

UNDERGRADUATE DEGREE CURRICULA

For Students Entering Maritime College During 2023-24 Academic Year

As of September 15, 2023

+ Students must register for both lecture and laboratory or recitation (as applicable).

Courses in **bold** type are typically limited to the semester shown.

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DEGREE CURRICULA NOTES

A student is responsible for knowing when their required courses are offered, as shown in the published curricula and course descriptions. For some curricula, flow charts showing the sequencing of courses is also available (check with department offering your curriculum).

General Remarks

Each degree curriculum in this document is provided as a reference showing all course requirements arranged in a model sequence. All bachelor's degrees leading to USCG licensure also require passing the relevant license exams.

A student's individual degree plan may divert from the published curriculum, but must take into account the following:

- A course may be offered only in certain semesters.
- Course prerequisites and corequisites must be honored.

The semester scheduling of course offerings is available in both this document and the accompanying course descriptions document. Course prerequisites/corequisites are available in the accompanying course descriptions document.

<u>**Rules about Curriculum Changes**</u> (Students are normally required to follow the policies below. Students may appeal in a timely fashion for waivers through the department chair and Provost.)

- **1. Grandfather clause:** A student is expected to complete their major curriculum as specified at the time of matriculation. A student may choose to follow a later curriculum, but the student must complete all of the requirements of that later curriculum.
- **2. Readmission rule:** A readmitted student follows the curriculum in effect at the time the student returns to studies. The only departure from the school that does not require readmission is an official leave of absence.
- **3.** Change of major rule: When a student changes major, they must change to the curriculum in effect at the time of the change.
- **4. Regulatory change rule:** If a regulatory body (such as the U.S. Coast Guard or ABET) institutes new requirements that change the student's curriculum, the student must complete the new requirements.

DEFINITIONS FOR ELECTIVE CATEGORIES

A **Free Elective** is defined as any course (except ENGL 090-095 and MATH 080) *not required by the student's degree program*. The sum of credits earned through Free Electives must equal the total required for the given degree program. Pass/Fail courses cannot be used as Free Electives.

An **Engineering (ENGR) Elective** is defined as any one of the following courses, *not required by the student's degree program:* any course numbered ENGR 3xx, 4xx, 50x, 54x, or 6xx; CHEM 213, CHEM 301, CHEM 321, ES 420, ES 430, MATH 311, MATH 446, OCEA 308, OCEA 425, NVSC 304; and other courses with the Engineering Chair's approval.

A **Global Business and Transportation (GBAT) Elective** is defined as any one of the following courses, *not required by the student's degree program:* MT 350, MT 408, MT 430, MT 435, NVSC 201, all courses with the prefix GBAC, GBEC, GBLW, GBMG, GBTT, or GBUS.

A **Humanities (HUMN) Elective** is defined as any one of the following courses, *not required by the student's degree program*: CHIN 101 or higher; ENGL 300 or higher (except ENGL 452); HIST 300 or higher; HUMN 300 or higher; NVSC 102, 311 and 402; SPAN 101 or higher.

A Law Elective is any course from the following list, *not required by the student's degree program*: GBLW 431, GBLW 433, GBLW 435, GBLW 437, GBMG 348, HUMN 430, MT 404.

A Liberal Arts & Sciences (LAS) Elective is defined as any one of the following courses, *not required by the student's degree program*: CHIN 101 or higher; ENGL 300 or higher (except ENGL 452); GBEC 121, 122, 424, 428; GBLW 435; HIST 300 or higher; HUMN 300 or higher; MATH 090 or higher; NVSC 102, 311 and 402; SPAN 101 or higher; SS 101 or higher; all courses with the prefix BIO, CHEM, ES, GEOL, METE, OCEA, or PHYS.

A Marine Environmental Science (MES) Elective is any BIO, ES, METE, or OCEA course numbered 300 or higher *not required by the student's degree program*.

A **Marine Transportation (MT) Elective** is any course from the following list, *not required by the student's degree program:* MT 212, MT 350, MT 404, MT 408, MT 430, MT 435, MT 450, NAUT 420, NAUT 476.

A **Physical Education (PE) Elective** is any course with the prefix PE *not required by the student's degree program.*

B.E. in Electrical Engineering with Deck License

Fall Semester

]	Lower D	ivision -	Freshman	ı Year		
	CHEM 121	General Chemistry I	3	—			Gen Ed DEISJ Elective	3
		General Chemistry I Laboratory	1				Engineering Graphics	1
		Freshman English I	3				Programming for Engineers	2
		Intro to Engineering Practice	2			MATH 102		4
		Leadership/Maritime Experience	1	—	L		Intro to Vessel Ops & Seamanship	1
	MATH 101		4	—	L		Navigation I: Intro to Navigation	4
_		Water Safety & Survival	1				Engineering Physics I	4
		STCW Basic Training	2				Engineering Physics I Laboratory	0.5
I		Semester Credits:	17	—		-	Semester Credits:	19.5
	MT 51	0 Summer Sea Term I	6	— —				
			-	vision -	Sophomo	e Vear		
	ENGR 242		3				Materials Science I	3
		Calculus III	4	—			Circuit Analysis	3
		Meteorology for Mariners	3	—			Digital Electronics	4
		Engineering Physics II	4	—			Differential Equations	4
-		Engineering Physics II Laboratory	0.5				Navigation II: Oceans	4
	11113 203	General Education Elective**	3		L		General Education Elective**	4
					L			-
		Semester Credits:	17.5				Semester Credits:	21
L	MT 520	Summer Sea Term II	6		OR L	MT 521	Cadet Comm Vessel Shipping	6
1				Division	- Junior			n
		Engineering Statistical Analysis	3				Engineering Economics	3
		Signals & Systems	3				Electric Machines	3
		Instrumentation & Measurement	1				Machine Learning	3
		Analog Electronics	4				Control System Theory	3
		Electromagnetic Fields	3		L		Ship Const & Stability (Unltd Lic)	2
		Rules of the Road	2		L		Nautical Operations: Safety	2
	NAUT 315	Intro to Integrated Bridge Systems	3		L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4
		Semester Credits:	19				Semester Credits:	20
L	MT 53	0 Summer Sea Term III	5					
L	MTO 41	2 Medical Care Provider	1					
			Upper	Division	- Senior `	Year		
-	ENGR 481	Communications Theory	3			ENGR 489 ⁺	Electrical Design II	4
		Electrical Design I	3			ENGR 494	Intro Renewable Energy Resource	3
	ENGR 488+		3 4				AC & DC Power Distribution Sys	3
	ENGR 488 ⁺ ENGR 490 ⁺	Electrical Design I			L	ENGR 497		
,	ENGR 488 ⁺ ENGR 490 ⁺ ENGR 3xx	Electrical Design I Power Electronics & Electric Drives	4		L	ENGR 497	AC & DC Power Distribution Sys	3
,	ENGR 488 ⁺ ENGR 490 ⁺ ENGR 3xx	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing	4 3		L	ENGR 497	AC & DC Power Distribution Sys	3
, ,	ENGR 488 ⁺ ENGR 490 ⁺ ENGR 3xx	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability	4 3 3		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations	3 3
	ENGR 488 ⁺ ENGR 490 ⁺ ENGR 3xx	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester	4 3 3 3		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations Semester Credits:	3 3
	ENGR 488 ENGR 490 ⁺ ENGR 3xx MT 321	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester General Education Elective**	4 3 3 3		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations	3 3
	ENGR 488 ENGR 490 ⁺ ENGR 3xx MT 321	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester	4 3 3 3 19		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations Semester Credits: USCG License Exam:	3 3 13
_	ENGR 488 ENGR 490 ENGR 3xx MT 321 MT 412	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester General Education Elective**	4 3 3 19 3		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations Semester Credits: USCG License Exam: Lower Division Credits:	3 3 13 87
	ENGR 488* ENGR 490* ENGR 3xx MT 321 MT 412 MT 412	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester General Education Elective** Deck License Seminar	4 3 3 19 3 4		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits:	3 3 13 87 93
	ENGR 488* ENGR 490* ENGR 3xx MT 321 MT 412 MT 412	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester General Education Elective** Deck License Seminar Maritime Communications	4 3 3 19 3 4 3		L	ENGR 497	AC & DC Power Distribution Sys Marine Cargo Operations Semester Credits: USCG License Exam: Lower Division Credits:	3 3 13 87 93 62
	ENGR 488 ENGR 490 ENGR 3xx MT 321 MT 412 MT 412 NAUT 416	Electrical Design I Power Electronics & Electric Drives Engineering Technical Writing Intro to Cargo Ops & Stability Free Elective Semester Credits: 9th Semester General Education Elective** Deck License Seminar Maritime Communications Bridge Resource Mgmt (Unltd Lic)	4 3 3 19 3 4 3 3 3 16			ENGR 497 MT 322 ⁺	AC & DC Power Distribution Sys Marine Cargo Operations Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column): Total Credits:	3 3 13 87 93 62 180

Spring Semester

B.E. in Electrical Engineering with Engine License

Fall Semester

		L	ower Div	vision
	CHEM 121	General Chemistry I	3	
	CHEM 122	General Chemistry I Laboratory	1	
	ENGL 101	Freshman English I	3	
	ENGR 110 ⁺	Intro to Engineering Practice	2	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 101	Calculus I	4	
L	MTO 103	Water Safety & Survival	1	
L	MTO 112 ⁺	STCW Basic Training	2	
		Semester Credit	s: 17	

ENGR 510 Summer Sea Term I

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		Spring Semester		
reshn	nan Year			
		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
	ENGR 120	Programming for Engineers	2	
L	ENGR 540 ⁺	Introduction to Ship Systems	3	
	MATH 102	Calculus II	4	
	PHYS 102	Engineering Physics I	4	
	PHYS 104	Engineering Physics I Laboratory	0.5	

Semester Credits: 17.5

		Low	er Div	ision - S	opho	omore Year			
	ENGR 242	Statics	3			CHEM 212	Materials Science I	3	
L	ENGR 503+	Manufacturing Processes I	1			ENGR 290	Circuit Analysis	3	
L	ENGR 542	Ship Systems II	2			ENGR 292+	Digital Electronics	4	
	MATH 211	Calculus III	4		L	ENGR 504+	Manufacturing Processes II	1	
	PHYS 201	Engineering Physics II	4		L	ENGR 541	Ship Systems I	2	
	PHYS 203	Engineering Physics II Laboratory	0.5			MATH 212	Differential Equations	4	
		General Education Elective**	3				General Education Elective**	3	
-		Semester Credits:	17.5				Semester Credits:	20	
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L	ENGR 520 Summer Sea Term II	6		OR	L	ſ
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ENGR 345 Engineering Statistical Analysis

ENGR 385 Instrumentation & Measurement

ENGR 383 Signals & Systems

Upper Division - Junior Year

3

3

1

4

	ENGR 314	Engineering Economics	3	Γ
	ENGR 395+	Electric Machines	3	
	ENGR 396	Machine Learning	3	
	ENGR 398+	Control System Theory	3	Γ
L	ENGR 544	Ship Systems IV	4	
L	NAUT 308	Nautical Operations: Safety	2	
		Semester Credits:	18	T

ENGR 521 Cadet Comm Vessel Shipping

Semester Credits: 18

6

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

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\mathbf{U}_{l}	pper D	Divisio	on - Se	nior	Year

