

Curriculum Sheet for 2017-2018 Catalog

This Curriculum expires after six years.

Degree: **Bachelor of Science**

Major: **BIOLOGY**

Emphasis **Marine Biology**

UNIVERSITY CORE CURRICULUM

SCH PREREQUISITES

_____	<u>COMM 1311</u>	<u>Foundation of Communication</u>	Communication	3	
_____	<u>ENGL 1302</u>	<u>Writing and Rhetoric</u>	Communication	3	
_____	<u>See Catalog</u>		Language, Philosophy, and Culture	3	Varies see catalog for pre-requisites
_____	<u>HIST 1301</u>	<u>US History to 1865</u>	American History	3	
_____	<u>HIST 1302</u>	<u>US History Since 1865</u>	American History	3	
_____	<u>POLS 2305</u>	<u>US Government and Politics</u>	Government/Political Science	3	
_____	<u>POLS 2306</u>	<u>State and Local Government</u>	Government/Political Science	3	
_____	<u>See Catalog</u>		Creative Arts	3	
_____	<u>PSYC 2301</u>	<u>General Psychology</u>	Social and Behavioral Science	3	
_____	<u>MATH 2413</u>	<u>Calculus I</u>	Mathmatics	(3)	MATH 1314 and 1316, or MATH 2312, or placement beyond MATH 2312
_____	<u>BIOL 1406</u>	<u>Gen Biology I</u>	Life and Physical Sciences	(3)	
_____	<u>BIOL 1407</u>	<u>Gen Biology II</u>	Life and Physical Sciences	(3)	
_____	<u>CHEM 1411</u>	<u>Gen. Chemistry I</u>	Component Area Option	(3)	
_____	<u>CHEM 1412</u>	<u>Gen. Chemistry II</u>	Component Area Option	(3)	

Note: Taking core curriculum courses other than those listed below will result in additional credit hours apply to your degree. Please consult your academic advisor for more details.

First-Year Seminars/ Professional Skills 2 Credits required

_____	UCCP 1101 & UCCP 1102	<u>First-Year Seminar</u>		2	
_____	BIOL 2200	<u>Professional Skills</u>		2	

Biology Core

_____	BIOL 1406	<u>Biology I</u>	*Life and Physical Sciences Core Course	4	MATH 1314 or see catalog for placement criteria
_____	BIOL 1407	<u>Biology II</u>	*Life and Physical Sciences Core Course	4	BIOL 1406
_____	BIOL 2416	<u>Genetics</u>		4	BIOL 1406 w "C", 1407, CHEM 1411, 1412
_____	BIOL 2421	<u>Microbiology</u>		4	BIOL 1406 w "C", 1407, CHEM 1411, 1412
_____	BIOL 2371	<u>Principles of Evolution</u>		3	BIOL 1407
_____	BIOL 3428	<u>Principles of Ecology</u>		4	BIOL 1407, CHEM 1411, BIOL 2200 or UCCP1101, 1102, MATH 2312
_____	CHEM 1411	<u>Gen. Chemistry I</u>	*Component area option core course	4	MATH 1314 or see catalog for placement criteria
_____	CHEM 1412	<u>Gen. Chemistry II</u>	*Component area option core course	4	CHEM 1411
_____	*CHEM 3411	<u>Organic Chemistry I</u>		4	CHEM 1411
_____	*CHEM 3412	<u>Organic Chemistry II</u>		4	CHEM 3411
_____	MATH 2413	<u>Calculus I</u>		4	MATH 1314 and 1316, or MATH 2312, or placement beyond MATH 2312
_____	*BIOL 4292	<u>Senior Presentation</u>		2	BIOL 2200, Sr. standing

Math Requirement:

Choose one from the following:

_____	MATH 1314	<u>College Algebra</u>		3	College Ready
_____	MATH 1316	<u>Trigonometry</u>		3	MATH 1314, level IV ready
_____	MATH 2312	<u>Precalculus</u>		3	MATH 1314, level IV ready
_____	MATH 2414	<u>Calculus II</u>		4	MATH 2413
_____	MATH 3342	<u>Applied Probability and Stats</u>		3	MATH 2413

Chemistry of Life/Cell Biology Requirement:

Choose one from the following:

_____	BIOL 3403	<u>Molecular Biology (SP)</u>		4	BIOL 2416 and BIOL 2421
_____	BIOL 3410	<u>Cell Biology (FL)</u>		4	CHEM 3411 and BIOL 2416
_____	CHEM 4401	<u>Biochemistry I</u>		4	CHEM 3412 and one year biology

Form and Function Requirement:

Choose one from the following:

_____	BIOL 3425	<u>Functional Anatomy (SP)</u>		4	BIOL 1407
_____	BIOL 3430	<u>Physiology (FL)</u>		4	BIOL 1407
_____	BIOL 3455	<u>Plant Form and Function (alt)</u>		4	BIOL 1407

Organismal Requirement:

Choose one from the following:

_____	BIOL 2472	<u>Principles of Botany (alt SP)</u>		4	BIOL 1407, CHEM 1411
_____	BIOL 3413	<u>Invertebrate Zoology (FL)</u>		4	BIOL 1407
_____	BIOL 3414	<u>Vertebrate Zoology (FL)</u>		4	BIOL 1407

Marine Biology Core Course:

_____	BIOL 4436	<u>Marine Ecology (SP)</u>		4	BIOL 3428
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Marine Organisms Requirement:

Select one from the following:

_____	BIOL 4319	<u>Marine Mammals (FL)</u>		3	BIOL 1407
_____	BIOL 4429	<u>Marine Botany (FL)</u>		4	BIOL 1407
_____	BIOL 4432	<u>Ichthyology (FL)</u>		4	BIOL 3414
_____	BIOL 4444	<u>Estuarine Organisms (SP)</u>		4	BIOL 3413

