



UNDERGRADUATE DEGREE CURRICULA

For Students Entering
Maritime College
During
2020-21 Academic Year

As of August 15, 2020

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.

DEFINITIONS FOR ELECTIVE CATEGORIES

A **Free Elective** is defined as any course numbered 100 or higher, *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 200 or higher (except ENGL 452); HIST 200 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 200 or higher (except ENGL 452); GBEC 121, 122, 424, 428; GBLW 435; HIST 200 or higher; HUMN 300 or higher; MATH 101 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*.

A **Professional Studies (PS) Elective** is any course from the following list, *not required by the student's degree program*: PS 120, PS 410, PS 411, PS 414, MTEO 561, MTEO 562.

B.E. in Electrical Engineering with Deck 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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	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	
Semester Credits:			17.5	

	CHEM 212	Materials Science I	3	
	ENGR 290	Circuit Analysis	3	
	ENGR 292*	Digital Electronics	4	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
L	NAVG 212	Navigation II: Oceans	4	
Semester Credits:			21	

L	MT 520	Summer Sea Term II	6	
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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	PS 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	
	HIST 101	American Civilization I	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

	HIST 102	American Civilization II	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.

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

* Students must register for both lecture and laboratory or recitation.

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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	3	
	MATH 211	Calculus III	4	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
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	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
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	
	HIST 101	American Civilization I	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	PS 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	
	HIST 102	American Civilization II	3	
		Free Elective	3	
Semester Credits:			16	

USCG License Exam:

Lower Division Credits: 84

Upper Division Credits: 76

License Credits (L in left column): 42

Total Credits: 160

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

* Students must register for both lecture and laboratory or recitation.

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	

ENGL 103	Freshman English II for Engineers	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	
HUMN 201	World Literature & Culture I	3	
MATH 211	Calculus III	4	
PHYS 201	Engineering Physics II	4	
PHYS 203	Engineering Physics II Laboratory	0.5	
Semester Credits:		14.5	

CHEM 212	Materials Science I	3	
ENGR 290	Circuit Analysis	3	
ENGR 292+	Digital Electronics	4	
HUMN 202	World Literature & Culture II	3	
MATH 212	Differential Equations	4	
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	
HIST 101	American Civilization I	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	
HIST 102	American Civilization II	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

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

* Students must register for both lecture and laboratory or recitation.

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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	3	
	MATH 211	Calculus III	4	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
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	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
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 345	Engineering Statistical Analysis	3	
	ENGR 380*	Intro to Electric Machinery	3	
L	ENGR 543*	Ship Systems III	3	
	HIST 101	American Civilization I	3	
Semester Credits:			18	

	ENGR 347	Strength of Materials	3	
	<i>or</i> *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	PS 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	
	HIST 102	American Civilization II	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

* 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.

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	

ENGL 103	Freshman English II for Engineers	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	
HUMN 201	World Literature & Culture I	3	
MATH 211	Calculus III	4	
PHYS 201	Engineering Physics II	4	
PHYS 203	Engineering Physics II Laboratory	0.5	
Semester Credits:		14.5	

CHEM 212	Materials Science I	3	
<i>or</i> *ENGR 347	Strength of Materials		
ENGR 244	Dynamics	3	
ENGR 290	Circuit Analysis	3	
HUMN 202	World Literature & Culture II	3	
MATH 212	Differential Equations	4	
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	
HIST 101	American Civilization I	3	
Semester Credits:		15	

ENGR 347	Strength of Materials	3	
<i>or</i> *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	
HIST 102	American Civilization II	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.

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

* Students must register for both lecture and laboratory or recitation.

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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	3	
	MATH 211	Calculus III	4	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
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	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
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	PS 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	
	HIST 101	American Civilization I	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	
	HIST 102	American Civilization II	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

* 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.