ENGR 371	Applied Naval Architecture	3			ENGR 489*	Electrical Design II	4	
ENGR 481	Communications Theory	3			ENGR 494	Intro Renewable Energy Resource	3	
ENGR 488+	Electrical Design I	3			ENGR 497	AC & DC Power Distribution Sys	3	
ENGR 490+	Power Electronics & Electric Drives	4				General Education Elective**	3	
	Free Elective	3				Free Elective	3	
	Semester Credits:	16				Semester Credits:	16	
	ENGR 481 ENGR 488 ⁺ ENGR 490 ⁺	Free Elective	ENGR 481 Communications Theory 3 ENGR 488* Electrical Design I 3 ENGR 490* Power Electronics & Electric Drives 4 Free Elective 3	ENGR 481 Communications Theory 3 ENGR 488* Electrical Design I 3 ENGR 490* Power Electronics & Electric Drives 4 Free Elective 3	ENGR 481 Communications Theory 3 ENGR 488 ⁺ Electrical Design I 3 ENGR 490 ⁺ Power Electronics & Electric Drives 4 Free Elective 3 1	ENGR 481 Communications Theory 3 ENGR 494 ENGR 488* Electrical Design I 3 ENGR 497 ENGR 490* Power Electronics & Electric Drives 4 1 Free Elective 3 1	ENGR 481 Communications Theory 3 ENGR 481 Electrical Design I 3 ENGR 490* Power Electronics & Electric Drives 4 Free Elective 3 Free Elective	ENGR 481Communications Theory3ENGR 481Communications Theory3ENGR 488*Electrical Design I3ENGR 490*Power Electronics & Electric Drives4Free Elective3Free Elective3

USCG License Exam:

Lower Division Credits: 84

Upper Division Credits: 76

License Credits (L in left column): 42

Total Credits: 160

6

ENGR 387⁺ Analog Electronics **ENGR 394** Electromagnetic Fields 3 ENGR 543⁺ Ship Systems III 3 ENGR 3xx Engineering Technical Writing 3 Semester Credits: 20

**In compliance with SUNY General Education Framework requirements

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).

B.E. in Electrical Engineering with Internship

CHEM 122 Ge ENGL 101 Fr ENGR 110 ⁺ Int LEAD 101 Le MATH 101 Ca	eneral Chemistry I eneral Chemistry I Laboratory reshman English I ttro to Engineering Practice eadership/Maritime Experience alculus I	3 1 3 2				Gen Ed DEISJ Elective	3
ENGL 101 Fr ENGR 110 ⁺ Int LEAD 101 Le MATH 101 Ca	reshman English I htro to Engineering Practice eadership/Maritime Experience	3 2			ENGP 100	Engineering Graphics	1
ENGR 110 ⁺ Int LEAD 101 Le MATH 101 Ca	tro to Engineering Practice eadership/Maritime Experience	2				Programming for Engineers	2
LEAD 101 Le MATH 101 Ca	eadership/Maritime Experience		<u></u>		MATH 102		4
MATH 101 Ca		1	<u></u>			Engineering Physics I	4
		4				Engineering Physics I Laboratory	0.5
PE 100 5V		4			FILIS 104	Engineering Filysics 1 Laboratory	0.5
	wimming and Lifetime Fitness Semester Credits:	15	 			Semester Credits:	14.5
	L		1			Semester erents.	17.,
ENGR 242 Sta			vision -	Sophomo		Materials Science I	2
		3					3
MATH 211 Ca		4	<u> </u>			Circuit Analysis	3
	ngineering Physics II	4	<u> </u>			Digital Electronics	4
	ngineering Physics II Laboratory	0.5	<u> </u>			Differential Equations	4
Ge	eneral Education Elective**	3	<u> </u>			General Education Elective**	3
	Semester Credits:	14.5				Semester Credits:	17
ENGR 526 In	ndustrial Internship I	3					
	UI	oper I	Division	- Junior	Year		
ENGR 345 En	ngineering Statistical Analysis	3			ENGR 314	Engineering Economics	3
ENGR 383 Sig	ignals & Systems	3			ENGR 395+	Electric Machines	3
ENGR 385 In	strumentation & Measurement	1			ENGR 396	Machine Learning	3
	nalog Electronics	4	<u> </u>			Control System Theory	3
	lectromagnetic Fields	3	+			General Education Elective**	3
	Engineering Technical Writing	3	 				
	Semester Credits:	17				Semester Credits:	15
ENGR 536 In	ndustrial Internship II	3					
			11				
	Alternate Internship	Choi	ice:		ENGR 538	Extended Industrial Internship	6
	-	-	<u>Division</u>	- Senior			
	ommunications Theory	3				Electrical Design II	4
	lectrical Design I	3				Intro Renewable Energy Resource	3
	ower Electronics & Electric Drives	4			ENGR 497	AC & DC Power Distribution Sys	3
	ngineering Elective	3				Engineering Elective	3
	ree Elective	3					
Fre	Semester Credits:		1 -			Semester Credits:	

2023-2024 Undergraduate Degree Curricula

MATH 101 Calculus I

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CHEM 121 General Chemistry I

ENGL 101 Freshman English I

B.E. in Facilities Engineering with Engine License

Fall Semester

CHEM 122 General Chemistry I Laboratory

LEAD 101 Leadership/Maritime Experience

ENGR 110⁺ Intro to Engineering Practice

MTO 103 Water Safety & Survival

MTO 112⁺ STCW Basic Training

Lower Division - Freshman Year

3

1

3

2

1

4

1

2

17

Semester Credits:

Spring Semester Gen Ed DEISJ Elective 3 ENGR 100 Engineering Graphics 1 ENGR 120 Programming for Engineers 2 L ENGR 540⁺ Introduction to Ship Systems 3 **MATH 102** Calculus II 4 PHYS 102 Engineering Physics I 4 0.5 PHYS 104 Engineering Physics I Laboratory

Semester Credits: 17.5

6

3

L	ENGR 510	Summer Sea Term I	6	
		Low	er Div	ision -
	ENGR 242	Statics	3	
L	ENGR 503+	Manufacturing Processes I	1	
L	ENGR 542	Ship Systems II	2	
	MATH 211	Calculus III	4	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
		General Education Elective**	3	
	•	Semester Credits:	175	

S	oph	omore Year			
		CHEM 212	Materials Science I	3	
		or *ENGR 347	Strength of Materials	3	
		ENGR 244	Dynamics	3	
		ENGR 290	Circuit Analysis	3	
	L	ENGR 504	Manufacturing Processes II	1	
	L	ENGR 541	Ship Systems I	2	
		MATH 212	Differential Equations	4	
			General Education Elective**	3	
			Semester Credits:	19	

Upper Division - Junior Year	
ENGR 341 Fluid Mechanics 3 ENGR 347 Strength of Materials	8
ENGR 344 Thermodynamics 3 or * CHEM 212 Materials Science I	
ENGR 345 Engineering Statistical Analysis 3 ENGR 351 Heat Transfer	
ENGR 380 ⁺ Intro to Electric Machinery 3 ENGR 354 ⁺ Marine Engineering 1	Design I
L ENGR 543 ⁺ Ship Systems III 3 ENGR 390 Applied Electronics	
ENGR 3xx Engineering Comm. & Ethics 3 ENGR 424 HVAC System Op &	& Mgmt
L ENGR 544 Ship Systems IV	
L NAUT 308 Nautical Operations:	Safety
Semester Credits: 18 Se	emester Cre

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

ENGR 351 Heat Transfer 3 ENGR 354 ⁺ Marine Engineering Design I 3 ENGR 390 Applied Electronics 3 ENGR 424 HVAC System Op & Mgmt 3 L ENGR 544 Ship Systems IV 4 L NAUT 308 Nautical Operations: Safety 2	ENGR 354+Marine Engineering Design I3ENGR 390Applied Electronics3ENGR 424HVAC System Op & Mgmt3LENGR 544Ship Systems IV4		••••••			
ENGR 390Applied Electronics3ENGR 424HVAC System Op & Mgmt3LENGR 544Ship Systems IV4LNAUT 308Nautical Operations: Safety2	ENGR 390Applied Electronics3ENGR 424HVAC System Op & Mgmt3LENGR 544Ship Systems IV4LNAUT 308Nautical Operations: Safety2		ENGR 351	Heat Transfer	3	
ENGR 424HVAC System Op & Mgmt3LENGR 544Ship Systems IV4LNAUT 308Nautical Operations: Safety2	ENGR 424HVAC System Op & Mgmt3LENGR 544Ship Systems IV4LNAUT 308Nautical Operations: Safety2		ENGR 354+	Marine Engineering Design I	3	
LENGR 544Ship Systems IV4LNAUT 308Nautical Operations: Safety2	LENGR 544Ship Systems IV4LNAUT 308Nautical Operations: Safety2		ENGR 390	Applied Electronics	3	
L NAUT 308 Nautical Operations: Safety 2	L NAUT 308 Nautical Operations: Safety 2		ENGR 424	HVAC System Op & Mgmt	3	
		L	ENGR 544	Ship Systems IV	4	
Semester Credits: 21	Semester Credits: 21	L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits: 21				Semester Credits:	21	

		Upper l	Division	- Senie	or Year
ENGR 314	Engineering Economics	3			EN
ENGR 350+	Automation & Control Systems	3			EN
ENGR 371	Applied Naval Architecture	3			EN
ENGR 423	HVAC System Design	3			EN
ENGR 425	Facilities Engineering Design I	4			
	Semester Credits	s: 16			

ENGR 348 Strength of Materials Laboratory	1	
ENGR 349 Transport Processes Laboratory	1	
ENGR 426 Facilities Engineering Design II	4	
ENGR 444 Engr Project Management	3	
General Education Elective**	3	
Free Elective	3	
Semester Credits:	15	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

License Credits (L in left column):

Total Credits: 159

83

76 42

**In compliance with SUNY General Education Framework requirements

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).

Semester Credits: 17.5

B.E. in Facilities Engineering with Internship

Fall Semester

Spring Semester Lower Division - Freshman Year CHEM 121 General Chemistry I Gen Ed DEISJ Elective 3 3 CHEM 122 General Chemistry I Laboratory ENGR 100 Engineering Graphics 1 1 ENGL 101 Freshman English I 3 ENGR 120 Programming for Engineers 2 ENGR 110⁺ Intro to Engineering Practice 2 MATH 102 Calculus II 4 LEAD 101 Leadership/Maritime Experience 1 PHYS 102 Engineering Physics I 4 PHYS 104 Engineering Physics I Laboratory MATH 101 Calculus I 4 0.5 PE 100 Swimming and Lifetime Fitness 1 14.5 Semester Credits: 15 Semester Credits: n - Sophomore Year CHEM 212 Materials Science I 3 *ENGR 347 Strength of Materials orENGR 244 Dynamics 3 ENGR 290 Circuit Analysis 3 MATH 212 Differential Equations 4 General Education Elective** 3 Semester Credits: 14.5 Semester Credits: 16 ENGR 526 Industrial Internship I 3 Upper Division - Junior Year ENGR 341 Fluid Mechanics 3 ENGR 344 Thermodynamics 3 ENGR 345 Engineering Statistical Analysis 3 ENGR 380⁺ Intro to Electric Machinery 3 ENGR3xx Engineering Comm. & Ethics 3 Semester Credits: 15 Semester Credits: 15 ENGR 536 Industrial Internship II 3 Alternate Internship Choice: ENGR 538 Extended Industrial Internship 6 **Upper Division - Senior Year** ENGR 314 Engineering Economics 3 ENGR 348 Strength of Materials Laboratory 1 ENGR 349 Transport Processes Laboratory ENGR 350⁺ Automation & Control Systems 3 1 ENGR 423 HVAC System Design ENGR 426 Facilities Engineering Design II 3 4 4 3 ENGR 425 Facilities Engineering Design I **ENGR 444 Engr Project Management** Engineering Elective 3 General Education Elective** 3 Free Elective 3 Semester Credits: Semester Credits: 16 15 Lower Division Credits: 63 Upper Division Credits: 64 Total Credits: 127 * Students wishing to transfer to a Mechanical Engineering program at another SUNY campus should take this course.

