



UNDERGRADUATE DEGREE CURRICULA

For Students Entering
Maritime College
During
2015-16 Academic Year

As of October 4, 2015

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, course descriptions, and curricula flow.

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 file. The resulting "flow of courses" for each curriculum can be found in the accompanying Curricula Flow 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, 56x, or 6xx; CHEM 213, CHEM 220, ES 420, ES 430, 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, ENGR 561, ENGR 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	PE 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 & Smnship	1	
L	NAVG 112	Terrestrial 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	Electrical Engineering I	3	
	ENGR 292	Digital Electronics	4	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
L	NAVG 212	Celestial Navigation	4	
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	Network Analysis	3	
	ENGR 387	Analog Electronics	4	
	ENGR 394	Electromagnetic Fields	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Collision Avoidance	3	
Semester Credits:			18	

	ENGR 314	Engineering Economics	3	
	ENGR 384	Power Electronics	3	
	ENGR 395	Electric Machines	3	
L	MT 250	Ship Const & Stability (Unltd Lic)	2	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Electr Nav & Voyage Planning	4	
Semester Credits:			17	

L	MT 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	ENGR 481	Communications Theory	3	
	ENGR 484	Electric Drives	3	
	ENGR 488	Electrical Design I	4	
	HIST 101	American Civilization I	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
		Free Elective	3	
Semester Credits:			19	

	ENGR 428	Computerized Control Systems	3	
	ENGR 483	Control System Theory	3	
	ENGR 489	Electrical Design II	4	
	ENGR 495	Marine Electrical Systems	3	
L	MT 322	Marine Cargo Operations	3	
Semester Credits:			16	

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:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	PE 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 Processess 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	Electrical Engineering I	3	
	ENGR 292	Digital Electronics	4	
L	ENGR 504	Manufacturing Processess 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	Network Analysis	3	
	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:			19	

	ENGR 314	Engineering Economics	3	
	ENGR 384	Power Electronics	3	
	ENGR 395	Electric Machines	3	
L	ENGR 544	Ship Systems IV	3	
	HIST 102	American Civilization II	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			17	

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

L	ENGR 371	Applied Naval Architecture	3	
	ENGR 481	Communications Theory	3	
	ENGR 484	Electric Drives	3	
	ENGR 488	Electrical Design I	4	
		Free Elective	3	
Semester Credits:			16	

	ENGR 428	Computerized Control Systems	3	
	ENGR 483	Control System Theory	3	
	ENGR 489	Electrical Design II	4	
	ENGR 495	Marine Electrical Systems	3	
		Free Elective	3	
Semester Credits:			16	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	Electrical Engineering I	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	Network Analysis	3	
ENGR 387	Analog Electronics	4	
ENGR 394	Electromagnetic Fields	3	
HIST 101	American Civilization I	3	
Semester Credits:		16	

ENGR 314	Engineering Economics	3	
ENGR 384	Power Electronics	3	
ENGR 395	Electric Machines	3	
HIST 102	American Civilization II	3	
	Engineering Elective	3	
Semester Credits:		15	

ENGR 536	Industrial Internship II	3	
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Upper Division - Senior Year

ENGR 481	Communications Theory	3	
ENGR 484	Electric Drives	3	
ENGR 488	Electrical Design I	4	
	Engineering Elective	3	
	Free Elective	3	
Semester Credits:		16	

ENGR 428	Computerized Control Systems	3	
ENGR 483	Control System Theory	3	
ENGR 489	Electrical Design II	4	
ENGR 495	Marine Electrical Systems	3	
Semester Credits:		13	

Lower Division Credits:	64
Upper Division Credits:	63
Total Credits:	127

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

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	PE 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	Electrical Engineering I	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	Electrical Engineering II	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	Electrical Engineering III	3	
L	ENGR 544	Ship Systems IV	3	
	HIST 102	American Civilization II	3	
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	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	ENGR 314	Engineering Economics	3	
	ENGR 350	Analog Controls	3	
	ENGR 423	HVAC System Design	3	
	ENGR 425	Facilities Engineering Design I	4	
		Free Elective	3	
Semester Credits:			16	

	ENGR 348	Strength of Materials Laboratory	1	
	ENGR 349	Transport Processes Laboratory	1	
L	ENGR 371	Applied Naval Architecture	3	
	ENGR 426	Facilities Engineering Design II	4	
	ENGR 444	Engr Project Management	3	
		Free Elective	3	
Semester Credits:			15	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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

