

# ACADEMIC MAP

## BIOLOGY - MICROBIOLOGY TRACK

Bachelor of Science



**START HERE** →

**1**

SEMESTER 1 - FALL	CREDITS	COMPLETED
BIOL 1406 BIOLOGY I	4	✓
CHEM 1411 GENERAL CHEMISTRY I	4	
UNIV 1101 UNIVERSITY SEMINAR I	1	
UNIVERSITY CORE CURRICULUM	3	
UNIVERSITY CORE CURRICULUM	3	

TOTAL CREDITS: 15

**3**

SEMESTER 3 - FALL	CREDITS	COMPLETED
BIOL 2416 GENETICS	4	
CHEM 3411 ORGANIC CHEMISTRY I	4	
ENGL 2316 OR ENGL 2332 OR ENGL 2333 LITERATURE AND CULTURE OR LITERATURE OF THE WESTERN WORLD: FROM THE CLASSICS TO THE RENAISSANCE OR LITERATURE OF THE WESTERN WORLD: FROM THE ENLIGHTENMENT TO THE PRESENT	3	
UNIVERSITY CORE CURRICULUM	4	

TOTAL CREDITS: 15

**5**

SEMESTER 5 - FALL	CREDITS	COMPLETED
ENGL 2316 OR ENGL 2332 OR ENGL 2333 LITERATURE AND CULTURE OR LITERATURE OF THE WESTERN WORLD: FROM THE CLASSICS TO THE RENAISSANCE OR LITERATURE OF THE WESTERN WORLD: FROM THE ENLIGHTENMENT TO THE PRESENT	3	
BIOL 3428 PRINCIPLES OF ECOLOGY	4	
SMTE 4270 SCIENCE EDUCATION TOPICS I	3	
CHEMISTRY OF LIFE/CELL BIOLOGY REQUIREMENT	4	
ORGANISMAL (PLANT) BIOLOGY REQUIREMENT	3	

TOTAL CREDITS: 17

**7**

SEMESTER 7 - FALL	CREDITS	COMPLETED
EDUC 4605 PLANNING, TEACHING, ASSESSMENT AND TECHNOLOGY	6	
EDUC 4321 INSTRUCTIONAL DESIGN FOR SPECIAL POPULATIONS	3	
UPPER DIVISION BIOLOGY ELECTIVE	3	
READING COURSE	3	

TOTAL CREDITS: 15

**2**

SEMESTER 2 - SPRING	CREDITS	COMPLETED
BIOL 1407 BIOLOGY II	4	
CHEM 1412 GENERAL CHEMISTRY II	4	
UNIV 1101 UNIVERSITY SEMINAR II	1	
MATH 2413 CALCULUS I	4	
UNIVERSITY CORE CURRICULUM	3	

TOTAL CREDITS: 16

**4**

SEMESTER 4 - SPRING	CREDITS	COMPLETED
BIOL 2421 OR BIOL 2416 MICROBIOLOGY OR GENETICS	4	
BIOL 2401 ANATOMY AND PHYSIOLOGY I	4	
BIOL 2371 OR BIOL 2416 PRINCIPLES OF EVOLUTION OR GENETICS	3	
UNIVERSITY CORE CURRICULUM	4	

TOTAL CREDITS: 15

**6**

SEMESTER 6 - SPRING	CREDITS	COMPLETED
ORGANISMAL (ANIMAL) BIOLOGY REQUIREMENT	4	
ENGL 3301 TECHNICAL AND PROFESSIONAL WRITING	3	
CHEMISTRY OF LIFE/CELL BIOLOGY REQUIREMENT	4	
SMTE 4320 SECONDARY SCIENCE LABORATORY TECHNIQUES	3	
SMTE 4217 SECONDARY APPROACHES TO THE LIFE SCIENCES	2	

TOTAL CREDITS: 16

**8**

SEMESTER 8 - SPRING	CREDITS	COMPLETED
EDUC 4311 CLASSROOM MANAGEMENT	3	
EDUC 4995 CLINICAL TEACHING	9	
READING COURSE	3	

TOTAL CREDITS: 15

YEAR 1

YEAR 2

YEAR 3

YEAR 4



# CAREER MAP

## BIOLOGY - MICROBIOLOGY TRACK

### *Bachelor of Science*



The biology program provides diverse training for careers in the biological sciences. The biology curriculum includes content courses required for teacher certification in life science, acceptance to post-graduate studies, and pre-professional studies in preparation for admission to professional schools.

Students will acquire content and skills to enter a variety of biology-related careers such as research, marine biology, wildlife and coastal management, environmental protection, laboratory technician, biotechnology industry, medical or environmental microbiology, technical writing, pharmaceutical sales, careers in the medical, dental, and allied health fields, and science education.

Field and laboratory courses emphasize the development of practical skills in using special materials and equipment. Focus is on enhancement of critical thinking skills, which will prepare the student for careers in the biological sciences as well as in other general areas of employment. The undergraduate biology degree has six tracks, fitting a wide variety of student interests and career goals. These tracks include: Cellular & Molecular Biology, Ecology, Integrative Biology, Marine Biology, Microbiology, Organismal Biology. The biology core provides students with a broad biological background and includes coursework in four key areas:

mathematics, the chemistry of life/cell biology, form and function, and organismal biology. In each of these areas students select one course from a list of appropriate courses, depending on their interests and choice of biology career track. The biology career track areas are: (A) Ecology, (B) Marine Biology, (C) Cell/Molecular Biology, (D) Microbiology, (E) Organismal Biology and (F) Integrative Biology.

## CONTACT INFORMATION

### Career Counselor:

Career and Professional Development Center  
UC 304 | 361.825.2628  
career.center@tamucc.edu

### Internship Coordinator:

Dr. Kim Withers  
NRC 3205 | 361.825.5907  
kim.withers@tamucc.edu

### Department Contact:

Department of Life Sciences  
NRC 3205 | 361.825.5907  
kim.withers@tamucc.edu

## ADDITIONAL SOURCES OF INFORMATION

1. American Fisheries Society
2. Association for the Sciences of Limnology and Oceanography
3. Society for Marine Mammalogy

## STUDENT ORGANIZATIONS

- American Cetacean Society Student Coalition
- Pre-Veterinary Society
- SACNAS Chapter at Texas A&M University - Corpus Christi
- Pre-Dental Society
- American Medical Student Association
- Sea Turtle Club
- American Fisheries Society
- Indian Student Association
- Islander Green Team
- Health Sciences Association
- Student Council of Math and Science Teachers

## CAREER OPTIONS

- |  |                                   |
|--|-----------------------------------|
| • Researcher   | • Pharmaceutical Sales            |
| • Marine Biologist   | • Laboratory Technician           |
| • Medical Microbiologist   | • Science Teacher                 |
| • Environmental Biologist  | • Wildlife and Coastal Management |
| • Professional School (Med school, dental school, optometry, etc.) |                                   |

## SKILLS/ATTRIBUTES

- Communication Skills
- Research
- Ability to use scientific equipment and organize and maintain accurate records
- Aptitude for scientific inquiry and problem solving
- Ability to organize, analyze and interpret scientific data
- Conduct and clearly explain scientific research
- Teamwork