

This Curriculum expires after six years.

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

**UNIVERSITY CORE CURRICULUM**

		<b>SCH</b>	<b>PREREQUISITES</b>
_____	COMM 1311	Foundation of Communication	3
_____	ENGL 1302	Writing and Rhetoric	3
_____	See Catalog	Language, Philosophy, Culture	3 See catalog
_____	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 and 1316, or MATH 2312, or placement beyond MATH 2312
_____	BIOL 1406	Gen Biology I	(3) MATH 1314 or see catalog for placement criteria
_____	BIOL 1407	Gen Biology II	(3) BIOL 1406
_____	CHEM 1411	Gen. Chemistry I	(3)
_____	CHEM 1412	Gen. Chemistry II	(3) CHEM 1411 and MATH 1314 or placement beyond

**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 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, & 1412
_____	BIOL 2421	Microbiology	4	BIOL 1406 w "C", 1407, CHEM 1411, & 1412
_____	BIOL 2371	Principles of Evolution	3	BIOL 1407
_____	BIOL 3428	Principles of Ecology	4	BIOL 1406, 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 placement beyond
_____	*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 2312, or placement
_____	*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, level IV placement
_____	MATH 2312	Precalculus	3	MATH 1314, level IV placement
_____	MATH 2414	Calculus II	4	MATH 2413
_____	MATH 3342	Applied Probability and Stats	3	MATH 2413

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

_____	BIOL 3425	Functional Anatomy (SP)	4	BIOL 1407
_____	BIOL 3430	Physiology (FL,SS)	4	BIOL 1407
_____	BIOL 3455	Plant Form and Function (alt)	4	BIOL 1407

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

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

**MICROBIOLOGY CORE CLASSES: (27 sem hours)**

_____	BIOL 3403	Molecular Biology (SP)	4	BIOL 2416 & BIOL 2421
_____	BIOL 4406	Immunology	4	BIOL 2421
_____	BIMS 4374	Medical Microbiology	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 (g.p.a.):	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**

<b>COURSE</b>			<b>PRE-REQ</b>
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 3345	Cell Physiology		3 BIOL 2200, BIOL 3410
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, BIOL2421, CHEM1411
BIOL 4319	Marine Mammals		3 BIOL 1407
BIOL 4323	Global Change Ecology		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 Permissioning of instructor
BIOL 4370	Mariculture		3 BIOL 1407
BIOL 4371	Population Genetics		3 BIOL 2416, MATH1442 or 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 4428	Fisheries		4 BIOL 1407
BIOL 4429	Marine Botany		4 BIOL 1407
BIOL 4431	Mammology		4 BIOL 3414
BIOL 4432	Ichthyology		4 BIOL 3414
BIOL 4433	Parasitology		4 BIOL 2421
BIOL 4435	Biological Microtechniques		4 CHEM 3411, BIOL1407
BIOL 4436	Marine Ecology		4 BIOL 3428
BIOL 4442	Herpetology		4 BIOL 3414
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 strongly 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
BIMS 4410	Histology		4 BIOL 3425
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