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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	3	
	MATH 211	Calculus III	4	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
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	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
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	
	HIST 101	American Civilization I	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			17	

	ENGR 312	Machine Design	3	
	ENGR 341	Fluid Mechanics	3	
	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 351	Heat Transfer	3	
	ENGR 390	Applied Electronics	3	
L	ENGR 544	Ship Systems IV	4	
Semester Credits:			19	

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	PS 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 454	Vibrations	3	
	ENGR 456	Computer Aided Engineering	3	
	HIST 102	American Civilization II	3	
Semester Credits:			17	

	ENGR 314	Engineering Economics	3	
	ENGR 349	Transport Processes Laboratory	1	
	ENGR 354*	Marine Engineering Design I	4	
	ENGR 419*	Mechanical Engr Design II	3	
		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.

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

* Students must register for both lecture and laboratory or recitation.

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	

ENGL 103	Freshman English II for Engineers	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	
HUMN 201	World Literature & Culture I	3	
MATH 211	Calculus III	4	
PHYS 201	Engineering Physics II	4	
PHYS 203	Engineering Physics II Laboratory	0.5	
Semester Credits:		15.5	

CHEM 212	Materials Science I	3	
<i>or</i> *ENGR 347	Strength of Materials		
ENGR 244	Dynamics	3	
ENGR 290	Circuit Analysis	3	
HUMN 202	World Literature & Culture II	3	
MATH 212	Differential Equations	4	
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	
<i>or</i> *CHEM 212	Materials Science I		
ENGR 380*	Intro to Electric Machinery	3	
HIST 101	American Civilization I	3	
	Free Elective	3	
Semester Credits:		15	

ENGR 312	Machine Design	3	
ENGR 341	Fluid Mechanics	3	
ENGR 345	Engineering Statistical Analysis	3	
ENGR 351	Heat Transfer	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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ENGR 418*	Mechanical Engr Design I	4	
ENGR 454	Vibrations	3	
ENGR 456	Computer-Aided Engineering	3	
HIST 102	American Civilization II	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.

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

* Students must register for both lecture and laboratory or recitation.

B.E. in Naval Architecture with Deck 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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	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	
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	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
L	NAVG 212	Navigation II: Oceans	4	
Semester Credits:			20	

L	MT 520	Summer Sea Term II	6		<i>OR</i>	L	MT 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	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	PS 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	
	<i>or</i>	Engineering Elective		
	HIST 101	American Civilization I	3	
L	MT 321	Intro to Cargo Ops & Stability	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	
	<i>or</i>	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

	HIST 102	American Civilization II	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: 86

Upper 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.

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

* Students must register for both lecture and laboratory or recitation.

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	PS 103	Water Safety & Survival	1	
L	PS 112 ⁺	STCW Basic Training	2	
Semester Credits:			17	

	ENGL 103	Freshman English II for Engineers	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	
	HUMN 201	World Literature & Culture I	3	
	MATH 211	Calculus III	4	
	PHYS 201	Engineering Physics II	4	
	PHYS 203	Engineering Physics II Laboratory	0.5	
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	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
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 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	
	HIST 101	American Civilization I	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	PS 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		
	HIST 102	American Civilization II	3	
Semester Credits:			17	

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

USCG License Exam:	
Lower Division Credits:	83
Upper Division Credits:	77
License Credits (L in left column):	42
Total Credits:	160

* 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.

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	

ENGL 103	Freshman English II for Engineers	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	
HUMN 201	World Literature & Culture I	3	
MATH 211	Calculus III	4	
PHYS 201	Engineering Physics II	4	
PHYS 203	Engineering Physics II Laboratory	0.5	
Semester Credits:		14.5	

CHEM 212	Materials Science I	3	
<i>or</i> *ENGR 347	Strength of Materials		
ENGR 244	Dynamics	3	
ENGR 290	Circuit Analysis	3	
HUMN 202	World Literature & Culture II	3	
MATH 212	Differential Equations	4	
Semester Credits:		16	

ENGR 526	Industrial Internship I	3	
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Upper Division - Junior Year

ENGR 347	Strength of Materials	3	
<i>or</i> *CHEM 212	Materials Science I		
ENGR 363	Ship Statics	3	
ENGR 365⁺	Ship Form and Graphics	3	
ENGR 380 ⁺	Intro to Electric Machinery	3	
HIST 101	American Civilization I	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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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	
<i>or</i>	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	
<i>or</i>	Engineering Elective		
	Engineering Elective	3	
HIST 102	American Civilization II	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.

