

Please inform the Registrar's Office if you choose an alternate option.
 Otherwise your Academic Advisement Report will be incorrect.

STUDENTS ENTERING IN 2025
MECHANICAL ENGINEERING MAJOR
U.S. COAST GUARD THIRD ASSISTANT ENGINEER LICENSE OPTION
DIVISIONS 1&2
CURRICULUM ROADMAP

11/06/24
 Subject to Change

Total Units: 171

FALL 2025

CHE 110	General Chemistry (Area 5A-Lower Div)	3.0
CHE 110L	General Chemistry Lab (Area 5C-Lower Div)	1.0
EGL 100	English Composition (Area 1A) "G4"	3.0
ENG 110	Introduction to Engineering and Technology*	1.0
ENG 112	Intro to Technical Communication* (Area 1C☆) "G4"	2.0
EPO 110	Plant Operations I▶	1.0
EPO 125	Introduction to Marine Engineering	3.0
EPO 125L	Introduction to Marine Engineering Lab	1.0
EPO 213	Welding Lab▶	1.0
MTH 210	Calculus I (Area 2-Lower Div) "G4"	4.0
PE 101	Swim Competency Exam	0.0
PE 102	Beginning/Intermediate Swimming	(0.5)
Total		20.0

SPRING 2026

Arts Elective (Area 3A-Lower Div)	3.0	
DL 105	Marine Survival▶	1.0
DL 105L	Marine Survival Lab▶	1.0
DL 105X	USCG Lifeboatman's Exam	0.0
EGL 220	Critical Thinking	3.0
Critical Thinking Elective (Area 1B) "G4"	1.0	
FF 100	Basic Marine Firefighting▶	0.0
ME 220	Computer Aided Design*	2.0
MTH 211	Calculus II (Area 2-Lower Div)	4.0
NAU 104	Shipboard Security and Responsibility▶	1.0
PHY 200	Engineering Physics I (Area 5A-Lower Div)	3.0
PHY 200L	Engineering Physics I Lab (Area 5C-Lower Div)	1.0
Total		19.0

SUMMER SEA TERM 2026

CRU 150	Sea Training I (Engine)▶	8.0
Total		8.0

English Communication

Mathematical Concepts and Quantitative Reasoning

Arts and Humanities

FALL 2026

ENG 210	Engineering Computer Programming	2.0
EPO 210	Plant Operations II▶	1.0
EPO 215	Manufacturing Processes I▶	1.0
EPO 220	Diesel Engineering I	1.0
EPO 220L	Diesel Engineering I Lab	1.0
ME 230	Engineering Materials*	3.0
ME 232	Engineering Statics*	3.0
MTH 212	Calculus III (Area 2-Lower Div)	4.0
PHY 205	Engineering Physics II (Area 5A-Lower Div)	3.0
PHY 205L	Engineering Physics II Lab	1.0
Total		20.0

SPRING 2027

Humanities Elective (Area 3B-Lower Div)	3.0	
ENG 250	Electrical Circuits and Electronics▶*	3.0
ENG 250L	Electrical Circuits and Electronics Lab▶*	1.0
EPO 214	Boilers▶	3.0
EPO 230	Steam Plant System Operations▶	1.0
ME 240	Engineering Thermodynamics*	3.0
ME 330	Engineering Dynamics*	3.0
MTH 215	Differential Equations (Area 2-Lower Div)	3.0
Total		20.0

SUMMER SEA TERM 2027

CRU 250	Sea Training II	8.0
Total		8.0

Social and Behavioral Sciences

Physical and Biological Sciences

Ethnic Studies

FALL 2027

Life Science Elective (Area 5B-Lower Div)	3.0	
EPO 235	Steam Plant Watch Team Management▶	1.0
EPO 312	Turbines▶	3.0
EPO 322	Diesel Engineering II/Simulator	1.0
EPO 322L	Diesel Engineering II/Simulator Lab▶	1.0
ME 332	Mechanics of Materials*	3.0
ME 340	Engineering Fluid Mechanics*	3.0
ME 360	Instrumentation and Measurement Systems*	2.0
ME 360L	Instr. and Measurement Systems Lab*	1.0
Total		18.0

SPRING 2028

CSU Graduate Writing Assessment Requirement (GWAR) Elective♦	(3.0)	
EPO 310	Plant Operations III▶	1.0
EPO 343	Refrigeration & A/C▶	1.0
ME 344	Heat Transfer*	3.0
ME 392	Mechanical Design*	3.0
ME 429	Manufacturing Processes Lab*	1.0
ME 436	Mechatronic System Design▶*	2.0
ME 436L	Mechatronic System Design Lab▶*	1.0
ME 490	Engineering Design Process* (Area 1C☆) "G4"	3.0
Total		15.0

SUMMER SEA TERM 2028

CRU 350	Sea Training III (Engine)▶	8.0
Total		8.0

**THIRD ASSISTANT ENGINEER/OICEW LICENSE
 REQUIRED FOR GRADUATION**

"G4" "Golden 4" Courses (Must receive a "C-" or higher)

☆ GE Area 1C Sequence of Two Courses

♦ The CSU Graduate Writing Assessment Requirement (GWAR) may be met by passing one of the following courses: EGL 300 Advanced Writing or EGL 302 Nonfiction Writing. (Must receive a "C-" or higher)

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

* Courses in Major (CGPA = 2.0 is required)

FALL 2028

HIS 100	U.S. History (to 1877) OR HIS 101 U.S. History (from 1877)	3.0
American Institutions I Elective (Area 4-Lower Div) OR (Area 6)	3.0	
Social Science Elective (Area 4-Lower Div)	3.0	
ENG 430	Naval Architecture▶*	3.0
ME 350	Electromechanical Machinery*	3.0
ME 350L	Electromechanical Machinery Lab▶*	1.0
ME 462	Experimental Methods in ME*	2.0
ME 462L	Experimental Methods in ME Lab*	1.0
ME 492	Project Design I*	2.0
ME 492L	Project Design I Lab*	1.0
Total		19.0

SPRING 2029

Arts/Humanities Upper Div Elective (Area 3-Upper Div)	3.0	
ENG 310	Engineering Ethics (Area 4-Upper Div)	3.0
EPO 217	Shipboard Medical▶	1.0
FF 300	Advanced Marine Firefighting▶	0.0
GOV 200	American Government	3.0
American Institutions II Elective (Area 4-Lower Div)	1.0	
ME 460	Automatic Feedback Control▶*	3.0
ME 494	Project Design II*	2.0
ME 494L	Project Design II Lab*	1.0
Total		16.0