuition rates. Students from the states of Alaska, Arizona, Colorado, Commonwealth of the Northern Marianas Islands (CNMI), Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming, U.S. Pacific Terriotries and Freely Associated States are eligible as applicants from WICHE member states. Students participating in Cal Maritime's WUE program pay only 50% more than the in-state tuition rate. WUE scholarships reduce the overall cost of attending Cal Maritime by reducing the tuition for a recipient from out-of-state.

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

To remain in Cal Maritime's WUE program, students must maintain the financial aid Satisfactory Academic Progress (SAP) policy. Please refer to the SAP Standards.

Captain David Lyman Scholarship for Hawaii Residents

The Captain David Lyman Scholarship seeks to honor the memory of Captain David Lyman, a longtime member of Hawaii's maritime community, by providing financial incentive for Hawaii students to apply to and enroll at Cal Maritime and pursue a maritime profession.

Up to two recipients will be selected each year. Each student receives a scholarship of up to $3,000 per year, renewable for up to a total of four years if the student maintains a minimum GPA while at Cal Maritime as follows:

- Freshman students must maintain a minimum 2.25 GPA
- Sophomore, Junior, and Senior students must maintain a minimum 2.50 GPA

To be eligible for the scholarship, students must meet all of the following criteria:

- Be a resident of the state of Hawaii;
- Submit an online admission application to Cal Maritime by November 30 of the year preceding the year of attendance
- Be a student pursuing their first bachelors degree;
- Be a student pursuing a degree in Marine Transportation, Marine Engineering Technology, or Mechanical Engineering (USCG License Track)

- Apply for the scholarship in writing by January of the year of attendance

The Osher Foundation Scholarship

The Bernard Osher Foundation, headquartered in San Francisco, was founded in 1977 by Bernard Osher, a respected businessman and community leader. The Foundation seeks to improve quality of life through support for higher education and the arts. The Foundation provides post-secondary scholarship funding to colleges and universities across the nation.

A generous scholarship endowment has been given to Cal Maritime by the Bernard Osher Foundation to assist upper-division transfer students from California community colleges with the tuition cost of attending Cal Maritime. Up to two new scholarships may be awarded each year. Qualifying students may retain their scholarships for up to eight semesters. Scholarship amounts can be up to $5,000 per year. To be eligible, a student must:

- Submit an online application for admission to Cal Maritime by November 30 of the year preceding the year of attendance
- Be a student transferring in with at least 60 transferable semester units (or equivalent) completed by the spring semester before enrolling
- Be a student whose last college was a California Community College
- Submit the Osher Foundation Scholarship application by the February of the year of attendance

Grants

Federal Pell Grant Program

Pell Grants are federally funded, need-based awards available to students pursuing their first undergraduate degree. Grants are awarded on a sliding scale based on a student's expected family contribution from the FAFSA and enrollment. Pell Grants are awarded assuming full-time enrollment. The award may be adjusted according to actual enrollment at the add/drop deadline for the term.

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**

Federal Supplemental Educational Opportunity Grant Program (FSEOG)

SEOG Grants are federally funded, need-based awards available to students pursuing their first undergraduate degree who have exceptional financial need. Priority is given to Federal Pell Grant recipients and those who have completed their FAFSA by March 2. 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.

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 provides need-based grant assistance to low- and middle-income students to offset tuition/fee costs for high school graduates with at least a 3.0 GPA. Recipients must also meet financial requirements. For 2017-18, the maximum Cal Grant A award for CSU students is $5,742 for undergraduates. These awards are limited to the total amount of the system-wide state tuition fees for full-time students.

Cal Grant B provides need-based grant assistance to high-potential students from low-income, disadvantaged families to help offset tuition/fee and other costs for high school graduates with at least a 2.0 GPA. Recipients must also meet financial requirements. In 2018-19, the maximum living allowance is $1,672 and the tuition/fee awards are the same as Cal Grant A ($5,742) for students enrolling at CSU campuses.

Students must apply for the Cal Grant by completing their FAFSA by the March 2 deadline and submitting a GPA verification form. This grant is not available to students who have already received a baccalaureate degree.

Middle Class Scholarship (MCS)

The Middle Class Scholarship is administered by the California Student Aid Commission and provides an amount to help with college expenses for eligible California residents with family incomes and assets of up to $171,000. Students apply for MCS by completing their FAFSA by the March 2 deadline.

State University Grants

The State University Grant (SUG) provides need-based awards to cover the state tuition fees for eligible undergraduate students who are California residents or are otherwise determined as eligible. System-wide, the priority is to award an SUG at least equal to the amount of the state tuition fees of $5,472 to eligible, first-time undergraduate students. At Cal Maritime, preference is given to high-need students who have filed their FAFSA by March 2. Students who have their state university fees paid with a Cal Grant or by another outside agency are not eligible to receive this award.

Loans

All students are required to make a "self-investment" in their education. Student loans play a significant role in financing the education of Cal Maritime students. Federal Perkins loan, federal direct Stafford loan, and federal direct parent PLUS Loan are the best loans that students and their families can receive because they are federally regulated. Please remember that these are loans and must be repaid. Failure to repay these loans can result in loan default, resulting in many years without the use of credit. Students must complete a FAFSA to determine eligibility for all loans.

Federal Direct Stafford Loans

A subsidized federal direct Stafford loan is a government-insured, long-term, low-interest loan for eligible undergraduate students. The federal government pays the interest on the loan while the student remains enrolled in college at least half-time or more. Repayment begins six months after graduation or separation. The standard repayment period is 10 years. However students can take longer, if needed. The fixed interest rate is set each year on July 1.

An unsubsidized federal direct Stafford loan is a long-term, low-interest loan for eligible undergraduate and graduate students who generally do not qualify for other need-based financial assistance, or for students who need loan assistance beyond the maximums provided by the subsidized loan program. Students can pay the interest while in school, or defer payments until the loan goes into repayment. Repayment on the loan begins six months after graduation or separation. The standard repayment period is 10 years. However students can take longer, if needed. The fixed interest rate is set each year on July 1.

Federal Plus Loan

A federal direct parent PLUS Loan is a government-insured, long-term, low-interest loan for eligible parents of dependent, undergraduate students who generally do not qualify for other financial assistance. Parents may borrow up to the total cost of their dependent student's education minus any other aid for which the student is eligible.

PLUS loans have a fixed interest rate set on July 1 of each year. Repayment begins 60 days after the funds are fully disbursed (usually towards the middle of Spring term), and the repayment term is 10 years. Parents have the option of deferring repayment on PLUS loans while the student is in school, and for a six-month grace period after the student graduates or drops below full-time enrollment.

Dependent students whose parents have been denied a PLUS loan may be eligible to apply for an additional unsubsidized Stafford loan.

To qualify for a PLUS loan, the parent 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.

Private Loans

In addition to the federal loan program, many lenders offer alternative educational loans. At Cal Maritime, we encourage you to look at the federal loans before you take out alternative or private loans. These loans have variable rates and are not federally regulated. 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 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 placement for student employment on campus. FWS is a need-based financial aid program that provides part-time employment for students. Federal 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.

Students who are interested in a FWS position must make sure they have been awarded FWS. If not, they must contact the Financial Aid Office to see if they are eligible.

Once it is determined that a student has been accepted into the FWS program, he or she will be provided with additional instructions for assistance in finding an on-campus job, and to complete the required paperwork.

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.

In order to receive financial aid at Cal Maritime, a student must:

- be a U.S. citizen or eligible non-citizen
- be registered with the Selective Service (if required)
- be enrolled or accepted for enrollment as a regular matriculated student in a degree program
- be making Satisfactory Academic Progress
- not owe a refund on a federal grant or be in default on a federal education loan
- not have been convicted of a drug related violation while receiving federal student aid
- for state programs - Cal Grant and State University Grant - be a California resident

Financial Aid Satisfactory Academic Progress

It is the policy of Cal Maritime that all students receiving Title IV assistance meet satisfactory academic progress (SAP) standards as defined by Cal Maritime 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, whether or not they previously received aid. The programs governed by these regulations are:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Federal Work-Study
- Federal Stafford Loan
- Federal PLUS Loan
- Cal Grants (A & B)
- Middle Class Scholarship (MCS)
- State University Grant

Satisfactory Academic Progress Standards

Federal regulations require students maintain Satisfactory Academic Progress (SAP) to remain eligible to receive federal financial assistance. The SAP policy governs eligibility for all federal and state financial aid programs. (Note:

The SAP policy for financial aid is separate and different from the CMA Academic Standing Policy, which pertains to eligibility to remain enrolled in courses at Cal Maritime). There are two components required to maintain SAP: a *qualitative* measure, demonstrated by grade point average (GPA), and a *quantitative* measure which includes both a measurement of pace of progression towards a degree and a maximum timeframe for completion of a program of study.

Major	Units Needed for Degree	Maximum Units Allowed to Meet SAP
Business Administration International Business and Logistics	120	180
Facilities Engineering Technology	154	231
Global Studies and Maritime Affairs	120	180
Marine Engineering Technology	159	238
Marine Transportation	159	238
Mechanical Engineering ME Option	153	229
Mechanical Engineering - 3rd Assistant Engineer's License Option	179	268

Qualitative Standard

Undergraduate students must maintain an academic year, cumulative GPA of at least a 2.0 (C average) and graduate students must maintain an academic year, cumulative GPA of at least a 3.0. The academic year for financial aid purposes runs from fall term to the end of spring term. Summer is an optional term and any units taken will be evaluated at the next SAP evaluation period.

Courses with F and NC grades are included in the GPA calculation as "zero" earned grade points. Students academically disqualified by Cal Maritime are ineligible for financial assistance until official re-admittance to the Academy.

Quantitative Standard

The quantitative standard has two components:

- pace of progression
- maximum timeframe (see table above)

Pace of Progression

Full-time students are expected to complete their degree within 8 terms (4 years). However, because some students need additional time, financial aid is available for up to 6 years for students without transfer credits.

To ensure students are making progress towards their degree, Cal Maritime requires that they complete 67% of all attempted units in their program based on cumulative units. Courses with F, NC, W, I and WU grades taken at Cal Maritime will be included in the cumulative units attempted.

Maximum Timeframe

Federal regulations stipulate that the maximum timeframe for completion of a degree is 150% of the published length of time required to complete the program. Transfer credits applied to outstanding degree requirements will be counted as both attempted and completed units when determining both pace of progression and maximum timeframe. Remedial coursework is not included in the maximum attempted and completed unit calculation.

SAP Evaluation Period

Financial Aid SAP will be reviewed at the end of the Fall semester. Courses taken in the Spring and Summer will be evaluated at the end of the next Fall semester.

Incomplete and Withdrawals

Letter grades of W, WU, NC, I, and IC are all considered toward units attempted for pace of progression but because no credits are earned, these grades will not improve a student's pace towards graduation.

SAP Disqualification

Students who fail to meet SAP standards will be SAP disqualified and deemed ineligible for Federal and State financial assistance. If during the SAP review process it is determined a student will not be able to meet the quantitative measure (maximum timeframe) by graduation, the student will be ineligible for future financial assistance.

Appealing and Reinstatement of Financial Aid Eligibility

To regain eligibility for financial aid, students may submit an appeal in cases where there has been extenuating circumstances beyond the student's control which prevented him/her from meeting SAP requirements. Examples include the death of a close relative, a serious injury, or illness. There are three critical elements to filing a successful appeal:

- an explanation why the student failed to meet the academic standards
- what has changed to ensure success in future coursework
- an academic plan signed by an academic or major advisor that demonstrates the student will be able to meet SAP standards within one year, or by a specific time point as defined by the plan

We encourage all students who fail to maintain SAP for financial aid purposes to submit an appeal and to speak with a representative from the Financial Aid office.

Students who regain eligibility as a result of an appeal will be considered to be on Financial Aid Probation for the period of the plan. Students who fail to meet SAP standards (as defined by the academic plan) or does not follow the academic plan will be ineligible to receive financial aid. No further appeals will be granted unless the student can demonstrate there were extenuating circumstances beyond the student's control which prevented meeting the

requirements of the academic plan. These circumstances must be different circumstances than those for which a prior appeal was granted.

Continued Enrollment Without Financial Aid

Students who are denied aid as a result of Financial Aid SAP policy may continue coursework at Cal Maritime without the benefit of federal, state, or campus financial aid. It may be possible for students to receive loans and scholarships from private sources.

Withdrawal from the California State University Maritime Academy

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

Financial aid recipients are obligated to remain enrolled and pass a certain number of units. Upon a financial aid 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 the 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 Cal Maritime as any of these changes may impact a student's satisfactory academic progress and thus future eligibility for financial aid.

Return of Title IV Funds (Federal Requirement)

Federal Regulations, 34 CFR 668.22 require schools to calculate the amount of Federal financial aid earned by students who withdraw from an institution. This calculation, R2T4, must be performed for students who follow the school's formal withdrawal procedures and those who leave without formal notification, the "unofficial" withdrawals.

The purpose of R2T4 is to return to the federal financial aid programs any aid that is "unearned" by the student. These funds are returned first by the institution and second by the student/parent. The philosophy behind the order of return of funds is that since aid is disbursed to meet institutional charges, the campus had control over these funds. Funds disbursed to the student to meet other educationally-related expenses are not under the control of the institution.

Upon a financial aid recipient's withdrawal, Cal Maritime is required by the federal government to calculate, collect, and return a portion of federal financial aid grant or loan funds received by the student if the student has not completed 60% of the number of days in the complete courses taken.

The Registrar's Office assigns the official date of withdrawal. 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 this formula: the total number of calendar days in the semester that are not completed by the student divided by the total number of calendar days in the semester.

When a student leaves Cal Maritime during a term, the State University Grant and some scholarships may be prorated and decreased.

If the student withdraws without notifying Cal Maritime, the withdrawal date is the midpoint of the semester. As a result, some funds received may have to be repaid.

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

1. Unsubsidized Stafford Loans
2. Subsidized Stafford Loans
3. PLUS Loans
4. Pell Grant
5. FSEOG
6. Other Title IV aid for which return is required

If the student owes unearned financial aid, the student has 45 days to enter into a repayment agreement with Cal Maritime and the U.S. Department of Education.

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 Cal Maritime may withhold permission to register, to use facilities, or to render services. Until such time that the repayment issue is resolved, the student's record will be notated every time a student files any subsequent FAFSA. A student in repayment is ineligible for federal financial aid at any institution in the nation.

Student Affairs

The Division of Student Affairs enhances the experiences of students both in and outside of the classroom by promoting personal wellness, intellectual development, and emotional growth. From Orientation through Commencement, the Division facilitates leadership and offers high-quality programs and services that foster an inclusive and diverse community.

The Edwards Leadership Development Program

The California State University Maritime Academy has undertaken a multi-year presidential initiative to create and to sustain the finest co-curricular leadership development program at any of the U.S. maritime academies.

The task force charged with this initiative has designed a Cadet Leadership Development Program that offers all students a common leadership foundation with optional honors achievement levels.

The Edwards Leadership Development Program at Cal Maritime is built on a "maritime model" embracing the history, tradition and importance of the seafaring chain of command, while promoting active participation in modern team management practices. The foundation of the program promotes a maritime leader who at all times "does good for the greater good." The maritime leader is a "loyal shipmate," who is ethical, responsive and goal-oriented, who strives for excellence, demonstrates integrity, and is confident, ever-learning, and adaptive.

The common foundation required of all graduates is delivered through a combination of academic courses, residential and off-campus programs, and participation in the Corps of Cadets. Honors levels of programming may be achieved

through various pathways, such as additional academic coursework, athletics, Associated Students activities, and Corps of Cadets leadership positions.

The Edwards Leadership Development Program began in Fall 2014, and is required for all cadets. With their participation in this program, graduates of Cal Maritime will have a distinct leadership advantage in their careers and personal lives, and will be ready to meet leadership challenges today and into the future.

Corps of Cadets

The Corps of Cadets is what sets Cal Maritime apart from most other colleges and universities in the United States. Every Cal Maritime student is a cadet in the Corps, and is required to participate in Corps activities including participation in formations and inspections and abiding by standards of grooming, and standards of conduct.

The Corps functions as the most visible mechanism for the delivery of the widest range of direct leadership experience opportunities on campus. All Corps members develop positive and desirable leadership traits, such as bearing, discipline, initiative, integrity, justice, loyalty, reliability, responsibility, selflessness, and tact. Much is asked of every cadet at Cal Maritime, and the development of self-discipline is critical to the success of each man and woman in the Corps.

The Corps is directed by approximately 40 cadet officers appointed from the senior class by the President. The Corps Commander is the highest ranking cadet and works closely with the Corps Executive Officers, Corps Training and Academics Officer, Corps Administrative Officer and two Company Commanders. Every new cadet is placed in a division upon entry into Cal Maritime. The Division Commanders work closely with all cadets in developing professional, watchstanding, and leadership skills. These officers also work to ensure high morale, camaraderie and fellowship within their divisions.

Office of the Commandant

The Office of the Commandant is responsible for overseeing the Corps of Cadets. It is involved in many of the day-to-day activities of the Corps, in training Corps officers, overseeing watchstanding, and offering leadership instruction for all cadets.

Watchstanding

Watchstanding is an important element of leadership development and is essential for each cadet's future success, whether at sea or ashore. Cadets stand watch either on the *Training Ship GOLDEN BEAR* or on campus. As they develop their skills, cadets are placed in positions of increasing levels of responsibility. As their knowledge grows, they oversee and direct the actions of others during periods of watch.

Watches are scheduled in 4-hour blocks from 4:30 p.m. until 7:30 a.m. daily, every day including weekends. Watches provide important learning experiences for cadets, and they also assist Cal Maritime in providing a high level of security and safety, both on campus and the ship.