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

* Students must register for both lecture and laboratory or recitation.

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	
	HIST 101	American Civilization I	3	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 111	Applied Calculus I	4	
L	PS 103	Water Safety & Survival	1	
L	PS 112+	STCW Basic Training	2	
Semester Credits:			18	

	ENGL 102	Freshman English II	3	
	GBEC 121	Macroeconomics	3	
	HIST 102	American Civilization II	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	
	HUMN 202	World Literature & Culture II	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 314	Rules of the Road	2	
Semester Credits:			17	

	GBAC 315	Managerial Accounting	3	
	GBLW 433	Admiralty Law	3	
	GBMG 345	Fundamentals of Marketing	3	
	HUMN 202	World Literature & Culture II	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	
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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	
	GBT 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	
	GBT 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	PS 412	Medical Care Provider	1	

Upper Division - Senior Year

	GBLW 435	Environmental Law & Policy	3	
	GBMG 341	Organizational Management	3	
	GBT 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	
	GBT 351	International Logistics	3	
	GBT 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.

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 or MATH 111	Intro to College Mathematics Applied Calculus I	4	
		GenEd: Natural Science	3	
		Semester Credits:	15	

	ENGL 102	Freshman English II	3	
	GBEC 121	Macroeconomics	3	
	GBMG 345	Fundamentals of Marketing	3	
	HIST 101	American Civilization I	3	
	MATH 251	Statistics	3	
		Semester Credits:	15	

Lower Division - Sophomore Year

	ENGL 452	Technical Writing	3	
	GBAC 311	Financial Accounting	3	
	GBEC 122	Microeconomics	3	
	HIST 102	American Civilization II	3	
	HUMN 201	World Literature & Culture I	3	
		Semester Credits:	15	

	GBAC 315	Managerial Accounting	3	
	GBLW 431	Business Law	3	
	HUMN 202	World Literature & Culture II	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	
	GBTT 251	Transportation Systems	3	
		LAS Elective	3	
		Semester Credits:	15	

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

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

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

	GBEC 429 or GBMG 440	Seminar: Transport. Economics Seminar: Strategy and Policy	3	
	GBTT 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
- 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

- GBLW 437 International Law
- GBMG 442 Intl Marketing Management
- GBMG 443 Cross-Cultural Management
- GBTT 460 Principles of Global Supply Chain Security
- GBUS 400 Maritime Cyber Security
- GBUS 526 ITT Study Abroad*
- MT 408 International Safety Management
- MT 435 Maritime Security
- * Other study abroad courses to be evaluated by Dept Chair

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

* Students must register for both lecture and laboratory or recitation.

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	PS 112 ⁺	STCW Basic Training	2	
Semester Credits:			18	

	BIO 202⁺	General Biology II	4	
	ENGL 102	Freshman English II	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	PS 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	
	HIST 101	American Civilization I	3	
	HUMN 201	World Literature & Culture I	3	
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	
Semester Credits:			18.5	

	BIO 210	Ecology	3	
	CHEM 123	General Chemistry II	3	
	CHEM 124	General Chemistry II Laboratory	1	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	3	
L	MT 322 ⁺	Marine Cargo Operations	3	
L	NAVG 212	Navigation II: Oceans	4	
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	PS 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	Estuaries & Coastal Processes	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.

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

+ Students must register for both lecture and laboratory or recitation.

