

This Curriculum expires after six years.

Degree: **Bachelor of Science**  
Major: **BIOLOGY**  
Emphasis: **MICROBIOLOGY**

**UNIVERSITY CORE CURRICULUM**

		<b>HR</b>	<b>PREREQUISITES</b>
_____	COMM 1311	Foundation of Communication	3
_____	ENGL 1302	Writing and Rhetoric	3
_____	See Catalog	Language, Philosophy, Culture	3
_____	HIST 1301	US History to 1865	3
_____	HIST 1302	US History Since 1865	3
_____	POLS 2305	US Government and Politics	3
_____	POLS 2306	State and Local Government	3
_____	See Catalog	Creative Arts	3
_____	See Catalog	Social and Behavioral Science	3
_____	MATH 2413	Calculus I	(3) MATH 1314 & MATH 1316 or MATH 2312 or see catalog for placement criteria
_____	BIOL 1406	Biology I	(3) MATH 1314 or see catalog for placement criteria
_____	BIOL 1407	Biology II	(3) BIOL 1406
_____	CHEM 1411	Gen. Chemistry I	(3)
_____	CHEM 1412	Gen. Chemistry II	(3) CHEM 1411 and MATH 1314 or see catalog for placement criteria

**Note: Taking core curriculum courses other than those listed below will result in additional credit hours applying to your degree.**

**Please consult your academic advisor for more details.**

**First-Year Seminars / Professional Skills**

**Choose UCCP 1101 & UCCP 1102 or UCCP 1102 or BIOL 2200**

_____	UCCP 1101 & 1102	First-Year Seminar	2
_____	BIOL 2200	Professional Skills	2

**Biology Core**

_____	BIOL 1406	Biology I	4	MATH 1314 or see catalog for placement criteria
_____	BIOL 1407	Biology II	4	BIOL 1406
_____	BIOL 2416	Genetics	4	BIOL 1406 w "C", 1407, CHEM 1411 & CHEM 1412
_____	BIOL 2421	Microbiology	4	BIOL 1406 w "C", 1407, CHEM 1411 & CHEM 1412
_____	BIOL 2371	Principles of Evolution	3	BIOL 1407
_____	BIOL 3428	Principles of Ecology	4	BIOL 1407, CHEM 1411, BIOL 2200 or UCCP1101/1102 & pre/co- req MATH 2413
_____	CHEM 1411	Gen. Chemistry I	4	
_____	CHEM 1412	Gen. Chemistry II	4	CHEM 1411 & MATH 1314 or see catalog for placement criteria
_____	CHEM 3411	Organic Chemistry I	4	CHEM 1411
_____	CHEM 3412	Organic Chemistry II	4	CHEM 3411
_____	MATH 2413	Calculus I	4	MATH 1314 & MATH 1316 or MATH 2312, or see catalog for placement criteria
_____	BIOL 4292	Senior Presentation	2	BIOL 2200 or UCCP 1101/1102 & senior standing

**Math requirement**

**Choose one from the following:**

_____	MATH 1314	College Algebra	3	College Ready
_____	MATH 1316	Trigonometry	3	MATH 1314 or see catalog for placement criteria
_____	MATH 2312	Precalculus	3	MATH 1314 or see catalog for placement criteria
_____	MATH 2414	Calculus II	4	MATH 2413
_____	MATH 3342	Applied Probability and Stats	3	MATH 2413

**Chemistry of Life/Cell Biology requirement: Choose one from the following:**

_____	BIOL3403	Molecular Biology (SP)	4	BIOL 2416, BIOL 2421
_____	BIOL 3410	Cell Biology (FL)	4	BIOL 2416, CHEM 3411
_____	CHEM 4401	Biochemistry I	4	CHEM 3412

**Form and Function requirement: Choose one from the following:**

_____	BIOL 3425	Functional Anatomy (SP)	4	BIOL 1407
_____	BIOL 3430	Physiology (FL)	4	BIOL 1407
_____	BIOL 3455	Plant Form & Function (even SP)	4	BIOL 1407

**Organismal Biology requirement: Choose one from the following:**

_____	BIOL 2472	Principles of Botany (odd SP)	4	BIOL 1407 & CHEM 1411
_____	BIOL 3413	Invertebrate Zoology (FL)	4	BIOL 1407
_____	BIOL 3414	Vertebrate Zoology (SP)	4	BIOL 1407