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	Electrical Engineering I	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	Electrical Engineering II	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	Electrical Engineering III	3	
HIST 102	American Civilization II	3	
Semester Credits:		15	

ENGR 536	Industrial Internship II	3	
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Upper Division - Senior Year

ENGR 314	Engineering Economics	3	
ENGR 350	Analog Controls	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	
	Engineering Elective	3	
	Free Elective	3	
Semester Credits:		15	

Lower Division Credits:	63
Upper Division Credits:	64
Total Credits:	127

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

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

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	PE 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	Electrical Engineering I	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	Electrical Engineering II	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	Electrical Engineering III	3	
L	ENGR 544	Ship Systems IV	3	
Semester Credits:			16	

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	PE 411	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	Analog Controls	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:
Upper Division Credits:
Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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

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	PE 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	Electrical Engineering I	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	Electrical Engineering II	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	Electrical Engineering III	3	
L	ENGR 544	Ship Systems IV	3	
Semester Credits:			18	

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	ENGR 348	Strength of Materials Laboratory	1	
	ENGR 354	Marine Engineering Design I	3	
L	ENGR 371	Applied Naval Architecture	3	
	ENGR 418	Mechanical Engr Design I	4	
	ENGR 454	Vibrations	3	
		Engineering Elective	3	
Semester Credits:			17	

	ENGR 314	Engineering Economics	3	
	ENGR 349	Transport Processes Laboratory	1	
	ENGR 419	Mechanical Engr Design II	4	
	HIST 102	American Civilization II	3	
		Engineering Elective	3	
		Free Elective	3	
Semester Credits:			17	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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

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	
	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	Electrical Engineering I	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 314	Engineering Economics	3	
	ENGR 344	Thermodynamics	3	
	ENGR 347	Strength of Materials	3	
	<i>or</i> *CHEM 212	Materials Science I		
	ENGR 380	Electrical Engineering II	3	
	HIST 101	American Civilization I	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	
	ENGR 390	Electrical Engineering III	3	
Semester Credits:			15	

	ENGR 536	Industrial Internship II	3	
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Upper Division - Senior Year

	ENGR 354	Marine Engineering Design I	3	
	ENGR 418	Mechanical Engr Design I	4	
	ENGR 454	Vibrations	3	
		Engineering Elective	3	
		Engineering Elective	3	
Semester Credits:			16	

	ENGR 348	Strength of Materials Laboratory	1	
	ENGR 349	Transport Processes Laboratory	1	
	ENGR 419	Mechanical Engr Design II	4	
	HIST 102	American Civilization II	3	
		Engineering Elective	3	
		Free Elective	3	
Semester Credits:			15	

Lower Division Credits:	63
Upper Division Credits:	64
Total Credits:	127

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

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

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

Spring Semester

	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 & Smnship	1	
L	NAVG 112	Terrestrial 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	Electrical Engineering I	3	
	HUMN 202	World Literature & Culture II	3	
	MATH 212	Differential Equations	4	
L	NAVG 212	Celestial Navigation	4	
Semester Credits:			20	

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

	ENGR 314	Engineering Economics	3	
	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	Electrical Engineering II	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Collision Avoidance	3	
Semester Credits:			20	

	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	Electr Nav & Voyage Planning	4	
Semester Credits:			20	

L	MT 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 461	Ship Design II	4	
	ENGR 462	Ship Resistance and Propulsion	3	
	HIST 101	American Civilization I	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
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	
L	MT 322	Marine Cargo Operations	3	
		Engineering Elective	3	
Semester Credits:			17	

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:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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

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	PE 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	Electrical Engineering I	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		OR	L	ENGR 521	Cadet Comm Vessel Shipping	6	
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Upper Division - Junior Year

	ENGR 314	Engineering Economics	3	
	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	Electrical Engineering II	3	
L	ENGR 543	Ship Systems III	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	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			19	

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	ENGR 345	Engineering Statistical Analysis	3	
	ENGR 390	Electrical Engineering III	3	
	ENGR 461	Ship Design II	4	
	ENGR 462	Ship Resistance and Propulsion	3	
	HIST 101	American Civilization I	3	
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	
	HIST 102	American Civilization II	3	
		Engineering Elective	3	
Semester Credits:			17	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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

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	Electrical Engineering I	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 314	Engineering Economics	3	
	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	Electrical Engineering II	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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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	
	HIST 101	American Civilization I	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	
	HIST 102	American Civilization II	3	
Semester Credits:			16	

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

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

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

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	

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	Seminar: Transport. Economics	3	
or GBMG 440	Seminar: Strategy and Policy		
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 Elective

At least one of these two electives must be chosen from the left column.

