ENVIRONMENTAL MICROBIOLOGY

DEPARTMENT OF INTEGRATIVE BIOLOGY

Students majoring in Environmental Microbiology study the roles that microorganisms play in the environment. The program of study explores the diversity, community structure, and ecological functioning of microorganisms. The objective of the program is to provide students with a firm foundation in basic biology and the tools necessary to function as professional biologists, with special emphasis on microorganisms in natural ecosystems and human-engineered systems.

**MAJOR REQUIREMENTS (30 CREDIT HOURS)**

- BSC 2010/L: Cellular Processes with lab
- BSC 2011/L: Biodiversity with lab
- MCB 3020/L: Microbiology with lab
- PCB 3043/L: Ecology and lab
- PCB 3063/L: Genetics and lab
- MCB 4404/L: Microbial Physiology & Genetics
- Two Upper Level Microbiology Course
  - BSC 4933: Applied and Env Microbiology
  - BSC 4933: Microbiology of Waterborne Diseases
  - BSC 4933: Epigenetics
  - BSC 4933: Genomics
  - MCB 4202: Ecology of Infectious Diseases
  - ZOO 4233: Parasitology

**MAJOR ELECTIVES OPTIONS (10 CREDIT HOURS)**

- BOT 3152C: Field Botany
- BOT 3373C: Vascular Plants
- BOT 3850: Medical Botany
- BSC 3312: Marine Biology
- BSC 4933: Coastal Plants
- BSC 4933: Coral Reef Ecology
- BSC 4933: Ecosystem Ecology
- BSC 4933: Evolutionary Medicine
- BSC 4933: Tropical Ecology
- PCB 3712/3713L: General Physiology and lab
- ZOO 3205C: Advanced Invertebrate Zoology
- ZOO 3713C: Comparative Vertebrate Anatomy
- ZOO 4513C: Animal Behavior

**SUPPORTING SCIENCE (32-34 CREDIT HOURS)**

- CHM 2045/L: General Chemistry I and lab
- CHM 2046/L: General Chemistry II and lab
- CHM 2210/L: Organic Chemistry I and lab
- CHM 2211/L: Organic Chemistry II and lab
- PHY 2053/L OR PHY 2048/L: Physics I with lab
- PHY 2054/L OR PHY 2049/L: Physics II with lab
- Calculus I
  - MAC 2241 OR MAC 2311 OR MAC 2281
- Calculus II OR Statistics
  - MAC 2242 OR MAC 2312 OR STA 2023

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BioAdvise

Location: SCA 203
Email: BioAdvise@usf.edu
Phone: 813-974-3250
biology.usf.edu/bioadvise

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USF UNIVERSITY OF SOUTH FLORIDA COLLEGE OF ARTS & SCIENCES
Transfer and Exam Credits

Check your AP, IB and/or AICE credit to see how they will apply at USF: http://ugs.usf.edu/credit-by-exam/

Any Florida public dual enrollment credit will follow common course coding and will transfer easily!

Out-of-state and private science/math coursework will need to be evaluated:
http://biology.usf.edu/bioadvise/registration/transfer/

Two years of consecutive high school foreign language will satisfy your foreign language requirement for Marine Biology.

GET INVOLVED!

ON CAMPUS

✓ Undergraduate Research- Work one-on-one with faculty beginning your junior year with the possibility to be published!
✓ Lab and Field experience through a wide array of coursework
✓ USF Herpetology Club
✓ USF Wildlife Conservation Club
✓ USF EcoMentors- independent environmental research projects

OFF CAMPUS

✓ Big Cat Rescue has volunteer opportunities
✓ Nicodemus Wilderness Project has volunteer opportunities and scholarships
✓ Florida Fish and Wildlife Research Institute (FWRI) has internships and volunteer opportunities
✓ Callaway Gardens has various paid internships and volunteer opportunities
✓ Lowry Park Zoo has internships and volunteer opportunities
✓ Smithsonian Tropical Research Institute has paid internship opportunities in Panama
✓ Centers for Disease Control and Prevention (CDC) offers paid summer internships in Atlanta

Please refer to the BioAdvise involvement website for links to the above opportunities:
http://biology.usf.edu/bioadvise/involvement/clubs.aspx

SKILL SETS LEARNED IN THIS MAJOR CAN PREPARE YOU FOR THE FOLLOWING CAREER FIELDS*

Environmental Biologist | Agriculture | Education | Conservation Biologist | Environmental Consultant | Forestry
Environmental Monitoring and Safety | Characterization and Control of Pathogenic Microorganisms | Bioremediation

*This is a general list and does not include all potential opportunities post-graduation. The combination of your in-class experiences and extra-curricula's will help to shape your post-graduation plans.

ADDITIONAL DEGREE REQUIREMENTS

- ENC 1101 and ENC 1102
- Core Social Science
- Core Humanities
- FKL- Social and Behavioral Science
- FKL- Human and Cultural Diversity
- FKL- Fine Arts
- FKL- Humanities