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	
	ENGL 102	Freshman English II	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	
	HIST 101	American Civilization I	3	
	HUMN 201	World Literature & Culture I	3	
	METE 201 ⁺	Meteorology for Mariners	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
Semester Credits:			16.5	

	BIO 210	Ecology	3	
	CHEM 123	General Chemistry II	3	
	CHEM 124	General Chemistry II Laboratory	1	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	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	Estuaries & Coastal Processes	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.

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

⁺ Students must register for both lecture and laboratory or recitation.

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	PS 112+	STCW Basic Training	2	
Semester Credits:			18	

	BIO 202+	General Biology II	4	
	ENGL 102	Freshman English II	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	PS 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	
	HIST 101	American Civilization I	3	
	HUMN 201	World Literature & Culture I	3	
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	
Semester Credits:			18.5	

	BIO 210	Ecology	3	
	CHEM 123	General Chemistry II	3	
	CHEM 124	General Chemistry II Laboratory	1	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	3	
L	MT 322+	Marine Cargo Operations	3	
L	NAVG 212	Navigation II: Oceans	4	
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 Plannir	4	
(1)	OCEA 415	Marine Biogeochemistry	3	
		MES Elective	3	
Semester Credits:			19	

L	MT 530	Summer Sea Term III	5	
L	PS 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	Estuaries & Coastal Processes	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.

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

+ Students must register for both lecture and laboratory or recitation.

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	
	ENGL 102	Freshman English II	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	
	HIST 101	American Civilization I	3	
	HUMN 201	World Literature & Culture I	3	
	METE 201 ⁺	Meteorology for Mariners	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
Semester Credits:			16.5	

	BIO 210	Ecology	3	
	CHEM 123	General Chemistry II	3	
	CHEM 124	General Chemistry II Laboratory	1	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	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	Estuaries & Coastal Processes	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.

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

⁺ Students must register for both lecture and laboratory or recitation.

B.S. in Marine Operations with Deck License

Fall Semester

Spring 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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			17	

	CS 101	Computer Laboratory	1	
	ENGL 102	Freshman English II	3	
	HIST 101	American Civilization I	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	
	HUMN 201	World Literature & Culture I	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	
Semester Credits:			15.5	

	ENGR 540*	Intro to Ship Systems	3	
	GBEC 122	Microeconomics	3	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	3	
L	NAUT 314	Rules of the Road	2	
L	NAVG 212	Navigation II: Oceans	4	
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	
L	MT 212	Ship Management	3	
	MT 321	Intro to Cargo Ops & Stability	3	
	NAUT 308	Nautical Operations: Safety	2	
	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	PS 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 410	Business of Towing	3	
		Humanities Elective	3	
Semester Credits:			16	

	GBLW 435	Environmental Law & Policy	3	
	MT 408	International Safety Mgt	3	
	MTO 411	Towing Operations	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:

Upper Division Credits:

License Credits (L in left column):

Total Credits:

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.

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

* Students must register for both lecture and laboratory or recitation.

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	PS 112*	STCW Basic Training	2	
Semester Credits:			16	

	CHEM 100	Introductory Chemistry	3	
	ENGL 103	Freshman English II for Engineers	3	
	ENGR 100	Engineering Graphics	1	
L	ENGR 540	Intro to Ship Systems	3	
	HIST 101	American Civilization I	3	
	MATH 112	Applied Calculus II	3	
L	PS 103	Water Safety & Survival	1	
Semester Credits:			17	

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	
	HUMN 201	World Literature & Culture I	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
Semester Credits:			15.5	

L	ENGR 504*	Manufacturing Process II	1	
L	ENGR 541	Ship Systems I	2	
	MATH 251	Statistics	3	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	3	
	PHYS 214	General Physics II	4	
	PHYS 216	General Physics Lab	0.5	
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	
L	MT 250	Ship Construction & Stability	2	
	MTOE 201*	Engine Room Resource Mgmt	3	
Semester Credits:			14	

	ENGR 380*	Intro to Electric Machinery	3	
L	ENGR 544	Ship Systems IV	4	
	GBTT 251	Transportation Systems	3	
	MT 212	Ship Management	3	
L	MT 322*	Marine Cargo Operations	3	
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	PS 412	Medical Care Provider	1	

Upper Division - Senior Year

	GBTT 252	Business of Shipping	3	
	GBTT 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 435 Maritime Security
- MTO 300 Maritime Regulatory Framework
- MTO 310 Shipyard Management
- MTO 410 The Business of Towing

USCG License Exam:

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

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

* Students must register for both lecture and laboratory or recitation.

