



UNDERGRADUATE DEGREE CURRICULA

For Students Entering
Maritime College
During
2023-24 Academic Year

As of September 15,
2023

**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).

UNDERGRADUATE DEGREE CURRICULA

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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.

Rules about Curriculum Changes (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.

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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**

	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 Credits:			17	

Spring Semester

		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
	ENGR 120	Programming for Engineers	2	
	MATH 102	Calculus II	4	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
	PHYS 102	Engineering Physics I	4	
	PHYS 104	Engineering Physics I Laboratory	0.5	
Semester Credits:			19.5	

L	MT 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	ENGR 242	Statics	3	
	MATH 211	Calculus III	4	
L	METE 201 ⁺	Meteorology for Mariners	3	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
		General Education Elective**	3	
Semester Credits:			17.5	

	CHEM 212	Materials Science I	3	
	ENGR 290	Circuit Analysis	3	
	ENGR 292⁺	Digital Electronics	4	
	MATH 212	Differential Equations	4	
	NAVG 212	Navigation II: Oceans	4	
L		General Education Elective**	3	
Semester Credits:			21	

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

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 383	Signals & Systems	3	
	ENGR 385	Instrumentation & Measurement	1	
	ENGR 387⁺	Analog Electronics	4	
	ENGR 394	Electromagnetic Fields	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
Semester Credits:			19	

	ENGR 314	Engineering Economics	3	
	ENGR 395⁺	Electric Machines	3	
	ENGR 396	Machine Learning	3	
	ENGR 398⁺	Control System Theory	3	
L	MT 250	Ship Const & Stability (Unltd Lic)	2	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
Semester Credits:			20	

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

Upper Division - Senior Year

	ENGR 481	Communications Theory	3	
	ENGR 488⁺	Electrical Design I	3	
	ENGR 490⁺	Power Electronics & Electric Drives	4	
	ENGR 3xx	Engineering Technical Writing	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
		Free Elective	3	
Semester Credits:			19	

	ENGR 489⁺	Electrical Design II	4	
	ENGR 494	Intro Renewable Energy Resource	3	
	ENGR 497	AC & DC Power Distribution Sys	3	
L	MT 322 ⁺	Marine Cargo Operations	3	
Semester Credits:			13	

9th Semester

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

USCG License Exam:

Lower Division Credits: 87

Upper Division Credits: 93

License Credits (L in left column): 62

Total Credits: 180

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

B.E. in Electrical Engineering with Engine License**Fall Semester****Spring 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	
L	MTO 112 ⁺	STCW Basic Training	2	
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	

L	ENGR 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	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:			17.5	

	CHEM 212	Materials Science I	3	
	ENGR 290	Circuit Analysis	3	
	ENGR 292⁺	Digital Electronics	4	
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:			20	

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

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 383	Signals & Systems	3	
	ENGR 385	Instrumentation & Measurement	1	
	ENGR 387⁺	Analog Electronics	4	
	ENGR 394	Electromagnetic Fields	3	
L	ENGR 543⁺	Ship Systems III	3	
	ENGR 3xx	Engineering Technical Writing	3	
Semester Credits:			20	

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

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

Upper Division - Senior Year

L	ENGR 371	Applied Naval Architecture	3	
	ENGR 481	Communications Theory	3	
	ENGR 488⁺	Electrical Design I	3	
	ENGR 490⁺	Power Electronics & Electric Drives	4	
		Free Elective	3	
Semester Credits:			16	

	ENGR 489⁺	Electrical Design II	4	
	ENGR 494	Intro Renewable Energy Resource	3	
	ENGR 497	AC & DC Power Distribution Sys	3	
		General Education Elective**	3	
		Free Elective	3	
Semester Credits:			16	

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

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B.E. in Electrical Engineering with Internship**Fall Semester****Spring 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	

Lower Division - Sophomore Year

	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	
Semester Credits:			14.5	

	CHEM 212	Materials Science I	3	
	ENGR 290	Circuit Analysis	3	
	ENGR 292⁺	Digital Electronics	4	
	MATH 212	Differential Equations	4	
		General Education Elective**	3	
Semester Credits:			17	