	Le	ower Div	isior
ENGR 242	Statics	3	
MATH 211	Calculus III	4	
PHYS 201	Engineering Physics II	4	
PHYS 203	Engineering Physics II Laboratory	0.5	
	General Education Elective**	3	

Ju	lifor rear			
	ENGR 347	Strength of Materials	3	
	or * CHEM 212	Materials Science I	3	
	ENGR 351	Heat Transfer	3	
	ENGR 354+	Marine Engineering Design I	3	
	ENGR 390	Applied Electronics	3	
	ENGR 424	HVAC System Op & Mgmt	3	
		Semester Credits:	15	

B.E. in Marine Engineering with Engine License

+	CHEM 121	General Chemistry I	3		I I CSII	man Year	Gen Ed DEISJ Elective	3
		General Chemistry I Laboratory	1	<u> </u>		ENGR 100	Engineering Graphics	1
		Freshman English I	3	<u> </u>			Programming for Engineers	2
		Intro to Engineering Practice	2	<u> </u>	L		Introduction to Ship Systems	3
_		Leadership/Maritime Experience	1	<u> </u>	L	MATH 102		4
_	MATH 101		4	<u> </u>			Engineering Physics I	4
T		Water Safety & Survival	1	<u> </u>			Engineering Physics I Laboratory	0.5
L T		STCW Basic Training	2	<u> </u>		11115 101	Engineering Physics P Eucoratory	0.5
L	1110 112	Semester Credits:	17	<u>+</u>			Semester Credits:	17.5
		Semester creats.	17	L			bemester creats.	17.5
L	ENGR 510	Summer Sea Term I	6					
_			-	vision - S	Sopho	more Year		
	ENGR 242		3				Materials Science I	
L		Manufacturing Processes I	1	 			Strength of Materials	3
L L		Ship Systems II	2	<u>+</u>		ENGR 244		3
		Calculus III	4	<u> </u>			Circuit Analysis	3
_		Engineering Physics II	4	┼──	L		Manufacturing Processes II	1
+		Engineering Physics II Laboratory	0.5	╂───	L		Ship Systems I	2
+	11115 205	General Education Elective**	3	┨────	L		Differential Equations	4
-			3	╂───		MATE 212	General Education Elective**	4
		Semester Credits:	17.5	╂───			Semester Credits:	19
		Semester Creatis:	17.3				Semester creats.	17
r	ENCD 520	Summer Sea Term II	6	OR	2 L	ENCD 521	Cadet Comm Vessel Shipping	6
-	ENGR 520		•			ior Year	Cauce Commi vesser Simpping	0
1	ENGR 3/1	Fluid Mechanics	3		- Jum		Engineering Statistical Analysis	3
		Thermodynamics	3	 			Strength of Materials Laboratory	1
		Strength of Materials	3				Heat Transfer	3
		Materials Science I	3	<u> </u>			Marine Engineering Design I	3
			2	+				
Ŧ		Intro to Electric Machinery	3	+			Applied Electronics	3
L		Ship Systems III	3	<u>+</u>	L	ENGK 544	Ship Systems IV	4
L	NAU1 308	Nautical Operations: Safety	2 17	<u>+</u>				17
		Semester Credits:	1/				Semester Credits:	17
r I	ENCD 516	Engine License Seminar	0					
L		Summer Sea Term III	5					
L		Medical Care Provider	5					
L	M10 412			Division	S	Vere		
	ENCD 214	Engineering Economics	pper I	JIVISION	- Sem		Transport Processes Laboratory	1
		Applied Naval Architecture	3	+			Automation & Control Systems	3
T			3	—			-	
L		HVAC System Design	3	<u> </u>			Engr Project Management	3
L		Vibrations	3	_			Marine Engineering Design III	4
L	or ENGR 454	М Е		<u>+</u>		ENGK 495	Marine Electrical Systems	3
L	ENGR 440*	Marine Engineering Design II						3
L	ENGR 440+ ENGR 453	Modern Concepts	3	<u> </u>			General Education Elective**	
	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3					17
L	ENGR 440+ ENGR 453	Modern Concepts	3				General Education Elective** Semester Credits:	17
L	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits:	17
L	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam:	
L	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits:	83
L	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits:	83 75
L	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	83 75 42
	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits:	83 75
	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	83 75 42
	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	83 75 42
	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	83 75 42
	ENGR 440+ ENGR 453	Modern Concepts Engineering Technical Writing	3 3 18				Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	83 75 42

2023-2024 Undergraduate Degree Curricula

B.E. in Mechanical Engineering with Engine License

Fall Semester

Lower Division - Freshman Year CHEM 121 General Chemistry I 3 CHEM 122 General Chemistry I Laboratory 1 ENGL 101 Freshman English I 3 ENGR 110⁺ Intro to Engineering Practice 2 LEAD 101 Leadership/Maritime Experience 1 MATH 101 Calculus I 4 MTO 103 Water Safety & Survival 1 L MTO112⁺ STCW Basic Training 2 L Semester Credits: 17

Spring Semester

11

res	iman year			
		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
	ENGR 120	Programming for Engineers	2	
L	ENGR 540 ⁺	Introduction to Ship Systems	3	
	MATH 102	Calculus II	4	
	PHYS 102	Engineering Physics I	4	
	PHYS 104	Engineering Physics I Laboratory	0.5	
		Semester Credits:	17.5	

L ENGR 510 Summer Sea Term I

Lower Division - Sophomore Year

6

	ENGR 242	Statics	3			CHEM 212	Materials Science I	3
_	ENGR 503+	Manufacturing Processes I	1			or *ENGR 347	Strength of Materials	3
L	ENGR 542	Ship Systems II	2			ENGR 244	Dynamics	3
	MATH 211	Calculus III	4			ENGR 290	Circuit Analysis	3
	PHYS 201	Engineering Physics II	4		L	ENGR 504+	Manufacturing Processes II	1
	PHYS 203	Engineering Physics II Laboratory	0.5		L	ENGR 541	Ship Systems I	2
		General Education Elective**	3			MATH 212	Differential Equations	4
							General Education Elective**	3
		Semester Credits:	17.5	_			Semester Credits:	19
L	ENGR 520	Summer Sea Term II	6	OF	R L	ENGR 521	Cadet Comm Vessel Shipping	6
			pper Di	vision	- Jur	ior Year		
		Thermodynamics	3				Machine Design	3
		Strength of Materials	3			ENGR 454	Vibrations	3
	or * CHEM 212	Materials Science I	3			ENGR 351	Heat Transfer	3
	ENGR 380+	Intro to Electric Machinery	3			ENGR 390	Applied Electronics	3
L	ENGR 543+	Ship Systems III	3		L	ENGR 544	Ship Systems IV	4
		Fluid Mechanics	3			ENGR 3xx	Engineering Comm. & Ethics	3
	ENGR 341	r fuid Mechanics	5			LIVOR JAA	Engineering Comm. & Ethics	-
L		Nautical Operations: Safety Semester Credits:	2 17				Semester Credits:	19
	NAUT 308 ENGR 516 ENGR 530	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III	2					
	NAUT 308 ENGR 516 ENGR 530	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider	2 17 0 5 1	vision	- Sen	ior Year		
L	NAUT 308 ENGR 516 ENGR 530 MTO 412	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider	2 17 0 5 1	vision	- Sen	ior Year		
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider	2 17 0 5 1 pper Di	vision	- Sen	ior Year ENGR 314	Semester Credits:	19
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider Uj Strength of Materials Laboratory	2 17 0 5 1 pper Di 1		- Sen	ior Year ENGR 314 ENGR 349	Semester Credits: Engineering Economics	19
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider Uj Strength of Materials Laboratory Applied Naval Architecture	2 17 0 5 1 pper Di 1 3	vision	- Sen	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory	19 3 1
L L L	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I	2 17 0 5 1 pper Di 1 3 4		- Sen	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory Marine Engineering Design I	19 3 1 3
L L L	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I Engineering Statistical Anaylysis	2 17 0 5 1 pper Di 1 3 4 3	vision	- Sen	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory Marine Engineering Design I Mechanical Engr Design II	19 3 1 3 4
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I Engineering Statistical Anaylysis Computer Aided Engineering	2 17 5 1 pper Di 1 3 4 3 3		- Sen	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory Marine Engineering Design I Mechanical Engr Design II Engineering Elective	19 3 1 3 4 3
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I Engineering Statistical Anaylysis Computer Aided Engineering General Education Elective**	2 17 0 5 1 pper Di 1 3 4 3 3 3 3	vision	- Ser	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory Marine Engineering Design I Mechanical Engr Design II Engineering Elective Free Elective Semester Credits:	19 3 1 3 4 3 3
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I Engineering Statistical Anaylysis Computer Aided Engineering General Education Elective**	2 17 0 5 1 pper Di 1 3 4 3 3 3 3	vision	- Ser	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory Marine Engineering Design I Mechanical Engr Design II Engineering Elective Free Elective Semester Credits: USCG License Exam:	19 3 1 3 4 3 3 17
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I Engineering Statistical Anaylysis Computer Aided Engineering General Education Elective**	2 17 0 5 1 pper Di 1 3 4 3 3 3 3		- Ser	ior Year ENGR 314 ENGR 349 ENGR 354+	Engineering Economics Transport Processes Laboratory Marine Engineering Design I Mechanical Engr Design II Engineering Elective Free Elective Semester Credits: USCG License Exam: Lower Division Credits:	19 3 1 3 4 3 3 17 17 83
	NAUT 308 ENGR 516 ENGR 530 MTO 412 ENGR 348 ENGR 371 ENGR 418 ⁺ ENGR 345	Nautical Operations: Safety Semester Credits: Engine License Seminar Summer Sea Term III Medical Care Provider U Strength of Materials Laboratory Applied Naval Architecture Mechanical Engr Design I Engineering Statistical Anaylysis Computer Aided Engineering General Education Elective**	2 17 0 5 1 pper Di 1 3 4 3 3 3 3		- Ser	ior Year ENGR 314 ENGR 349 ENGR 354+	Semester Credits: Engineering Economics Transport Processes Laboratory Marine Engineering Design I Mechanical Engr Design II Engineering Elective Free Elective Semester Credits: USCG License Exam:	19 3 1 3 4 3 3 17

B.E. in Mechanical Engineering with Internship

Fall Semester

Lower Division - Freshman Year

CHEM 121	General Chemistry I	3	
CHEM 122	General Chemistry I Laboratory	1	
ENGL 101	Freshman English I	3	
ENGR 110 ⁺	Intro to Engineering Practice	2	
LEAD 101	Leadership/Maritime Experience	1	
MATH 101	Calculus I	4	
PE 100	Swimming and Lifetime Fitness	1	
	Semester Credits:	15	