Standards of Conduct

Another important element of leadership development is standards of conduct. All cadets are subject to rules and regulations that characterize the objectives set forth in the development of their leadership and professional skills. Cal Maritime's conduct and discipline system is a vehicle for assessing a cadet's aptitude for becoming a respected working professional.

The goal of the conduct system is to develop and reward positive personal characteristics and to modify incorrect behavior. Cadets receive demerits for inappropriate behavior and, those with excessive demerits, may be required to serve extra duty on Saturdays. Cadets who commit egregious breaches of conduct or who have consistent conduct problems may be subject to extra duty, probation, suspension or dismissal.

Cadets are required to wear uniforms to all academic functions and formations, and while standing watch. Inspections are conducted and grooming standards for both men and women are enforced.

Regulations also exist that forbid cheating, plagiarism, alcohol consumption, use of illegal drugs, theft, hazing and other conduct considered unbecoming of a member of the Corps.

Drug Testing

The Cal Maritime, 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, 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.

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), Cali Maritime prohibits the unlawful possession, use, sale, or distribution of alcohol and illegal drugs by cadets, 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.

Cadets-in-training for a U.S. Coast Guard license are subject to additional federal regulations regarding alcohol and drug use, and are also required to participate in Cal Maritime's random drug testing program.

For more information regarding these regulations and the standards of conduct, please refer to the student handbook and regulations governing the Corps of Cadets, or contact the Office of the Commandant at 707-654-1181.

Co-Curricular Activities

Cal Maritime offers a variety of co-curricular activities which strengthen and complement the objectives of leadership development. These activities and organizations provide leadership roles for students in preparing them for success upon graduation. Cadets can strengthen their leadership skills by participating in one or more of the following activities:

- **Edwards Leadership Development Program (ELDP)**. The Edwards Leadership Development Program, funded in part by a generous gift of the Tom and Libby Edwards Family, provides the framework for the cadet's common experience in Leadership Development. It is a comprehensive co-curricular program integrated with academic programming, which will prepare our cadets for leadership opportunities within the Corps of Cadets, and our graduates for fulfilling careers in the global maritime workforce.
- **Associated Students of the California Maritime Academy (ASCMA)**. A student-elected Board of Directors governs the Association, providing board members and class officers ample leadership opportunities during the academic year. They use student funds to create and operate programs to benefit the campus community.
- **Athletics**. The academy sponsors nine intercollegiate athletic teams, including three - men's and women's basketball and men's soccer - that are members of the National Association of Intercollegiate Athletics and

the California Pacific Conference. Building teams and developing leaders has long been recognized as a critical element for successful athletic competition. Students can also participate in club sports and recreational activities. The Physical Education and Aquatics Center offers classes, work-out facilities, and an Olympic class pool.

- **Academy clubs and organizations**. Cal Maritime has a diverse variety of student clubs and organizations to broaden the educational experience of students within the campus, local, and regional community.
- **Housing and Residence Life**. Residential life is an important component of a cadet's experience at Cal Maritime, and housing staff members strive to create a community atmosphere in each of our residence halls. Resident Housing Officers (RHOs) and Living, Learning, Community mentors (LLCMs) are trained student housing staff members who live in the residence halls, and lead cadets in their respective halls through social and community standards. RHOs and LLCMs are selected, based on demonstrated maturity, their willingness to commit to the health and welfare of a larger community, and their ability to maintain a comfortable and safe living environment in the residence halls and the training ship.
- **Community outreach**. Cal Maritime's Student Engagement and Academic Success (SEAS) Center participates in many local community-development projects. Volunteer opportunities exist for cadets to help in community outreach programs, in local schools, and with non-profit organizations.

Campus Life and Student Services

Cal Maritime provides a range of co-curricular classroom experiences and services that encourage student learning and foster a sense of community. Students are challenged to support community standards within an environment where the principles of Dedication, Honor, Integrity, Respect, Responsibility and Trust are valued and affirmed. Student development programs and services enhance, support, and enrich the academic and training goals of the institution, and provide students with opportunities to learn and practice life skills, citizenship, leadership and wellness.

The purpose of student services and programs is to:

- assist students with identifying, clarifying and achieving personal education and life goals
- improve the quality of student life
- provide opportunities for students to participate in social, cultural, recreational, and community experiences
- enhance the campus learning environment
- improve student access and retention
- provide support services such as tutoring and special programs

Student Center

The Student Center building serves as a focal point for campus life. The Morrow Cove Café, Student Health and Wellness Center, Counseling Services, Office of the Dean of Student Development, Office of the Commandant, and student mail services are located in this facility.

Associated Students

Located in Mayo Hall, the Associated Students, Inc. (ASI), a non-profit student-run corporation chartered with California's Secretary of State, utilizes student funds to create and operate programs to benefit the student community. The Associated Students of the California Maritime Academy (ASCMA) fee is paid by all students.

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

ASCMA's services and programs are designed to enrich campus life and to help support many campus organizations. ASCMA officers also serve as the elected representatives of students, and work to protect students' rights.

The ASCMA sponsors a very diverse variety of events on and off campus under the direction of the Activities, Camaraderie, and Entertainment (ACE) coordinators and Adventure & Recreational Center (ARC) for the outdoor enthusiast. ACE events have included comedy nights, coffee houses, hypnotist shows, casino nights, trips to see plays in San Francisco 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, Friday night rock climbing nights at local gyms, and much more. Student government fees allow ASCMA to provide these events to students for reduced or no charges.

Housing and Residential Life

It is the policy of Cal Maritime that students enrolled in its baccalaureate degree programs shall maintain residence on campus and participate in a meal plan. All undergraduate students are required to live on campus and purchase a meal plan as part of their educational experience at Cal Maritime. Decades of research and best practices in higher education support the added benefits of living on campus. Students who live on campus take and earn more credit hours, have higher GPAs and are more likely to graduate than their off campus counterparts.

Three traditional campus residence halls can accommodate 580 students, with many rooms having a beautiful view of the Carquinez Strait. In addition, the Training Ship *Golden Bear* is home to over 160 students during the academic year. Professional and paraprofessional staff members live in the residence halls and are available to assist students. The Housing and Residential Life staff coordinates an exciting program of educational seminars, social events, and recreational activities for residents each semester.

Please refer to the Student Handbook for additional information on services provided through Housing & Residential Life.

Consideration for Off-Campus Housing Policy

Students may be exempted from living on-campus for a variety of reasons. Please refer to the Housing & Residential Life website for the most current policy.

Generally, off-campus privileges will be considered for the following:

- **Age** - Students who are 24 years of age or older on or prior to May 1st of the following year. Must submit a copy of a valid driver's license or government ID.
- **Military Service** - Students who have served at least two years of continuous active military duty. Must provide a copy of your DD-14 papers or discharge papers.
- **Maritime License** - Students holding a Third Mate or Third Assistant Engineer maritime license. Must provide a copy of your license.
- **Marital Status** - Students who are married or head of household, as defined by the Internal Revenue Service, and students who are domestic partners and can qualify according to Cal Maritime policy. Must provide a copy of your marriage certificate.
- **5th Year as Cal Maritime Resident Student** - Students who have completed at least 7 semesters of residency on campus. Residency on the Cal Maritime campus is defined as having completed the housing license agreement, moved into the residence hall, picked up and returned room key at the appropriate times, properly completed room checkout, and attended mandatory floor meetings.
- **Medical** - Must provide current (within 1 year) documentation from an appropriate licensed medical professional describing all of the following: the student's disability/medical condition, basis for diagnosis, how the disability/condition impacts student's ability to live in on-campus housing and recommended accommodations. All medical petitions will be reviewed by the Off-Campus Housing Review Committee.

- **Financial Hardship** - Must have completed a FAFSA by appropriate date advertised by the Cal Maritime Office of Financial Aid. Must include a copy of your income tax return as well as other documents supporting your claim, and must have accepted all university aid offered, including loans. Must also fill out and submit with petition the budget worksheet. Must still have 20% unmet need. All financial hardship petitions will be reviewed by the Off-Campus Housing Review Committee.
- **Lottery** - Students that have been initially denied off-campus housing may submit a request in writing within 5 business days of their denial, to be placed into the lottery for off-campus housing. There will be at least two rounds of the lottery. Seniors will have first priority and all other students will have second priority. The petitions must be submitted prior to the April 1st deadline. Must have three semesters of residency on Cal Maritime campus, good academic, disciplinary, and financial standing, and have completed a minimum of 50 credit hours at time of application. Residency on the Cal Maritime campus is defined as having completed the housing license agreement, moved into the residence hall, picked up and returned room key at the appropriate times, properly completed room checkout, and attended mandatory floor meetings The lottery will take place in the middle of April. The approval for off-campus housing may come as late as the date of start of classes for the following academic year.

The off-campus housing approval offer must be accepted by submitting the Off-Campus Housing Acceptance agreement to the Office of Housing & Residential Life within 10 business days of the offer, or by July 1st, whichever is sooner. If acceptance is not timely, the off-campus approval will be revoked.

All students living off-campus are required to provide their living and mailing address, contact information, and landlord information to the Office of Housing & Residential Life at time of acceptance of the off-campus approval. Students are required to maintain current mailing, phone, and living address in the student online services area in PeopleSoft.

All students living off-campus are expected to follow and uphold Corps standards of conduct at all times. Students are expected to be good neighbors and citizens on- and off-campus. Failure to meet these expectations may result in revocation of permission and privilege of living off-campus and require the student to move into campus housing at the student's expense.

Dining Services

Cal Maritime Dining Services is a hospitality organization dedicated to providing the campus community and guests with high quality food and services in a variety of settings. The striking new dining center has expansive waterfront views from its two stories and mezzanine level. The main floor and mezzanine are designed for student dining and are open 7 days a week. The service area features 6 stations offering healthy meals daily in an all-you-care-to-eat setting. The second floor can be divided into three conference rooms or function as one large meeting or banquet space. 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 all shipboard meals and services.

The Morrow Cove Café is an additional food service location to visit for morning coffee, lunch, and beverages and snacks throughout the day. The Café accepts Flex dollars. Closed in the afternoon, the café re-opens in the evening for expanded meals. It is located inside the Student Center building where one can catch up on email, relax in the common room and lounge, or sit outside on the patio overlooking the waterfront.

The Bistro is a café-concept offering a gourmet coffee program, lunch, and beverages and snacks not equivalent to the dining program. It is located in the Student Services Building. The Bistro accepts cash or credit cards, but unfortunately not Flex dollars.

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. Dining Services offers four meal plans for resident students and one for off-campus students.

- **The 19-Meal Plan** provides the maximum number of meals available - breakfast, lunch, and dinner on Monday through Friday in the dining center or café, and brunch and dinner on Saturday and Sunday in the dining center. In other words, a cadet may have a meal at each of the 19 serving sessions during which the dining center or café is open in a week. Unused meals for a week do not carry forward.
- **The 15-Meal Plan** provides the cadet a choice of eating at any 15 of the 19 serving sessions during which the dining center or café is open in a week. Unused meals for a week do not carry forward.
- **The 15-Meal Flex Plan** provides the cadet a choice of eating at any 15 of the 19 serving sessions during which the dining center or café is open in a week. It includes 'flex dollars' which can be used to purchase beverages, snacks, or even a full meal, for the student or a guest. Unused meals are erased at the end of each week. Flex dollars roll over from fall to spring semester but do not carry over year-to-year.
- **The 10-Meal Flex Plan** provides the cadet a choice of eating at any 10 of the 19 serving sessions during which the dining center or café is open in a week. It includes 'flex dollars' which can be used to purchase beverages, snacks, or even a full meal, for the student or a guest. Unused meals are erased at the end of each week. Flex dollars roll over from fall to spring semester but do not carry over year-to-year.
- **The 35-Block Plan** is available to off-campus students, faculty, and staff. This plan allows for 35 visits to the dining center (all-you-care-to-eat meals) or you can take advantage of the board meal equivalency option for lunches in the café. One meal will be subtracted from your starting balance for each meal that you redeem. The meals may roll over from fall to spring but do not carry over year-to-year. Please make purchases in multiples of 35 as needed. Flex dollars are not available on this plan.

Student Health and Wellness

The Student Health Center provides confidential, high quality, and easily accessible outpatient primary care services on campus to all Cal Maritime students. We favor an approach that uses health education to help students understand how to make informed decisions about their health and wellness.

Services are available:
Monday-Friday, 8:30 a.m. to 5 p.m.
(Closed 1-2 p.m.)
(707) 654-1170

- An After-Hours Assistance Line is available for physical and mental health concerns (707-654-1170, ext. 1) offering confidential health care advice and information

Students are encouraged to utilize the Student Health Center for the majority of their health care needs. Same day appointments with a medical provider (nurse practitioner, physician, or physician assistant) are available as well as scheduled appointments. Common reasons for visits include physical examinations, men's and women's health consults, illness, injuries, and personal health concerns.

The Student Health Center also offers basic laboratory tests, many common prescription medications, and referrals to off-campus specialists as needed using students' insurance coverage. In addition, Counseling and Psychological Services within the Student Health Center provides confidential, short-term, mental health counseling with a licensed professional. Most services provided by the Student Health Center are at no or low cost. Students are financially responsible for services received outside the Student Health Center.

Medical Services

The Student Health Center provides the following health care services to regularly enrolled students:

- primary care of medical conditions, illnesses, and injuries
- physical examinations, including pre-cruise and USCG physicals
- family planning services, excluding surgical procedures

- health education programs
- several common immunizations for the prevention and control of communicable diseases and referrals for immunizations not available at the Student Health Center
- evaluation and counseling for individual health problems (including screening and prevention)
- dispensing of many common non-prescription and prescription medications, at limited or no additional cost
- basic laboratory testing
- usage and maintenance of a confidential and secure electronic medical record system
- referrals to health care providers in the community for services beyond the scope of the Student Health Center (at the student's own expense), including drug and alcohol-related concerns
- consultative services on health related issues on campus
- health care on the Training Ship GOLDEN BEAR summer cruises

Counseling and Psychological Services (CAPS)

Overview: CAPS is an integrated service within Student Health Services (SHS). CAPS has offices located within the Student Health Center and in Upper Residence Hall, as well as on the Training Ship Golden Bear as part of the medical team during summer cruises. The CAPS counselors report directly to the SHS Director. CAPS provides confidential, high quality, and accessible mental health services to all enrolled students. This includes assistance to students experiencing personal, educational, interpersonal/relationship, family, social, and other psychological difficulties. These services include individual and group counseling, consultation, assessment, crisis support, education, prevention, and outreach. There are no additional charges for counseling services. Consultation is available to faculty and staff who may have questions or concerns regarding students. While on campus or at sea, the care of certain illnesses, injuries, or conditions may require hospitalization or services beyond our scope of care. In these instances, CAPS assists students throughout the process of obtaining additional care.

Mission: CAPS believes that personal development and mental health are inherently connected to intellectual, academic, and professional success. Cal Maritime's overarching mission is served by providing cadets with access to holistic health and wellness. CAPS strives to support this mission by delivering a variety of services for individuals and groups that promote personal growth, self-awareness, coping skills, support during times of crisis, professionalism, and a healthy campus environment. Moreover, CAPS supports a multicultural worldview that endeavors to work toward greater health equity for all students. CAPS counselors are dedicated to creating an open and welcoming environment that is safe and comfortable for all those whom we serve and with whom we interact.

Appointments: To make an appointment with a CAPS counselor call (707-654-1170) or visit SHS. Counseling sessions generally occur between 0800 and 1700, Monday through Friday, and are typically 45 minutes. Urgent Care Walk-In appointments are available M-F from 2:00-3:00 pm (no scheduled appointment needed). For assistance after hours, call the After-Hours Assistance Line (707-654-1170, ext. 1) to speak with a professional, confidential professional. More information is also available on the CAPS website.

Health Care Services at Sea

During annual training cruises, Health Services maintains and staffs the medical treatment facility (sick bay) onboard the Training Ship GOLDEN BEAR (TSGB). This facility is staffed by a Chief Medical Officer (Physician) and a Medical Officer (Physician Assistant or Nurse Practitioner) to provide medical care. Typically a CAPS counselor joins the medical team on the TSGB and provides mental health services to cadets and crew. The medical team provides a daytime drop-in clinic while at sea and a short morning clinic while in port. In addition, 24-hour limited emergency medical care is available while at sea.

The training ship is equipped with basic lab, x-ray, medical supplies, and pharmaceuticals to support the majority of the health care needs of the students, staff, and faculty on cruise.

Mandatory Health Insurance

Due to the special nature of the educational experience at Cal Maritime, which typically includes international travel and/or a training cruise, students are required to be covered by health insurance. All matriculated Cal Maritime students are automatically enrolled in and charged for the school's student health insurance plan unless they get a waiver approved for having their own similar coverage. The online health insurance waiver is submitted annually by the designated deadline and subsequently reviewed for approval. Please see the Student Health Center website for more information including deadline dates on Cal Maritime's health insurance requirement and to access the online health insurance waiver link at the Student Health Center.

While on campus or at sea, the treatment of certain illnesses, injuries, and medical conditions may require hospitalization or services beyond the scope of authorized services by Student Health Services. In such instances, a student will be referred to local health care services, at their own expense utilizing the student's personal medical insurance.

Emergency Travel Assistance Services Requirement

All Cal Maritime students are required to enroll in emergency travel assistance services provided by On Call International. On Call International provides medical evacuation and repatriation services if a student becomes ill or injured anywhere that is more than 100 miles away from home or campus, including foreign travel. On Call International will arrange for and cover emergency medical transportation home, or to the nearest qualified regional hospital, as long as medically indicated. Students who enroll in the student insurance plan are automatically covered for travel assistance.

Students who waive out of the school's health insurance plan will be charged the travel assistance group rate of $20 per semester. For more information on the emergency travel assistance services, please visit On Call International.