	ENGR 526	Industrial Internship I	3	
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Upper Division - Junior Year

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 383	Signals & Systems	3	
	ENGR 385	Instrumentation & Measurement	1	
	ENGR 387⁺	Analog Electronics	4	
	ENGR 394	Electromagnetic Fields	3	
	ENGR 3xx	Engineering Technical Writing	3	
Semester Credits:			17	

	ENGR 314	Engineering Economics	3	
	ENGR 395⁺	Electric Machines	3	
	ENGR 396	Machine Learning	3	
	ENGR 398⁺	Control System Theory	3	
		General Education Elective**	3	
Semester Credits:			15	

	ENGR 536	Industrial Internship II	3	
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Alternate Internship Choice:

	ENGR 538	Extended Industrial Internship	6	
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Upper Division - Senior Year

	ENGR 481	Communications Theory	3	
	ENGR 488⁺	Electrical Design I	3	
	ENGR 490⁺	Power Electronics & Electric Drives	4	
		Engineering Elective	3	
		Free Elective	3	
Semester Credits:			16	

	ENGR 489⁺	Electrical Design II	4	
	ENGR 494	Intro Renewable Energy Resource	3	
	ENGR 497	AC & DC Power Distribution Sys	3	
		Engineering Elective	3	
Semester Credits:			13	

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

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B.E. in Facilities Engineering with Engine License**Fall Semester****Spring 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	
L	MTO 112 ⁺	STCW Basic Training	2	
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	

L	ENGR 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	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:			17.5	

	CHEM 212	Materials Science I	3	
	or *ENGR 347	Strength of Materials		
	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	

L	ENGR 520	Summer Sea Term II	6		OR	L	ENGR 521	Cadet Comm Vessel Shipping	6	
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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	
L	ENGR 543⁺	Ship Systems III	3	
	ENGR 3xx	Engineering Comm. & Ethics	3	
Semester Credits:			18	

	ENGR 347	Strength of Materials	3	
	or *CHEM 212	Materials Science I		
	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	
Semester Credits:			21	

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

Upper Division - Senior Year

	ENGR 314	Engineering Economics	3	
	ENGR 350 ⁺	Automation & Control Systems	3	
L	ENGR 371	Applied Naval Architecture	3	
	ENGR 423	HVAC System Design	3	
	ENGR 425	Facilities Engineering Design I	4	
Semester Credits:			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:	83
Upper Division Credits:	76
License Credits (L in left column):	42
Total Credits:	159

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B.E. in Facilities Engineering with Internship**Fall Semester****Spring 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	

Lower Division - Sophomore Year

	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	
Semester Credits:			14.5	

	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	
		General Education Elective**	3	
Semester Credits:			16	

	ENGR 526	Industrial Internship I	3	
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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	

	ENGR 347	Strength of Materials	3	
	or *CHEM 212	Materials Science I		
	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	

	ENGR 536	Industrial Internship II	3	
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Alternate Internship Choice:

	ENGR 538	Extended Industrial Internship	6	
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Upper Division - Senior Year

	ENGR 314	Engineering Economics	3	
	ENGR 350+	Automation & Control Systems	3	
	ENGR 423	HVAC System Design	3	
	ENGR 425	Facilities Engineering Design I	4	
		Engineering Elective	3	
Semester Credits:			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	

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.

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

B.E. in Marine Engineering with Engine License**Fall Semester****Spring 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	
L	MTO 112 ⁺	STCW Basic Training	2	
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	

L	ENGR 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	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:			17.5	

	CHEM 212	Materials Science I	3	
	<i>or</i> *ENGR 347	Strength of Materials		
	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	

L	ENGR 520	Summer Sea Term II	6		<i>OR</i>	L	ENGR 521	Cadet Comm Vessel Shipping	6	
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Upper Division - Junior Year

	ENGR 341	Fluid Mechanics	3	
	ENGR 344	Thermodynamics	3	
	ENGR 347	Strength of Materials	3	
	<i>or</i> *CHEM 212	Materials Science I		
	ENGR 380 ⁺	Intro to Electric Machinery	3	
L	ENGR 543⁺	Ship Systems III	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			17	