	Gen Ed DEISJ Elective	3	
ENGR 100	Engineering Graphics	1	
ENGR 120	Programming for Engineers	2	
MATH 102	Calculus II	4	
PHYS 102	Engineering Physics I	4	
PHYS 104	Engineering Physics I Laboratory	0.5	
	Semester Credits:	14.5	

Spring Semester

	Low	er Div	ision -
ENGR 242	Statics	3	
ENGR 503+	Manufacturing Processes I	1	
MATH 211	Calculus III	4	
PHYS 201	Engineering Physics II	4	
PHYS 203	Engineering Physics II Laboratory	0.5	
	General Education Elective**	3	
	Semester Credits:	15.5	

ENGR 526 Industrial Internship I

- S	oph	omore Year				
		CHEM 212 Materials Science I				
		or *ENGR 347	Strength of Materials	3		
		ENGR 244	Dynamics	3		
		ENGR 290	Circuit Analysis	3		
		MATH 212	Differential Equations	4		
			General Education Elective**	3		
			G (C 1')	1.(

Semester Credits: 16

Upper Division - Junior Year

3

3

ENGR 344	Thermodynamics	3	
ENGR 347	trength of Materials		
or * CHEM 212	Materials Science I	3	
ENGR 380+	Intro to Electric Machinery	3	
ENGR 341	Fluid Mechanics	3	
	Free Elective	3	
	Semester Credits:	15	
	ENGR 347 or * CHEM 212 ENGR 380 ⁺		ENGR 347Strength of Materials3or * CHEM 212Materials Science I3ENGR 380 ⁺ Intro to Electric Machinery3ENGR 341Fluid Mechanics3Free Elective3

ENGR 536 Industrial Internship II

Alternate Internship Choice:

oumor rem			
ENGR 312	Machine Design	3	
ENGR 454	Vibrations	3	
ENGR 351	Heat Transfer	3	
ENGR 3xx	Engineering Comm. & Ethics	3	
	Electrical Engineering Elective	3	
	Semester Credits:	15	

Semester Credits: 15

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ENGR 538 Extended Industrial Internship

Upper Division - Senior Year

ENGR 314	Engineering Economics	3	
ENGR 348	Strength of Materials Laboratory	1	
ENGR 349	Transport Processes Laboratory	1	
ENGR 354+	Marine Engineering Design I	3	
ENGR 419+	Mechanical Engr Design II	4	
	Engineering Elective	3	
	Semester Credits:	15	

Lower Division Credits:	
Upper Division Credits:	64
Total Credits:	128

Electrical Engineering Electives:

ENGR 383 Signals & Systems

ENGR 390 Applied Electronics

ENGR 396 Machine Learning

ENGR 398 Control System Theory

ENGR 494 Introduction to Renewable Energy Resources

ENGR 418⁺ Mechanical Engr Design I

* Students wishing to transfer to a Mechanical Engineering program at another SUNY campus should take this course.

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).

ENGR 345	Engineering Statistical Analysis	3	
ENGR 456	Computer-Aided Engineering	3	
	General Education Elective**	3	
	Engineering Elective	3	

Semester Credits: 16

B.E. in Naval Architecture with Deck License

Fall Semester

Lower Division - Freshman Year

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CHEM 121 General Chemistry I 3 CHEM 122 General Chemistry I Laboratory 1 3 ENGL 101 Freshman English I 2 ENGR 110⁺ Intro to Engineering Practice LEAD 101 Leadership/Maritime Experience 1 4 MATH 101 Calculus I MTO 103 Water Safety & Survival 1 L MTO 112⁺ STCW Basic Training 2 L Semester Credits: 17

		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
		Programming for Engineers	2	
	MATH 102	Calculus II	4	
	PHYS 102	Engineering Physics I	4	
	PHYS 104	Engineering Physics I Laboratory	0.5	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
		Semester Credits:	19.5	

Spring Semester

MT 510 Summer Sea Term I

MT 520 Summer Sea Term II

MT 530 Summer Sea Term III

MTO 412 Medical Care Provider

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		I	Lower D	ivision -	Sophor	nore Year
	ENGR 242	Statics	3			C
	MATH 211	Calculus III	4			or *E
L	METE 201+	Meteorology for Mariners	3			E
	PHYS 201	Engineering Physics II	4			E
	PHYS 203	Engineering Physics II Laboratory	0.5			М
		General Education Elective**	3			N
					L	
		Semester Credits:	17.5			

CHEM 212 Materials Science I 3 or *ENGR 347 Strength of Materials ENGR 244 Dynamics 3 ENGR 290 Circuit Analysis 3 MATH 212 Differential Equations 4 4 NAVG 212 Navigation II: Oceans General Education Elective** 3 L Semester Credits: 20

			Upper	Division -	Junio	or Year	
	ENGR 347	Strength of Materials	2			ENGR 341	Fluid M
	or * CHEM 212	Materials Science I	3			ENGR 344	Thermo
L	ENGR 363	Ship Statics	3			ENGR 366+	Ship St
	ENGR 365+	Ship Form and Graphics	3			ENGR 368+	Ship D
	ENGR 380+	Intro to Electric Machinery	3		L	NAUT 308	Nautica
L	NAUT 314	Rules of the Road	2		L	NAVG 312	Intgrtd]
L	NAUT 315	Intro to Integrated Bridge Systems	3				
		Semester Credits:	17				

ENGR 300	Sinp Structure	4
ENGR 368+	Ship Design I	4
NAUT 308	Nautical Operations: Safety	2
NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4
	Semester Credits:	20

program at another SUNY campus should take this course.

Upper Division - Senior Year

		Engineering Statistical Analysis	3	
	ENGR 461*	Ship Design II	4	
	ENGR 462+	Ship Resistance and Propulsion	3	
	ENGR 472+	Sailboat Principles & Design	3	
	or	Engineering Elective	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
	ENGR 3xx	Engineering Comm. & Ethics	3	
		Semester Credits:	19	

All Naval Architecture students must take at least one of the Boat Principles & Design courses ENGR 472/476.

		9th Semester		
L	MT 412	Deck License Seminar	4	
L	MT 426+	Maritime Communications	3	
L	NAUT 416+	Bridge Resource Mgmt (Unltd Lic)	3	
		General Education Elective**	3	
		Free Elective	3	
		Semester Credits:	16	

Note: Though not required for your license, students who plan to sail are strongly advised to take MT 435 (Maritime Security) in addition to the courses above.

		OR	L	MT 521	Cadet Comm Vessel Shipping	6
er	Divis	ion -	Juni	ior Year		
				ENGR 341	Fluid Mechanics	3
				ENGR 344	Thermodynamics	3
				ENGR 366+	Ship Structure	4
					Ship Design I	4
			L	NAUT 308	Nautical Operations: Safety	2
			L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4

* Students wishing to transfer to a Mechanical Engineering

**In compliance with SUNY	General Education Framework requirements
Courses in bold type are typically limited to the semester shown.	+ Students must register for both lecture and laboratory or recitation (as applicable).

	ENGR 348	Strength of Materials Laboratory	1	
	ENGR 354+	Marine Engineering Design I	3	
	ENGR 471+	Ship Design III	4	
	ENGR 473	Ship Dynamics	3	
	ENGR 476*	Power Boat Principles & Design	3	
	or	Engineering Elective	3	
L	MT 322	Marine Cargo Operations	3	
		Semester Credits:	17	

USCG License Exam:

Lower Division Credits: Upper Division Credits: License Credits (L in left column): Total Credits: ____

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B.E. in Naval Architecture with Engine License

Fall Semester

Lower Division - Freshman Year

CHEM 121 General Chemistry I 3 CHEM 122 General Chemistry I Laboratory 1 ENGL 101 Freshman English I 3 ENGR 110⁺ Intro to Engineering Practice 2 LEAD 101 Leadership/Maritime Experience 1 MATH 101 Calculus I 4 L MTO 103 Water Safety & Survival 1 MTO 112⁺ STCW Basic Training 2 т Semester Credits: 17

		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
	ENGR 120	Programming for Engineers	2	
L	ENGR 540*	Introduction to Ship Systems	3	
	MATH 102	Calculus II	4	
	PHYS 102	Engineering Physics I	4	
	PHYS 104	Engineering Physics I Laboratory	0.5	
		Semester Credits:	17.5	

Spring Semester

L	ENGR 510	Summer Sea Term I	6							
		Lo	wer D	ivisio	on - \$	Sop	homore Year			
	ENGR 242	Statics	3		Γ		CHEM 212	Materials Science I	2	
L	ENGR 503+	Manufacturing Processes I	1				or *ENGR 347	Strength of Materials	3	
L	ENGR 542	Ship Systems II	2				ENGR 244	Dynamics	3	
	MATH 211	Calculus III	4				ENGR 290	Circuit Analysis	3	
	PHYS 201	Engineering Physics II	4			L	ENGR 504+	Manufacturing Processes II	1	
	PHYS 203	Engineering Physics II Laboratory	0.5			L		Ship Systems I	2	
		General Education Elective**	3				MATH 212	Differential Equations	4	
								General Education Elective**	3	
		Semester Credits:	17.5		_			Semester Credits:	19	
L	ENGR 520	Summer Sea Term II	6		OR	L	ENGR 521	Cadet Comm Vessel Shipping	6	
		Ul	pper D	Divisi	on -	Ju	nior Year			
	ENGR 347	Strength of Materials	3				ENGR 341	Fluid Mechanics	3	
	or * CHEM 212	Materials Science I					ENGR 344	Thermodynamics	3	
L	ENGR 363	Ship Statics	3					Ship Structure	4	
	ENGR 365+	Ship Form and Graphics	3				ENGR 368+	Ship Design I	4	
	ENGR 380+	Intro to Electric Machinery	3			L	ENGR 544	Ship Systems IV	4	
L	ENGR 543+	Ship Systems III	3			L	NAUT 308	Nautical Operations: Safety	2	
	ENGR 3xx	Engineering Technical Writing	3							
		Semester Credits:	18		_			Semester Credits:	20	
L	ENGR 516	Engine License Seminar	0							

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

	Ul	pper I	Division -	- Sei	nior Year			
ENGR 345	Engineering Statistical Analysis	3			ENGR 348	Strength of Materials Laboratory	1	
ENGR 390	Applied Electronics	3			ENGR 354+	Marine Engineering Design I	3	
ENGR 461+	Ship Design II	4			ENGR 471*	Ship Design III	4	
ENGR 462+	Ship Resistance and Propulsion	3			ENGR 473	Ship Dynamics	3	
ENGR 472+	Sailboat Principles & Design	2			ENGR 476*	Power Boat Principles & Design	2	
or	Engineering Elective	3			or	Engineering Elective	3	
						General Education Elective**	3	
	Semester Credits:	16				Semester Credits:	17	

All Naval Architecture students must take at least one of the Boat Principles & Design courses ENGR 472/476 * Students wishing to transfer to a Mechanical Engineering program at another SUNY campus should take this course.

> USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column): Total Credits:

B.E. in Naval Architecture with Internship

Fall Semester		Spring Semester	
		ision - Freshman Year	
CHEM 121 General Chemistry I	3	Gen Ed DEISJ Elective	3
CHEM 122 General Chemistry I Laboratory	1	ENGR 100 Engineering Graphics	1
ENGL 101 Freshman English I	3	ENGR 120 Programming for Engineers	
ENGR 110 ⁺ Intro to Engineering Practice	2	MATH 102 Calculus II	4
LEAD 101 Leadership/Maritime Experience	1	PHYS 102 Engineering Physics I	4
MATH 101 Calculus I	4	PHYS 104 Engineering Physics I Labo	oratory 0.5
PE 100 Swimming and Lifetime Fitness	1		
Semester Credits:	15	Semeste	er Credits: 14.5
	er Div	sion - Sophomore Year	
ENGR 242 Statics	3	CHEM 212 Materials Science I	3 —
MATH 211 Calculus III	4	or *ENGR 347 Strength of Materials	5
PHYS 201 Engineering Physics II	4	ENGR 244 Dynamics	3
PHYS 203 Engineering Physics II Laboratory	0.5	ENGR 290 Circuit Analysis	3
General Education Elective**	3	MATH 212 Differential Equations	4
		General Education Elective	** 3
Semester Credits:	14.5	Semeste	er Credits: 16
ENGR 526 Industrial Internship I	3		
T		· · · · · · · ·	
ENGR 347 Strength of Materials	pper L	ivision - Junior Year ENGR 341 Fluid Mechanics	
or * CHEM 212 Materials Science I	3		3
	2	ENGR 344 Thermodynamics	-
ENGR 363 Ship Statics	3	ENGR 348 Strength of Materials Labor	
ENGR 365 th Ship Form and Graphics	3	ENGR 366 ⁺ Ship Structure	4
ENGR 380 ⁺ Intro to Electric Machinery	3	ENGR 368 ⁺ Ship Design I	4
ENGR 3xx Engineering Technical Writing	3		0 12 15
Semester Credits:	15	Semesto	er Credits: 15
ENGR 536 Industrial Internship II	3		
Alternate Internship	. Chai	ENCD 529 Estandad Industrial Inter	nshin 6
		Ce: ENGR 538 Extended Industrial Inter	nsnip 0
U	pper I	ivision - Senior Year	
ENGR 345 Engineering Statistical Analysis	3	ENGR 354 ⁺ Marine Engineering Design	n I 3
ENGR 461 ⁺ Ship Design II	4	ENGR 471 ⁺ Ship Design III	4
ENGR 462 ⁺ Ship Resistance and Propulsion	3	ENGR 473 Ship Dynamics	3
ENGR 472 ⁺ Sailboat Principles & Design		ENGR 476 ⁺ Power Boat Principles &	Design
or Engineering Elective	3	or Engineering Elective	3 -
Engineering Elective	3	General Education Elective	** 3
Semester Credits:	16		er Credits: 16
All Naval Architecture students mus	st take	at least one of the Boat Principles & Design courses ENGR Lower Divisio Upper Divisio	n Credits: 63 n Credits: 65
		Tota	l Credits: 128
* Students wishing to transfer to a Mechanical Engineering prog	ram at :	nother SUNY campus should take this course	

* Students wishing to transfer to a Mechanical Engineering program at another SUNY campus should take this course.

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).

2023-2024 Undergraduate Degree Curricula

Spring Semester

B.S. in International Transportation and Trade with Deck License

Fall Semester

	CS 101	Computer Laboratory	1		51	ıman Year	Gen Ed DEISJ Elective	3
		Freshman English I	3			GBEC 121	Macroeconomics	3
+		Intro to Business & Economics	3				US History Since 1865	3
+		Leadership/Maritime Experience	1			MATH 251	-	3
_		Applied Calculus I	4		L		Ship Construction & Stability	2
_		Water Safety & Survival	4		L		Intro to Vessel Ops & Seamanship	1
r		STCW Basic Training	2				Navigation I: Intro to Navigation	4
L	MI0 112*	General Education Elective**	3		L	NAVO 112	Navigation 1: Third to Navigation	4
		Semester Credits:		I			Semester Credits:	19
		Semester Credits.	10				Semester Credits.	19
L	MT 510	Summer Sea Term I	6					
		Low	er Div	ision - S	opho	omore Year		
	GBAC 311	Financial Accounting	3			GBAC 315	Managerial Accounting	3
	GBEC 122	Microeconomics	3			GBLW 433	Admiralty Law	3
	GBLW 431	Business Law	3			GBMG 345	Fundamentals of Marketing	3
	MT 321	Intro to Cargo Ops & Stability	3			HUMN 202	Later Wrld Civilization & Culture	3
L	NAUT 314	Rules of the Road	2		L	METE 201+	Meteorology for Mariners	3
		General Education Elective**	3		L		Navigation II: Oceans	4
		Semester Credits:	17	!			Semester Credits:	19
-	N/T 730	<u>а а т н</u>			-	3475 201		
L	MT 520	Summer Sea Term II	6	OR Division -			Cadet Comm Vessel Shipping	6
-	ENCL 452		1.	$\frac{1}{1}$	Jun			2
_		Technical Writing	3				Financial Management	3
		Intl. Economics and Finance	3				Economic Geography	3
		Transportation Systems	3				Business of Shipping	3
L		Marine Cargo Operations	3		L		Nautical Operations: Safety	2
L		Intro to Integrated Bridge Systems	3		L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4
		General Physics I	3				LAS Elective	3
	PHYS 213	General Physics I Lab	0.5					
		Semester Credits:	18.5				Semester Credits:	18
T	MT 530	Summer Sea Term III	5					
L		Summer Sea Term III Medical Care Provider	5					
L L		Summer Sea Term III Medical Care Provider	5 1					
	MTO 412	Medical Care Provider	5					
	MTO 412 Division - Senio	Medical Care Provider r Year	1			GBEC 429	Seminar: Transport, Economics	
	MTO 412 Division - Senio GBLW 435	Medical Care Provider r Year Environmental Law & Policy	1				Seminar: Transport. Economics Seminar: Strategy and Policy	3
	MTO 412 Division - Senio GBLW 435 GBMG 341	Medical Care Provider r Year Environmental Law & Policy Organizational Management	1 3 3			or GBMG 440	Seminar: Strategy and Policy	
per	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance	1 3 3 3			or GBMG 440 GBTT 351	Seminar: Strategy and Policy International Logistics	3
per L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar	1 3 3 3 4			or GBMG 440 GBTT 351 GBTT 453	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt.	3
L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications	1 3 3 3 4 3			or GBMG 440 GBTT 351 GBTT 453 GBUS 300	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business	3 3 3
L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar	1 3 3 3 4			or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research	3 3 3 3
per L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic)	3 3 3 3 3
Deper	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits:	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits:	3 3 3 3
Deper	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam:	3 3 3 3 3 18
L D D D D D D D D D D D D D D D D D D	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits:	3 3 3 3 3 3 18 85
Deper	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits:	3 3 3 3 3 18 85 79.5
Der	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62
Deper	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 418 Conte ENGL 470 Major	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 18 85 79.5
Deper	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 418 Conte ENGL 470 Major HIST 401-02 Topic	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature British Authors	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62
per L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 418 Conte ENGL 470 Major HIST 401-02 Topic	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature British Authors s in European Civilization I-II f American Foreign Policy	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62
per L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 416 Litera ENGL 418 Conte ENGL 470 Major HIST 401-02 Topic HIST 418 Hist o	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature British Authors s in European Civilization I-II f American Foreign Policy um and America	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62
L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 418 Conte ENGL 418 Conte ENGL 417 Major HIST 401-02 Topic HIST 418 Hist o HIST 421 Vietna HIST 421 Vietna HIST 425 Histor	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature British Authors s in European Civilization I-II f American Foreign Policy um and America	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62
per L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 416 Litera ENGL 418 Conte ENGL 418 Conte ENGL 418 Conte ENGL 410 Major HIST 401-02 Topic HIST 418 Hist of HIST 421 Vietna HIST 421 Vietna HIST 421 Vietna HIST 421 Vietna	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature British Authors s in European Civilization I-II f American Foreign Policy um and America y of Technology	1 3 3 3 4 3 3		L	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62
L	MTO 412 Division - Senio GBLW 435 GBMG 341 GBTT 451 MT 412 MT 426 International Studi ENGL 416 Litera ENGL 416 Litera ENGL 418 Conte ENGL 418 Conte ENGL 418 Conte ENGL 410 Major HIST 401-02 Topic HIST 418 Hist of HIST 421 Vietna HIST 421 Vietna HIST 421 Vietna HIST 421 Vietna	Medical Care Provider r Year Environmental Law & Policy Organizational Management Marine Insurance Deck License Seminar Maritime Communications International Studies Humanities Elective Semester Credits: es Humanities Electives ture of the Sea mporary Literature British Authors s in European Civilization I-II f American Foreign Policy um and America y of Technology ieth Century Technology ower and Maritime Affairs	1 3 3 3 4 3 3		Thou	or GBMG 440 GBTT 351 GBTT 453 GBUS 300 MATH 446 NAUT 416+	Seminar: Strategy and Policy International Logistics Import/Export & Traffic Mgt. International Business Operations Research Bridge Resource Mgmt (Unltd Lic) Semester Credits: USCG License Exam: Lower Division Credits: Upper Division Credits: License Credits (L in left column):	3 3 3 3 3 3 18 85 79.5 62

2023-2024 Undergraduate Degree Curricula

Fall Semester

	Eon		, 19101
CS 101	Computer Laboratory	1	
ENGL 101	Freshman English I	3	
GBUS 100	Intro to Business & Economics	3	
LEAD 101	Leadership/Maritime Experience	1	
MATH 090	Intro to College Mathematics	4	
or MATH 111	Applied Calculus I	4	
	GenEd Natural Science	3	
	Semester Credits:	15	

Spring	Semester
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Low	Lower Division - Freshman Year								
	1			Gen Ed DEISJ Elective	3				
	3		GBEC 121	Macroeconomics	3				
	3		GBMG 345	Fundamentals of Marketing	3				
e	1		MATH 251	Statistics	3				
	4			General Education Elective**	3				
	4			Semester Credits:	15				

Lower Division - Sophomore Year

ENGL 452	Technical Writing	3	
GBAC 311	Financial Accounting	3	
GBEC 122	Microeconomics	3	
HIST 102	US History Since 1865	3	
	General Education Elective**	3	
	Semester Credits:	15	

opnomore rem		
GBAC 315 Managerial Accounting	3	
GBLW 431 Business Law	3	
HUMN 202 Later Wrld Civilization & Culture	3	
Free Elective	3	
LAS Elective	3	
Semester Credits:	15	

Upper Division - Junior Year

		-								
	GBEC 424	Intl. Economics and Finance	3				GBEC 427	Financial Management	3	
	GBLW 433	Admiralty Law	3				GBEC 428	Economic Geography	3	
	GBMG 341	Organizational Management	3				GBTT 252	Business of Shipping	3	
	GBTT 251	Transportation Systems	3					International Studies Elective	3	
		LAS Elective	3					LAS Elective	3	
Semester Credits:			15		_			Semester Credits:	15	
	GBUS 525	ITT Internship / Work Experience	6	0	DR		GBUS 526	ITT Study Abroad	6	

Upper Division - Senior Year

GBLW 435	Environmental Law & Policy	3				GBEC 429	Seminar: Transport. Economics	2	
GBTT 451	Marine Insurance	3				or GBMG 440	Seminar: Strategy and Policy	3	
GBTT 453	Import/Export & Traffic Mgt.	3				GBTT 351	International Logistics	3	
GBTT 457	Port and Terminal Operations	3				GBUS 300	International Business	3	
	International Studies Elective	3				MATH 446	Operations Research	3	
							Phys Ed Elective	1	
 Semester Credits: 15 Semester Credits: 13									

Lower Division Credits: 60 Upper Division Credits: 64

Total Credits:

124

International Studies Electives

At least one of these two electives must be chosen from the left column (International Studies Humanities Electives)

ENGL 416	Literature of the Sea	GBLW 437	International Law
ENGL 418	Contemporary Literature	GBMG 442	Intl Marketing Management
ENGL 470	Major British Authors	GBMG 443	Cross-Cultural Management
HIST 401- 02	Topics in European Civilization I-II	GBTT 460	Principles of Global Supply Chain Security
HIST 418	Hist of American Foreign Policy	GBUS 400	Maritime Cyber Security
HIST 421	Vietnam and America	GBUS 526	ITT Study Abroad*
HIST 425	History of Technology	MT 408	International Safety Management
HIST 426	Twentieth Century Technology	MT 435	Maritime Security
NVSC 102	Sea Power and Maritime Affairs		*Other Study Abroad courses to be evaluated by Dept. Chair
NVSC 311	Evolution of Warfare		
	Foreign Language Courses		

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).