For more information, please contact the Student Health Center by phone at 707-654-1170 or by email.

Academic Support Services

Educational Opportunity Program (EOP)

Established at Cal Maritime in 2015, the **Educational Opportunity Program** provides academic, social, and financial support to students from low-income and historically disadvantaged backgrounds. Students apply to EOP when they apply for admission to the university. For more information, visit the EOP website.

Louis Stokes Alliance for Minority Participation (LSAMP)

The CSU **Louis Stokes Alliance for Minority Participation**, or CSU-LSAMP, is a National Science Foundation (NSF) funded program intended to support underrepresented students and others facing barriers to success in science, technology, engineering, and mathematics (STEM) disciplines. Participants must apply to the program annually in September. For more information, visit the LSAMP website.

Tutoring Services

Cal Maritime offers accessible academic support through tutoring designed to assist the student in becoming an independent learner. Tutoring support is available in many subject areas including math, writing, science, engineering, global studies, and marine transportation. Drop-in group tutoring is available; in addition, Supplemental Instruction (SI) in traditionally difficult courses and Targeted Learning Sessions (TLS) in critical path courses are offered each semester. For more information and tutoring schedules, visit the Tutoring Services website.

Disability Services

The **Disability Services Office** (DSO) is committed to supporting the academic success of Cal Maritime students who have documented disabilities. Support services and information resources are provided to individual students who self-identify. Students seeking accommodations should follow these steps to complete an application for assistance through the DSO:

1. Read the guidelines for documentation/verification of their disability. (Guidelines may differ according to disability.)
2. Submit an application for services with supporting verification documents to the DSO.
3. Schedule an intake appointment.

Instructions and forms are available at the Disability Services website.

Community Engagement and Service Learning

Community engagement and service-learning have existed within the CSU since the first campus opened in 1857. Through community engagement and reflective activities, students enhance and develop their civic responsibility, self-awareness, and leadership skills. Courses with embedded service-learning teach real world application of classroom theory and build a sense of community and shared values. For more information, visit the Community Engagement website.

Early Assessment Program

The Early Assessment Program (EAP) was established by the State Board of Education, Department of Education, and the CSU with the goal of allowing high school graduates to enter the CSU fully prepared to begin college-level work. The program works with local high school students, teachers, and administrators to achieve this goal. Cal Maritime students may choose to serve as mentors and academic tutors at local high schools through EAP.

Career Services

Career Services is responsible for assisting with graduate employment, Sea Training II coordination, and cooperative internships. Our staff is available to assist in résumé building, interview skills, career development workshops, and career advising.

Mission

Career Services seeks to complement the academic mission of Cal Maritime by educating and empowering students to take ownership of their professional development as a lifelong learner and to function successfully in a global society.

- In partnership with **students and alumni**, career services will facilitate career exploration, career decision-making, and guiding them toward their career selections.

- In partnership with **faculty and university staff**, career services will provide information, programs, and consultations to help them better understand the career-related needs of students.
- In partnership with **employers**, career services will maintain existing, as well as develop new, relationships with employers who have an on-going interest in the employment potential and careers of students and alumni.

Career Conversation Series

Career Services, through the Edwards Leadership Development Program (ELDP), begins the career path dialog with students during each academic year:

- Freshman - Making the Campus Connection
- Sophomore - Three mandatory classes that focus on small group discussions and assignments
- Junior - One-on-one in-depth meetings with a career coordinator to reassess and update career goals
- Senior - Panel discussions to highlight strategies for the fulltime job search and transitioning from college to full time work status

Career Fairs

Each year, Career Services hosts two career fairs that attract companies from all across the country. These events are open to all current students and alumni. Exhibitors include maritime companies, engineering firms, a broad base of business and logistics companies, graduate schools, non-profit agencies, and community partners.

Company Presentations and Interviews

Each year, companies come to campus to recruit our graduating seniors and internship cadets. They hold presentations and follow up with interviews. All students, regardless of class standing, are encouraged to attend company presentations. These companies come directly to our campus because of Cal Maritime's outstanding reputation in the industry.

Sea Training II

License-track cadets are required to participate in three sea terms. Career Services provides administrative support in implementing the Sea Training II. Students select a billet aboard the Training Ship *Golden Bear* or a commercial vessel based on their conduct and their academic progress. Deck cadets are required to complete a minimum of 100 sea days and Engineer cadets are required to complete a minimum of 60 sea days.

The Sea Training II Coordinator works under the direction of the academic department chairs. Since this is an academic program, details such as prerequisites can be found under the specific course listing.

Cooperative Education (Co-ops)

All shore-side professional track cadets must participate in a Co-op as required for their major. Co-ops provide a great opportunity to develop skills that have been 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. Since this is an academic program, details such as prerequisites can be found under the specific course listing.

Career Placement

The Career Services Office may furnish, upon request, information about the employment of students who graduate from programs or courses of study preparing students for a particular career field. Any such data provided must be in a form that does not allow for the identification of any individual student. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The information may include data collected from either graduates of the campus or graduates of all campuses in the California State University system.

Marine Programs

Office of Marine Programs

The Office of Marine Programs oversees much of what makes Cal Maritime a unique learning environment. This department manages all shipboard and waterfront training and the professional development of cadets. Perhaps one of the most exciting opportunities you will be exposed to while at CMA is the training that takes place out of our historic Boathouse, and our Marina. You will train on everything from rowboats to work boats to tug boats, and on the Training Ship *Golden Bear*. We are very proud of our excellent small boat program, arguably the best small boat handling program in the nation.

Marine Programs manages the summer cruise taken by cadets in their first and third years, which provides an excellent opportunity to immerse oneself in shipboard life. Not only will you learn every aspect of operating an ocean-going ship, you will visit exciting foreign ports throughout the Pacific Rim.

The department also arranges the training during the second year, when most cadets embark on a commercial ship. This is your opportunity to experience the professional side of the maritime industry.

Cal Maritime's Office of Marine Programs may be reached at 707-654-1211.

Training Ship *Golden Bear*

The *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 the two month long 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.

The newly upgraded multi-million dollar Navigation Laboratory onboard the training ship provides state of the art navigation equipment, which results in the finest navigation training platform available in the country.

During their training voyage onboard the *Golden Bear*, cadets who are working toward a license feel the responsibility of command, demonstrate their effectiveness as leaders, and refine their technical skills and leadership styles. All cadets, whether in the license programs or not, interact with other countries and cultures to learn about the peoples who are their hosts. The cadets experience connections to the larger global maritime environment 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 cadets as they apply the intellectual and practical training they have received during the school year.

Waterfront and Maritime Operations

During the fall and spring, specialized training occurs on our fleet of rowboats, work boats, 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.

When entering our historic Boathouse for the first time, one cannot help but feel the pride and traditions of maritime life. This is where it all starts. You will progress through our fleet of small vessels, starting with our double-ended rowboats and ending with our tug, crew boat and t-boats.

Every cadet 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.

Not every CSU student can claim they have a 500-foot ship docked in their "front yard"!

Military Opportunities

There is no armed service obligation requirement to graduate from the Cal Maritime. However, several military options are available that can offer financial aid and additional career opportunities.

U.S. Coast Guard - Maritime Academy Graduate Program (MARGRAD)

Maritime Academy graduates have the education and training that enhance the Coast Guard's ability to carry out its missions. The Direct Commission Maritime Academy Graduate Program (MARGRAD) is available to individuals who hold a qualifying degree from the California State University Maritime Academy.

Eligibility Criteria

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

1. Be a U.S. citizen.
2. Be between the ages of 21 and 40 (applicants must have reached their 21st birthday but not their 41st birthday as of September 30 of the fiscal year in which the panel convenes).
3. Have graduated from a state or federal maritime academy and hold a Third Mate OR Third Assistant Engineer license, OR a degree major in Marine Environmental Protection OR a related field. **The Global Studies and Maritime Affairs degree from California State University Maritime Academy qualifies**
4. Receive a favorable recommendation from an Officer Interview Board (coordinated by one's recruiter).
5. Meet character standards and be eligible for a security clearance.
6. Meet financial standards.
7. Meet dependency standards (single parents with sole custody or primary custody are ineligible).
8. Pass a commissioning physical exam.
9. Qualifying GPA: Must have at least a 2.2 GPA on a 4.0 scale.
10. 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. Must have less than a total of 10 years non-CG service.
11. Applicants may be initiated during the applicant's final year at the California State University Maritime Academy, if all other requirements are met.

Service Obligation

Individuals who are selected attend a five-week Direct Commission Officer (DCO) School at the United States Coast Guard Academy in New London, CT, and are then commissioned as officers in the U.S. Coast Guard. One's experience, education, and qualifications will determine commission as an Ensign (O-1) or Lieutenant Junior Grade (O-2).

Upon completion of DCO School, officers are obligated to serve for three years on active duty, after which an extension may be requested for the chance to continue to serve as an officer in the Coast Guard.

Contact Information

Contact the On-Campus Coast Guard Liaison Office for Coast Guard programs at California State University Maritime Academy.

Further information may also be found at http://www.gocoastguard.com

Recruiting Office
BM1 Kathleen Harnois
Officer Recruiter
RO San Francisco
510-769-8187 Office
408-315-4841 Mobile
510-769-8366 Fax
kathleen.f.harnois@uscg.mil

On-Campus Coast Guard Liaison Office
MST1 Blaine Meserve-Nibley
Coast Guard Liaison Officer
CSU Maritime Academy
707-654-1722 Office
720-318-8229 Mobile
blaine.f.meserve-nibley@uscg.mil

U.S. Navy - Strategic Sealift Officer Program (SSOP)

The Naval Science Department prepares students to participate in the Strategic Sealift Officer Program (SSOP), a joint program established in 1925 between the U.S. Navy and the U.S. Merchant Marine. This is a program unique to maritime schools. It allows students who have earned U.S. Coast Guard licenses as merchant marine deck or engine officers to be commissioned as Ensigns in the Naval Reserve upon graduation. SSOs normally serve on inactive duty in the 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 an unrestricted line officer.

Eligibility

To participate in the SSOP, students must meet the following qualifications:

- be no older than 27 years by June 30 of commissioning year, waived to 30 years for prior military service

- pass a Department of Defense physical examination
- pass a semi-annual physical readiness test
- be enrolled in a degree program with a U.S. Coast Guard license option
- be in good academic standing, with a GPA of 2.0 or better

Students will be offered the opportunity to join the SSOP in 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 each semester ($32,000 total distributed over four years) from the Federal Maritime Administration.

Program Requirements

Midshipmen (SSO students) meet for weekly leadership and physical 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/Strategic Sealift Officer
- NSC 200 - Naval Science for the Merchant Marine Reservist I
- NSC 400 - Leadership, Ethics, and Naval Science for the Merchant Marine Reservist II
- NSC 450 - Advanced Midshipman Naval Training

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 three years.

Information

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

ROTC

In addition to the above programs, Cal Maritime provides Army, Navy, and Air Force ROTC programs through arrangements with other universities in the area.

Police Services

Cal Maritime Academy Police Services provides 24 hours service on and around campus. Our mission is to provide a safe living and learning environment for our community. Sworn and non-sworn staffs work closely with our community to prevent crime, enforce laws, preserve peace, and provide educational programs. We are the first responders to campus emergencies. Officers conduct foot and vehicle patrols on campus, including interior patrols of the campus residence halls.

Some of our safety programs include: Safety Escort Program; Drug/Alcohol Program ; Don't Stall-Call; Blue Light Emergency Phones; Operation I.D.; If I Were a Thief; and, Disabled Vehicle Assistance.

Police Services has three primary areas of responsibility: policing and patrol services; emergency preparedness; and parking/alternative transportation. For more information, please visit us at: http://www.csum.edu/web/police-services

Annual Security and Fire Safety Reports

The Annual Security Report is required by federal law and contains policy statements and crime statistics for the University. The policy statements address the University's policies, procedures and programs concerning safety and security, for example, policies for responding to emergency situations and sexual offenses. Three years' worth of statistics are included for certain types of crimes that were reported to have occurred on campus, in or on off campus buildings or properties owned or controlled by the University and on public property within or immediately adjacent to the campus. This report is available online at http://www.csum.edu/web/police-services/clery.

The Annual Fire Safety Report contains information on emergency and evacuation procedures, fire safety equipment and fire statistics in the residence hall. Three years' worth of fire statistics and fire evacuation drills in the residence halls are included. This report is available online at http://www.csum.edu/web/police-services/firesafety-report

You may request a paper copy of either report from Police Services located in the Police Services building at 200 Maritime Academy Dr., Vallejo CA 94590.

Emergency Preparedness

Cal Maritime maintains a comprehensive Emergency Management Program that includes: (1) Risk mitigation; (2) Emergency preparedness; (3) Emergency response; (4) Recovery from emergencies that overwhelm campus resources; and, (5) the circumstances under which CSUMA's Emergency Response Plan should be activated.

The Emergency Response Plan provides the basic structure and procedures that guide the campus's response to extraordinary situations associated with natural and man-made disasters. CSUMA personnel and equipment will be utilized with the following sequential priorities: Priority I- Protection of life safety; Priority II- Maintenance of life support and assessment of damages; Priority III- Restoration of general campus operations; and, Priority IV- Financial reimbursement through the appropriate state and federal agencies. As operations progress from Priority I through IV, the administrative control of the campus will transition from the NIMS/SEMS/ICS structure back to the normal CSUMA organizational structure. The entire Emergency Response Plan is available at: http://www.csum.edu/web/police-services/emergency-preparedness-plan

Parking and Transportation

The use of transportation and parking at Cal Maritime is considered a privilege that is granted subject to compliance with California law and The CSU Maritime Academy Parking Rules and Regulations. Parking is limited; therefore, a campus permit is required for all students, faculty, staff, and guests. Due to limited space and high demand for parking on campus, new incoming students must submit a waiver request to be considered for approval to purchase a permit. This form and detailed parking rules and regulations can be found here: http://www.csum.edu/web/police-services/parkingand-transportation

Veteran Services

Cal Maritime is approved by the State of California as a training facility for veterans applying for VA educational benefits. The Office of the Registrar provides VA enrollment certification services to new and currently-enrolled veterans and dependents who are eligible for the GI Bill. For information about financial aid outside your VA educational benefits, visit the Financial Aid office website at: http://www.csum.edu/web/financial-aid/home

The following educational benefits are available to veterans and dependents at Cal Maritime:

- Chapter 30 (Montgomery GI Bill - Active Duty)
- Chapter 31 (Vocational Rehabilitation)
- Chapter 33 (Post-9/11 GI Bill)
- Chapter 1606 (Montgomery GI Bill - Reservists)
- Chapter 1607 (Reserve Educational Assistance Program)
- Chapter 35 (Dependents Educational Assistance)
- Dependent Fee Waiver

Veteran's Affairs Committee

The purpose of the Veteran's Affairs Committee is to assist Cal Maritime in meeting CSU and national goals: being a veteran-friendly campus; ensuring that any problems that veterans may have-with the campus or personal-are addressed and resolved; increasing services to veterans and dependents on campus; and raising awareness of veteran-related issues on campus and in the community.

Admissions for Veterans

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

- possess a high school diploma or its equivalent (G.E.D. or California High School Proficiency Examination)
- not have prior enrollment as a full-time college student (12+ units per semester) for more than one term during the past five years
- have an average GPA of 2.0 (C or higher) on all college coursework in the past five years
- meet the English and mathematics requirements for first-time freshmen or transfer students with grades of C or higher
- be in good standing at the last educational institution attended

Also recommended:

- have successfully completed, with a grade of C or higher, a college-level algebra/trigonometry course in the past five years, or have worked in a related technical field within the last two years
- have successfully completed, with a grade of C or higher, a college-level composition course

Please note that Cal Maritime has some flexibility regarding academic requirements for entrance and admissions deadlines for military veterans. This is part of the CSU system-wide effort to prioritize educating those who have served the United States. If you need such flexibility, please contact the Cal Maritime Admissions office and identify yourself as a military veteran. We will do our best to work with you to achieve your educational goals as quickly as possible.

Veteran Student Association

Cal Maritime's Veteran Student Association (VSA) is open to all Cal Maritime students. The purpose of the VSA is to help veterans transition into college life. The VSA will address issues faced by veteran's on campus, and also at the CSU level. The association will also perform community service to help less fortunate veterans.

Q & A for Veterans

Where can I find out about the CSU's "Troops to College" initiative and how it can benefit me?

Visit the CSU Veterans web site at: http://www.calstate.edu/veterans/

How can I apply?

Apply online at Cal State Apply. There is a $55.00 application fee required when you submit the online application.

What items are required for your office to make an admission decision?

A completed online application, the $55.00 application fee, and all official high school and college transcripts.

How can I determine if I qualify for admission?

You will be evaluated as a first-time freshman or transfer applicant. To find the qualifications required for those two categories, look for those words on the left side of the website under "I want to apply."

Veterans' Resources

For up-to-date information regarding VA educational benefits, veterans and dependents of veterans are encouraged to visit the U. S. Department of Veterans Affairs GI Bill website. Students who would like to apply for VA Educational Benefits, or who need to request a change in program or place of training, can complete the required VA forms directly online at the GI Bill website using the Veterans On-Line Application (VONAPP) website.

- Form 22-1990 Application for VA Education Benefits (veteran)
- Form 22-5490 Application for VA Education Benefits (dependent)
- Form 22-1995 Request for Change of Program/Place of Training (veteran)
- Form 22-5495 Request for Change of Program/Place of Training (dependent)
- Free Application for Federal Student Aid (FAFSA) www.fafsa.gov

Once a student becomes eligible (approved) to receive VA educational benefits, the student should also submit a Cal Maritime Veteran's Information form to the veterans-certifying official(s) in the Registrar's Office in order to start the enrollment certification process.