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 348	Strength of Materials Laboratory	1	
	ENGR 351	Heat Transfer	3	
	ENGR 354 ⁺	Marine Engineering Design I	3	
	ENGR 390	Applied Electronics	3	
L	ENGR 544	Ship Systems IV	4	
Semester Credits:			17	

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

Upper Division - Senior Year

	ENGR 314	Engineering Economics	3	
L	ENGR 371	Applied Naval Architecture	3	
	ENGR 423	HVAC System Design	3	
	<i>or</i> ENGR 454	Vibrations		
	ENGR 440⁺	Marine Engineering Design II	3	
	ENGR 453	Modern Concepts	3	
	ENGR3xx	Engineering Technical Writing	3	
Semester Credits:			18	

	ENGR 349	Transport Processes Laboratory	1	
	ENGR 350 ⁺	Automation & Control Systems	3	
	ENGR 444	Engr Project Management	3	
	ENGR 450	Marine Engineering Design III	4	
	ENGR 495	Marine Electrical Systems	3	
		General Education Elective**	3	
Semester Credits:			17	

USCG License Exam:

Lower Division Credits: 83

Upper Division Credits: 75

License Credits (L in left column): 42

Total Credits: 158

**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 Mechanical Engineering with Engine License**Fall Semester****Spring 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	
L	MTO112+	STCW Basic Training	2	
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	

L	ENGR 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	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:			17.5	

	CHEM 212	Materials Science I	3	
	<i>or</i> *ENGR 347	Strength of Materials		
	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	

L	ENGR 520	Summer Sea Term II	6		<i>OR</i>	L	ENGR 521	Cadet Comm Vessel Shipping	6	
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Upper Division - Junior Year

	ENGR 344	Thermodynamics	3	
	ENGR 347	Strength of Materials	3	
	<i>or</i> *CHEM 212	Materials Science I		
	ENGR 380+	Intro to Electric Machinery	3	
L	ENGR 543+	Ship Systems III	3	
	ENGR 341	Fluid Mechanics	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			17	

	ENGR 312	Machine Design	3	
	ENGR 454	Vibrations	3	
	ENGR 351	Heat Transfer	3	
	ENGR 390	Applied Electronics	3	
L	ENGR 544	Ship Systems IV	4	
	ENGR 3xx	Engineering Comm. & Ethics	3	
Semester Credits:			19	

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

Upper Division - Senior Year

	ENGR 348	Strength of Materials Laboratory	1	
L	ENGR 371	Applied Naval Architecture	3	
	ENGR 418+	Mechanical Engr Design I	4	
	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 456	Computer Aided Engineering	3	
		General Education Elective**	3	
Semester Credits:			17	

	ENGR 314	Engineering Economics	3	
	ENGR 349	Transport Processes Laboratory	1	
	ENGR 354+	Marine Engineering Design I	3	
	ENGR 419+	Mechanical Engr Design II	4	
		Engineering Elective	3	
		Free Elective	3	
Semester Credits:			17	

USCG License Exam:

Lower Division Credits: 83

Upper Division Credits: 76

License Credits (L in left column): 42

Total Credits: 159

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

**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 Mechanical Engineering with Internship**Fall Semester****Spring 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	

Lower Division - Sophomore Year

	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	

	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	
		General Education Elective**	3	
Semester Credits:			16	

	ENGR 526	Industrial Internship I	3	
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Upper Division - Junior Year

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

	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	

	ENGR 536	Industrial Internship II	3	
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Alternate Internship Choice:

	ENGR 538	Extended Industrial Internship	6	
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Upper Division - Senior Year

	ENGR 418+	Mechanical Engr Design I	4	
	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 456	Computer-Aided Engineering	3	
		General Education Elective**	3	
		Engineering Elective	3	
Semester Credits:			16	

	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	

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

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

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

**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 Naval Architecture with Deck 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	
L	MTO 112+	STCW Basic Training	2	
Semester Credits:			17	

Spring Semester

		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	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
Semester Credits:			19.5	