B.S. in Marine Environmental Science with Deck License, Marine Biology Minor

Fall	Semester

Spring Semester

		La	wer Div	vision ·
	BIO 201+	General Biology I	4	
	CS 101	Computer Laboratory	1	
	ENGL 101 Freshman English I		3	
	ES 101 ⁺	Intro to Environmental Science	3	
	LEAD 101	Leadership/Maritime Experience	1	
		Applied Calc I (or MATH 101)	4	
L	MTO 112 ⁺	STCW Basic Training	2	
		Semester Credits	: 18	

	BIO 202+	General Biology II	4
		Gen Ed DEISJ Elective	3
	MATH 112	Applied Calc II (or MATH 102)	3
L	NAUT 102	Intro to Vessel Ops & Seamanship	1
L	NAVG 112	Navigation I: Intro to Navigation	4
	OCEA 101	General Oceanography	3
	OCEA 102	General Oceanography Lab	1
L	MTO 103	Water Safety & Survival	1
		Semester Credits:	20

L	MT 510	Summer Sea Term I	6	
		Ι	Lower Divi	ision
	CHEM 121	General Chemistry I	3	
	CHEM 122	General Chemistry I Laboratory	1	
L	METE 201+	Meteorology for Mariners	3	
L	MT 250	Ship Construction & Stability	2	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
		General Education Elective**	3	
		General Education Elective**	3	
		Semester Cred	its: 18.5	

-	Sophomore	e Year

	BIO 210	Ecology	3	
	CHEM 123	General Chemistry II	3	
	CHEM 124	General Chemistry II Laboratory	1	
L	MT 322+	Marine Cargo Operations	3	
L	NAVG 212	Navigation II: Oceans	4	
		General Education Elective**	3	
		General Education Elective**	3	
		Semester Credits:	20	

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Upper	Division	- Junior	Ye
Cpper	DIVISION	ounor	

(2)	BIO 315	Marine Biology	3	(1
	CHEM 311	Environmental Chemistry	3	
	CHEM 312	Environmental Chemistry Lab	1	
	MATH 251	Statistics	3	
L	MT 321	Intro to Cargo Ops & Stability	3	I
L	NAUT 314	Rules of the Road	2	I
L	NAUT 315	Intro to Integrated Bridge Systems	3	
		Semester Credits:	18	

Ju	nior Year			
(1)	BIO 415	Ichthyology	3	
	CHEM 321	Organic Chemistry	3	
	CHEM 322	Organic Chemistry Laboratory	1	
	ES 303	GIS	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
		MES Elective	3	
		Semester Credits:	19	

L	MT 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

Upper Division - Se	enior Year
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(1)	BIO 320 ⁺	Invertebrate Zoology	4	
	ES 451+	Field Methods in Environ. Science	4	
	GEOL 301	General Geology	3	
L	MT 412	Deck License Seminar	4	
L	MT 426+	Maritime Communications	3	
		Semester Credits:	18	

(2)	BIO 416	Fisheries Science	3	
	ES 430	Environmental Impact Assessment	3	
	GBLW 435 Environmental Law & Policy L NAUT 416 ⁺ Bridge Resource Mgmt (Unltd Lic.) OCEA 402 Coastal Processes and Mngt		3	
L			3	
			3	
		MES Elective	3	
		Semester Credits:	18	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

License Credits (L in left column):

Total Credits: 167.5

88.5

79

62

Note: Though not required for your license, students who plan to sail are strongly advised to take MT 435 (Maritime Security) in addition to the courses above. (1) This course is offered in odd years only. (2) This course is offered in even years only.

B.S. in Marine Environmental Science with Internship, Marine Biology Minor

Fall Semester

	r an Semester				
	Lo	wer Div	vision - 1	Freshman Yea	ır
BIO 201+	General Biology I	4		B	BIO
CS 101	Computer Laboratory	1			
ENGL 101	Freshman English I	3		MA	Т
ES 101+	Intro to Environmental Science	3		00	E
LEAD 101	Leadership/Maritime Experience	1		00	E
MATH 111	Applied Calc I (or MATH 101)	4			P
	Semester Credits	: 16			

reshman Year			
BIO 202+	General Biology II	4	
	Gen Ed DEISJ Elective	3	
MATH 112	Applied Calc II (or MATH 102)	3	
OCEA 101	General Oceanography	3	
OCEA 102	General Oceanography Lab	1	
PE 100	Swimming and Lifetime Fitness	1	
	Semester Credits:	15	

Spring Semester

Lower Division - Sophomore Year

		0		
CHEM 121	General Chemistry I		3	
CHEM 122	General Chemistry I Laboratory		1	
METE 201+	Meteorology for Mariners		3	
PHYS 211	General Physics I		3	
PHYS 213	General Physics I Lab		0.5	
	General Education Elective**		3	
	General Education Elective**		3	
	Semester Credi	ts: 1	6.5	

3	
3	
1	
3	
3	
13	
	3 1 3 3 13

Upper Division - Ju	unior Year
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(2)	BIO 315	Marine Biology	3	
	CHEM 311	Environmental Chemistry	3	
	CHEM 312	Environmental Chemistry Lab	1	
	MATH 251	Statistics	3	
		Free Elective	3	
		Semester Credits:	13	

ES 505	Environmental Science Internship I	3	
ES 515	Environmental Science Internship II	3	

(1)		Ichthyology	3	
	CHEM 321	Organic Chemistry	3	
	CHEM 322	Organic Chemistry Laboratory	1	
	ES 303	GIS	3	
		MES Elective	3	
		Semester Credits:	13	

(1) BIO 320 ⁺	Invertebrate Zoology	4	
ES 451+	Field Methods in Environ. Science	4	
GEOL 301	General Geology	3	
	Free Elective	3	
	Semester Credits:	14	

ision - 50	liittai			
(2)	BIO 416	Fisheries Science	3	
_	ES 430	Environmental Impact Assessment	3	
	GBLW 435	Environmental Law & Policy	3	
	OCEA 402	Coastal Processes and Mngt	3	
		MES Elective	3	
			1.7	

Semester Credits: 15

Lower Division Credits:		
Upper Division Credits:		
Total Credits:	121.5	

(2) This course is offered in even years only.

(1) This course is offered in odd years only.

Fall	Semester

Spring Semester

]	Lower Divisio	n - Fr
	BIO 201+	General Biology I	4	
	CS 101	Computer Laboratory	1	
	ENGL 101	Freshman English I	3	
	ES 101+	Intro to Environmental Science	3	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 111	Applied Calc I (or MATH 101)	4	
L	MTO 112 ⁺	STCW Basic Training	2	
		Semester Cred	its: 18	

MT 510 Summer Sea Term I

L

res	hman Year			
	BIO 202+	General Biology II	4	
		Gen Ed DEISJ Elective	3	
	MATH 112	Applied Calc II (or MATH 102)	3	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
	OCEA 101	General Oceanography	3	
	OCEA 102	General Oceanography Lab	1	
L	MTO 103	Water Safety & Survival	1	
		Semester Credits:	20	

Lower Division - Sophomore Year

6

	CHEM 121	General Chemistry I	3		BIO 210	Ecology	3	Γ
	CHEM 122	General Chemistry I Laboratory	1		CHEM 123	General Chemistry II	3	
L	METE 201+	Meteorology for Mariners	3		CHEM 124	General Chemistry II Laboratory	1	T
L	MT 250	Ship Construction & Stability	2	 L	MT 322+	Marine Cargo Operations	3	
	PHYS 211	General Physics I	3	 L	NAVG 212	Navigation II: Oceans	4	
	PHYS 213	General Physics I Lab	0.5			General Education Elective**	3	
		General Education Elective**	3			General Education Elective**	3	
		General Education Elective**	3	 		Semester Credits:	20	
		Semester Credits:	18.5					

L	MT 520 Summer Sea Term II	6		OR	L	MT 521 Cadet Comm Vessel Shipping	6	
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Upper Division - Junior Ye

	CHEM 311	Environmental Chemistry	3	
	CHEM 312	Environmental Chemistry Lab	1	
	MATH 251	Statistics	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
(2)	OCEA 425	Marine Environmental Issues	3	
		Semester Credits:	18	

L	MT 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

	CHEM 321	Organic Chemistry	3	
	CHEM 322	Organic Chemistry Laboratory	1	
	ES 303	GIS	3	
L	NAUT 308	Nautical Operations: Safety	2	Γ
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
(1)	OCEA 415	Marine Biogeochemistry	3	
		MES Elective	3	
		Semester Credits:	19	Γ

U	pper D	oivision	- Senior	Year

	ES 451+	Field Methods in Environ. Science	4		ES 430	Environmental Impact Assessment	3	
	GEOL 301	General Geology	3		GBLW 435	Environmental Law & Policy	3	
(1) METE 350 ⁺	Synoptic Meteorology	4	(2)	METE 408	Dynamic Meteorology	3	
L	MT 412	Deck License Seminar	4	L	NAUT 416 ⁺	Bridge Resource Mgmt (Unltd Lic.)	3	
L	MT 426+	Maritime Communications	3		OCEA 402	Coastal Processes and Mngt	3	
		Semester Credits:	18			MES Elective	3	

Semester Credits: 18

USCG License Exam:

Lower Division Credits: 88.5

Upper Division Credits: 79

License Credits (L in left column): 62

Total Credits: 167.5

Note: Though not required for your license, students who plan to sail are strongly advised to take MT 435 (Maritime Security) in addition to the courses above. (1) This course is offered in odd years only. (2) This course is offered in even years only.