Resource Links

- California Veterans Initiative http://calstate.edu/veterans/
- Troops to College Brochure http://calstate.edu/veterans/documents/CSU_TTCBrochure.pdf
- U. S. Department of Veterans Affairs http://www.gibill.va.gov/
- California Department of Veterans Affairs https://www.calvet.ca.gov/veteran-services-benefits/education

For further information regarding VA Educational Benefits, please email veterans@csum.edu which is checked by the veterans-certifying official(s) in the Office of the Registrar.

Appendix

Policy Statements

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 students' privacy in 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 give students access to most records directly related to the student, and must also provide opportunity for a hearing to challenge the records if the student claims 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 determined by the instructor. The law generally requires the institution to receive a student's written consent before releasing personally identifiable data about the student. The institution has adopted a set of policies and procedures governing implementation of the statute and the regulations. Copies of these policies and procedures may be obtained at the Office of the Registrar. Among the types of information included in the campus statement of policies and procedures are: (1) the types of student records maintained and the information they contain; (2) the official responsible for maintaining each type of record; (3) the location of access lists indicating persons requesting or receiving information from the record; (4) policies for reviewing and expunging records; (5) student access rights to their records; (6) the procedures for challenging the content of student records; (7) the cost to be charged for reproducing copies of records; and (8) the right of the student to file a complaint with the Department of Education. The Department of Education has established an office and review board to investigate complaints and adjudicate violations. The designated office is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202-5920.

The campus is authorized under the Act to release "directory information" concerning students. "Directory information" may include 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 above-designated information is subject to release by the campus at any time unless the campus has received prior written objection from the student specifying what information the student requests not be released. Written objections should be sent to the Provost and Vice President of 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 have responsibilities in the campus's academic, administrative or service functions and have reason for accessing student records associated with their campus or other related academic responsibilities. Student records will be disclosed to the Chancellor's Office of the California State University in order to conduct research, to analyze trends, or to provide other administrative services on behalf of the CSU. Student records may also be disclosed 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; or to other institutions to which the student is transferring).

NONDISCRIMINATION POLICY AND COMPLAINT PROCEDURES

Protected Status: Genetic Information, Marital Status, Medical Condition, Nationality, Race or Ethnicity (including color or ancestry), Religion or Religious Creed, and Veteran or Military Status.

The California State University does not discriminate on the basis of age, genetic information, marital status, medical condition, nationality, race or ethnicity (including color and ancestry), religion (or religious creed), and veteran or military status - as these terms are defined in CSU policy - in its programs and activities, including admission and access. Federal and state laws, including Title VI of the Civil Rights Act of 1964 and the California Equity in Higher Education Act, prohibit such discrimination. Ingrid Williams, Associate Vice President of Human Resources has been designated to coordinate the efforts of Cal Maritime to comply with all applicable federal and state laws prohibiting discrimination on these bases. Inquiries concerning compliance may be presented to this person at 200 Maritime Academy Drive, Vallejo, CA 94590, (707) 654-1135. CSU Executive Order 1097 Revised October 5, 2016 (www.calstate.edu/EO/EO-1097-rev-10-5-16.html)(or any successor exewcutive order) is the systemwide procedure for all complaints of discrimination, harassment or retaliation made by students against the CSU, a CSU employee, other CSU students or a third party.

Protected Status: Disability

The California State University does not discriminate on the basis of disability (physical and mental) 0 as this term is defined in CSU policy - in its programs and activities, including admission and access. Federal and state laws, including sections 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, prohibit such discrimination. Ingrid Williams, Associate Vice President of Human Resources has been designated to coordinate the efforts of [CAMPUS] to comply with all applicable federal and state laws prohibiting discrimination on the basis of disability. Inquiries concerning compliance may be presented to this person at 200 Maritime Academy Drive, Vallejo, CA 94590, (707) 654-1135. CSU Executive Order 1097 Revised October 5, 2016 (www.calstate.edu/EO/EO-1097-rev-10-5-16.html) (or any sucessor executive order) is the systemwide procedure for all complaints of discrimination, harassment or retaliation made by students against the CSU, a CSU employee, other CSU students or a third party.

Protected Status: Gender (or sex), Gender Identity (including transgender), Gender Expression and Sexual Orientation

The California State University does not discriminate on the basis of gender (or sex), gender Identity (including transgender), gender expression or sexual orientation - as these terms are defined in CSU policy - in its programs and activities, including admission and access. Federal and state laws, including Title IX of the Education Amendments of 1972, prohibit such discrimination. Ingrid Williams, Associate Vice President of Human Resources has been designated to coordinate the efforts of Cal Maritime to comply with all applicable federal and state laws prohibiting discrimination on these bases. Inquiries concerning compliance may be presented to this person at 200 Maritime Academy Drive, Vallejo, CA 94590, (707) 654-1135. The California State University is committed to providing equal opportunities to all CSU students in all campus programs, including intercollegiate athletics. CSU Executive Order 1097 Revised October 5, 2016 (www.calstate.edu/EO/EO-1097-rev-10-5-16.pdf) (or any successor executive order) is the systemwide procedure for all complaints of discrimination, harassment or retaliation *made by students* against the CSU, a CSU employee, other CSU students or a third party.

Title IX of the Education Amendments of 1972 protects all people regardless of their gender, gender identity or gender expression from sex discrimination, which includes sexual harassment and violence:

Gender discrimination means an adverse act taken against an individual because of gender or sex (including sexual harassment, sexual misconduct, domestic violence, dating violence, and stalking) that is perpetrated against an individual on a basis prohibited by Title IX of the Education Amendments of 1972, 20 U.S.C. §1681 et seq., and its implementing regulations, 34 C.F.R. Part 106 (Title IX); California Education Code §66250 et seq., and/or California Government Code §11135.

Sexual harassment, a form of sex discrimination, is unwelcome verbal, nonverbal or physical conduct of a sexual nature that includes, but is not limited to, sexual advances, requests for sexual favors, and any other conduct of a sexual nature where:

1. Submission to, or rejection of, the conduct is explicitly or implicitly used as the basis for any decision affecting a Complainant's academic status or progress, or access to benefits and services, honors, programs, or activities available at or through the University; or
2. The conduct is sufficiently severe, persistent or pervasive that its effect, whether or not intended, could be considered by a reasonable person in the shoes of the Complainant, and is in fact considered by the Complainant, as limiting his or her ability to participate in or benefit from the services, activities or opportunities offered by the University; or
3. The conduct is sufficiently severe, persistent or pervasive that its effect, whether or not intended, could be considered by a reasonable person in the shoes of the Complainant, and is in fact considered by the Complainant, as creating an intimidating, hostile or offensive environment.

Sexual Harassment could include being forced to engage in unwanted sexual contact as a condition of membership in a student organization; being subjected to video exploitation or a campaign of sexually explicit graffiti; or frequently being exposed to unwanted images of a sexual nature in a classroom that are unrelated to the coursework.

Sexual Harassment also includes acts of verbal, non-verbal or physical aggression, intimidation or hostility based on Gender or sex-stereotyping, even if those acts do not involve conduct of a sexual nature.

Executive Order 1097 covers unwelcome conduct of a sexual nature. While romantic, sexual, intimate, personal or social relationships between members of the University community may begin as consensual, they may evolve into situations that lead to Sexual Harassment or Sexual Misconduct, including Dating or Domestic Violence, or Stalking, subject to this policy. Claiming that the conduct was not motivated by sexual desire is not a defense to a complaint of harassment based on Gender.

Sexual misconduct: All sexual activity between members of the University community must be based on affirmative consent. Engaging in any sexual activity without first obtaining affirmative consent to the specific activity is sexual misconduct, whether or not the conduct violates any civil or criminal law. Sexual activity includes, but is not limited to, kissing, touching intimate body parts, fondling, intercourse, penetration of any body part, and oral sex. It also includes any unwelcome physical acts, such as unwelcome sexual touching, sexual assault, sexual battery, rape, and dating violence. When based on gender, domestic violence or stalking also constitutes sexual misconduct. Sexual misconduct may include using physical force, violence, threat or intimidation, ignoring the objections of the other person, causing the other person's intoxication or incapacitation through the use of drugs or alcohol, or taking advantage of the other person's incapacitation (including voluntary intoxication) to engage in sexual activity. Men as well as women can be victims of these forms of sexual misconduct. Sexual activity with a minor is never consensual when the complainant is under 18 years old, because the minor is considered incapable of giving legal consent due to age.

Sexual assault is a form of sexual misconduct and is an attempt, coupled with the ability, to commit a violent injury on the person of another because of that person's gender or sex.

Sexual battery is a form of sexual misconduct and is any willful and unlawful use of force or violence upon the person of another because of that person's gender or sex as well as touching an intimate part of another person against that person's will and for the purpose of sexual arousal, gratification or abuse.

Rape is a form of sexual misconduct and is non-consensual sexual intercourse that may also involve the use of threat of force, violence, or immediate and unlawful bodily injury or threats of future retaliation and duress. Any sexual penetration, however slight, is sufficient to constitute rape. Sexual acts including intercourse are considered non-consensual when a person is incapable of giving consent because s/he is incapacitated from alcohol and/or drugs, is under 18 years old, or if a mental disorder or developmental or physical disability renders the person incapable of giving consent. The respondent's relationship to the person (such as family member, spouse, friend, acquaintance or stranger) is irrelevant.

Acquaintance rape is a form of sexual misconduct committed by an individual known to the victim. This includes a person the victim may have just met; i.e., at a party, introduced through a friend, or on a social networking website.

Affirmative consent means an informed, affirmative, conscious, voluntary, and mutual agreement to engage in sexual activity. It is the responsibility of each person involved in the sexual activity to ensure that s/he has the affirmative consent of the other participant(s) to engage in the sexual activity. Lack of protest or resistance does not mean consent nor does silence mean consent. Affirmative consent must be voluntary, and given without coercion, force, threats or intimidation.

- The existence of a dating or social relationship between those involved, or the fact of past sexual activities between them, should never by itself be assumed to be an indicator of affirmative consent. A request for someone to use a condom or birth control does not, in and of itself, constitute affirmative consent.
- Affirmative consent can be withdrawn or revoked. Consent to one form of sexual activity (or sexual act) does not constitute consent to other forms of sexual activity. Consent given to sexual activity on one occasion does not constitute consent on another occasion. There must always be mutual and affirmative consent to engage in sexual activity. Consent must be ongoing throughout a sexual activity and can be revoked at any time, including after penetration. Once consent is withdrawn or revoked, the sexual activity must stop immediately.
- A person who is incapacitated cannot give affirmative consent. A person is unable to consent when s/he is asleep, unconscious or is incapacitated due to the influence of drugs, alcohol, or medication so that s/he could not understand the fact, nature or extent of the sexual activity. A person is incapacitated if s/he lacks the physical and/ or mental ability to make informed, rational decisions. Whether an intoxicated person (as a result of using alcohol or other drugs) is incapacitated depends on the extent to which the alcohol or other drugs impact the person's decision- making capacity, awareness of consequences, and ability to make fully informed judgments. A person's own intoxication or incapacitation from drugs or alcohol does not diminish that person's responsibility to obtain affirmative consent before engaging in sexual activity.
- A person with a medical or mental disability may also lack the capacity to give consent.
- Sexual activity with a minor (a person under 18 years old) is not consensual, because a minor is considered incapable of giving legal consent due to age.
- It shall not be a valid excuse that a person affirmatively consented to the sexual activity if the respondent knew or reasonably should have known that the person was unable to consent to the sexual activity under any of the following circumstances:
    - The person was asleep or unconscious;
    - The person was incapacitated due to the influence of drugs, alcohol or medication, so that the person could not understand the fact, nature or extent of the sexual activity;
    - The person was unable to communicate due to a mental or physical condition.
- It shall not be a valid excuse that the respondent believed that the person consented to the sexual activity under either of the following circumstances:
    - The respondent's belief in affirmative consent arose from the intoxication or recklessness of the respondent;
    - The respondent did not take reasonable steps, in the circumstances known to the respondent at the time, to ascertain whether the person affirmatively consented.

Consensual relationships: Consensual relationship means a sexual or romantic relationship between two persons who voluntarily enter into such a relationship. While sexual and/or romantic relationships between members of the University community may begin as consensual, they may evolve into situations that lead to discrimination, harassment, retaliation, sexual misconduct, dating or domestic violence, or stalking.

- A University employee shall not enter into a consensual relationship with a student or employee over whom s/ he exercises direct or otherwise significant academic, administrative, supervisory, evaluative, counseling, or extracurricular authority. In the event such a relationship already exists, each campus shall develop a procedure to reassign such authority to avoid violations of policy.
- This prohibition does not limit the right of an employee to make a recommendation on the personnel matters concerning a family or household member where the right to make recommendations on such personnel

matters is explicitly provided for in the applicable collective bargaining agreement or MPP/confidential personnel plan.

Domestic violence is abuse committed against someone who is a current or former spouse, current or former cohabitant, someone with whom the abuser has a child, someone with whom the abuser has or had a dating or engagement relationship, or a person similarly situated under California domestic or family violence law. Cohabitant means two unrelated persons living together for a substantial period of time, resulting in some permanency of relationship. It does not include roommates who do not have a romantic, intimate, or sexual relationship. Factors that may determine whether persons are cohabiting include, but are not limited to (1) sexual relations between the parties while sharing the same living quarters, (2) sharing of income or expenses, (3) joint use or ownership of property, (4) whether the parties hold themselves out as husband and wife, (5) the continuity of the relationship, and (6) the length of the relationship. For purposes of this definition, "abuse" means intentionally or recklessly causing or attempting to cause bodily injury or placing another person in reasonable apprehension of imminent serious bodily injury to himself or herself, or another. Abuse does not include non-physical, emotional distress or injury.

Dating violence is abuse committed by a person who is or has been in a social or dating relationship of a romantic or intimate nature with the victim. This may include someone the victim just met; i.e., at a party, introduced through a friend, or on a social networking website. For purposes of this definition, "abuse" means intentionally or recklessly causing or attempting to cause bodily injury or placing another person in reasonable apprehension of imminent serious bodily injury to himself or herself, or another. Abuse does not include non-physical, emotional distress or injury.

Stalking means a repeated course of conduct directed at a specific person that would cause a reasonable person to fear for his/her or others' safety or to suffer substantial emotional distress. For purposes of this definition:

- Course of conduct means two or more acts, including but not limited to, acts in which the stalker directly, indirectly, or through third parties, by any action, method, device, or means, follows, monitors, observes, surveys, threatens, or communicates to or about a person, or interferes with a person's property;
- Reasonable person means a reasonable person under similar circumstances and with the same protected status as the complainant;
- Substantial emotional distress means significant mental suffering or anguish that may, but does not necessarily, require medical or other professional treatment or counseling.

See further information in Cal Maritime's sexual violence prevention and education statement, Title IX Notice of Nondiscrimination (which includes facts and myths about sexual violence), and Victim's Rights and Options Notice, at https://www.csum.edu/web/title-ix.

WHO TO CONTACT IF YOU HAVE COMPLAINTS, QUESTIONS OR CONCERNS

Title IX requires the university to designate a Title IX Coordinator to monitor and oversee overall Title IX compliance.

The campus Title IX Coordinator is available to explain and discuss the right to file a criminal complaint (for example, in cases of sexual misconduct); the university's complaint process, including the investigation process; how confidentiality is handled; available resources, both on and off campus; and other related matters. If you are in the midst of an emergency, please call the police immediately by dialing 9-1-1.

CAMPUS TITLE IX COORDINATOR:

Ingrid C. Williams, Ed.D.
Associate Vice President of Human Resources
200 Maritime Academy Drive
Vallejo, CA 94590

iwilliams@csum.edu
(707) 654-1135
Monday-Friday, 0830 to 1700

UNIVERSITY POLICE:

Chief Donny Gordon
200 Maritime Academy Drive
Vallejo, CA 94590
dgordon@csum.edu
(707) 654-1175
U. S. Department of Education, Office for Civil Rights (OCR): (800) 421-3481 or (415) 486-5555 or (800) 833-8339 (TDD) or ocr.sanfrancisco@ed.gov

If you wish to fill out a complaint form online with the OCR, you may do so at: www2.ed.gov/about/offices/list/ocr/complaintintro.html.

Title IX requires the university to adopt and publish complaint procedures that provide for prompt and equitable resolution of gender discrimination complaints, including sexual harassment and misconduct as well as provide training, education and preventive measures related to sex discrimination. CSU Executive Order 1097 (www.calstate.edu/EO/EO- 1097-rev-10-5-16.pdf) (or any successsor executive order) is the systemwide procedure for all complaints of discrimination, harassment or retaliation made by students against the CSU, a CSU employee, other CSU students or a third party.

Except as provided below under confidentiality and sexual misconduct, dating violence, domestic violence, and stalking, **any** University employee who knows or has reason to know of allegations or acts that violate University policy shall promptly inform the Title IX Coordinator. These employees are required to disclose all information including the names of the parties, **even where the person has requested that his/her name remain confidential**. The Title IX Coordinator will determine whether confidentiality is appropriate given the circumstances of each such incident (see confidential reporting options outlined below).

Regardless of whether an alleged victim of gender discrimination ultimately files a complaint, if the campus knows or has reason to know about possible sexual discrimination, harassment or misconduct, violence, it must review the matter to determine if an investigation is warranted. The campus must then take appropriate steps to eliminate any gender discrimination/harassment/misconduct, prevent its recurrence, and remedy its effects.