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 Prin. of Global Supply Chain 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.

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	IntroVesselOps & Seamanship	1	
L	NAVG 112	Terrestrial Navigation	4	
	OCEA 101	General Oceanography	4	
L	PE 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	

	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	NAVG 212	Celestial Navigation	4	
	PHYS 214	General Physics II	4	
	PHYS 216	General Physics II Lab	0.5	
Semester Credits:			18.5	

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

	BIO 210	Ecology	3	
(2)	BIO 315	Marine Biology	3	
(2)	CHEM 220	Environmental Chemistry	3	
	MATH 251	Statistics	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Collision Avoidance	3	
Semester Credits:			20	

(1)	BIO 415	Ichthyology	3	
	CHEM 221	Organic Chemistry	3	
	CHEM 222	Organic Chemistry Laboratory	1	
L	MT 322	Marine Cargo Operations	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Electr Nav & Voyage Planning	4	
		MES Elective	3	
Semester Credits:			19	

L	MT 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

(1)	BIO 320	Invertebrate Zoology	4	
	ES 451	Field Methods in Environ. Science	4	
(1)	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 420	Environmental Pollution	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:

Upper Division Credits:

Total Credits:

(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. L denotes a license course.

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	4	
	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	

	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	
	PHYS 214	General Physics II	4	
	PHYS 216	General Physics II Lab	0.5	
Semester Credits:			14.5	

Upper Division - Junior Year

	BIO 210	Ecology	3	
(2)	BIO 315	Marine Biology	3	
(2)	CHEM 220	Environmental Chemistry	3	
	MATH 251	Statistics	3	
Semester Credits:			12	

(1)	BIO 415	Ichthyology	3	
	CHEM 221	Organic Chemistry	3	
	CHEM 222	Organic Chemistry Laboratory	1	
		MES Elective	3	
		Free 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	
(1)	GEOL 301	General Geology	3	
		Free Elective	3	
Semester Credits:			14	

(2)	BIO 416	Fisheries Science	3	
	ES 420	Environmental Pollution	3	
	GBLW 435	Environmental Law & Policy	3	
	OCEA 402	Estuaries & Coastal Processes	3	
		MES Elective	3	
Semester Credits:			15	

Lower Division Credits:	62
Upper Division Credits:	60
Total Credits:	122

(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.

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	IntroVesselOps & Seamanship	1	
L	NAVG 112	Terrestrial Navigation	4	
	OCEA 101	General Oceanography	4	
L	PE 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	

	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	NAVG 212	Celestial Navigation	4	
	PHYS 214	General Physics II	4	
	PHYS 216	General Physics II Lab	0.5	
Semester Credits:			18.5	

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

	BIO 210	Ecology	3	
(2)	CHEM 220	Environmental Chemistry	3	
	MATH 251	Statistics	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Collision Avoidance	3	
(2)	OCEA 425	Marine Environmental Issues	3	
Semester Credits:			20	

	CHEM 221	Organic Chemistry	3	
	CHEM 222	Organic Chemistry Laboratory	1	
L	MT 322	Marine Cargo Operations	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Electr Nav & Voyage Planning	4	
(1)	OCEA 415	Marine Biogeochemistry	3	
(1)	OCEA 416	Marine Biogeochemistry Lab	1	
		MES Elective	3	
Semester Credits:			20	

L	MT 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	ES 451	Field Methods in Environ. Science	4	
(1)	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 420	Environmental Pollution	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:

Upper Division Credits:

Total Credits:

(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. L denotes a license course.