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	PS 103	Water Safety & Survival	1	
L	PS 112 ⁺	STCW Basic Training	2	
Semester Credits:			15	

	ENGL 102	Freshman English II	3	
	HIST 101	American Civilization I	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	
	HUMN 201	World Literature & Culture I	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	
Semester Credits:			18.5	

	GBEC 122	Macroeconomics	3	
	GBTT 251	Transportation Systems	3	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	3	
L	NAUT 314	Rules of the Road	2	
L	NAVG 212	Navigation II: Oceans	4	
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 Plannir	4	
Semester Credits:			18	

L	MT 530	Summer Sea Term III	5	
L	PS 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		
	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 410 The Business of Towing
- MTO 411 Towing Operations
- NAUT 420 Piloting and Shiphandling
- NAUT 460 Coastal Operations
- NAUT 476 Fast Rescue Boat Operations

USCG License Exam:

Lower Division Credits:	79.5
Upper Division Credits:	73
License Credits (L in left column):	62
Total Credits:	152.5

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

⁺ Students must register for both lecture and laboratory or recitation.

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	PS 103	Water Safety & Survival	1	
L	PS 112 ⁺	STCW Basic Training	2	
Semester Credits:			15	

	ENGL 102	Freshman English II	3	
	ES 101⁺	Intro to Environmental Science	3	
L	METE 201 ⁺	Meteorology for Mariners	3	
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:			17	

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

	GBTT 251	Transportation Systems	3	
	HIST 101	American Civilization I	3	
	HUMN 201	World Literature & Culture I	3	
	MATH 251	Statistics	3	
L	MT 250	Ship Construction & Stability	2	
	MT 435	Maritime Security	3	
Semester Credits:			17	

	GBTT 252	Business of Shipping	3	
	HIST 102	American Civilization II	3	
	HUMN 202	World Literature & Culture II	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	
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 121	Macroeconomics	3	
	MT 404	Environmental Management	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	

	GBEC 122	Microeconomics	3	
	HIST 416	US Maritime History to Civil War	3	
	or HIST 417	US Maritime History Since 1865		
L	MT 322 ⁺	Marine Cargo Operations	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannir	4	
		Humanities Elective	3	
Semester Credits:			18	

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

Upper Division - Senior Year

	HUMN 465	Humanities Research Methods	3	
	or ENGL 416	Literature of the Sea		
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:

Upper Division Credits:

License Credits (L in left column):

Total Credits:

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.

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

⁺ Students must register for both lecture and laboratory or recitation.

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 <i>or</i> MATH 111	Intro to College Mathematics Applied Calculus I	4	
PE 100	Swimming and Lifetime Fitness	1	
Semester Credits:		13	

ENGL 102	Freshman English II	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	
GBTT 251	Transportations Systems	3	
HIST 101	American Civilization I	3	
HUMN 201	World Literature & Culture I	3	
	Free Elective	3	
Semester Credits:		15	

GBTT 252	Business of Shipping	3	
HIST 102	American Civilization II	3	
HUMN 202	World Literature & Culture II	3	
OCEA 101	General Oceanography	3	
OCEA 102	General Oceanography Lab	1	
	Free Elective	3	
Semester Credits:		16	

Upper Division - Junior Year

GBEC 121	Macroeconomics	3	
GBLW 435 <i>or</i> MT 404	Environmental Law & Policy Environmental Management	3	
	Humanities Elective	3	
	Humanities Elective	3	
	LAS Elective	3	
Semester Credits:		15	