SAFETY OF THE CAMPUS COMMUNITY IS PRIMARY

The University's primary concern is the safety of its campus community members. The use of alcohol or drugs never makes the victim at fault for gender discrimination, harassment or misconduct; therefore, victims should not be deterred from reporting incidents of sexual misconduct out of a concern that they might be disciplined for related violations of drug, alcohol or other university policies. Except in extreme circumstances, victims of sexual misconduct shall not be subject to discipline for related violations of the Student Conduct Code.

INFORMATION REGARDING CAMPUS, CRIMINAL AND CIVIL CONSEQUENCES OF COMMITTING ACTS OF SEXUAL VIOLENCE

Individuals alleged to have committed sexual misconduct may face criminal prosecution by law enforcement and may incur penalties as a result of civil litigation. In addition, employees and students may face discipline at the university, up to including suspension or expulsion. Employees may face sanctions up to and including dismissal from employment, pursuant to established CSU policies and provisions of applicable collective bargaining unit agreements.

Students who are charged by the University with gender discrimination, harassment or misconduct will be subject to discipline, pursuant to the California State University Student Conduct Procedures (see Executive Order 1098 at www.calstate.edu/EO/EO-1098-rev-6-23-15.pdf or any successor executive order) and will be subject to appropriate sanctions. In addition, during any investigation, the University may implement interim measures in order to maintain a safe and non-discriminatory educational environment. Such measures may include but not be limited to: immediate interim suspension from the University; a required move from university-owned or affiliated housing; adjustments to course schedule; and/or prohibition from contact with parties involved in the alleged incident.

CONFIDENTIALITY AND SEXUAL MISCONDUCT, DATING VIOLENCE, DOMESTIC VIOLENCE AND STALKING

The University encourages victims of sexual misconduct, dating violence, domestic violence, or stalking (collectively sexual misconduct) to talk to someone about what happened - so they can get the support they need, and so the University can respond appropriately.

PRIVILEGED AND CONFIDENTIAL COMMUNICATIONS

Physicians, Psychotherapists, Professional Licensed Counselors, Licensed Clinical Social Workers and Clergy - Physicians, psychotherapists, professional, licensed counselors, licensed clinical social workers, and clergy who work or volunteer on or off campus, acting solely in those roles or capacities as part of their employment, and who provide medical or mental health treatment or counseling (and those who act under their supervision, including all individuals who work or volunteer in their centers and offices) may not report any information about an incident of sexual misconduct to anyone else at the University, including the Title IX Coordinator, without the victim's consent. A victim can seek assistance and support from physicians, psychotherapists, professional, licensed counselors, licensed clinical social workers, and clergy without triggering a University investigation that could reveal the victim's identity or the fact of the victim's disclosure. However, see limited exceptions below regarding when health care practitioners must report to local law enforcement agencies. Health care practitioners should explain these limited exceptions to victims, if applicable.

Sexual Assault and Domestic Violence Counselors and Advocates - Sexual assault and domestic violence counselors and advocates who work or volunteer on or off campus in sexual assault centers, victim advocacy offices, women's centers, and health centers and who are acting solely in that role (including those who act in that role under their supervision, along with non- professional counselors or advocates who work or volunteer in sexual assault centers, victim advocacy offices, women's centers, gender equity centers, or health centers) may talk to a victim without revealing any information about the victim and the incident of sexual misconduct to anyone else at the University, including the Title IX Coordinator, without the victim's consent. A victim can seek assistance and support from these counselors and advocates without triggering a University investigation that could reveal his/her identity or that a victim disclosed an incident to them. However, see limited exceptions below regarding when sexual assault and domestic violence counselors and advocates must report to local law enforcement agencies. Counselors and advocates should explain these limited exceptions to victims, if applicable.

The University will be unable to conduct an investigation into a particular incident or pursue disciplinary action against a perpetrator if a victim chooses to (1) speak only to a physician, professional licensed counselor, licensed clinical social worker, clergy member, sexual assault counselor, domestic violence counselor or advocate; and (2) maintain complete confidentiality. Even so, these individuals will assist victims in receiving other necessary protection and support, such as victim advocacy, disability, medical/health or mental health services, or legal services, and will advise victims regarding their right to file a Title IX complaint with the University and a separate complaint with local or University police. If a victim insists on confidentiality, such professionals, counselors and advocates will likely not be able to assist the victim with: University academic support or accommodations; changes to University-based living or working schedules; or adjustments to course schedules. A victim who at first requests confidentiality may later decide to file a complaint with the University or report the incident to the police, and thus have the incident fully investigated. These counselors and advocates can provide victims with that assistance if requested by the victim. These counselors and advocates will also explain that Title IX includes protections against retaliation, and that the University will not only take steps to prevent retaliation when it knows or reasonably should know of possible retaliation, but will also take strong responsive action if retaliation occurs.

EXCEPTIONS: Under California law, any health practitioner employed in a health facility, clinic, physician's office, or local or state public health department or clinic is required to make a report to local law enforcement if he or she provides medical services for a physical condition to a patient/victim who he or she knows or reasonably suspects is suffering from (1) a wound or physical injury inflicted by a firearm; or (2) any wound or other physical injury inflicted upon a victim where the injury is the result of assaultive or abusive conduct (including sexual misconduct, domestic violence, and dating violence). This exception does not apply to sexual assault and domestic violence counselors and advocates. Health care practitioners should explain this limited exception to victims, if applicable.

Additionally, under California law, all professionals described above (physicians, psychotherapists, professional counselors, licensed clinical social workers, clergy, and sexual assault and domestic violence counselors and advocates) are mandatory child abuse and neglect reporters, and are required to report incidents involving victims under 18 years of age to local law enforcement. These professionals will explain this limited exception to victims, if applicable.

Finally, some or all of these professionals may also have reporting obligations under California law to (1) local law enforcement in cases involving threats of immediate or imminent harm to self or others where disclosure of the information is necessary to prevent the threatened danger; or (2) to the court if compelled by court order or subpoena in a criminal proceeding related to the sexual violence incident. If applicable, these professionals will explain this limited exception to victims.

REPORTING TO UNIVERSITY OR LOCAL POLICE

If a victim reports to local or university police about sexual misconduct crimes, the police are required to notify victims that their names will become a matter of public record unless confidentiality is requested. If a victim requests that his/her identity be kept confidential, his/her name will not become a matter of public record and the police will not report the victim's identity to anyone else at the University, including the Title IX Coordinator. University Police will, however, report the facts of the incident itself to the Title IX Coordinator being sure not to reveal to the Title IX Coordinator victim names/identities or compromise their own criminal investigation. The University is required by the federal Clery Act to report certain types of crimes (including certain sex offenses) in statistical reports. However, while the University will report the type of incident in the annual crime statistics report known as the Annual Security Report, victim names/identities will not be revealed.

REPORTING TO THE TITLE IX COORDINATOR AND OTHER UNIVERSITY EMPLOYEES

Most university employees have a duty to report incidents of sexual misconduct when they are on notice of it. When a victim tells the Title IX Coordinator or another university employee about an incident of sexual misconduct, the

victim has the right to expect the university to take immediate and appropriate steps to investigate what happened and to resolve the matter promptly and equitably. In all cases, the university strongly encourages victims to report incidents of sexual misconduct directly to the campus Title IX Coordinator. As detailed above, in the "Privileged and Confidential Communications" section of this policy, all university employees except physicians, licensed professional counselors, licensed clinical social workers, sexual assault counselors and advocates, must report to the Title IX Coordinator all relevant details about any incidents of sexual misconduct of which they become aware. The university will need to determine what happened - and will need to know the names of the victim(s) and the perpetrator(s), any witnesses, and any other relevant facts, including the date, time and specific location of the incident.

To the extent possible, information reported to the Title IX Coordinator or other university employees will be shared only with individuals responsible for handling the university's response to the incident. The university will protect the privacy of individuals involved in a sexual misconduct violence incident except as otherwise required by law or university policy. A report of sexual misconduct may result in the gathering of extremely sensitive information about individuals in the campus community. While such information is considered confidential, university policy regarding access to public records and disclosure of personal information may require disclosure of certain information concerning a report of sexual misconduct. In such cases, efforts will be made to redact the records, as appropriate, in order to protect the victim's identity and privacy and the privacy of other involved individuals. Except as detailed in the section on "Privileged and Confidential Communications" above, no university employee, including the Title IX Coordinator, should disclose the victim's identity to the police without the victim's consent or unless the victim has also reported the incident to the police.

If a victim requests of the Title IX Coordinator or another university employee that his/her identity remain completely confidential, the Title IX Coordinator will explain that the university cannot always honor that request or guarantee complete confidentiality. If a victim wishes to remain confidential or request that no investigation be conducted or disciplinary action taken, the university must weigh that request against the university's obligation to provide a safe, non-discriminatory environment for all students, employees, and third parties, including the victim. Under those circumstances, the Title IX Coordinator will determine whether the victim's request for complete confidentiality and/or no investigation can be honored under the facts and circumstances of the particular case, including whether the university has a legal obligation to report the incident, conduct an investigation or take other appropriate steps. Without information about a victim's identity, the university's ability to meaningfully investigate the incident and pursue disciplinary action against the perpetrator may be severely limited. See Executive Order 1095 (or any successor executive order) for further details around confidential reporting, and other related matters (http://www.calstate.edu/eo/EO-1095-rev-6-23-15.pdf).

ADDITIONAL RESOURCES

Cal Maritime's sexual misconduct prevention and education statement, which includes facts and myths about sexual misconduct, at the Title IX website.

U.S. Department of Education, regional office:

Office for Civil Rights
50 United Nations Plaza San Francisco, CA 94102 (415) 486-5555
TDD (877) 521-2172
U.S. Department of Education, national office:

Office for Civil Rights (800) 872-5327
California Coalition Against Sexual Assault:

1215 K. Street, Suite 1850
Sacramento, CA 95814
(916) 446-2520
http://calcasa.org/

Know Your Rights about Title IX www2.ed.gov/about/offices/list/ocr/docs/title-ix-rights-201104.html

Domestic and Family Violence, Office of Justice Programs, U.S. Department of Justice

National Institute of Justice: Intimate Partner Violence, Office of Justice Programs, U.S. Department of Justice

National Domestic Violence Hotline: 1-800-799-SAFE (7233)

Office of Violence against Women, United States Department of Justice

Centers for Disease Control and Prevention: Intimate Partner Violence

Defending Childhood, United States Department of Justice

Local Community Resource Information:

- Rape Crisis Hotline: 707-258-8000
- Mental Health Crisis Line: 707-553-5332
- Victims of Crime Resources: 800-842-8467

Student Complaint Procedure

The California State University takes complaints and concerns regarding the institution very seriously. If you have a complaint regarding the CSU, you may present your complaint as follows:

1. If your complaint concerns CSU's compliance with academic program quality and accrediting standards, you may present your complaint to the Western Association of Schools and Colleges (WASC) at www.wscuc.org/. WASC is the agency that accredits the CSU's academic program. If you believe that your complaint warrants further attention after you have exhausted all the steps outlined by WASC, you may file an appeal with the Assistant Vice Chancellor, Academic and Student Affairs at the CSU Chancellor's Office.
2. If your complaint concerns an alleged violation by CSU of any law that prohibits discrimination, harassment or retaliation based on a protected status (such as age, disability, gender (or sex), gender identity, gender expression, nationality, race or ethnicity (including color or ancestry), religion or veteran or military status), you may present your complaint as described in Section XVI (Nondiscrimination Policy).
3. If your complaint concerns an alleged violation by CSU of a state law, including laws prohibiting fraud and false advertising, you may present your claim to the campus president or designee at Ingrid C. Williams, AVP of Human Resources. See Procedure for Student Complaints-Executive Order No. 1063 for details regarding the complaint requirements and complaint process: www.calstate.edu/eo/eo-1063.html. The president or designee will provide guidance on the appropriate campus process for addressing your particular issue.
4. Other complaints regarding the CSU may be presented to the campus dean of students, who will provide guidance on the appropriate campus process for addressing your particular issue.

This procedure should not be construed to limit any right that you may have to take action to resolve your complaint.

Availability of Institutional & Financial Assistance Information

The following information concerning student financial assistance may be obtained from the Director of Financial Aid, Student Services Building, (707) 654-1287:

1. A description of the federal, state, institutional, local, and private student financial assistance programs available to students who enroll at Cal Maritime;
2. For each aid program, a description of procedures and forms by which students apply for assistance, student eligibility requirements, criteria for selecting recipients from the group of eligible applicants, and criteria for determining the amount of a student's award;
3. A description of the rights and responsibilities of students receiving financial assistance, including federal Title IV student assistance programs, and criteria for continued student eligibility under each program;
4. The satisfactory academic progress standards that students must maintain for the purpose of receiving financial assistance and criteria by which a student who has failed to maintain satisfactory progress may reestablish eligibility for financial assistance;
5. The method by which financial assistance disbursements will be made to students and the frequency of those disbursements;
6. The way the school provides for Pell-eligible students to obtain or purchase required books and supplies by the seventh day of a payment period and how the student may opt out;
7. The terms of any loan received as part of the student's financial aid package, a sample loan repayment schedule, and the necessity for repaying loans;
8. The general conditions and terms applicable to any employment provided as part of the student's financial aid package;
9. The terms and conditions of the loans students receive under the Direct Loan and Perkins Loan Programs;
10. The exit counseling information the school provides and collects for student borrowers; and
11. Contact information for campus offices available for disputes concerning federal, institutional and private loans.

Information concerning the cost of attending Cal Maritime is available from the Director of Financial Aid, Student Services Building, (707) 654-1287, and includes tuition and fees; the estimated costs of books and supplies; estimates of typical student room, board, and transportation costs; and, if requested, additional costs for specific programs.

Information concerning the refund policies of Cal Maritime for the return of unearned tuition and fees or other refundable portions of institutional charges is available from the Cashier's Office, Administration Building, (707) 654-1030, option 6.

Information concerning policies regarding the return of federal Title IV student assistance funds as required by regulation is available from Director of Financial Aid, Student Services Building, (707) 654-1287.

Information regarding special facilities and services available to students with disabilities may be obtained from Disability Services Office, Student Enagement and Academic Support, Laboratory Building, (707) 654-1283.

Information concerning Cal Maritime policies, procedures, and facilities for students and other to report criminal actions or other emergencies occurring on campus may be obtained from Cal Maritime Police Services, Police Services Building, (707) 654-1176..

Information concerning Cal Maritime annual campus security report and annual fire safety report may be obtained from Cal Maritime Police Services, Police Services Building, (707) 654-1176.

Information concerning the prevention of drug and alcohol abuse and rehabilitation programs may be obtained from the Student Health Center, (707) 654-1174 or from the Dean of Student Development, Student Center, (707) 654-1190.

Information regarding student retention and graduation rates at Cal Maritime and, if available, the number and percentage of students completing the program in which the student is enrolled or has expressed interest may be obtained from the Director of Institutional Research, Administration Building, (707) 654-1224.

Information concerning athletic opportunities available to male and female students and the financial resources and personnel that Cal Maritime dedicates to its men and women's teams may be obtained from Director of Athletics, Athletics and Aquatics Center, (707) 654-1050.

Information concerning grievance procedures for students who feel aggrieved in their relationships with the university, its policies, practices and procedures, or its faculty and staff may be obtained from the Associate Vice President of Human Resources, Administration Building, (707) 654-1135.

Information concerning student activities that Cal Maritime provides, must be easily accessible on the campus website.

Information concerning student body diversity at Cal Maritime, including the percentage of enrolled, full- time students who are (1) male, (2) female, (3) Pell Grant recipients, and (4) self-identified members of a specific racial or ethnic group, must be obtained from the Director of Institutional Research, Administration Building, (707) 654-1224.

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 30 days of their 18th 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.

Procedure for the Establishment or Abolishment of Campus-Based Mandatory Fees

The law governing the California State University provides that specific campus fees defined as mandatory, such as a student association fee and a student center fee, may be established. A student 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). The campus President may adjust the student association fee only after the fee adjustment has been approved by a majority of students voting in a referendum established for that purpose. 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. Student association fees support a variety of cultural and recreational programs, childcare centers, and special student support programs. A student 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). Once bonds are issued, authority to set and adjust student 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.

The process to establish and adjust other campus-based mandatory fees requires consideration by the campus fee advisory committee and a student referendum as established by Executive Order 1102, Section III. The campus President may use alternate 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 to establish a new mandatory fee. The President shall provide to the campus 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

Campus Community Values

The University 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.

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:
    1. Cheating, plagiarism, or other forms of academic dishonesty that are intended to gain unfair academic advantage.
    2. Furnishing false information to a University official, faculty member, or campus office.
    3. Forgery, alteration, or misuse of a University document, key, or identification instrument.
    4. 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 a 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 a commercial purpose.
15. Misuse of computer facilities or resources, including:
    1. Unauthorized entry into a file, for any purpose.

2. Unauthorized transfer of a file.
3. Use of another's identification or password.
4. Use of computing facilities, campus network, or other resources to interfere with the work of another member of the University community.
5. Use of computing facilities and resources to send obscene or intimidating and abusive messages.
6. Use of computing facilities and resources to interfere with normal University operations.
7. Use of computing facilities and resources in violation of copyright laws.
8. 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 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:
    1. Falsification, distortion, or misrepresentation of information related to a student discipline matter.
    2. Disruption or interference with the orderly progress of a student discipline proceeding.
    3. Initiation of a student discipline proceeding in bad faith.
    4. Attempting to discourage another from participating in the student discipline matter.
    5. Attempting to influence the impartiality of any participant in a student discipline matter.
    6. Verbal or physical harassment or intimidation of any participant in a student discipline matter.
    7. Failure to comply with the sanction(s) imposed under a student discipline proceeding.
20. Encouraging, permitting, or assisting another to do any act that could subject him or her to discipline.

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. [Note: At the time of publication, such procedures are set forth in California State University Executive Order 1098 (Revised June 23, 2015), available at calstate.edu/eo/EO-1098-rev-6-23-15.html.