Human Impacts Requirement:

Select one from the following:

_____	BIOL 4428	<u>Fisheries</u>		4	BIOL 1407
_____	BIOL 4302	<u>Coral Reef Conservation</u>		3	BIOL 3428
_____	BIOL 4323	<u>Global Change Ecology</u>		3	BIOL 3428 or permission of instructor

MARINE BIOLOGY ELECTIVES: See elective list

18-21

University Requirements:

Minimum Total Hours for degree:	120	Minimum Major grade point average (g.p.a.):	
*Upper Division minimum total hours:	45		2.50
*Upper Division minimum residency hours:	36		
*Upper Division minimum major residency hrs:	12	First Year Seminar Requirement: UCCP 1101/1102	
Cumulative TAMU-CC minimum g.p.a.:	2		2
Foreign Language Requirement:	see catalog		

Marine Electives: Choose 18-21 hours

COURSE			PRE-REQ
BIOL2472	Principles of Botany	*If not used elsewhere for degree	4 BIOL1407, CHEM1411
BIOL 3300	Animal Nutrition		3 BIOL 1407, CHEM3411, Pre/Corequisite of CHEM3412
BIOL 3345	Cell Physiology		3 BIOL 2200, BIOL3410
BIOL 3403	Molecular Biology	*If not used elsewhere for degree	4 BIOL 2416, BIOL2421
BIOL 3410	Cell Biology	*If not used elsewhere for degree	4 BIOL 2416 & CHEM3411
BIOL 3413	Invert. Zoology	*If not used elsewhere for degree	4 BIOL 1407
BIOL 3414	Vert. Zoology	*If not used elsewhere for degree	4 BIOL 1407
BIOL 3425	Functional Anatomy	*If not used elsewhere for degree	4 BIOL 1407
BIOL 3430	Physiology	*If not used elsewhere for degree	4 BIOL 1407
BIOL 3455	Plant Form & Function	*If not used elsewhere for degree	4 BIOL 1407
BIOL 3479	Plant Ecology		4 BIOL 1407
BIOL 4299	Directed Independent Research		
BIOL4302	Coral Reef Conservation	*If not used elsewhere for degree	3 BIOL3428
BIOL 4301	Embryology		3 BIOL 2416
BIOL 4304	Biology of Viruses		3 BIOL 2416, BIOL2421, CHEM1411
BIOL 4319	Marine Mammals	*If not used elsewhere for degree	3 BIOL 1407
BIOL 4323	Global Change Ecology	*If not used elsewhere for degree	3 none
BIOL 4326	Toxic & Therapeutic Plants		3 BIOL 1407
BIOL 4340	Genomics, Proteomics, & Bioinformatics		3 BIOL 2416 & BIOL3410 or CHEM4401
BIOL 4350	Research & Design		3 PROF. PERM.
BIOL 4370	Mariculture		3 BIOL 1407
BIOL 4371	Population Genetics		3 BIOL 2416, MATH1442 or 2413
BIOL 4396	Directed Independent Study		3 20 HRS. BIO & PROF. PERM.
BIOL 4405	Limnology		4 BIOL 3428
BIOL 4406	Immunology		4 BIOL 2421
BIOL 4407	Biology of the Fungi		4 BIOL 2421
BIOL 4408	Microbial Diversity & Ecology		4 BIOL 2421
BIOL 4409	Field & Sampling Techniques		4 PROF. PERM.
BIOL 4411	Animal Behavior		4 BIOL 1407
BIOL 4413	Entomology		4 BIOL 3413
BIOL 4422	Plant Taxonomy		4 BIOL 1407
BIOL 4425	Ornithology		4 BIOL 3414
BIOL 4428	Fisheries	*If not used elsewhere for degree	4 BIOL 1407
BIOL 4429	Marine Botany	*If not used elsewhere for degree	4 BIOL 1407
BIOL 4431	Mammology		4 BIOL 3414
BIOL 4432	Ichthyology	*If not used elsewhere for degree	4 BIOL 3414
BIOL 4433	Parasitology		4 BIOL 2421
BIOL 4435	Biological Microtechniques		4 CHEM 3411, BIOL1407
BIOL 4442	Herpetology		4 BIOL 3414
BIOL 4444	Estuarine Organisms	*If not used elsewhere for degree	4 BIOL 3413
BIOL 4446	Tropical Ecos & Conserv		4 BIOL 3428
BIMS3401	Pathophysiology		4 CHEM1411, BIOL1407, BIOL2401
BIMS4311	Biology of Cancer		3 BIOL2416, BIOL3410 strongly recommended
BIMS4323	Neurobiology		3 BIOL2416
BIMS4327	Intro to Toxicology		3 BIOL1407, CHEM1412
BIMS4330	Biological Basis of Aging		3 BIOL1407, CHEM3411
BIMS4333	Medical Entomology		3 BIOL1407
BIMS4334	Human Genetics		3 CHEM3412, BIOL2416
BIMS4335	Endocrinology		3 BIOL2200, CHEM3412, BIOL2416
BIMS4374	Medical Microbiology		3 BIOL2421
BIMS4375	Mechanisms of Microbial Pathogenesis		3 BIOL2421
BIMS4410	Histology		4 BIOL3425
PHYS 1401	Physics I		4 (For 2425- MATH2413)
PHYS 1402	Physics II		4 (For 2426- MATH2414)
MATH2414	Calculus II	*If not used elsewhere for degree	4 Math 2413
BIOL4590	Selected Topics	With Faculty Mentor Approval	
		With Faculty Mentor Approval	4