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CUEM 101 C

Fall Semester

Lower Division - Freshman Year

BIO 201+	General Biology I	4	
CS 101	Computer Laboratory	1	
ENGL 101	Freshman English I	3	
ES 101 ⁺	Intro to Environmental Science	3	
LEAD 101	Leadership/Maritime Experience	1	
MATH 111	Applied Cale I (or MATH 101)	4	
	Semester Credits:	16	

BIO 202+	General Biology II	4	
	Gen Ed DEISJ Elective	3	
MATH 112	Applied Calc II (or MATH 102)	3	
OCEA 101	General Oceanography	3	
OCEA 102	General Oceanography Lab	1	
PE 100	Swimming and Lifetime Fitness	1	
	Semester Credits:	15	

Spring Semester

Low	er Div	ision - S	oph	omore Year
ry I	3			BIG
	1			CHEN

CHEM 121	General Chemistry I	3	
CHEM 122	General Chemistry I Laboratory	1	
METE 201+	Meteorology for Mariners	3	
PHYS 211	General Physics I	3	
PHYS 213	General Physics I Lab	0.5	
	General Education Elective**	3	
	General Education Elective**	3	
	Semester Credits:	16.5	

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BIO 210	Ecology	3	
CHEM 123	General Chemistry II	3	
CHEM 124	General Chemistry II Laboratory	1	
	General Education Elective**	3	ſ
	General Education Elective**	3	ſ
	Semester Credits:	13	

Upper Division - J	unior Year
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			L.L.	
	CHEM 311	Environmental Chemistry	3	
	CHEM 312	Environmental Chemistry Lab	1	
	MATH 251	Statistics	3	
(2)	OCEA 425	Marine Environmental Issues	3	
		Free Elective	3	
		Semester Credits:	13	

ES 505	Environmental Science Internship I	3	
ES 515	Environmental Science Internship II	3	

	CHEM 321	Organic Chemistry	3	
	CHEM 322	Organic Chemistry Laboratory	1	
	ES 303	GIS	3	
(1)	OCEA 415	Marine Biogeochemistry	3	
		MES Elective	3	
		Semester Credits:	13	

Upper Division - Senior Year

	ES 451+	Field Methods in Environ. Science	4	
	GEOL 301	General Geology	3	
(1)	METE 350*	Synoptic Meteorology	4	
		Free Elective	3	
		Semester Credits:	14	

	ES 430	Environmental Impact Assessment	3	
	GBLW 435	Environmental Law & Policy	3	
(2)	METE 408	Dynamic Meteorology	3	
	OCEA 402	Coastal Processes and Mngt	3	
		MES Elective	3	
		Semester Credits:	15	

Lower Division Credits:60.5Upper Division Credits:61Total Credits:121.5

(1) This course is offered in odd years only.

(2) This course is offered in even years only.

B.S. in Marine Operations with Deck License

Fall Semester

		Le	ower Div	vision - 1	Fres	ł
	ENGL 101	Freshman English I	3			Γ
	GBUS 100	Intro to Business & Economics	3			Γ
	LEAD 101	Leadership/Maritime Experience	1			Γ
	MATH 111	Applied Calculus I	4			Γ
	MTO 120 ⁺	Primer of Towing	3		L	Γ
L	MTO 103	Water Safety & Survival	1		L	Γ
L	MTO 112 ⁺	STCW Basic Training	2		L	
		Semester Credits	: 17			

5	nman Year				
	CS 101	Computer Laboratory	1		
		Gen Ed DEISJ Elective	3		
		Gen Ed US His & Civic Eng Elective	3		
	MATH 251	Statistics	3		
	MT 250	Ship Construction & Stability	2		
	NAUT 102	Intro to Vessel Ops & Seamanship	1		
	NAVG 112	Navigation I: Intro to Navigation	4		

Spring Semester

Semester Credits: 17

L MT 510 Summer Sea Term I	6
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Year
ENGR
GBE
NAU
NAV
-

MT 521 Cadet Comm Vessel Shipping

L

	ENGR 540+	Intro to Ship Systems	3	
	GBEC 122	Microeconomics	3	
L	NAUT 314	Rules of the Road	2	
L	NAVG 212	Navigation II: Oceans	4	
		Gen Ed Wrld His & Glb Aw Elective	3	
		General Education Elective**	3	
		Semester Credits:	18	

Upper Division - Junior Year

6

		U	pper D	
L	ENGL 452	Technical Writing	3	
	ENGR 542	Ship Systems II	2	
	GBTT 251	Transportation Systems	3	
	MT 212	Ship Management	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
		Semester Credits:	19	

Ι	MT 530	Summer Sea Term III	5	
Ι	MTO 412	Medical Care Provider	1	

		CHEM 100	Introductory Chemistry	3					
		GBEC 428	Economic Geography	3					
Γ		GBTT 252	Business of Shipping	3					
Γ	L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4					
Γ			Humanities Elective	3					
			$\alpha \rightarrow \alpha \gamma$	1.(

Semester Credits: 16

Upper Division - Senior Year

	GBTT 457	Port and Terminal Operations	3		
L	MT 412	Deck License Seminar	4		
L	MT 426+	Maritime Communications	3		
	MTO 211	Advanced Towing Operations	3		
	Humanities Elective				
		Semester Credits:	16		

	GBLW 435	Environmental Law & Policy	3	
	MT 408	International Safety Mgt	3	
	MTO 212	Business of Towing	3	
L	MTOD 414 ⁺	Bridge Resource and Team Mgmt	3	
		Humanities Elective	3	
		LAS Elective	3	
		Semester Credits:	18	

Semester Credits: 18

USCG License Exam:

Lower Division Credits:

Upper Division Credits: License Credits (L in left column):

79.5 75 62 Total Credits: 154.5

Note: Though not required for your license, students who plan to sail are strongly advised to take MT 435 (Maritime Security) in addition to the courses above.

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B.S. in Marine Operations with Engine License

Fall Semester

		Lo	wer Div	vision -	Fresł	ımaı
	CS 101	Computer Laboratory	1			
	ENGL 101	Freshman English I	3			
	ENGR 110+	Intro to Engineering Practice	2			
	GBUS 100	Intro to Business & Economics	3		L	
	LEAD 101	Leadership/Maritime Experience	1			
		Applied Calculus I	4		L	
L	MTO 112 ⁺	STCW Basic Training	2		L	
		Semester Credits:	16			

an Year		
CHEM 100	Introductory Chemistry	3
	Gen Ed DEISJ Elective	3
ENGR 100	Engineering Graphics	1
ENGR 540	Intro to Ship Systems	3
MATH 112	Applied Calculus II	3

MT 250 Ship Construction & Stability

MTO 103 Water Safety & Survival

Spring Semester

Semester Credits: 16

2

1

L	ENGR 510	Summer Sea Term I	6
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Low	er D	Divi	sion	-	So	ph	omore	Year
	•							

	CHEM 212	Materials Science I	3			
L	ENGR 503+	Manufacturing Process I	1			
L	ENGR 542	Ship Systems II	2			
	GBEC 121	Macroeconomics	3			
	PHYS 211 General Physics I					
	PHYS 213	General Physics I Lab	0.5			
	ENGR 3xx	Engineering Comm & Ethics Req	3			
		Gen Ed US His & Civic Eng Elective	3			
	18.5					

L	ENGR 504 ⁺	Manufacturing Process II	1		
L					
L	MT 322+	Marine Cargo Operations	3		
	MTO 310	Shipyard Management	3		
	PHYS 214 General Physics II				
	PHYS 216 General Physics Lab				
		Gen Ed Wrld His & Glb Aw Elective	3		
		Semester Credits:	16.5		

L	ENGR 520 Summer Sea Term II	6		OR	L	ENGR 521 Cadet Comm Vessel Shi	ping (5		
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			Upper D	ivision -	- Ju	nior Year
	ENGR 243	Transport Processes	3			ENG
	ENGR 290	Circuit Analysis	3		L	EN
L	ENGR 543+	Ship Systems III	3			GE
	MTOE 201+	Engine Room Resource Mgmt	3			MA
		General Education Elective**	3		L	NA
	•	Semester Credit	ts: 15			

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

	ENGR 380+	Intro to Electric Machinery	3	
L	ENGR 544	Ship Systems IV	4	
	GBTT 251	Transportation Systems	3	
	MATH 251	Statistics	3	
L	NAUT 308	Nautical Operations: Safety	2	
		Semester Credits:	15	

Upper	Division	- 3	Senior	Year

	U	pper r	11151011	50	mor rear			
GBTT 252	Business of Shipping	3			ENGR 446	Marine Engine Theory & Appl.	3	
GBTT 457	Port and Terminal Operations	3			GBLW 435	Environmental Law & Policy	3	
GBUS 300	International Business	3				Humanities Elective	3	
	Humanities Elective	3				LAS Elective	3	
	LAS Elective	3				Professional Option	3	
	Semester Credits:	15				Semester Credits:	15	

Professional Option Courses:

MT 212 Ship Management MT 435 Maritime Security Intro Regulatory MTO 200 Framework

Lower Division Credits: 79 Upper Division Credits: 66

License Credits (L in left column): 44

Total Credits:

145

**In compliance with SUNY General Education Framework requirements

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).

B.S. in Marine Transportation with Deck License

Fall Semester

L

L

L

Lower Division - Fresh CS 101 Computer Laboratory 1 ENGL 101 Freshman English I 3 GBUS 100 Intro to Business & Economics 3 LEAD 101 Leadership/Maritime Experience 1 MATH 111 Applied Calculus I 4 L MTO 103 Water Safety & Survival 1 MTO 112⁺ STCW Basic Training 2 T 15 Semester Credits:

5	hman Year			
		Gen Ed DEISJ Elective	3	
		Gen Ed US His & Civic Eng Elective	3	
	MATH 251	Statistics	3	
	MT 250	Ship Construction & Stability	2	
	NAUT 102	Intro to Vessel Ops & Seamanship	1	
	NAVG 112	Navigation I: Intro to Navigation	4	

Spring Semester

Semester Credits: 16

L	MT 510	Summer Sea Term I	6	

Lower Division - Sophomore Year

	GBEC 121	Macroeconomics	3		GBEC 122	Microeconomics	3	
L	METE 201+	Meteorology for Mariners	3		GBTT 251	Transportation Systems	3	
L	MT 322+	Marine Cargo Operations	3	L	NAUT 314	Rules of the Road	2	
	MT 408	International Safety Mgt	3	L	NAVG 212	Navigation II: Oceans	4	
	PHYS 211	General Physics I	3			Gen Ed Wrld His & Glb Aw Elective	3	
	PHYS 213	General Physics I Lab	0.5			General Education Elective**	3	
		General Education Elective**	3					
		Semester Credits:	18.5			Semester Credits:	18	

MT 520 Summer Sea Term II	6		OR	L	MT 521 (Cadet Comm Vessel Shipping	6	
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Upper	Division	- J	Junior	Yea

	ENGL 452	Technical Writing	3	
	GBEC 428	Economic Geography	3	
	GBLW 431	Business Law	3	
	GBMG 341	Organizational Management	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
		Semester Credits:	18	

- Ju	nior year			
	GBEC 424	International Economics & Finance	3	
	GBLW 435	Environmental Law & Policy	3	
	GBTT 252	Business of Shipping	3	
	MT 435	Maritime Security	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
		Semester Credits:	18	

	L	MT 530	Summer Sea Term III	5	
ſ	L	MTO 412	Medical Care Provider	1	

	GBUS 300	International Business	3			GBEC 429	Seminar: Transport. Economics	2	
L	MT 412	Deck License Seminar	4			or GBMG 440	Seminar: Strategy and Policy	3	
L	MT 426+	Maritime Communications	3			MATH 446	Operations Research	3	
		Humanities Elective	3	1	L	NAUT 416+	Bridge Resource Mgmt (Unltd Lic.)	3	
		LAS Elective	3				Humanities Elective	3	
							Professional Option	3	
		Semester Credits:	16				Semester Credits:	15	

GBAC 311 Financial Accounting GBLW 433 Admiralty Law USCG License Exam: GBTT 451 Marine Insurance Lower Division Credits: GBTT 460 Principles of Global Supply Chain Security GBUS 400 Maritime Cybersecurity Upper Division Credits: MT 404 Environmental Management License Credits (L in left column): MTO 212 The Business of Towing Total Credits: MTO 211 Advanced Towing Operations NAUT 420 Piloting and Shiphandling NAUT 460 Coastal Operations

NAUT 476 Fast Rescue Boat Operations compliance with SUNY General Education Framework requirements

Courses in **bold** type are typically limited to the semester shown. + Students must register for both lecture and laboratory or recitation (as applicable).