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 session 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 of 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.

Civil and Criminal Penalties for Violation of Federal Copyrights Law

Anyone who is found to be liable for copyright infringement may be liable for either the owner's actual damages along with any profits of the infringer or statutory damages of up to $30,000 per work infringed. In the case of a willful infringement, a court may award up to $150,000 per work infringed. (See 17 U.S.C. §504.) Courts also have discretion to award costs and attorneys' fees to the prevailing party. (See 17 U.S.C. §505.) Willful copyright infringement can also result in criminal penalties, including imprisonment and fines. (See 17 U.S.C. §506 and 18 U.S.C. §2319.)

Admissions Practices

Please be advised that the most current admissions practices can be found online at: http://www.csum.edu/web/admissions/admissions-process

Cal Maritime is fully committed to enrolling a diverse student body. Requirements for admissions 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 Admissions. 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-October 1 through November 30-prior to the year in which you choose to enroll. (See The California State University section for additional CSU Admissions information.)

Cal Maritime may continue to accept applications for non-impacted degree programs after November 30 until programs are full. New students must declare a major at the time of application.

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. These provisions authorize Cal Maritime to use admissions criteria that are above CSU requirements in any program. These additional criteria may include high school GPA and coursework, extracurricular activities, leadership, character, and college entrance examination scores. Currently, additional criteria are only used for impacted programs.

Enrollment criteria for admitted students will also include requirements made by the U.S. Coast Guard for maritime academies, and the unique requirements of mandatory international travel, especially on the school's training ship. These factors are 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 Admissions.

After Being Admitted

Deposit

To guarantee a space in the freshman class, you must submit a non-refundable* deposit of $500. The deadline for submitting the deposit is May 1. Failure to meet the deadline may result in the cancellation of your offer of admission and of any financial aid award that you may have received. The $500 deposit will be applied to your account as $150 for housing and $350 for uniforms.

*The deposit may be refunded upon request if a student does not pass medical review for his or her major. To secure a refund, all medical documents should have been submitted by April 1, any additionally requested information should be provided in a timely manner, and all information required was filled out by a physician.

Health Screening

All admitted students are required to submit a health report prior to enrollment. The health report form must be completed and signed by a licensed health care provider and returned to Cal Maritime's Student Health Center (SHC) as soon as possible and before May 1st. The actual physical examination must have been conducted within one year prior to enrollment, and with a tuberculosis test required within 12 months. All parts of the health report form must be adequately completed and reviewed as a condition of being able to register for classes.

There are specific health requirements for all Cal Maritime students as every student is required to participate in off campus activities that may involve travel such as the *Training Ship Golden Bear* Cruise, International Experience, internships, or Commercial cruise. Certain degree programs in which a U.S. Coast Guard license is a graduation requirement also have physical, perceptual, and psychological qualifications determined by the U.S. Coast Guard (see health criteria below).

The SHC reviews the health reports to determine whether the incoming student meets the health requirements necessary for participation in Cal Maritime Activities including the annual training cruise as applicable, and if enrolled in a license-track program, whether the student potentially meets the health requirements necessary for licensure by the U.S. Coast Guard.

In addition, the CSU and Cal Maritime have specific immunization requirements. All entering students are required to submit proof of the following prior to their first semester of enrollment:

Measles and rubella immunity: All new and re-admitted students born after January 1, 1957, must provide proof of two immunizations against measles and rubella.

Hepatitis B immunization: All new students who will be 18 years of age or younger at the start of their first semester must provide proof of full immunization against Hepatitis B prior to enrollment. Full immunization against Hepatitis B consists of three doses of the vaccine administered over a period of 4 to 6 months at prescribed time intervals.

Meningococcal meningitis vaccine: All freshmen are required to have the vaccine prior to enrollment at Cal Maritime. Students will be required to submit a form indicating that they have received information about meningococcal disease and the availability of a vaccine to reduce the risk of contracting it, and a statement indicating whether or not they have chosen to receive the vaccination at Cal Maritime. These are not admissions requirements, but are required of students as conditions of enrollment at Cal Maritime. If you need further details or have special circumstances, please consult the Student Health Center.

Additional immunization requirements at Cal Maritime include: hepatitis A (two dose series), varicella (two dose series) or proof of immunity, and Tdap (tetanus, diphtheria ,and pertussis).

Health Criteria

Students enrolled in license-track programs are required to meet the additional health criteria set forth in the U.S. Department of Homeland Security, USCG Navigation and Vessel Inspection Circular (NVIC). A non-exhaustive list of the specific health requirements may be found at: www.uscg.mil/nmc

Summary of the eyesight and color vision criteria:

Deck license students or applicants for 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. Engineering license students or applicants for 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. The U.S. Coast Guard (USCG) may grant a waiver if the above vision criteria are met in one eye and for uncorrected vision up to 20/800, provided the correctable vision standards are met. Applicants for STCW endorsements should meet the same vision standards. In addition, deck license students are required to demonstrate normal color vision by passing a color vision test approved by the USCG. Marine Engineering candidates are required to show the ability to distinguish red, blue, green, and yellow by passing a color vision test approved by the USCG.

Students enrolled in license-track programs should be able to meet USCG physical agility standards, and physical and mental health criteria. Having current or previous specific medical/physical/psychological conditions may be subject to an additional in-depth review by the USCG at the time of licensure. Any significant functional impairment, medical condition, or physical or psychological impairment, that might prevent a candidate from performing ordinary sea duties or have the potential of causing sudden incapacitation of a cadet or officer at sea, could preclude enrollment in majors leading to USCG licensure.

Orientation

Before the beginning of each fall semester, the Office of the Commandant conducts a mandatory orientation, a program that introduces new students to Cal Maritime. Students who do not attend the entire program will be dropped from enrollment for the fall semester.

Registration for Courses

First-time students may register for fall semester classes at Cal Maritime after they are accepted and have cleared their health screening, have paid their required deposit, and have submitted any additional documents that may have been requested. Continuing students will receive a registration or enrollment appointment which may be retrieved through the student section of PeopleSoft. Continuing students are required to meet with their advisor prior to registration, and to clear all financial or university obligations before registering for the next term.

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 cadets in USCG license-track majors - Marine Transportation, Marine Engineering Technology and Mechanical Engineering - are required to hold a TWIC as of their sophomore year. The TWIC is a prerequisite to application for a USCG Merchant Mariner Credential and is required for cadets enrolling in Sea Training II. Cadets in non-license track programs are encouraged to obtain a TWIC inasmuch as many of the Cooperative Education opportunities are with employers who require a TWIC.

The USCG Licensing Programs Coordinator will provide students with information regarding the TWIC application process during their first year. For more information, visit: http://www.tsa.gov/stakeholders/transportation-worker-identification-credential-twic (scroll down)

Uniforms

At Cal Maritime all students are required to wear uniforms per MARAD regulations, and uniform and grooming standards are a key component of the Leadership Development program.

All new incoming students are required to purchase the initial-issue sea bag through the Cal Maritime Bookstore. Additional or replacement uniform pieces may be purchased elsewhere, but shall conform in quality, material, and style to uniforms sold through the bookstore. All students are required to be in complete uniform on the first day of class.

Upon acceptance, students should take their sizing sheet to a professional tailor of their choice and send the completed form to the bookstore by May 1st, or as soon as the uniform deposit is paid. This gives the bookstore a chance to pre-order the student's sizes. A summer fitting appointment to try on the uniform must be scheduled with the bookstore and completed prior to August 1st. This summer fitting ensures that the student's uniforms are given room for any changes in growth or weight, and it allows the bookstore to send out all items that need tailoring or alteration and have them back in time for pick-up during Orientation Week. Civilian measurements are different from military measurements, so a uniform fitting in person is necessary.

To schedule an appointment, please call the Cal Maritime Bookstore at 707-654-1186. The balance payment for the initial-issue sea bag is due at the time of the fitting appointment. All non-tailored items are taken home at that time, and all items that need tailoring will be available for pick-up during Orientation Week.

For more information, please call the Cal Maritime Bookstore at 707-654-1186, or email bookstore@csum.edu.

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 the purpose of 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 the student's social security number 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.

Making Up Missing Requirements

Undergraduate applicants who did not complete subject requirements while in high school may make up missing subjects by:

- completing appropriate courses with a grade of C or higher prior to high school graduation
- completing appropriate college courses with a grade of C or higher, with each college course that earns at least 3 semester (4 quarter) units being considered equivalent to one year of high school study
- earn acceptable scores on specified examinations

Non-Transfer of Acceptance

Admission is not transferable either 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 with the application for admission become the property of Cal Maritime and cannot be returned. Applicants do not have the right to access or review files during the admissions process.

The documents of applicants who enroll are forwarded to the Office of the Registrar and are then accessible for review by the enrolled student, in compliance with the **Family Educational Rights and Privacy Act**. When a student withdraws from enrollment, the documents supporting an application for admission, such as transcripts and entrance examination scores, will be held for at least one year before they are destroyed.

Cancellation of Registration or Withdrawl 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; failing grades being assigned in all courses; and, the need to submit an application for readmission before being permitted to enroll in another academic term.

Prior to withdrawing, students who receive financial aid funds *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. Students who have received financial aid and withdraw from the institution during the academic term or payment period may need to return or repay some or all of the funds received, which may result in a debt owed to the institution.

Non-Discrimination Policy

The California State University Maritime Academy (Cal Maritime) does not discriminate on the basis of race, color, religious creed, national origin, ancestry, disability, medical condition, sex, gender identity/gender expression, sexual orientation, marital status, pregnancy, age, genetic information, and military or veteran status in its educational programs, activities and employment. Cal Maritime complies with all applicable state and federal laws regarding discrimination and harassment against employees, students, applicants, and third parties. We adhere to the California State University (CSU) system policies embodied in the CSU executive orders.

Cal Maritime is committed to creating and maintaining a positive learning and working environment. Compliance inquiries can be made directly to the Executive Director of Human Resources and Title IX Coordinator, Ingrid C. Williams, at iwilliams@csum.edu or 707-654-1135.

Office of Admission

The Office of Admission assists prospective students interested in attending Cal Maritime. The office holds walking tours of the campus, Monday through Friday, except holidays. Prospective students and their families are encouraged to make arrangements at least one week in advance. Appointments can be made online at: http://www.csum.edu/visit

Mail: Office of Admission
CSU Maritime Academy
200 Maritime Academy Drive
Vallejo, CA 94590-8181
Phone: 707-654-1330
Fax: 707-654-1336
Email: admission@csum.edu
Web: www.csum.edu

Open University

Enrollment in Open University is open to only those students who are not currently enrolled in a university. This includes: former Cal Maritime students who have been inactive (matriculation closed) or graduated (alumni); students who have been academically disqualified from Cal Maritime or other institutions; international or nonresident students not enrolled in a university program; and members of the general public. Students who received sanctions of suspension or expulsion from Cal Maritime may not enroll through Open University. Questions regarding sanctions should be directed to the Judicial Officer.

Open University is not open to students who received an approved leave-of-absence/withdrawal, or who elect not to enroll in a semester at Cal Maritime. Students with an approved leave-of-absence are still matriculated and therefore are not eligible to register in Open University.

Students interested in taking courses offered in an impacted program (check the Admissions website) must secure the approval of the department chair and Academic Dean on the Open University form. For a listing of courses which require safety-sensitive clearances, visit the Open University website located under the Office of the Registrar.

Academically disqualified students may elect to enroll at Cal Maritime through Open University to register for courses in which grades of D or F was earned. Cal Maritime repeated course rules apply to Open University courses. All grade attempts for a repeated course will be recorded on the student's transcript and averaged into their GPA calculations. In accordance with the Cal Maritime's Academic Standing policy, students disqualified for a third failure of a course must successfully complete the course prior to readmission. It is recommended that academically disqualified students meet with the department chair for advising prior to enrolling in Open University.

Students may enroll in up to 3 courses per semester, but not exceed 7 units Students may not enroll in directed-, independent-, or individual-study courses, research, thesis, field work, cooperative education or cruise. A maximum of 24 semester units earned through Open University in a non-matriculated status may be applied toward a bachelor's degree. All units attempted through Open University will be calculated in the student's GPA.

Students should print and complete the Open University registration form available at the Registrar's Office website, and attend the first class meeting to get faculty approval to add the course. Although enrollment in Open University courses is based on the availability of space, the Registrar's Office cannot guarantee that students will be permitted to enroll in any class. The faculty have the discretion to manage course enrollment, and to require students to provide

evidence of the satisfactory completion of prerequisites that must be completed prior to enrollment. An academic transcript indicating successful completion of course prerequisites must be submitted at the time of application.

Students should attend the first week of classes and secure faculty approval by the second week of the late registration period. Once submitted, Open University Add forms will be processed during the second week of the late registration period. Students must complete the registration process as described on the Open University website and meet all published add/drop deadlines. Open University Add forms will not be processed prior to the start of the semester.

Student must pay Open University fees at the Student Accounts office. The Open University website provides the most current tuition fees. The fees apply to both in-state and out-of-state students. Students should check with the Business office for adjustments or refund policies. Open University students must comply with Cal Maritime and individual department regulations regarding prerequisites, withdrawals, repeats, grading, and student conduct. Health, medical, and food services are available at additional cost, with arrangements are made through the Cashier's office.

Open University students are not eligible for financial aid, campus housing privileges, campus student employment, tutoring, participation in the Corps of Cadets, and watchstanding.

Open University students will be issued a temporary Cal Maritime email address and access to university learning platforms, such as Moodle, which may be required for the course(s). Upon completion of the semester, students may view their grades online or request an official Cal Maritime transcript.

Open University students are not members of the Corps of Cadets and should not dress in uniform. Students will not be permitted to conduct business on campus or attend classes wearing shorts, tee shirts, sandals, or similar attire.

Readmission Requirements

Application for readmission must be completed in full no later than October 1 for readmission to the spring semester of the following year, and April 1 for readmission to the fall semester of the year of application. Any student out of attendance for more than 2 consecutive semesters must apply for readmission.

Complete information on the readmission process may be found on the Registrar's Office web page at: https://www.csum.edu/web/registrar/readmission

Other documentation required for readmission may include the submission of official college transcripts of work completed during leave, a physical exam, and TB est. Students will be notified if additional documentation is required.

Readmission acceptance is based upon the completion of the requirements for readmission, an assessment of the reason the applicant left Cal Maritime, and also upon the availability of space.

For assistance with readmission, the applicant should call the Registrar's Office at 707-654-1200.

Supplemental Enrollment Options

Enrolled students who have completed at least one term and 12 units on a campus of the California State University, and who are in good standing at their home campus with a 2.00 GPA or higher, may elect to take courses at another CSU host campus, on a space available basis, without formal admission.

Although courses taken at 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 the California Community College system. A special application detailing policies and procedures may be obtained from the Office of the Registrar.

Intrasystem Enrollment at the CSU

CSU Concurrent Enrollment allows CSU students in good standing the ability to enroll concurrently at another CSU campus for a specific term, subject to the availability of space, and to the registration priority policies at the host campus. Credit earned at the host campus is reported, at the student's request, to the home campus for being included on the student's transcript at the home campus.

CSU Visitor Enrollment allows CSU students in good standing the ability to enroll at another CSU campus for one term, subject to the availability of space, and to the registration 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 for being included on the student's transcript at the home campus.

Intersystem Cross-Enrollment with the University of California or with the California Community College System

Undergraduate students enrolled in the California State University may enroll, without formal admission and without payment of additional CSU fees, in one course in each academic term at a campus of the University of California or at participating campuses of California Community College system subject to the availability of space.

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 with a 2.00 GPA or higher. Additional details on cross-enrollment policies and procedures are available from the Office of the Registrar.

The Early Admission (EA) Option

Applicants from high school who consider Cal Maritime a top choice may use the Early Admission (EA) option. EA allows students who apply early to receive a decision on their application on December 15th - 1½ months before other applicants.

Candidates are reviewed based on their academic performance in classes as self-reported in the online admission application, their standardized test scores, and (for impacted majors) optional résumés we receive. Although EA applicants should consider Cal Maritime a top choice, the program does not ask students to rush their decision to attend if admitted. Students admitted under this plan will have the same deadline to commit to Cal Maritime as all other admitted students. That date is May 1st.

All of the following criteria must be met to be considered for the Early Admission program:

- EA applicants must be applying as first-time freshmen. The program is not available to transfer students.
- EA applicants must answer "Yes" to the Early Admission question on Cal Maritime's CSUmentor online application.
- The online application and application fee (or fee waiver) must be submitted between October 1st and October 31st. Optional résumés for impacted majors are due by November 30th.
- EA applicants must take the SAT or ACT by the October testing dates.

The Early Admission process includes:

- Applicants who are admitted under the Early Admission program will be notified on December 15th - 1 ½ months before regular admission applicants.
- Admitted students to the Early Admission program will have the same May 1st deadline for committing to Cal Maritime as those admitted through the later, Regular Admission process.
- Early Admission applicants not accepted for the EA program will be notified on December 15th that their applications will be re-reviewed through the Regular Admission program and receive their decision with the larger group on February 1st.

The Regular Admission (RA) Option

All applicants who do not choose the Early Admission option are evaluated using the Regular Admission option.

The Regular Admission (RA) option includes a longer application window (October 1st through November 30th), and allows test scores from tests as late as December. Freshman RA applicants are all notified about their admission decision by February 1st while transfer applicants are notified on February 15. Commitments to attend by RA admitted students are due May 1st.

Undergraduate Admissions Requirements

First-time freshman requirements
http://www.csum.edu/web/admissions/first-timefreshmen

A student will be considered 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) has completed, with grades of C- or higher, each of the courses in the college preparatory subject requirements (see required and enhanced courses); and, (3) has a qualifying eligibility index for the student's chosen degree program (see Eligibility Index Table).