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	4	
	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	

	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	
	PHYS 214	General Physics II	4	
	PHYS 216	General Physics II Lab	0.5	
Semester Credits:			14.5	

Upper Division - Junior Year

	BIO 210	Ecology	3	
(2)	CHEM 220	Environmental Chemistry	3	
	MATH 251	Statistics	3	
(2)	OCEA 425	Marine Environmental Issues	3	
Semester Credits:			12	

	CHEM 221	Organic Chemistry	3	
	CHEM 222	Organic Chemistry Laboratory	1	
(1)	OCEA 415	Marine Biogeochemistry	3	
(1)	OCEA 416	Marine Biogeochemistry Lab	1	
		MES Elective	3	
		Free Elective	3	
Semester Credits:			14	

	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	
(1)	GEOL 301	General Geology	3	
(1)	METE 350	Synoptic Meteorology	4	
		Free Elective	3	
Semester Credits:			14	

	ES 420	Environmental Pollution	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:	62
Upper Division Credits:	61
Total Credits:	123

(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.

B.S. in Marine Operations 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	PE 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	IntroVesselOps & Seamanship	1	
L	NAVG 112	Terrestrial 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	
	MT 435	Maritime Security	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	Celestial Navigation	4	
Semester Credits:			18	

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	
	GBTT 251	Transportation Systems	3	
	MT 212	Ship Management	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
	MT 404	Environmental Management	3	
L	NAUT 308	Nautical Operations: Safety	2	
		Humanities elective	3	
Semester Credits:			20	

	CHEM 100	Introductory Chemistry	3	
	ENGR 541	Ship Systems I	2	
	GBTT 252	Business of Shipping	3	
L	MT 322	Marine Cargo Operations	3	
L	NAUT 315	Collision Avoidance	3	
L	NAVG 312	Electr Nav & Voyage Planning	4	
Semester Credits:			18	

L	MT 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	GBTT 457	Port and Terminal Operations	3	
	GBUS 300	International Business	3	
L	MT 412	Deck License Seminar	4	
L	MT 426	Maritime Communications	3	
		Humanities Elective	3	
Semester Credits:			16	

	GBLW 435	Environmental Law & Policy	3	
	MT 408	International Safety Mgt	3	
L	NAUT 416	Bridge Resource Mgmt (Unltd Lic.)	3	
		Humanities Elective	3	
		LAS Elective	3	
		LAS Elective	3	
Semester Credits:			18	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	PE 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 242	Statics	3	
	ENGR 243	Transport Processes	3	
	ENGR 290	Electrical Engineering I	3	
L	ENGR 543	Ship Systems III	3	
	GBT 251	Transportation Systems	3	
Semester Credits:			15	

L	ENGR 371	Applied Naval Architecture	3	
	ENGR 380	Electrical Engineering II	3	
L	ENGR 544	Ship Systems IV	3	
	GBT 252	Business of Shipping	3	
	MT 212	Ship Management	3	
L	NAUT 308	Nautical Operations: Safety	2	
Semester Credits:			17	

L	ENGR 516	Engine License Seminar	0	
L	ENGR 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	GBT 457	Port and Terminal Operations	3	
	GBUS 300	International Business	3	
	MT 408	International Safety Mgt	3	
		Humanities Elective	3	
		LAS Elective	3	
Semester Credits:			15	

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

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	PE 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	IntroVesselOps & Seamanship	1	
L	NAVG 112	Terrestrial 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	
	MT 435	Maritime Security	3	
	PHYS 211	General Physics I	3	
	PHYS 213	General Physics I Lab	0.5	
Semester Credits:			15.5	

	GBAC 311	Financial Accounting	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	Celestial Navigation	4	
Semester Credits:			18	

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	
	GBLW 431	Business Law	3	
	GBMG 341	Organizational Management	3	
	GBTT 251	Transportation Systems	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 315	Collision Avoidance	3	
Semester Credits:			18	

	GBEC 424	International Economics & Finance	3	
	GBTT 252	Business of Shipping	3	
L	MT 322	Marine Cargo Operations	3	
	MT 404	Environmental Management	3	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAVG 312	Electr Nav & Voyage Planning	4	
Semester Credits:			18	

L	MT 530	Summer Sea Term III	5	
L	PE 411	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	
		LAS Elective	3	
		LAS Elective	3	
Semester Credits:			18	

USCG License Exam:

Lower Division Credits:

Upper Division Credits:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	PE 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	
	GBTT 251	Transportation Systems	3	
L	METE 201	Meteorology for Mariners	3	
L	NAUT 102	IntroVesselOps & Seamanship	1	
L	NAVG 112	Terrestrial Navigation	4	
Semester Credits:			17	

