

Please inform the Registrar's Office if you choose an alternate option.
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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

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

**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)

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MECHANICAL ENGINEERING MAJOR
U.S. COAST GUARD THIRD ASSISTANT ENGINEER LICENSE OPTION
DIVISIONS 3&4
CURRICULUM ROADMAP

11/06/24
 Subject to Change

Total Units: 171

FALL 2025

Arts Elective (Area 3A-Lower Div)	3.0
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
FF 100 Basic Marine Firefighting▶	0.0
ME 220 Computer Aided Design▶*	2.0
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	19.0

SPRING 2026

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
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 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	20.0

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
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SUMMER SEA TERM 2027

CRU 250 Sea Training II	8.0
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Social and Behavioral Sciences

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Ethnic Studies

FALL 2027

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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
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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

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ME 350L Electromechanical Machinery Lab▶*	1.0
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ME 462L Experimental Methods in ME Lab*	1.0
ME 492 Project Design I*	2.0
ME 492L Project Design I Lab*	1.0
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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