Test Requirements

Freshman and transfer applicants to impacted or special requirement programs such as Mechanical Engineering, with fewer than 60 semester (or 90 quarter) units must provide SAT or ACT scores in all cases. All applicants to non-impacted programs who have fewer than 60 semester (or 90 quarter) units of transferable college credit are strongly encouraged to submit scores from either the ACT or the SAT Reasoning Test of the College Board. The last test date from which scores are accepted is October for EA applicants and December for RA applicants. Registration information and dates are available from the following web sites:

The College Board (SAT)
Registration Unit, Box 6200
Princeton, NJ 08541-6200
609-771-7588
www.collegeboard.com
School Code: 4035

ACT Registration Unit
P.O. Box 414
Iowa City, IA 52240
319-337-1270

www.act.org
School Code: 0184

Eligibility Index

The eligibility index is the combination of a high school grade point average and a score on either the composite ACT score or the combined best math and best critical reading SAT scores.

The student's grade point average (GPA) is based on grades earned in a set of required college preparatory "A-G" courses taken during the final three years of high school, with bonus points for approved honors courses (excluding courses such as physical education and military science).

Up to 8 semesters of honors courses taken in the last three years of high school, including up to 2 approved courses taken in the 10th grade can be accepted. Each unit of A in an honors course will receive a total of 5 grade points; B, 4 points; and C, 3 points. No additional points will be awarded for a grade of D.

A CSU Eligibility Index (EI) can be calculated in either of two ways: multiplying the student's GPA by 800 and adding it to the mathematics and critical reading scores on the SAT, or multiplying the GPA by 200 and adding it to 10 times the ACT composite score. Thus:

If the SAT has been taken:
EI = (SAT scores in mathematics and critical reading) + (800 x high school GPA)

If the ACT has been taken:
EI = (10 x ACT composite score without the writing score) + (200 x high school GPA)

California high school graduates (residents of California) and residents of WUE/WICHE (Western Undergraduate Exchange/Western Interstate Commission for Higher Education) states need a minimum EI of 2900 using the SAT, or 694 using the ACT. A higher EI may be required of residents of WICHE states for certain majors. The Eligibility Index Table illustrates several combinations of required test scores and averages.

Non-residents from states outside the WUE need a minimum EI of 3502 (SAT) or 842 (ACT). U.S. citizens who are graduates of secondary schools in foreign countries must be judged to have academic preparation and abilities equivalent to applicants eligible under this section.

No matter how high a student's GPA may be, all applicants for admission are expected to take the SAT or ACT and provide the scores of such tests to Cal Maritime. These test results are used for advising and placement purposes. In addition, given the academic rigor of the unique curriculum, ACT or SAT scores may be required for some majors.

Special Admissions 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. A higher index may be required of residents of WICHE states for certain majors. Updated information is available online at: http://www.csum.edu/web/admissions/first-timefreshmen

WICHE states are Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming, and the Commonwealth of Northern Mariana Islands.

Subject Requirements

The California State University requires that first-time applicants complete, with grades of C or higher, a comprehensive set of college-preparatory courses (UC/CSU) "A- G list") totaling 15 units (with a "unit" consisting of one year of study in high school):

A. 2 years of the social sciences, including 1 year of U.S. history or U.S. history and government
B. 4 years of English
C. 3 years of math (algebra I , geometry, and algebra II)
D. 2 years of laboratory sciences (1 year biological and 1 year physical, both with labs)
E. 2 years of the same foreign language (subject to waiver for applicants demonstrating equivalent competence)
F. 1 year of the visual and performing arts: art, dance, drama/theater, or music
G. 1 year of electives selected from English, advanced mathematics, social sciences, history, laboratory sciences, foreign language, visual and performing arts, or other courses approved and included on the UC/CSU "A-G List"

Alternate Criteria for Home Schooled Students

Students completing high school through home schooling are expected to meet the same admissions requirements as students attending traditional schools. Home schooled students may be affiliated with high schools or public school districts. In such cases, courses submitted to meet the college preparatory subject requirements must appear on the UC/CSU "A-G List". For home schooled students who are not affiliated with high schools or districts, and who have insufficient courses from the UC/CSU "A-G List", Cal Maritime will review the application on an individual basis to determine that all admissions requirements have been met.

Home-schooled applicants may be asked to submit supplemental information like SAT subject exam scores, ACT subscores, and AP exam scores to document completion of CSU eligibility requirements.

Eligibility Index Table for Residents of California (All Majors) and WUE/WICHE States (In Certain Majors)

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 admissions.		
2.82	13	650	2.61	88	820	2.40	22	980	2.19	26	1150			

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

Enhanced Requirements for Residents of WUE/WICHE States (In Certain Majors) and Out-Of-State Residents from Outside WUE (All Majors)

GPA	2.45	2.6	2.8	3.0	3.2	3.61+
SAT	1550	1430	1270	1110	950	Any score
ACT	36	33	29	25	21	Any score

Enhanced Requirements for First-Time Freshman Applicants to Impacted Majors

The Marine Transportation, Marine Engineering Technology, Facilities Engineering Technology, and Mechanical Engineering majors have been designated as impacted. An undergraduate major or campus is designated as impacted when the number of applications received from fully-qualified applicants during the initial filing period exceeds the number of available spaces. As a result, applications to these majors will be reviewed on a competitive basis, with a higher qualifying Eligibility Index and additional required courses taken in high school or college.

Mechanical Engineering First-Time Freshman Impaction Plan for Fall 2016

Additional Required and Recommended Admission Criteria

All applicants must apply within the October/November application period and complete the application within a timely manner.

Freshman Applicants

- All applicants must receive an SAT Math score of at least 550 or ACT Math score of 23
- The most recent math course (at least the immediate prerequisite to calculus) must be passed with a "C-" or better within five years of the application term.
- All other basic CSU eligibility requirements must be met.
- The following items are recommended
    - Completion of a high school course in physics
    - (New for Fall 2016 applicants) Completion of four years of high school math
    - Submission of a résumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Selection Methodology: Freshman Applicants

- An index score is calculated based on grade point average and SAT or ACT scores.
- Once an index score has been computed for each student, a minimum index score and (possibly) a minimum SAT math score or equivalent ACT math score will be used to match qualifying applications with the available number of freshman admission spaces.
- A faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission consideration.

Facilities Engineering Technology and Marine Engineering Technology Impaction Plan for Fall 2016

Additional Required and Recommended Admission Criteria

All applicants must apply within the October/November application period and complete the application within a timely manner.

Freshman Applicants

- All applicants must submit an SAT or ACT score so that an index score can be computed for everyone.
- The most recent math course (at least algebra II) must be passed with a "C-" or better within five years of the application term
- (New for Fall 2016 applicants) A minimum Math SAT score of 450 or ACT math score of 18
- All other basic CSU eligibility requirements must be met.
- The following items are recommended
    - Completion of a course in pre-calculus (or equivalent course).
    - Completion of a course in physics.
    - (New for Fall 2016 applicants) completion of four years of high school math
    - Submission of a résumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Selection Methodology: Freshman Applicants

- Once an index score has been computed for each student, a minimum index score and (possibly) a minimum SAT math score or equivalent ACT math score will be used to match qualifying applications with the available number of freshman admission spaces.
- A faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission offers.

Marine Transportation Impaction Plan for Fall 2016

Additional Required and Recommended Admission Criteria

All applicants must apply within the October/November application period and complete the application within a timely manner.

Freshman Applicants

- All applicants must submit an SAT or ACT score so that an index score can be computed for everyone.
- The most recent math course (at least algebra II) must be passed with a "C-" or better within five years of the application term
- (New for Fall 2016 applicants) A minimum SAT math score of at least 450 or ACT math score of 18
- All other basic CSU eligibility requirements must be met.
- The following items are recommended
    - Completion of a course in pre-calculus (or equivalent course).
    - Completion of a course in physics.
    - (New for Fall 2016 applicants) completion of four years of high school math
    - Submission of a resumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Selection Methodology: Freshman Applicants

- Once an index score has been computed for each student, a minimum index score and (possibly) a minimum SAT math score or equivalent ACT math score will be used to match qualifying applications with the available number of freshman admission spaces.
- A faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission offers.

Conditional Admissions for First-Time Freshman Applicants

All admissions offers at Cal Maritime begin as conditional offers of admission. The specific conditions are noted on the initial offer of admission. A common condition of admission is the verification of academic information provided in the online application based on the final transcripts received by the summer deadline. These final transcripts also verify that the student has remained eligible for admission based on grades received in courses from the final one or two semesters of their schooling.

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 admissions 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) admissions when Cal Maritime verifies that they have graduated and received a diploma from high school, have a qualifying minimum eligibility index, have completed the comprehensive sequence of college-preparatory "A-G" subjects, and, if applying to an impacted program or campus, have met all supplementary criteria.

Cal Maritime reserves the right to revoked the admission or cancel the enrollment eligibility of an entering student if any printed, published, or e-mailed deadline is missed from the time a student submits their enrollment deposit to the time they arrive for New Student Orientation. It is the student's responsibility to check for notices of missing items or necessary actions in their Student Portal "To-Do List" and their official e-mail account. The non-refundable $500 deposit is forfeited if a student's enrollment is canceled due to the actions or inactions of the student. Providing false application information or not maintaining admission eligibility are also grounds for revoking an admission offer. Students may appeal canceled admission or enrollment by using the admission appeal process described at http://www.csum.edu/web/admissions/admissiondecision-appeal-process.

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 institution.

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 for enrollment. These examinations are designed to identify entering students who may need additional support in acquiring entry-level college English and mathematics skills that are necessary to succeed in CSU baccalaureate-level courses. Undergraduate students who do not demonstrate college-level skills both in English and in mathematics must take

remedial coursework. Students taking remedial courses 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 or the ELM at www.ets.org/csu. Testing opportunities are available at any campus of the CSU system.

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" or "Ready for college-level courses" on the CSU Early Assessment Program (EAP), taken in grade 11 along with the California Standards Test (CST) in English Language Arts
- A score of 500 or higher on the critical reading section of the College Board SAT Reasoning test
- A score of 22 or higher on the American College Testing (ACT) English test
- A score of 680 or higher on the re-centered and adjusted College Board SAT II: Writing test taken in May 1998 or later
- A score of 3 or higher on either the English Language and Composition or the English Literature and Composition examination of the College Board Advanced Placement (AP) program
- Completion and transfer to CSU of the credits for a college course that satisfies the CSU General Education requirement in English Composition, provided such a course was completed with a grade of C or higher

Entry Level Mathematics (ELM) Placement Examination

The Entry Level Mathematics (ELM) placement examination is designed to assess the skill levels of entering undergraduate students in those areas of mathematics that are typically covered in three years of college-preparatory mathematics courses in high school (Algebra I, Geometry, and Algebra II). 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 550 or higher on the mathematics section of the College Board SAT Reasoning test or on the College Board SAT Subject test - Mathematics Level 1 or Level 2
- A score of 23 or higher on the American College Testing (ACT) Mathematics Test
- A score of 3 or higher on the College Board Advanced Placement (AP) Calculus AB or Calculus BC exam or Statistics exam
- Completion and transfer to CSU of a course that satisfies the CSU General Education requirement in Quantitative Reasoning, provided such a course was completed with a grade of C or higher
- A score of "Exempt" or "Ready for college- level Mathematics courses" on the CSU Early Assessment Program (EAP), taken in grade 11 along with the CST in Summative High School Mathematics or Algebra II
- A score of "Conditionally ready for college-level Mathematics courses" or "Conditional" on the CSU Early Assessment Program (EAP), taken in grade 11 along with the CST in Summative High School Mathematics or Algebra II, with the successful completion of a CSU-approved 12th grade math course that requires Algebra II as a prerequisite

Early Start Program

http://www.csum.edu/web/ admissions/early-start-program

The CSU recently enacted a program known as "Early Start." It requires incoming students (California residents only) who do not demonstrate readiness for college-level math or English to begin remediation (enroll in and complete

approved remedial courses) during the summer before coming to the CSU campus at which they seek to enroll. The goals of Early Start are to better prepare students in math and English before their first semester, thereby improving their chances of completing a college degree.

The Early Start program's steps include taking the ELM and EPT tests, informing Cal Maritime about the school at which the student will complete the Early Start program, and submitting proof of course completion. Leaving any of these steps incomplete is grounds to remove the student from fall semester enrollment. Deadlines to be met and more detailed explanations can be found on the admissions web site.

All students who require remediation (including those in the Early Start program) are urged to seek out summer courses that fully complete the remediation process rather than courses that only begin remediation.

Proficiency After Enrollment

Cal Maritime may offer courses in remedial English (Introduction to English Composition) and mathematics (Intermediate Algebra) for those who did not complete remediation in the summer before enrollment. 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 from further enrollment at Cal Maritime.

Undergraduate Transfer Admissions Requirements

Transfer Student Admissions

The Marine Transportation, Marine Engineering Technology, Facilities Engineering Technology, and Mechanical Engineering majors have been designated as impacted. An undergraduate major or campus is designated as impacted when the number of applications received from fully qualified applicants during the initial filing period exceeds the number of available spaces.

As a result, applications to these majors will be reviewed based on the quantity and academic quality of the transfer applicant. Applicants are encouraged to complete pre-calculus before transferring. In addition, applicants may submit a resumé indicating leadership or experience.

Mechanical Engineering Transfer Student Impaction Plan for 2016

Additional Required and Recommended Admission Criteria

Lower Division Transfer Applicants

- One of the following math requirements must be met.
    - A college-level math course that is an immediate prerequisite to calculus must be passed with a "C-" or better within five years of the application term to be eligible for consideration along with a math SAT score of at least 550 or ACT math score of 23.
    - A college-level calculus course must be passed with a "C-" or better within five years prior to the application term.
- All other CSU eligibility requirements must be met.

- The following items are recommended
    - (New for Fall 2016 applicants) A college-level calculus II course passed with a "C-" or better within five years of the application term. Equivalent credit from passing the AP Calculus BC Exam may be used.
    - (New for Fall 2016 applicants) A college-level physics course (calculus-based with lab or engineering physics with a lab) passed with a "C-" or better within five years of the application term
    - (New for Fall 2016 applicants) A college-level chemistry course (with lab) passed with a "C-" or better
    - Submission of a résumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Upper Division Transfer Applicants

- (New for Fall 2016 applicants) A college-level calculus II course passed with a "C-" or better within five years of the application term. Equivalent credit from passing the AP Calculus BC Exam may be used
- (New for Fall 2016 applicants) A college-level physics course (calculus-based with lab or engineering physics with a lab) passed with a "C-" or better within five years of the application term
- (New for Fall 2016 applicants) A college-level chemistry course (with lab) passed with a "C-" or better
- Passing the three non-math "Golden Four" courses required for upper-division transfer admission to the CSU System (College-level English, Critical Thinking, and Oral Communication)
- The following item is recommended: Submission of a résumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Selection Methodology: Lower Division Transfer Applicants

- An index score is calculated based on high school grade point average and SAT or ACT scores.
- Once an index score has been computed for the high school careers of each student and the available college GPA has been calculated, a minimum score and/or GPA will be used to match qualifying applications with the available number of lower-division transfer admission spaces.
- If possible, a faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission consideration.

Selection Methodology: Upper Division Transfer Applicants

- Once applicants have been sorted based on College GPA, a minimum GPA will be used to match qualifying applications with the available number of upper division transfer admission spaces.
- If possible, a faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission consideration.

Facilities Engineering Technology and Marine Engineering Technology Transfer Student Impaction Plan for Fall 2016

Additional Required and Recommended Admission Criteria

Transfer Applicants

- Must pass a college algebra course (or higher level) with a "C-" or better within five years prior to the application term to be eligible for consideration.
- All lower division applicants must submit an SAT or ACT score.
- All other CSU eligibility requirements must be met.

- The following items are recommended
    - Completion of a course in pre-calculus (or equivalent course).
    - Completion of a course in physics.
    - (New for Fall 2016 applicants) completion of four years of high school math
    - Submission of a résumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Selection Methodology: Lower Division Transfer Applicants

- Once an index score has been computed for the high school careers of each student and the available college GPA has been calculated, a minimum score and/or GPA will be used to match qualifying applications with the available number of lower-division transfer admission spaces.
- If possible, faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission offers

Selection Methodology: Upper Division Transfer Applicants

- Once applicants have been sorted based on College GPA, a minimum GPA will be used to match qualifying applications with the available number of upper division transfer admission spaces.
- If possible, a faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission offers.

Marine Transportation Transfer Student Impaction Plan for Fall 2016

Additional Required and Recommended Admission Criteria

Transfer Applicants

- Must pass a college algebra course (or higher level) with a "C-" or better within five years prior to the application term to be eligible for consideration.
- All lower division applicants must submit an SAT or ACT score.
- All other CSU eligibility requirements must be met.
- The following items are recommended
    - Completion of a course in pre-calculus (or equivalent course).
    - Completion of a course in physics.
    - Submission of a résumé including the applicant's background connected to engineering, leadership, and/or the maritime industry

Selection Methodology: Lower Division Transfer Applicants

- Once an index score has been computed for the high school careers of each student and the available college GPA has been calculated, a minimum score and/or GPA will be used to match qualifying applications with the available number of lower-division transfer admission spaces.
- If possible, a faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission offers

Selection Methodology: Upper Division Transfer Applicants

- Once applicants have been sorted based on College GPA, a minimum GPA will be used to match qualifying applications with the available number of upper division transfer admission spaces.
- If possible, a faculty committee will evaluate students with academics near the impaction minimum to ensure those with remarkable backgrounds or experiences receive admission offers.

