

MARITIME - ENGINEERING OFFICER, BACHELOR OF SCIENCE

Course Sequence Guide

Course	Title	Credits
First Year		
Pre-Fall		
MDK 100	Survival at Sea	1
MNG 100	Intro to Vessel Operations	1
Credits		2
Fall		
MNG 104	Engine Systems Graphics	3
MNG 110	Engineering Mechanics	3
ENG 111	English Composition ¹	4
MTH 121	College Algebra ¹	4
Credits		14
Spring		
MNS 100	Naval Science	2
MNG 234	Electronic Fundamentals	4
MNG 314	Diesel Engineering	7
MTH 122	Trigonometry ¹	3
Credits		16
Summer		
MNG 317	Engineering Sea Project I ²	3
Credits		3
Second Year		
Fall		
MNG 250	Fluid Systems	3
MNG 260	Maritime Machining	2
MNG 335	Electric Machines and Controls	4
MNG 336	Electric Mach. & Controls Lab	2
CHM 101	Introductory Chemistry ¹	4
Credits		15
Spring		
MNG 105	Shipboard Information Systems	3
MDK 149	Damage Control & Safety	2
MNG 271	Maritime Welding	2
MNG 321	Marine Boilers	3.5
MNG 322	Marine Turbines	2.5
MNG 323	Marine Steam Lab	1
ENG 220 or ENG 112	Technical Writing ¹ or English Composition	3
Credits		17
Summer		
No Classes		
Credits		0

Third Year

Fall

MNG 318	Engineering Sea Project II ²	6
Credits		6

Spring

MNG 275	Refrigeration	3
MDK 341	Ship Construction	2
GLMA Program Elective ¹		3
GLMA Program Elective ¹		3
NMC Humanities Elective (Group 1) ¹		3
PHL 202	Contemporary Ethical Dilemmas ¹	3
Credits		17

Summer

MNG 319	Engineering Sea Project III ²	6
Credits		6

Fourth Year

Fall

MDK 250	Stability for the Engineer	1
MDK 330	Medical First Aid Provider	2
MNG 455	Engine Room Resource Mgmt.	2
MNG 466	Engine Room Business	2
MNG 496	License Preparation - Engine	2
GLMA Program Elective ¹		3
Credits		12

Spring

PLS 101	Intro to American Politics ¹	3
GLMA Program Elective ¹		3
GLMA Program Elective ¹		3
GLMA Program Elective ¹		3
Credits		12

Total Credits

120

¹ General education classes

² Sailing projects/internships

Cadets must earn a minimum of 2.0 grade in all Maritime, NMC and transfer classes (BSMT is 120 credit hours).

Additional Requirements/Certifications

- VPDS
- Firefighting
- First Aid/CPR/AED
- In Port Sea Days (30 required)
- Completed Sea Days
- Personal Safety & Social Responsibility Training

Course	Title	Credits
	Maritime/Sea Projects Credit Hours	75
	NMC Credit Hours	45
Total Credits		120

Approved Program Electives (NMC course transfer or equivalent)

21 credit hours required

Course	Title	Credits
ACC 121	Accounting Principles I	4
BUS 231	Professional Communications	3
BUS 261	Business Law I	3
CIT 110	Programming Logic and Design	3
CIT 210	Microsoft Office - Excel	3
CIT 213	Networking Technologies	4
CIT 233	Project Management	3
COM 101	Introduction to Communication	4
COM 111	Public Speaking	4
DD 110	Basic Metallurgy	3
EET 221	Industrial Controls ¹	3
EET 232	Programmable Logic Controllers ¹	3
EET 304	Marine Electronics ²	3
EGR 201	Statics ²	3
EGR 202	Mechanics of Materials ²	3
EGR 203	Dynamics ²	4
HST 101	Western Civilization to 1500AD	4
HST 102	Western Civilization from 1500	4
HST 111	U S History to 1865	4
HST 112	U S History Since 1865	4
HST 211	Native American History	3
HST 212	African-American History	3
HST 213	American Women's History	3
HST 225	American Civil War	3
HST 228	The Vietnam War	3
HST 230	A History of Michigan	3
HST 235	20th Century Europe	3
HUM 101	Introduction to Humanities	3
HUM 102	Introduction to Humanities	3
HUM 116	World Cultures	4
MDK 445	Liquid Cargo Stowage	2
MFG 114	Machining II ³	3
MFG 217	CNC Operations - Lathe ³	4
MFG 304	Marine Hydraulics	3
MGT 241	Principles of Management	3
MGT 251	Human Resources Management	3
MNS 200	Naval Science II	2
MNS 250	Leadership and Ethics	2
MTH 131	Intro to Prob & Stats ²	3
MTH 141	Calculus I ²	5
MTH 142	Calculus II ²	5
PHL 105	Critical Thinking	3
PHL 201	Ethics	3
PHL 203	Environmental Ethics	3
PHY 105	Physics of the World Around Us	4
PHY 121	General Physics I ²	4
PHY 122	General Physics II ²	4
PLS 132	Comparative Politics	3
PLS 211	International Relations	3
PLS 233	U.S. Foreign Policy	3

PSY 101	Introduction to Psychology	3
PSY 223	Intro to Social Psychology ²	3
PSY 231	Psychology of Adjustment ²	3
RAM 155	Microcontroller Programming	3
SOC 101	Introduction to Sociology	3
SOC 211	Marriage and the Family	3
SOC 231	Deviance and Criminal Behavior	3

- ¹ Prerequisite required: EET 221 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=EET%20221>) Industrial Controls, EET 232 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=EET%20232>) Programmable Logic Controllers, and EET 234 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=EET%20234>) PLC Applications II are met by MNG 234 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=MNG%20234>) Electronic Fundamentals and may require an instructor signature
- ² All other courses with a required prerequisite must be met by the course(s) required in the catalog
- ³ Prerequisite required: MFG 114 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=MFG%20114>) Machining II and MFG 217 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=MFG%20217>) CNC Operations - Lathe are met by MNG 260 (<https://catalog.nmc.edu/archives/2021-2022/search/?P=MNG%20260>) Maritime Machining and may require an instructor signature