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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**

<b>FALL 2025</b>			<b>SPRING 2026</b>			<b>SUMMER SEA TERM 2026</b>		
CHE 110	General Chemistry (Area 5A-Lower Div)	3.0	Arts Elective (Area 3A-Lower Div)	3.0	CRU 150 Sea Training I (Engine)▶	8.0		
CHE 110L	General Chemistry Lab (Area 5C-Lower Div)	1.0	DL 105 Marine Survival▶	1.0			<b>Total</b>	<b>8.0</b>
EGL 100	English Composition (Area 1A) "G4"	3.0	DL 105L Marine Survival Lab▶	1.0				
ENG 110	Introduction to Engineering and Technology*	1.0	DL 105X USCG Lifeboatman's Exam	0.0				
ENG 112	Intro to Technical Communication* (Area 1C★) "G4"	2.0	EGL 220 Critical Thinking	3.0				
EPO 110	Plant Operations I▶	1.0	Critical Thinking Elective (Area 1B) "G4"					
EPO 125	Introduction to Marine Engineering	3.0	FF 100 Basic Marine Firefighting▶	0.0	English Communication			
EPO 125L	Introduction to Marine Engineering Lab	1.0	ME 220 Computer Aided Design*	2.0				
EPO 213	Welding Lab▶	1.0	MTH 211 Calculus II (Area 2-Lower Div)	4.0	Mathematical Concepts and Quantitative Reasoning			
MTH 210	Calculus I (Area 2-Lower Div) "G4"	4.0	NAU 104 Shipboard Security and Responsibility▶	1.0				
PE 101	Swim Competency Exam	0.0	PHY 200 Engineering Physics I (Area 5A-Lower Div)	3.0	Arts and Humanities			
PE 102	Beginning/Intermediate Swimming	(0.5)	PHY 200L Engineering Physics I Lab (Area 5C-Lower Div)	1.0				
<b>Total</b>		<b>20.0</b>	<b>Total</b>	<b>19.0</b>				
<b>FALL 2026</b>			<b>SPRING 2027</b>			<b>SUMMER SEA TERM 2027</b>		
ENG 210	Engineering Computer Programming	2.0	Humanities Elective (Area 3B-Lower Div)	3.0	CRU 250 Sea Training II	8.0		
EPO 210	Plant Operations II▶	1.0	ENG 250 Electrical Circuits and Electronics▶*	3.0			<b>Total</b>	<b>8.0</b>
EPO 215	Manufacturing Processes I▶	1.0	ENG 250L Electrical Circuits and Electronics Lab▶*	1.0				
EPO 220	Diesel Engineering I	1.0	EPO 214 Boilers▶	3.0				
EPO 220L	Diesel Engineering I Lab	1.0	EPO 230 Steam Plant System Operations▶	1.0	Social and Behavioral Sciences			
ME 230	Engineering Materials*	3.0	ME 240 Engineering Thermodynamics*	3.0				
ME 232	Engineering Statics*	3.0	ME 330 Engineering Dynamics*	3.0	Physical and Biological Sciences			
MTH 212	Calculus III (Area 2-Lower Div)	4.0	MTH 215 Differential Equations (Area 2-Lower Div)	3.0				
PHY 205	Engineering Physics II (Area 5A-Lower Div)	3.0			Ethnic Studies			
PHY 205L	Engineering Physics II Lab	1.0						
<b>Total</b>		<b>20.0</b>	<b>Total</b>	<b>20.0</b>				
<b>FALL 2027</b>			<b>SPRING 2028</b>			<b>SUMMER SEA TERM 2028</b>		
Life Science Elective (Area 5B-Lower Div)		3.0	CSU Graduate Writing Assessment Requirement (GWAR) Elective♦	(3.0)	CRU 350 Sea Training III (Engine)▶	8.0		
EPO 235	Steam Plant Watch Team Management▶	1.0	EPO 310 Plant Operations III▶	1.0			<b>Total</b>	<b>8.0</b>
EPO 312	Turbines▶	3.0	EPO 343 Refrigeration & A/C▶	1.0				
EPO 322	Diesel Engineering II/Simulator	1.0	ME 344 Heat Transfer*	3.0				
EPO 322L	Diesel Engineering II/Simulator Lab▶	1.0	ME 392 Mechanical Design*	3.0				
ME 332	Mechanics of Materials*	3.0	ME 429 Manufacturing Processes Lab*	1.0				
ME 340	Engineering Fluid Mechanics*	3.0	ME 436 Mechatronic System Design▶*	2.0				
ME 360	Instrumentation and Measurement Systems*	2.0	ME 436L Mechatronic System Design Lab▶*	1.0				
ME 360L	Instr. and Measurement Systems Lab*	1.0	ME 490 Engineering Design Process* (Area 1C★) "G4"	3.0				
<b>Total</b>		<b>18.0</b>	<b>Total</b>	<b>15.0</b>				
<b>FALL 2028</b>			<b>SPRING 2029</b>					
HIS 100	U.S. History (to 1877) OR HIS 101 U.S. History (from 1877)	3.0	Arts/Humanities Upper Div Elective (Area 3-Upper Div)	3.0				
American Institutions I Elective (Area 4-Lower Div) OR (Area 6)		3.0	ENG 310 Engineering Ethics (Area 4-Upper Div)	3.0				
Social Science Elective (Area 4-Lower Div)		3.0	EPO 217 Shipboard Medical▶	1.0				
ENG 430	Naval Architecture▶*	3.0	FF 300 Advanced Marine Firefighting▶	0.0				
ME 350	Electromechanical Machinery*	3.0	GOV 200 American Government	3.0				
ME 350L	Electromechanical Machinery Lab▶*	1.0	American Institutions II Elective (Area 4-Lower Div)					
ME 462	Experimental Methods in ME*	2.0	ME 460 Automatic Feedback Control▶*	3.0				
ME 462L	Experimental Methods in ME Lab*	1.0	ME 494 Project Design II*	2.0				
ME 492	Project Design I*	2.0	ME 494L Project Design II Lab*	1.0				
ME 492L	Project Design I Lab*	1.0						
<b>Total</b>		<b>19.0</b>	<b>Total</b>	<b>16.0</b>				

**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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**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)
<b>Total</b>	<b>19.0</b>

**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"	
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
<b>Total</b>	<b>20.0</b>

**SUMMER SEA TERM 2026**

CRU 150 Sea Training I (Engine)▶	8.0
<b>Total</b>	<b>8.0</b>

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
<b>Total</b>	<b>20.0</b>

**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
<b>Total</b>	<b>20.0</b>

**SUMMER SEA TERM 2027**

CRU 250 Sea Training II	8.0
<b>Total</b>	<b>8.0</b>

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
<b>Total</b>	<b>18.0</b>

**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
<b>Total</b>	<b>15.0</b>

**SUMMER SEA TERM 2028**

CRU 350 Sea Training III (Engine)▶	8.0
<b>Total</b>	<b>8.0</b>

**FALL 2028**

HIS 100 U.S. History (to 1877) OR HIS 101 U.S. History (from 1877)	
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
<b>Total</b>	<b>19.0</b>

**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)	
ME 460 Automatic Feedback Control▶*	3.0
ME 494 Project Design II*	2.0
ME 494L Project Design II Lab*	1.0
<b>Total</b>	<b>16.0</b>

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