MARINE BIOLOGY - BS, LICENSE OPTION

Program Requirements

First Year

Fall		Semester Credit Hours
CHEM 119	Fundamentals of Chemistry I	4
MARB 101	Succeeding in Science [1]	3
MART 103	Basic Safety and Lifeboatman Training [2]	3
MART 201	Vessel Structure and Ship Knowledge [2]	3
MATH 147 or MATH 151	Calculus I for Biological Sciences or Engineering Mathematics I	4
	Semester Credit Hours	**17**
Spring		
BIOL 111	Introductory Biology I [1,3]	4
CHEM 120	Fundamentals of Chemistry II	4
MARS 102	Earth and Ocean Science [1]	4
MART 115	Seamanship I [2]	3
MART 204	Terrestrial Navigation [2]	3
	Semester Credit Hours	**18**
Summer		
MART 200	Deck Sea Training I: Basic Communications, Navigation and Seamanship [2]	4
	Semester Credit Hours	**4**
Second Year		
Fall		
MARB 215	Marine Zoology [1]	4
NVSC 200	Naval Science for the Merchant Marine Officer [2]	3
Select one of the following:		4
MATH 148	Calculus II for Biological Sciences	
MATH 150	Functions, Trigonometry and Linear Systems	
MATH 152	Engineering Mathematics II	
Pathway elective [1,4]		4
	Semester Credit Hours	**15**
Spring		
ENGL 104	Composition and Rhetoric	3
MART 215	Seamanship II [2,5]	3
MART 303	Celestial Navigation [2]	3
Pathway elective [1,4]		4
Pathway elective [1,4]		4
	Semester Credit Hours	**17**
Summer		
ECON 202	Principles of Economics	3
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communications)		3

Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture)		3
	Semester Credit Hours	**9**
Third Year		
Fall		
MARB 303	Biostatistics [1]	4
MART 210	Integrated Navigation I: RADAR/ARPA/ECDIS [2]	4
MART 212	Marine Dry Cargo Operations [2]	3
MART 321	Navigation Rules, International and Inland [2]	2
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)		3
	Semester Credit Hours	**16**
Spring		
MART 202	Ship Stability and Trim [2]	3
MART 307	Global Maritime Distress Safety System [2]	3
MART 310	Integrated Navigation II: Electronic Navigation [2]	2
MART 313	Marine Liquid Cargo Operations [2]	3
POLS 206	American National Government	3
	Semester Credit Hours	**14**
Summer		
MART 300 or MART 350	Deck Sea Training II: Intermediate Communications, Navigation and Seamanship [2] or Deck Sea Training II – Commercial Internship	4
	Semester Credit Hours	**4**
Fourth Year		
Fall		
MARB 425	Marine Ecology [1]	4
MART 410	Integrated Navigation III: Bridge Watchstanding [2,5]	2
PHYS 201	College Physics	4
POLS 207	State and Local Government	3
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts)		3
	Semester Credit Hours	**16**
Spring		
MART 208	Maritime Meteorology [2]	3
MART 498	Maritime Medical Care [2,6]	2
PHYS 202	College Physics	4
American History (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)		3
Pathway elective [1,4]		4
	Semester Credit Hours	**16**

Summer

MART 400	Deck Sea Training III: Advanced Communications, Navigation and Seamanship [2]	4
	Semester Credit Hours	**4**
	Total Semester Credit Hours	**150**

[1] Indicates required courses in Marine Biology License Option major. These courses will be used to compute the major GPR.

[2] Indicates license courses leading to a USCG/STCW license endorsement or sea time credit accrual which require a minimum grade of C (70%) or better to earn the endorsement or accrual. Students will be required to repeat the course until they earn a grade of C (70%) or better. MART 307 requires a grade of 75% or better.

[3] A grade of C or better is required before advancing to upper level courses.

[4] Select one of the following pathways options for a total of 16 hours.
- Ecology: Take MARB 360, MARB 430, and select two of the following: MARB 311, MARB 315, MARB 435.
- Molecular: Take CHEM 227 and CHEM 237, CHEM 228 and CHEM 238, MARB 310, and select one of the following: MARB 311, MARB 315, MARB 435.

[5] Designated writing intensive course.

[6] MART 498 must be taken within one year of graduation to receive USCG approval.

All electives must be chosen in consultation with, and approved by, the student's academic advisor. Unless courses are specifically listed, see University Core Curriculum for a listing of course options for Communication; Mathematics; Life and Physical Sciences; Language, Philosophy and Culture; Creative Arts; American History; Government and Political Sciences; and Social and Behavioral Sciences. The 3-hour University Core Curriculum requirement for International and Cultural Diversity may be met with courses used to satisfy other degree requirements. The 3-hour University Core Curriculum requirement for Cultural Discourse may be met with courses used to satisfy other degree requirements.

The total hours may be increased if the student is required to take remedial math, remedial English, foreign language or International and Cultural Diversity courses, or any of the six hour cruise options. The six hour cruise options (NAUT 200, NAUT 300 and NAUT 400 or MARR 200, MARR 300 and MARR 400) do not add any required hours to the degree plan.

This degree requires full participation in the Texas A&M University Maritime Academy Corps of Cadets as a qualified License Option cadet. Refer to the University catalog section on the Texas A&M Maritime Academy for additional information. In addition to the academic requirements outlined here, the cadet must also complete the following requirements to receive the degree:

- Successfully complete required sea service and minimum training cruise requirements

- Pass a comprehensive professional examination (either the Third Mate Unlimited-Oceans or Third Assistant Engineering Unlimited) administered by the U.S. Coast Guard (USCG).

- Successfully complete all competencies required by the International Convention on Standards for Training, Certification and Watchkeeping (STCW).

Note: STCW competency certifications expire 5 years after completion. If the cadet does not complete the degree within that time period, the cadet will be required to revalidate the expired competency prior to graduation.