L	MT 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	ENGR 242	Statics	3	
	MATH 211	Calculus III	4	
L	METE 201+	Meteorology for Mariners	3	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
		General Education Elective**	3	
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	
	NAVG 212	Navigation II: Oceans	4	
L		General Education Elective**	3	
Semester Credits:			20	

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

	ENGR 347	Strength of Materials	3	
	or *CHEM 212	Materials Science I		
L	ENGR 363	Ship Statics	3	
	ENGR 365+	Ship Form and Graphics	3	
	ENGR 380+	Intro to Electric Machinery	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
Semester Credits:			17	

	ENGR 341	Fluid Mechanics	3	
	ENGR 344	Thermodynamics	3	
	ENGR 366+	Ship Structure	4	
	ENGR 368+	Ship Design I	4	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
Semester Credits:			20	

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

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

Upper Division - Senior Year

	ENGR 345	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		
L	MT 321	Intro to Cargo Ops & Stability	3	
	ENGR 3xx	Engineering Comm. & Ethics	3	
Semester Credits:			19	

	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		
L	MT 322	Marine Cargo Operations	3	
Semester Credits:			17	

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	

USCG License Exam:

Lower Division Credits: Upper	86
Division Credits:	95
License Credits (L in left column):	63
Total Credits:	181

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.

**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 Naval Architecture with Engine License**Fall Semester****Spring 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	
L	MTO 112 ⁺	STCW Basic Training	2	
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	

L	ENGR 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	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:			17.5	

	CHEM 212	Materials Science I	3	
	<i>or</i> *ENGR 347	Strength of Materials		
	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	

L	ENGR 520	Summer Sea Term II	6	
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<i>OR</i> L	ENGR 521	Cadet Comm Vessel Shipping	6	
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Upper Division - Junior Year

	ENGR 347	Strength of Materials	3	
	<i>or</i> *CHEM 212	Materials Science I		
L	ENGR 363	Ship Statics	3	
	ENGR 365⁺	Ship Form and Graphics	3	
	ENGR 380 ⁺	Intro to Electric Machinery	3	
L	ENGR 543⁺	Ship Systems III	3	
	ENGR 3xx	Engineering Technical Writing	3	
Semester Credits:			18	

	ENGR 341	Fluid Mechanics	3	
	ENGR 344	Thermodynamics	3	
	ENGR 366⁺	Ship Structure	4	
	ENGR 368⁺	Ship Design I	4	
L	ENGR 544	Ship Systems IV	4	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			20	

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

Upper Division - Senior Year

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 390	Applied Electronics	3	
	ENGR 461⁺	Ship Design II	4	
	ENGR 462⁺	Ship Resistance and Propulsion	3	
	ENGR 472⁺	Sailboat Principles & Design	3	
	<i>or</i>	Engineering Elective		
Semester Credits:			16	

	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	
	<i>or</i>	Engineering Elective		
		General Education Elective**	3	
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:	83
Upper Division Credits:	77
License Credits (L in left column):	42
Total Credits:	160

**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 Naval Architecture with Internship**Fall Semester****Spring 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	

Lower Division - Sophomore Year

	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	
Semester Credits:			14.5	

	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	
		General Education Elective**	3	
Semester Credits:			16	

	ENGR 526	Industrial Internship I	3	
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Upper Division - Junior Year

	ENGR 347	Strength of Materials	3	
	or *CHEM 212	Materials Science I		
	ENGR 363	Ship Statics	3	
	ENGR 365⁺	Ship Form and Graphics	3	
	ENGR 380 ⁺	Intro to Electric Machinery	3	
	ENGR 3xx	Engineering Technical Writing	3	
Semester Credits:			15	

	ENGR 341	Fluid Mechanics	3	
	ENGR 344	Thermodynamics	3	
	ENGR 348	Strength of Materials Laboratory	1	
	ENGR 366⁺	Ship Structure	4	
	ENGR 368⁺	Ship Design I	4	
Semester Credits:			15	

	ENGR 536	Industrial Internship II	3	
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Alternate Internship Choice:

	ENGR 538	Extended Industrial Internship	6	
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Upper Division - Senior Year

	ENGR 345	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		
		Engineering Elective	3	
Semester Credits:			16	

	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		
		General Education Elective**	3	
Semester Credits:			16	

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

Lower Division Credits:	63
Upper Division Credits:	65
Total Credits:	128

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

**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 International Transportation and Trade with Deck License**Fall Semester****Spring Semester****Lower Division - Freshman Year**

	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	
	MTO 103	Water Safety & Survival	1	
L	MTO 112*	STCW Basic Training	2	
		General Education Elective**	3	
Semester Credits:			18	

		Gen Ed DEISJ Elective	3	
	GBEC 121	Macroeconomics	3	
	HIST 102	US History Since 1865	3	
	MATH 251	Statistics	3	
L	MT 250	Ship Construction & Stability	2	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
Semester Credits:			19	

L	MT 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	GBAC 311	Financial Accounting	3	
	GBEC 122	Microeconomics	3	
	GBLW 431	Business Law	3	
	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 314	Rules of the Road	2	
		General Education Elective**	3	
Semester Credits:			17	

	GBAC 315	Managerial Accounting	3	
	GBLW 433	Admiralty Law	3	
	GBMG 345	Fundamentals of Marketing	3	
	HUMN 202	Later Wrld Civilization & Culture	3	
L	METE 201+	Meteorology for Mariners	3	
L	NAVG 212	Navigation II: Oceans	4	
Semester Credits:			19	

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

	ENGL 452	Technical Writing	3	
	GBEC 424	Intl. Economics and Finance	3	
	GBTT 251	Transportation Systems	3	
L	MT 322+	Marine Cargo Operations	3	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
Semester Credits:			18.5	

	GBEC 427	Financial Management	3	
	GBEC 428	Economic Geography	3	
	GBTT 252	Business of Shipping	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
		LAS Elective	3	
Semester Credits:			18	

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

Upper Division - Senior Year

	GBLW 435	Environmental Law & Policy	3	
	GBMG 341	Organizational Management	3	
	GBTT 451	Marine Insurance	3	
L	MT 412	Deck License Seminar	4	
L	MT 426	Maritime Communications	3	
		International Studies Humanities Elective	3	
Semester Credits:			19	

	GBEC 429	Seminar: Transport. Economics	3	
	or GBMG 440	Seminar: Strategy and Policy	3	
	GBTT 351	International Logistics	3	
	GBTT 453	Import/Export & Traffic Mgt.	3	
	GBUS 300	International Business	3	
	MATH 446	Operations Research	3	
L	NAUT 416+	Bridge Resource Mgmt (Unltd Lic)	3	
Semester Credits:			18	

International Studies Humanities Electives

ENGL 416 Literature of the Sea

ENGL 418 Contemporary Literature

ENGL 470 Major British Authors

HIST 401-02 Topics in European Civilization I-II

HIST 418 Hist of American Foreign Policy

HIST 421 Vietnam and America

HIST 425 History of Technology

HIST 426 Twentieth Century Technology

NVSC 102 Sea Power and Maritime Affairs

NVSC 311 Evolution of Warfare

Foreign Language Courses

USCG License Exam:

Lower Division Credits: 85

Upper Division Credits: 79.5

License Credits (L in left column): 62

Total Credits: 164.5

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

**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 International Transportation and Trade with Internship**Fall Semester****Spring Semester****Lower Division - Freshman Year**

	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		
		GenEd Natural Science	3	
Semester Credits:			15	

		Gen Ed DEISJ Elective	3	
	GBEC 121	Macroeconomics	3	
	GBMG 345	Fundamentals of Marketing	3	
	MATH 251	Statistics	3	
		General Education Elective**	3	
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	

	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	
	GBLW 433	Admiralty Law	3	
	GBMG 341	Organizational Management	3	
	GBT 251	Transportation Systems	3	
		LAS Elective	3	
Semester Credits:			15	

	GBEC 427	Financial Management	3	
	GBEC 428	Economic Geography	3	
	GBT 252	Business of Shipping	3	
		International Studies Elective	3	
		LAS Elective	3	
Semester Credits:			15	