73

62

152.5

79.5

B.S. in Maritime Studies with Deck License

Fall Semester

Spring Semester

		Fail Semester					Spring Semester	
		=***	ver Di	vision	- Freshi	nan Year	· · · · · · · · · · · · · · · · · · ·	
		Computer Laboratory	1				Gen Ed DEISJ Elective	3
		Freshman English I	3				Intro to Environmental Science	3
	GBUS 100	Intro to Business & Economics	3		L		Ship Construction & Stability	2
	LEAD 101	Leadership/Maritime Experience	1		L	NAUT 102	Intro to Vessel Ops & Seamanship	1
	MATH 111	Applied Calculus I	4		L	NAVG 112	Navigation I: Intro to Navigation	4
L		Water Safety & Survival	1			NVSC 102	Sea Power & Maritime Affairs	3
L	MTO 112 ⁺	STCW Basic Training	2					
		Semester Credits:	15		<u> </u>		Semester Credits:	16
L	MT 510	Summer Sea Term I	6					
		Ţ	р,		C 1	•		
	CDEC 121	-		ision	- Sopnor	nore Year	X4: ·	2
		Macroeconomics	3	—	L		Microeconomics	3
T	MATH 251		3	<u> </u>			Rules of the Road	2
L		Meteorology for Mariners	3	<u> </u>	L		Navigation II: Oceans	4
L	M1 322+	Marine Cargo Operations	-				General Oceanography	3
		Gen Ed US His & Civic Eng Elective		<u> </u>		OCEA 102	General Oceanography Lab	1
		Gen Ed Wrld His & Glb Aw Elective	3	<u> </u>			General Education Elective**	3
							General Education Elective**	3
		Semester Credits:	18				Semester Credits:	19
L	MT 520	Summer Sea Term II	6		OR L	MT 521	Cadet Comm Vessel Shipping	6
		T	nner I	Divici	n _ luni	or Vear		
	ENGL 452			Divisi	on - Juni		Business of Shipping	3
		Technical Writing	3		on - Juni	GBTT 252	Business of Shipping US Maritime History to Civil War	3
	GBLW 435	Technical Writing Environmental Law & Policy	3		on - Juni	GBTT 252 HIST 416	US Maritime History to Civil War	3
	GBLW 435 GBTT 251	Technical Writing Environmental Law & Policy Transportation Systems	3 3 3			GBTT 252 HIST 416 or HIST 417	US Maritime History to Civil War US Maritime History Since 1865	3
L	GBLW 435 GBTT 251 MT 321	Technical Writing Environmental Law & Policy Transportation Systems Intro to Cargo Ops & Stability	3 3 3 3			GBTT 252 HIST 416 or HIST 417 MT 435	US Maritime History to Civil War US Maritime History Since 1865 Maritime Security	3 3
L L	GBLW 435 GBTT 251 MT 321	Technical Writing Environmental Law & Policy Transportation Systems Intro to Cargo Ops & Stability Intro to Integrated Bridge Systems	3 3 3 3 3 3		L	GBTT 252 HIST 416 or HIST 417 MT 435 NAUT 308	US Maritime History to Civil War US Maritime History Since 1865 Maritime Security Nautical Operations: Safety	3 3 2
	GBLW 435 GBTT 251 MT 321	Technical Writing Environmental Law & Policy Transportation Systems Intro to Cargo Ops & Stability	3 3 3 3			GBTT 252 HIST 416 or HIST 417 MT 435 NAUT 308	US Maritime History to Civil War US Maritime History Since 1865 Maritime Security	3

L	MT 530	Summer Sea Term III	5	
L	MTO 412	Medical Care Provider	1	

Upper Division - Senior Year

(1)	HUMN 465	Humanities Research Methods	3	
	or ENGL 416	Literature of the Sea	3	
L	MT 412	Deck License Seminar	4	
L	MT 426 ⁺	Maritime Communications	3	
		Humanities Elective	3	
		Humanities Elective	3	
		Semester Credits:	16	

	GBEC 428	Economic Geography	3	
	HUMN 490	Studies in Maritime Policy	3	
L	NAUT 416 ⁺	Bridge Resource Mgmt (Unltd Lic.)	3	
		Humanities Elective	3	
		Law Elective	3	
		Semester Credits:	15	

USCG License Exam:

Lower Division Credits: 80

Upper Division Credits: 73 62

License Credits (L in left column):

Total Credits: 153

(1) This course is offered in odd years only.

B.S. in Maritime Studies with Internship

Fall Semester

er Division - Freshman Year

	Lov	ver Div	vision	
CS 101	Computer Laboratory	1		
ENGL 101	Freshman English I	3		
GBUS 100	Intro to Business & Economics	3		
LEAD 101	Leadership/Maritime Experience	1		
	Intro to College Mathematics	4		
or MATH 111	Applied Calculus I	4		
PE 100	Swimming and Lifetime Fitness	1		
Semester Credits:				

es	nman year			
		Gen Ed DEISJ Elective	3	
	ES 101+	Intro to Environmental Science	3	
	MATH 251	Statistics	3	
	METE 201+	Meteorology for Mariners	3	
	NVSC 102	Sea Power & Maritime Affairs	3	
		Semester Credits:	15	
		-		

Spring Semester

Lower Division - Sophomore Year

ENGL 452	Technical Writing	3	
GBEC 121	Macroeconomics	3	
	Gen Ed US His & Civic Eng Elective	3	
	Gen Ed Wrld His & Glb Aw Elective	3	
	Free Elective	3	
	Semester Credits:	15	

GBEC 122	Microeconomics	3
OCEA 101	General Oceanography	3
OCEA 102	General Oceanography Lab	1
	General Education Elective**	3
	General Education Elective**	3
	Free Elective	3
		17

Semester Credits: 16

Upper Division - Junior Year

	GBLW 435	Environmental Law & Policy	3	
	GBTT 251	Transportations Systems	3	
		Humanities Elective	3	
		Humanities Elective	3	
		LAS Elective	3	
Semester Credits:			15	

GBTT 252	Business of Shipping	3	
HIST 416	US Maritime History to Civil War	3	
or HIST 417	US Maritime History Since 1865	3	
	Humanities Elective	3	
	LAS Elective	3	
	Free Elective	3	
 Semester Credits:			

GBEC 428 Economic Geography 3 (1) HUMN 465 Humanities Research Methods 3 or ENGL 416 Literature of the Sea HUMN 505 Internship in Maritime Studies I 3 Humanities Elective 3 LAS Elective 3 Law Elective 3

Semester Credits: 18

Upper Division - Senior Year HUMN 490 Studies in Maritime Policy 3 HUMN 515 Internship in Maritime Studies II 3 or Free Elective Humanities Elective 3 LAS Elective 3 Law Elective 3 Semester Credits: 15

Lower Division Credits: 59 Upper Division Credits: 63

Total Credits: 122

(1) This course is offered in odd years only.

2023-2024 Undergraduate Degree Curricula

A.A.S. in Maritime Technology with Engine License

Fall Semester

Spring Semester

			Freshman Year			
	ENGL 101	Freshman English I	3			
	GBUS 100	Intro to Business & Economics	3			ENG
	LEAD 101	Leadership/Maritime Experience	1		L	ENG
	MATH 090	Intro to College Mathematics	4			MAT
L	MTO 103	Water Safety & Survival	1		L	М
L	MTO 112+	STCW Basic Training	2			CHE
		Gen Ed: US His & Civic Eng Elective	3			or PHY
		Semester Credits:	17			

re				
		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
L	ENGR 540+	Introduction to Ship Systems	3	
	MATH 251	Statistics	3	
L	MT 250	Ship Construction & Stability	2	
	CHEM 100	Introductory Chemistry	3	
	or PHYS 211	General Physics I	3	
		Semester Credits:	15	

L	ENGR 510 Summer Sea Term I	6	ſ
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MTOE 521 Cadet Com Vessel Asst Engr I 2

Sophomore Year

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L	ENGR 503+	Manufacturing Processes I	1		L		Manufacturing Processes II	1
L	ENGR 542	Ship Systems II	2		L	ENGR 541	Ship Systems I	2
	MTO 310	Shipyard Management	3		L		Marine Cargo Operations	3
L	MTOE 561 ⁺	Marine Eng & Aux Machinery I	3		L		Engine Room Resource Mgmt	3
L	MTOE 563 ⁺	Marine Electrical Machinery	3		L	MTOE 562 ⁺	Marine Eng & Aux Machinery II	3
L	NAUT 308	Nautical Operations: Safety	2		L	MTO 412	Medical First Aid	1
	Semester Credits: 14 Semester Credits: 1						13	
L	MTOE 522	Cadet Com Vessel Asst Engr II	4		L	MTOE 523	Cadet Com Vessel Asst Engr III	2

License Credits (L in left column):

Total Credits: 73

<u>46</u>

A.A.S. in Maritime Technology with Deck License

Fall Semester

			F	<u>`resh</u> man Y	ear	r
	ENGL 101	Freshman English I	3			
	LEAD 101	Leadership/Maritime Experience	1			
	MATH 090	Intro to College Mathematics	4		L	
	MTO 120 ⁺	Primer of Towing	3		L	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1			
L	MTO 103	Water Safety & Survival	1			
L	MTO 112 ⁺	STCW Basic Training	2			
		Semester Credits:	15			

Spring Semester

		Gen Ed DEISJ Elective	3	
	GBUS 100	Intro to Business & Economics	3	
L	MT 250	Ship Construction & Stability	2	
L	NAVG 112	Navigation I: Intro to Navigation	4	
		Gen Ed: US His & Civic Eng Elective	3	
		Semester Credits:	15	

L	MT 510	Summer Sea Term I	6	
L	*MTOD 524	Cadet Com Vssl Ship Lim Ton I	2	

* MT 520: Summer Sea Term II may be substituted for MTOD 524. Note that MT 520 has prerequisites MT 510, METE 201, and NAVG 212.

			Se	ophomor	e Y	ear
L	METE 201+	Meteorology for Mariners	3		L	
L	MT 321	Intro to Cargo Ops & Stability	3		L	
	MTO 211	Advanced Towing Operations	3			
L		Nautical Operations: Safety	2		L	
L	NAUT 314	Rules of the Road	2		L	
L	NAUT 315	Intro to Integrated Bridge Systems	3		L	
					L	
		Semester Credits:	16			

L	MTOD 525	Cadet Com Vssl Ship Lim Ton II	4	
L	MTOD 526	Cadet Com Vssl Ship Lim Ton III	2	

IC I	cai			
L	MT 322+	Marine Cargo Operations	3	
L	MT 426+	Maritime Communications	3	
	MTO 212	Business of Towing	3	
L	MTOD 414+	Bridge Resource and Team Mgmt	3	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
L	MTO 412	Medical First Aid	1	
		LAS Elective or	3 or	
L	NAVG 212	Navigation II: Oceans*	4	
		Semester Credits:	$20 \ or$	21

* Required for Oceans Endorsement

	License Credits (L in left column):	
License	Credits with Oceans Endorsement:	55
	Total Credits:	80
Total	Credits with Oceans Endorsement:	81

Note: Though not required for your license, students who plan to sail are strongly advised to take MT 435 (Maritime Security) in addition to the courses above.