GBEC 122	Microeconomics	3	
HIST 416 <i>or</i> HIST 417	US Maritime History to Civil War US Maritime History Since 1865	3	
	Humanities Elective	3	
	LAS Elective	3	
	Free Elective	3	
Semester Credits:		15	

Upper Division - Senior Year

GBEC 428	Economic Geography	3	
HUMN 465 <i>or</i> ENGL 416	Humanities Research Methods Literature of the Sea	3	
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 <i>or</i>	Internship in Maritime Studies II Free Elective	3	
	Humanities Elective	3	
	LAS Elective	3	
	Law Elective	3	
Semester Credits:		15	

Lower Division Credits:	59
Upper Division Credits:	63
Total Credits:	122

A.A.S. in Marine Technology: Small Vessel Operations with Assistant Engineer Limited License

Fall Semester

Spring Semester

Freshman Year

	ENGL 101	Freshman English I	3	
L	ENGR 503 ⁺	Manufacturing Processes I	1	
	GBUS 100	Intro to Business & Economics	3	
	LEAD 101	Leadership/Maritime Experience	1	
	MATH 090	Intro to College Mathematics	4	
L	PS 103	Water Safety & Survival	1	
L	PS 112 ⁺	STCW Basic Training	2	
Semester Credits:			15	

	ENGL 102	Freshman English II	3	
	ENGR 100	Engineering Graphics	1	
L	ENGR 504 ⁺	Manufacturing Processes II	1	
L	ENGR 540⁺	Introduction to Ship Systems	3	
	MATH 251	Statistics	3	
	CHEM 100	Introductory Chemistry	3	
	<i>or</i> PHYS 211	General Physics I		
Semester Credits:			14	

L	ENGR 510	Summer Sea Term I	6	
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Sophomore Year

L	ENGR 542	Ship Systems II	2	
L	MT 250	Ship Construction & Stability	2	
	MTO 410	The Business of Towing	3	
	MTOE 201⁺	Engine Room Resource Mgmt	3	
L	MTOE 561⁺	Marine Engines & Aux Machinery I	4	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			16	

L	ENGR 541	Ship Systems I	2	
	HIST 101	American Civilization I	3	
	<i>or</i> HIST 102	American Civilization II		
L	MT 322 ⁺	Marine Cargo Operations	3	
L	MTOE 562⁺	Marine Engines & Aux Machinery II	4	
L	MTOE 563⁺	Marine Electrical Machinery	3	
L	PS 412	Medical First Aid	1	
Semester Credits:			16	

L	MTOE 521	Cadet Com Vessel Asst Engr I	2	
L	MTOE 522	Cadet Com Vessel Asst Engr II	2	
L	MTOE 523	Cadet Com Vessel Asst Engr III	2	

License Credits (L in left column):	46
Total Credits:	73

A.A.S. in Marine Technology: Small Vessel Operations with Deck Limited 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	PS 103	Water Safety & Survival	1	
L	PS 112*	STCW Basic Training	2	
Semester Credits:			15	

	ENGL 102	Freshman English II	3	
	GBUS 100	Intro to Business & Economics	3	
	HIST 101	American Civilization I	3	
	<i>or</i> HIST 102	American Civilization II		
L	MT 250	Ship Construction & Stability	2	
L	NAVG 112	Navigation I: Intro to Navigation	4	
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 MTO 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 410	The Business of Towing	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 411	Towing Operations	3	
L	MTOD 414*	Bridge Resource and Team Mgmt	3	
L	NAVG 312	Intgrtd Bridge Sys & Voyage Plannin	4	
L	PS 412	Medical First Aid	1	
		LAS Elective <i>or</i>	3 <i>or</i>	
L	NAVG 212	Navigation II: Oceans*	4	
Semester Credits:			20 <i>or</i> 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	4	

License Credits (L in left column):	53
License Credits with Oceans Endorsement:	57
Total Credits:	82
Total Credits with Oceans Endorsement:	83

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.

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

* Students must register for both lecture and laboratory or recitation.