	GBUS 525	ITT Internship / Work Experience	6		OR		GBUS 526	ITT Study Abroad	6	
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Upper Division - Senior Year

	GBLW 435	Environmental Law & Policy	3	
	GBT 451	Marine Insurance	3	
	GBT 453	Import/Export & Traffic Mgt.	3	
	GBT 457	Port and Terminal Operations	3	
		International Studies Elective	3	
Semester Credits:			15	

	GBEC 429	Seminar: Transport. Economics	3	
	or GBMG 440	Seminar: Strategy and Policy		
	GBT 351	International Logistics	3	
	GBUS 300	International Business	3	
	MATH 446	Operations Research	3	
		Phys Ed Elective	1	
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	GBT 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		

**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 Environmental Science with Deck License, Marine Biology Minor**Fall Semester****Spring 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 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	
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Lower Division - Sophomore Year

	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 Credits:			18.5	

	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	

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

(2)	BIO 315	Marine Biology	3	
	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	
Semester Credits:			18	

(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 - Senior Year

(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	3	
L	NAUT 416 ⁺	Bridge Resource Mgmt (Unltd Lic.)	3	
	OCEA 402	Coastal Processes and Mngt	3	
		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.

**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 Environmental Science with Internship, Marine Biology Minor**Fall Semester****Spring 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 Calc 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	

Lower Division - Sophomore Year

	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	

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

Upper Division - Junior Year

(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	

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

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

Upper Division - Senior Year

(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	

(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	
Semester Credits:			15	

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

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

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

**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 Environmental Science with Deck License, Meteorology and Oceanography Minor**Fall Semester****Spring 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 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	
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Lower Division - Sophomore Year

	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 Credits:			18.5	

	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	

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

	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	

	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	
(1)	OCEA 415	Marine Biogeochemistry	3	
		MES Elective	3	
Semester Credits:			19	

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

Upper Division - Senior Year

	ES 451⁺	Field Methods in Environ. Science	4	
	GEOL 301	General Geology	3	
(1)	METE 350⁺	Synoptic Meteorology	4	
L	MT 412	Deck License Seminar	4	
L	MT 426 ⁺	Maritime Communications	3	
Semester Credits:			18	

	ES 430	Environmental Impact Assessment	3	
	GBLW 435	Environmental Law & Policy	3	
(2)	METE 408	Dynamic Meteorology	3	
L	NAUT 416 ⁺	Bridge Resource Mgmt (Unltd Lic.)	3	
	OCEA 402	Coastal Processes and Mngt	3	
		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.

**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 Environmental Science with Internship, Meteorology and Oceanography Minor**Fall Semester****Spring 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 Calc 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	

Lower Division - Sophomore Year

	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	

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

Upper Division - Junior Year

	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	

	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	

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

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:	60.5
Upper Division Credits:	61
Total Credits:	121.5

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

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

**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 Operations with Deck License**Fall Semester****Lower Division - Freshman Year**

	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	
	MTO 120*	Primer of Towing	3	
L	MTO 103	Water Safety & Survival	1	
L	MTO 112*	STCW Basic Training	2	
Semester Credits:			17	

Spring Semester

	CS 101	Computer Laboratory	1	
		Gen Ed DEISJ Elective	3	
		Gen Ed US His & Civic Eng Elective	3	
	MATH 251	Statistics	3	
L	MT 250	Ship Construction & Stability	2	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
Semester Credits:			17	

L	MT 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	GBEC 121	Macroeconomics	3	
L	METE 201*	Meteorology for Mariners	3	
L	MT 322*	Marine Cargo Operations	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
		General Education Elective**	3	
Semester Credits:			15.5	

	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	

L	MT 521	Cadet Comm Vessel Shipping	6	
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Upper Division - Junior Year

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	

	CHEM 100	Introductory Chemistry	3	
	GBEC 428	Economic Geography	3	
	GBTT 252	Business of Shipping	3	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
		Humanities Elective	3	
Semester Credits:			16	

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

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	3	
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	

USCG License Exam: Lower Division Credits: **79.5**Upper Division Credits: **75**License Credits (L in left column): **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.