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

	ENGL 452	Technical Writing	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	Celestial Navigation	4	
	OCEA 101	Oceanography	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

	GBEC 121	Macroeconomics	3	
	MT 404	Environmental Management	3	
L	MT 321	Intro to Cargo Ops & Stability	3	
L	NAUT 315	Collision Avoidance	3	
		Humanities Elective	3	
		Humanities Elective	3	
Semester Credits:			18	

	GBEC 122	Microeconomics	3	
	HIST 416	US Maritime History to Civil War	3	
	<i>or</i> HIST 417	US Maritime History Since 1865	3	
L	MT 322	Marine Cargo Operations	3	
L	NAUT 308	Nautical Operations: Safety	3	
L	NAVG 312	Electr Nav & Voyage Planning	4	
		Humanities Elective	3	
Semester Credits:			19	

L	MT 530	Summer Sea Term III	5	
L	PE 411	Medical Care Provider	1	

Upper Division - Senior Year

	HUMN 465	Humanities Research Methods	3	
	<i>or</i> ENGL 416	Literature of the Sea	3	
L	MT 412	Deck License Seminar	4	
L	MT 426	Maritime Communications	3	
		Humanities Elective	3	
		LAS 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:

Total Credits:

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	Oceanography	4	
	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	Humanities Internship I	3	
	Humanities Elective	3	
	Humanities Elective	3	
	Humanities Elective	3	
	Law Elective	3	
Semester Credits:		18	

HUMN 490	Studies in Maritime Policy	3	
HUMN 515 <i>or</i>	Humanities Internship II Free Elective	3	
	Humanities Elective	3	
	Humanities Elective	3	
	Law Elective	3	
Semester Credits:		15	

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

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

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	PE 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	ENGR 561	Small Vessels Engineer I	4	
	HIST 101	American Civilization I	3	
	<i>or</i> HIST 102	American Civilization II		
L	MT 250	Ship Construction & Stability	2	
L	NAUT 308	Nautical Operations: Safety	2	
	PS 410	The Business of Towing	3	
Semester Credits:			16	

L	ENGR 541	Ship Systems I	2	
L	ENGR 562	Small Vessels Engineer II	4	
L	ENGR 563	Small Vessel Electrical Machinery	3	
L	MTEO 201	Small Vessel Resource Mgmt	3	
L	MT 322	Marine Cargo Operations	3	
L	PE 411	Medical First Aid	1	
Semester Credits:			16	

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

Total Credits: 73

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.

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	
L	NAUT 102	IntroVesselOps & Seamanship	1	
L	PE 103	Water Safety & Survival	1	
L	PS 112	STCW Basic Training	2	
	PS 120	Primer of Towing	3	
Semester Credits:			15	

	ENGL 102	Freshman English II	3	
	GBUS 100	Intro to Business & Economics	3	
	HIST 101	American Civilization I	3	
	or HIST 102	American Civilization II		
L	MT 250	Ship Construction & Stability	2	
L	NAVG 112	Terrestrial Navigation	4	
Semester Credits:			15	

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

* MT 520: Summer Sea Term II may be substituted for MTDO 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	
L	NAUT 308	Nautical Operations: Safety	2	
L	NAUT 314	Rules of the Road	2	
L	NAUT 315	Collision Avoidance	3	
	PS 410	The Business of Towing	3	

L	MT 322	Marine Cargo Operations	3	
L	NAVG 312	Electr Nav & Voyage Planning	4	
L	PE 411	Medical First Aid	1	
	PS 411	Towing Operations	3	
L	PS 414	Bridge Resource Mgmt (Limited Lic.	3	
		LAS Elective	3	

With Ocean Endorsement Option:

L	MT 426	Maritime Communications	3	
Semester Credits:			16	
Semester Credits with Ocean Endorsement Option:			19	

L	NAVG 212	Celestial Navigation	4	
Semester Credits:			17	
Semester Credits with Ocean Endorsement Option:			21	

L	MTDO 525	Cadet Com Vssl Ship Lim Ton II	6	
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Total Credits:	77
Total Credits with Ocean Endorsement Option:	84

Courses in **bold type** are typically limited to the semester shown. L denotes a license course.