California STAR Act (SB 1440)

The Student Transfer Achievement Reform Act (SB 1440/Padilla) establishes a transfer Associate of Arts (AA-T) or Associate of Science (AS-T) degree for California community college students and is designed to provide a clear pathway to CSU degree majors. The Student Transfer Agreement Reform Act (STAR) commenced in fall 2011.

Students who receive a California community college associate's degree for transfer are eligible for admission as juniors in the California State University (CSU) system. A student who has earned one of these transfer degrees will not be guaranteed admission for a specific major or campus, but will be given priority admissions consideration to their local CSU campus, and to a program or major that is determined by the CSU to be similar to the transfer associate's degree. Upon enrollment at the CSU campus, the student will be eligible to graduate with sixty remaining semester units.

For the most current list of Cal Maritime majors and community colleges with degrees that have been designated as similar and eligible for STAR Act transfer students, please visit the following web page:
http://www.csum.edu/web/admissions/transfers

Transfer Students' Time to Graduation

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

This is because:

- by federal law, the minimum period of training shall be three years. The USCG approved deck and engine programs are four year programs
- degrees at Cal Maritime require up to 183 semester units. Most of the courses are specialized because of license requirements and are not available at other colleges
- students are allowed few open electives, and not every type of general education class is transferable to the degree program at Cal Maritime
- 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 (2.4 for non-residents), 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 (2.4 for non-residents).

Lower-division transfer

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

- submit your high school transcript
- submit SAT or ACT scores, unless your high school GPA was above 3.00
- make up any high school deficiencies on a course-by-course basis, usually by completing General Education courses
- earn at least a 2.00 GPA in all college work
- have met the CSU eligibility index with your high school courses
- earn a C- or higher in each General Education course
- be in good standing at the last educational institution attended

All Lower Division Transfer students must complete two subject areas with a grade of C- or higher prior to admission at Cal Maritime:

- a college English composition course (CSU General Education requirement A2)

- a college math course (CSU General Education requirement B4).

It is highly recommended, but not required, that students take a college pre-calculus course.

Students may also take elective courses applicable to their Cal Maritime major. To view the course curriculum for Cal Maritime majors, visit: https://www.csum.edu/web/majors/majors

Upper-division transfer

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

- earn at least a 2.0 GPA in all college work
- be in good standing at the last educational institution attended.

All upper-division transfer students should complete four subject areas with a grade of C- or higher prior to admission at Cal Maritime:

- a college English composition course (CSU General Education requirement A2);
- a college math course (CSU General Education requirement B4)
- a critical thinking / English literature course (CSU General Education requirement A3)
- an oral communication course (CSU General Education area A1)

These are often referred to as the "Golden 4" requirements. It is highly recommended, but not required, that students take a college pre-calculus course.

Students are also expected to have taken academic elective courses applicable to their Cal Maritime major. To view the course curriculum for Cal Maritime majors, visit: https://www.csum.edu/web/majors/majors

Transfer credit

Types of college credit given prior to enrollment for courses that meet degree requirements are as follows (see Cal Maritime equivalency tables at the end of this section):

- college work from regionally accredited institutions as listed in the American Association of Collegiate Registrars and Admissions Officers "Transfer Credit Practices of Designated Educational Institutions" information exchange report
- applicable Advanced Placement (AP) coursework completed with a score of 3, 4, or 5 on the AP test for that course.
- applicable International Baccalaureate (IB) coursework completed with a minimum score on the IB test for that course.
- College Level Examination Program (CLEP) exams in the areas of natural science, humanities (not including English), and social science/ history.
- 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"

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

- transfer courses graded as "credit" if not verified as equivalent to a grade of C- or higher
- some transfer courses older than 10 years. This time period may be even shorter for some courses that are technical or that have specific requirements by licensing agencies

Conditional admissions

All admissions offers at Cal Maritime begin as conditional offers of admission. The specific conditions are noted on the initial admissions offer. A common condition of admission is verification that the spring semester transcript confirms that the student has remained eligible for admission based on grades received in courses from that semester.

Conditional Admissions Transfer Applicants

All admissions offers at Cal Maritime begin as conditional offers of admission. The specific conditions are noted on the initial offer of admission. A common condition of admission is the verification of academic information provided in the online application based on the final transcripts received by the summer deadline. These final transcripts also verify that the student has remained eligible for admission based on grades received in courses from the final one or two semesters of their schooling.

Cal Maritime may rescind admissions 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.

Cal Maritime reserves the right to revoked the admission or cancel the enrollment eligibility of an entering student if any printed, published, or e-mailed deadline is missed from the time a student submits their enrollment deposit to the time they arrive for New Student Orientation. It is the student's responsibility to check for notices of missing items or necessary actions in their Student Portal "To-Do List" and their official e-mail account. The non-refundable $500 deposit is forfeited if a student's enrollment is canceled due to the actions or inactions of the student. Providing false application information or not maintaining admission eligibility are also grounds for revoking an admission offer. Students may appeal canceled admission or enrollment by using the admission appeal process described at http://www.csum.edu/web/admissions/admission-decision-appeal-process.

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 institution.

Adult Student Admissions

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

- possess a high school diploma or its equivalent (G.E.D. or California High School Proficiency Examination)
- have 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
- have an average GPA of 2.0 (C or higher) on all college coursework in the past five years
- meet the English and mathematics requirements for either first-time freshmen or transfer students with grades of C- or higher
- be in good standing at the last educational institution attended

Also recommended:

- successful completion, with a grade of C- or higher, a college-level algebra/trigonometry course in the past five years or work in a related technical field within the last two years
- successful completion, with a grade of C- or higher, a college-level English composition course

Veteran Student Admissions

http://www.csum.edu/web/admissions/veterans

The California State University's "Troops to College" initiative allows Cal Maritime to exercise flexibility with established admissions policies for veterans. Veterans should determine their category of application (first-time freshman, lower-division transfer, or upper-division transfer) and follow the instructions for that application category to the best of their ability.

If some requirements cannot be met, veteran applicants should contact the Admissions office and introduce themselves as a veteran, so exceptions can be discussed and appropriate advice given. In general, veterans who did not meet CSU eligibility in high school or were unsuccessful in attempts at college will need to complete college English and college math with a grade of C- or higher to be admitted.

International Student Admissions Requirements

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

The CSU uses separate requirements and application filing dates in the admissions process of international students. Verification of English proficiency, financial resources, and academic performance are all important considerations for admission.

International students should use the same application period of October 1 through November 30 of the year prior to the fall semester in which they plan to enroll. Cal Maritime does not accept applications for any other term. In some years, the application period for certain majors may be extended to accommodate additional applications.

International students seeking degrees that require a U.S. Coast Guard license are not eligible for those licenses without first gaining U.S. citizenship. International students in those degree programs will, however, receive their diplomas and letters of completion for presentation to their countries' licensing organizations.

International Student English Test Requirement

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

The minimum TOEFL score is 61.
The minimum IELTS score is 6.

Academic records from foreign schools must be submitted before an admissions decision is made. If not in English, these records 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 for all educational expenses including books, room and board: approximately $42,000 USD, the amount required to attend Cal Maritime for a year.

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-resident of California rate.

International students pursuing license-option degrees will be required to obtain a Mariners Document from their country of origin, or other appropriate maritime nation, in order to work as a Third Mate or Third Assistant Engineer on vessels flagged under nations other than the United States.

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 Cal Maritime. 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. Additional information may be obtained by writing the Admissions office.

Resident Aliens

Resident aliens (Permanent Residents) may submit a certified Permanent Resident Card (Form I-551) in lieu of a birth certificate for admissions. The Immigration and Customs Enforcement agency requires a passport or other legal travel document to sail on the training cruise, so students are advised to apply for those documents as soon as possible.

Immigration Requirements for Licensure

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193), also known as the Welfare Reform Act, includes provisions to eliminate eligibility for federal and state public benefits for certain categories of lawful immigrants as well as benefits for all illegal immigrants.

Students who will require a professional or commercial license provided by a local, state, or federal government agency in order to engage in an occupation for which the CSU may be training them must meet the immigration requirements of the Personal Responsibility and Work Opportunity Reconciliation Act to achieve licensure. Information regarding the application of these requirements is available from the Admissions office.

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, health documents, and financial aid forms. In addition, 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).

Admissions Appeals Process

An applicant who has been denied admission may have that decision reconsidered. The applicant must compose a short letter detailing the reason(s) for the appeal. The letter and supporting documentation (evidence) must supply new information that was not available to the applicant when the original application was submitted. The most updated appeal procedures and policies are online at http://www.csum.edu/web/admissions/admission-decision-appeal-process. Some examples of decisions that a student may appeal:

Missed deadlines for

- application fee
- test scores (ACT or SAT)

- final high school transcript
- college transcript(s)
- acceptance of offer/enrollment deposit
- required math or English placement tests
- remediation in math or English as required but not attempted (Early Start program)

Admissions criteria based decisions such as

- freshman with a low eligibility index
- freshman missing college-prep course(s)
- transfer missing a "golden 4" requirement
- transfer with a low GPA
- transfer with fewer than 60 units and not meeting minimum high school qualifications

Appeal Procedure

All requests must include documentation related to the extraordinary circumstances to be considered for the appeal. Proof must be provided that the established admissions criteria for the type of admission (freshman or transfer) and all deadlines have been met. Also:

- there is a limit of one appeal per application per
- academic term
- the appeal must be received no later than 15 days from the date of the admission decision notification
- Appeal packets must include:
    - A letter of appeal
    - Documentation to support the appeal (e.g., transcripts, SAT/ACT scores, proof of mailing/submission of requested information, etc.)

Appeal letters must be submitted by the applicant. Appeal letters written by anyone other than the applicant will not be considered. Letters of recommendation will not be considered.

Appeal packets must be submitted by:

- Mail to:
  CSU Maritime Academy
  Office of Admissions-Admissions Appeals
  200 Maritime Academy Drive
  Vallejo, CA 94590-8181
- FAX to: 707-654-1336
- e-mail to: admission@csum.edu

After the appeal is received and reviewed, applicants will be notified of the appeal decision within two weeks by e-mail. Appeal applicants are advised to explore other college options or other educational pursuits while waiting for the appeal decision.

Reporting errors made on the application are not a basis for the reversal of a decision.

Decisions rendered are final and non-negotiable.

Systemwide Credit for Advanced Placement Courses

AP Tests

College Board Advanced Placement Courses (AP)	Passing Score	Minimum Semester Credits Earned[1]	Cal Maritime Equivalency	Semester Credits Toward GE Breadth Certification	American Institutions and/or GE Breadth Area[2]
AP Art History	3	6	n/a	3	C1 or C2
AP Biology	3	6	n/a	4	B2+B3
AP Calculus AB[4]	3	3	MTH 210	3	B4
AP Calculus BC[4]	3	6	MTH 210 & MTH 211	3	B4
AP Calculus BC/AB Subscore[4]	3	3	MTH 210 & MTH 211	3	B4
AP Chemistry	3	6	CHE 110/110L	4	B1+B3
AP Chinese Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Comparative Government & Politics	3	3	GMA 215	3	D8
AP Computer Science A[4]	3	3	n/a	0	n/a
AP Computer Science AB[4]	3	6	n/a	0	n/a
AP Computer Science Principles[4]	3	6	n/a	0	n/a
AP English Language	3	6	EGL 100	3	A2
AP English Literature	3	6	EGL 100	6	A2+C2
AP Environmental Science[5]	3	4	n/a	4	B1+B3
AP European History	3	6	n/a	3	C2 or D6
AP French Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP German Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Human Geography	3	3	n/a	3	D5

AP Italian Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Japanese Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Latin	3	3	Language Semester 1 and 2	3	C2
AP Macroeconomics	3	3	ECO 100	3	D
AP Microeconomics	3	3	ECO 101	3	D
AP Physics 1[6]	3	4	PHY 100/100L	3	B1+B3
AP Physics 2[6]	3	4	n/a	4	B1+B3
AP Physics C (electricity/magnetism)[6]	3	4	PHY 200/200L	4	B1+B3
AP Physics C (mechanics)[6]	3	4	PHY 200/200L	4	B1+B3
AP Psychology	3	3	n/a	3	D
AP Spanish Language and Culture	3	6	Language Semester 1 and 2	3	C2
AP Spanish Literature	3	6	n/a	3	C2
AP Statistics	3	3	MTH 107	3	B4
AP Studio Art - 2D	3	3	n/a	0	n/a
AP Studio Art - 3D	3	3	n/a	0	n/a
AP Studio Art - Drawing	3	3	n/a	0	n/a
AP U.S. Government & Politics	3	3	American Institutions II	3	D+US-2
AP U.S. History	3	6	American Institutions I	3	(C2 or D)+US-1
AP World History	3	6	n/a	3	C2 or D

[1]These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for Academic Affairs Coded Memo AA-2011-12 for details.

[2]Areas of GE Breadth (A1 through E) are defined in EO 1033. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 405, and at assist.org.

[4]If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.

[5]Students who pass AP Environmental Science earn 4 units of credit. Tests prior to Fall 2009 may apply to either B1+B3 or B2+B3 of GE Breadth. Fall of 2009 or later, those credits may only apply to B1+B3.

[6]If a student passes more than one AP exam in physics, only six units of credit may be applied to the baccalaureate, and only four units of credit may be applied to a certification in GE Breadth.

Systemwide Credit for College-Level Examination Program Tests

CLEP Tests

College-Level Examination Program (CLEP)	Passing Score	Minimum Semester Credits Earned[1]	Cal Maritime Equivalency	Semester Credits Toward GE Breadth Certification	American Institutions and/or GE Breadth Area[2]
CLEP American Government	50	3	n/a	3	D
CLEP American Literature	50	3	n/a	3	C2
CLEP Analyzing and Interpreting Literature	50	3	n/a	3	C2
CLEP Biology	50	3	n/a	3	B2
CLEP Calculus	50	3	MTH 210	4	B4
CLEP Chemistry	50	3	CHE 110	3	B1
CLEP College Algebra	50	3	n/a	3	B4
CLEP College Algebra - Trigonometry	50	4	MTH 100	3	B4
CLEP English Composition (No Essay)	50	0	n/a	0	n/a
CLEP English Composition with Essay	50	0	n/a	0	n/a
CLEP English Literature	50	3	n/a	3	C2 (before F11)

CLEP Financial Accounting	50	3	n/a	0	n/a
CLEP French[1] Level I	50	6	Language Semester 1 and 2	0	n/a
CLEP French[1] Level II	59	9	Language Semester 1 and 2	3	C2
CLEP Freshman College Composition	50	0	n/a	0	n/a
CLEP German[1] Level I	50	6	Language Semester 1 and 2	0	n/a
CLEP German[1] Level II	60	9	Language Semester 1 and 2	3	C2
CLEP History, United States I	50	3	American Institutions I	3	D+US-1
CLEP History, United States II	50	3	American Institutions 1	3	D+US-1
CLEP Human Growth and Development	50	3	n/a	3	E
CLEP Humanities	50	3	n/a	3	C2
CLEP Information Systems and Computer Applications	50	3	COM 100	0	n/a
CLEP Introduction to Educational Psychology	50	3	n/a	0	n/a
CLEP Introductory Business Law	50	3	n/a	0	n/a
CLEP Introductory Psychology	50	3	n/a	3	D
CLEP Introductory Sociology	50	3	n/a	3	D
CLEP Natural Sciences	50	3	n/a	3	B1 or B2
CLEP Pre-Calculus	50	3	MTH 100	3	B4
CLEP Principles of Accounting	50	3	n/a	0	n/a
CLEP Principles of Macroeconomics	50	3	ECO 100	3	D

CLEP Principles of Management	50	3	n/a	0	n/a
CLEP Principles of Marketing	50	3	n/a	0	n/a
CLEP Principles of Microeconomics	50	3	ECO 101	3	D
CLEP Social Sciences and History	50	3	n/a	3	n/a
CLEP Spanish[1] Level I	50	6	Language Semester 1 and 2	0	n/a
CLEP Spanish[1] Level II	63	9	Language Semester 1 and 2	3	C2
CLEP Trigonometry	50	3	n/a	3	B4 (before F06)
CLEP Western Civilization I	50	3	n/a	3	C2 or D
CLEP Western Civilization II	50	3	n/a	3	D

*These units count toward eligibility for admission. The units may not all apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

**Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org.

[1]For CLEP tests in the same language other than English:

- Only one exam score may be applied towards the CSU degree.
- A passing score of 50 is considered "Level I" and earns six units of baccalaureate credit.
- A passing score higher than 50 is considered "Level II" and earns additional units of credit and placement in Area C2 of GE Breadth.

Systemwide Credit for International Baccalaureate Exams

IB Tests

International Baccalaureate (IB)	Passing Score	Minimum Semester Credits Earned[1]	Cal Maritime Equivalency	Semester Credits Toward GE	American Institutions and/or GE Breadth Area[2]

				Breadth Certification	
IB Biology HL	5	6	n/a	3	B2
IB Chemistry HL	5	6	CHE 110	3	B1
IB Economics HL	5	6	n/a	3	D
IB Geography HL	5	6	n/a	3	D
IB History (any region) HL	5	6	n/a	3	C2 or D
IB Language A[1] (any language) HL	4	6	n/a	3	C2
IB Language A[2] (any language) HL	4	6	n/a	3	C2
IB Language B (any language) HL[8]	4	6	n/a	0	n/a
IB Mathematics HL	4	6	n/a	3	B4
IB Physics HL	5	6	n/a	3	B1
IB Psychology HL	5	3	n/a	3	D
IB Theatre HL	4	6	n/a	3	C1

*These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

**Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org.

***The IB currciulum offers language at various levels for native and non-native speakers. Language B courses are offered at the intermediate level for nonnatives. Language A1 and A2 are advanced courses in literature for native and non-native speakers, respectively.