**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 Operations with Engine License**Fall Semester****Spring Semester****Lower Division - Freshman Year**

	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	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 111	Applied Calculus I	4	
L	MTO 112+	STCW Basic Training	2	
Semester Credits:			16	

	CHEM 100	Introductory Chemistry	3	
		Gen Ed DEISJ Elective	3	
	ENGR 100	Engineering Graphics	1	
L	ENGR 540	Intro to Ship Systems	3	
	MATH 112	Applied Calculus II	3	
L	MT 250	Ship Construction & Stability	2	
L	MTO 103	Water Safety & Survival	1	
Semester Credits:			16	

L	ENGR 510	Summer Sea Term I	6	
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Lower Division - Sophomore 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	3	
	PHYS 213	General Physics I Lab	0.5	
	ENGR 3xx	Engineering Comm & Ethics Req	3	
		Gen Ed US His & Civic Eng Elective	3	
Semester Credits:			18.5	

L	ENGR 504+	Manufacturing Process II	1	
L	ENGR 541	Ship Systems I	2	
L	MT 322+	Marine Cargo Operations	3	
	MTO 310	Shipyards Management	3	
	PHYS 214	General Physics II	4	
	PHYS 216	General Physics Lab	0.5	
		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 Shipping	6	
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Upper Division - Junior Year

	ENGR 243	Transport Processes	3	
	ENGR 290	Circuit Analysis	3	
L	ENGR 543+	Ship Systems III	3	
	MTOE 201+	Engine Room Resource Mgmt	3	
		General Education Elective**	3	
Semester Credits:			15	

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

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

Upper Division - Senior Year

	GBT 252	Business of Shipping	3	
	GBT 457	Port and Terminal Operations	3	
	GBUS 300	International Business	3	
		Humanities Elective	3	
		LAS Elective	3	
Semester Credits:			15	

	ENGR 446	Marine Engine Theory & Appl.	3	
	GBLW 435	Environmental Law & Policy	3	
		Humanities Elective	3	
		LAS Elective	3	
		Professional Option	3	
Semester Credits:			15	

Professional Option Courses:

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

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

**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****Spring Semester****Lower Division - Freshman Year**

	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	
L	MTO 112+	STCW Basic Training	2	
Semester Credits:			15	

		Gen Ed DEISJ Elective	3	
		Gen Ed US His & Civic Eng Elective	3	
	MATH 251	Statistics	3	
L	MT 250	Ship Construction & Stability	2	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
Semester Credits:			16	

L	MT 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	GBEC 121	Macroeconomics	3	
L	METE 201+	Meteorology for Mariners	3	
L	MT 322+	Marine Cargo Operations	3	
	MT 408	International Safety Mgt	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
		General Education Elective**	3	
Semester Credits:			18.5	

	GBEC 122	Macroeconomics	3	
	GBTT 251	Transportation Systems	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	

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

	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	

	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	
L	MTO 412	Medical Care Provider	1	

Upper Division - Senior Year

	GBUS 300	International Business	3	
L	MT 412	Deck License Seminar	4	
L	MT 426+	Maritime Communications	3	
		Humanities Elective	3	
		LAS Elective	3	
Semester Credits:			16	

	GBEC 429	Seminar: Transport. Economics	3	
	or GBMG 440	Seminar: Strategy and Policy	3	
	MATH 446	Operations Research	3	
L	NAUT 416+	Bridge Resource Mgmt (Unltd Lic.)	3	
		Humanities Elective	3	
		Professional Option	3	
Semester Credits:			15	

Professional Option Courses:

GBAC 311 Financial Accounting

GBLW 433 Admiralty Law

GBTT 451 Marine Insurance

GBTT 460 Principles of Global Supply Chain Security

GBUS 400 Maritime Cybersecurity

MT 404 Environmental Management

MTO 212 The Business of Towing

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).

