

Please inform the Registrar's Office if you choose an alternate option. **STUDENTS ENTERING IN 2019**
 Otherwise your Academic Advisement Report will be incorrect. **MECHANICAL ENGINEERING MAJOR**
THIRD ASSISTANT ENGINEER'S LICENSE OPTION
DIVISIONS 1&2
CURRICULUM

REVISED 1/15/21
 Subject to Change

Total Units: 162

THIRD ASSISTANT ENGINEER'S LICENSE COURSES ARE BOLDED. ADDITIONAL UNITS MUST BE ADDED TO TOTAL FOR EACH SEMESTER.

<u>FALL 2019</u>		<u>SPRING 2020</u>		<u>SUMMER CRUISE 2020</u>		
CHE 110	General Chemistry (Area B1)	3.0	Humanities Elective (Area C2-Lower Div)	3.0	CRU 150 Sea Training I (Engine)▶	8.0
CHE 110L	General Chemistry Lab (Area B3)	1.0	DL 105 Marine Survival▶	1.0	EPO 220 Diesel Engineering I	2.0
EGL 100	English Composition (Area A2) "G4"	3.0	DL 105L Marine Survival Lab▶	1.0	Total	10.0
EGL 120	Technical Communication* (Area A1) "G4"	3.0	DL 105X USCG Lifeboatman's Exam	0.0		
ENG 110	Introduction to Engineering and Technology*	1.0	EGL 220 Critical Thinking	3.0		
EPO 110	Plant Operations I▶	1.0	[Critical Thinking Elective] (Area A3) "G4"			
EPO 125	Introduction to Marine Engineering	3.0	FF 200 Basic/Advanced Marine Firefighting▶	0.0		
EPO 213	Welding Lab▶	1.0	MTH 211 Calculus II (Area B4)	4.0		
MTH 210	Calculus I (Area B4) "G4"	4.0	NAU 104 Shipboard Security and Responsibility▶	1.0		
PE 101	Swim Competency Exam	0.0	PHY 200 Engineering Physics I (Area B1)	3.0		
PE 102	Beginning/Intermediate Swimming	(0.5)	PHY 200L Engineering Physics I Lab (Area B3)	1.0		
Total	20.0	Total	17.0			

<u>FALL 2020</u>		<u>SPRING 2021</u>		<u>SUMMER CRUISE 2021</u>		
ENG 210	Engineering Computer Programming	2.0	ENG 250 Electrical Circuits and Electronics▶*	3.0	CRU 250 Sea Training II	8.0
EPO 210	Plant Operations II▶	1.0	ENG 250L Electrical Circuits and Electronics Lab▶*	1.0	Total	8.0
EPO 215	Manufacturing Processes I▶	1.0	EPO 214 Boilers▶	3.0		
ME 220	Computer Aided Engineering▶*	2.0	EPO 230 Steam Plant System Operations▶	1.0		
ME 230	Engineering Materials*	3.0	ME 240 Engineering Thermodynamics*	3.0		
ME 232	Engineering Statics*	3.0	ME 330 Engineering Dynamics*	3.0		
MTH 212	Calculus III (Area B4)	4.0	ME 332 Mechanics of Materials*	3.0		
PHY 205	Engineering Physics II (Area B1)	4.0	MTH 215 Differential Equations (Area B4)	4.0		
Total	19.0	Total	17.0			

<u>FALL 2021</u>		<u>SPRING 2022</u>		<u>SUMMER CRUISE 2022</u>	
Life Science Elective (Area B2)	3.0	EGL 300 Advanced Writing	(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	Total	8.0
EPO 312 Turbines▶	3.0	EPO 343 Refrigeration & A/C▶	1.0		
EPO 322 Diesel Engineering II/Simulator	1.0	ME 339 Material/Mechanical Lab*	2.0		
EPO 322L Diesel Engineering II/Simulator Lab▶	1.0	ME 344 Heat Transfer*	3.0		
ME 340 Engineering Fluid Mechanics*	3.0	ME 392 Mechanical Design*	3.0		
ME 350 Electromechanical Machinery*	3.0	ME 460 Automatic Feedback Control▶*	2.0		
ME 350L Electromechanical Machinery Lab▶*	1.0	ME 460L Automatic Feedback Control Lab*	1.0		
ME 360 Instrumentation and Measurement Systems*	2.0	ME 490 Engineering Design Process*	3.0		
ME 360L Instr. and Measurement Systems Lab*	1.0	STEM 1 Stem Course (See Box)*	3.0		
Total	13.0	Total	17.0		

<u>FALL 2022</u>		<u>SPRING 2023</u>			
American Institutions I Elective (Area D-Lower Div)	3.0	Humanities Elective (Area C-Upper Div)	3.0		
Social Science Elective (Area D-Lower Div)	3.0	ENG 310 Engineering Ethics (Area D-Upper Div)	3.0		
ENG 430 Naval Architecture▶*	3.0	EPO 217 Shipboard Medical▶	1.0		
ME 349 Fluid/Thermal Lab*	2.0	GOV 200 American Government	3.0		
ME 394 Fluid/Thermal Design*	3.0	[American Institutions II Elective] (Area D-Lower Div)			
ME 492 Project Design I*	2.0	ME 429 Manufacturing Processes Lab*	1.0		
ME 492L Project Design I Lab*	1.0	ME 494 Project Design II*	2.0		
STEM 2 Stem Course (See Box)*	3.0	ME 494L Project Design II Lab*	1.0		
Total	17.0	STEM 3 Stem Course (See Box)*	3.0		
		Total	16.0		

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

CSU Writing Proficiency Requirements may be met by passing the Graduate Writing Exam, or passing EGL 300 Advanced Writing.

"G4" "Golden 4" Courses (Must receive a "C-" or higher)
 ▶ **STCW Courses (Must receive a "C-" or higher, or "CR")**
 * **Courses in Major (CGPA = 2.0 is required)**

STEM COURSES

Energy Design Stem
 1 - ME 440 Advanced Fluids & Thermodynamics (Spring 2022)*
 2 - ME 442 Heating, Ventilation and A/C Design (Fall 2022)*
 3 - ME 444 Energy Systems Design (Spring 2023)*

Mechanical Design Stem
 1 - ME 436 Mechatronic System Design (Spring 2022)*
 2 - ME 430 Mechanical Vibrations (Fall 2022)*
 3 - ME 432 Machinery Design (Spring 2023)*