**MICROBIOLOGY CORE CLASSES: (23 sem hours)**

_____	BIOL 3403	Molecular Biology (SP)	4	BIOL 2416 & BIOL 2421
_____	BIOL 4406	Immunology (SP)	4	BIOL 2421
_____	BIMS 4374	Medical Microbiology (FL)	3	BIOL 2421
_____	CHEM 4401	Biochemistry I	4	CHEM 3412 & one year biology
_____	CHEM 4402	Biochemistry II	4	CHEM 4401
_____	PHYS 1401 or 2425	Physics I	4	See catalog
_____	PHYS 1402 or 2426	Physics II	4	See catalog

**MICROBIOLOGY ELECTIVES ELECTIVES: See elective list**

7-8

**University Requirements**

Minimum Total Hours for degree:	120	Minimum Major grade point average (GPA):	2.5
*Upper Division minimum total hours:	45		
*Upper Division minimum residency hours:	36	First Year Seminar Requirement: UCCP 1101/1102	
*Upper Division minimum major residency hrs:	12		2
Cumulative TAMU-CC minimum g.p.a.:	2		
Foreign Language Requirement:	See catalog		

**Microbiology Electives: Choose 7-8 hours**

COURSE		PRE-REQ
BIOL 2472	Principles of Botany *If not used elsewhere for degree	4 BIOL1407, CHEM 1411
BIOL 3300	Animal Nutrition	3 BIOL 1407, CHEM 3411, Pre/Corequisite of CHEM 3412
BIOL 3410	Cell Biology *If not used elsewhere for degree	4 BIOL 2416 & CHEM 3411
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 & Functio *If not used elsewhere for degree	4 BIOL 1407
BIOL 3479	Plant Ecology	4 BIOL 1407
BIOL 4299	Directed Independent Research	
BIOL 4301	Embryology	3 BIOL 2416
BIOL4302	Coral Reef Conservation	3 BIOL3428
BIOL 4304	Biology of Viruses	3 BIOL 2416, BIOL 2421, & CHEM 1411
BIOL 4319	Marine Mammals	3 BIOL 1407
BIOL 4323	Global Change Ecology	3 none
BIOL 4340	Genomics, Proteomics, & Bioinformatics	3 BIOL 2416 & BIOL 3410 or CHEM 4401
BIOL 4350	Research & Design	3 Permissioning of instructor
BIOL 4370	Mariculture	3 BIOL 1407
BIOL 4371	Population Genetics	3 BIOL 2416, MATH 2413
BIOL 4396	Directed Independent Study	3 20 hours of biology and Permission of instructor
BIOL 4405	Limnology	4 BIOL 3428
BIOL 4407	Biology of the Fungi	4 BIOL 2421
BIOL 4408	Microbial Diversity & Ecology	4 BIOL 2421
BIOL 4409	Field & Sampling Techniques	4 Permissioning of instructor
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 4328	Fisheries	4 BIOL 1407
BIOL 4429	Marine Botany	4 BIOL 1407
BIOL 4431	Mammology	4 BIOL 1407 (BIOL 3414 recommended)
BIOL 4432	Ichthyology	4 BIOL 1407 (BIOL 3414 recommended)
BIOL 4433	Parasitology	4 BIOL 2421
BIOL 4436	Marine Ecology	4 BIOL 3428
BIOL 4444	Estuarine Organisms	4 BIOL 3413
BIOL 4446	Tropical Ecos & Conserv	4 BIOL 3428
BIMS 3401	Pathophysiology	4 CHEM 1411, BIOL 1407, BIOL 2401
BIMS 4311	Biology of Cancer	3 BIOL 2416 (BIOL 3410 recommended)
BIMS 4323	Neurobiology	3 BIOL 2416
BIMS 4327	Intro to Toxicology	3 BIOL 1407, CHEM 1412
BIMS 4330	Biological Basis of Aging	3 BIOL 1407, CHEM 3411
BIMS 4333	Medical Entomology	3 BIOL 1407
BIMS 4334	Human Genetics	3 CHEM 3412, BIOL 2416
BIMS 4335	Endocrinology	3 BIOL 2200, CHEM 3412, BIOL 2416
BIMS 4375	Mechanisms of Microbial Pathogenesis	3 BIOL 2421
MATH 2414	Calculus II *If not used elsewhere for degree	4 MATH 2413
BIOL4590	Selected Topics With Faculty Mentor Approval	
Electives	With Faculty Mentor Approval	4