USCG License Exam:

Lower Division Credits: 79.5

Upper Division Credits: 73

License Credits (L in left column): 62

Total Credits: 152.5

B.S. in Maritime Studies with Deck License**Fall Semester****Spring Semester****Lower Division - Freshman Year**

	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	
L	MTO 112+	STCW Basic Training	2	
Semester Credits:			15	

		Gen Ed DEISJ Elective	3	
	ES 101+	Intro to Environmental Science	3	
L	MT 250	Ship Construction & Stability	2	
L	NAUT 102	Intro to Vessel Ops & Seamanship	1	
L	NAVG 112	Navigation I: Intro to Navigation	4	
	NVSC 102	Sea Power & Maritime Affairs	3	
Semester Credits:			16	

L	MT 510	Summer Sea Term I	6	
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Lower Division - Sophomore Year

	GBEC 121	Macroeconomics	3	
	MATH 251	Statistics	3	
L	METE 201+	Meteorology for Mariners	3	
L	MT 322+	Marine Cargo Operations	3	
		Gen Ed US His & Civic Eng Elective	3	
		Gen Ed Wrld His & Glb Aw Elective	3	
Semester Credits:			18	

	GBEC 122	Microeconomics	3	
L	NAUT 314	Rules of the Road	2	
L	NAVG 212	Navigation II: Oceans	4	
	OCEA 101	General Oceanography	3	
	OCEA 102	General Oceanography Lab	1	
		General Education Elective**	3	
		General Education Elective**	3	
Semester Credits:			19	

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

	ENGL 452	Technical Writing	3	
	GBLW 435	Environmental Law & Policy	3	
	GBTT 251	Transportation Systems	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
		Humanities Elective	3	
Semester Credits:			18	

	GBTT 252	Business of Shipping	3	
	HIST 416	US Maritime History to Civil War	3	
	or HIST 417	US Maritime History Since 1865	3	
	MT 435	Maritime Security	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
		Humanities Elective	3	
Semester Credits:			18	

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

License Credits (L in left column): 62

Total Credits: 153

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

**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 Maritime Studies with Internship**Fall Semester****Spring Semester****Lower Division - Freshman Year**

	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		
	PE 100	Swimming and Lifetime Fitness	1	
Semester Credits:			13	

		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	

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	
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		
		Humanities Elective	3	
		LAS Elective	3	
		Free Elective	3	
Semester Credits:			15	

Upper Division - Senior Year

	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	

	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.

**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).

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	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 090	Intro to College Mathematics	4	
L	MTO 103	Water Safety & Survival	1	
L	MTO 112 ⁺	STCW Basic Training	2	
		Gen Ed: US His & Civic Eng Elective	3	
Semester Credits:			17	

		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	
	<i>or</i> PHYS 211	General Physics I		
Semester Credits:			15	

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

L	ENGR 503 ⁺	Manufacturing Processes I	1	
L	ENGR 542	Ship Systems II	2	
	MTO 310	Shipyards Management	3	
L	MTOE 561⁺	Marine Eng & Aux Machinery I	3	
L	MTOE 563⁺	Marine Electrical Machinery	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			14	

L	ENGR 504 ⁺	Manufacturing Processes II	1	
L	ENGR 541	Ship Systems I	2	
L	MT 322 ⁺	Marine Cargo Operations	3	
L	MTOE 564⁺	Engine Room Resource Mgmt	3	
L	MTOE 562⁺	Marine Eng & Aux Machinery II	3	
L	MTO 412	Medical First Aid	1	
Semester Credits:			13	

L	MTOE 522	Cadet Com Vessel Asst Engr II	4	
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L	MTOE 523	Cadet Com Vessel Asst Engr III	2	
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License Credits (L in left column):	46
Total Credits:	73

**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).

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

Fall Semester

Spring Semester

Freshman Year

	ENGL 101	Freshman English I	3	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 090	Intro to College Mathematics	4	
	MTO 120*	Primer of Towing	3	
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	

		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.

Sophomore Year

L	METE 201*	Meteorology for Mariners	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
	MTO 211	Advanced Towing Operations	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Intro to Integrated Bridge Systems	3	
Semester Credits:			16	

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

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

License Credits (L in left column):		51
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.

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