

Microbiology

Theme Information

Microbiology is one of eight interdisciplinary PhD themes within Graduate Biomedical Sciences (GBS). Students select a theme upon application but have access to faculty and courses from across GBS, allowing for flexibility in both research and academics.

The Microbiology Theme emphasizes the study of bacteria, viruses, fungi, and parasites. Over 60 faculty members from the Departments of Microbiology, Cell Biology, Biochemistry and Molecular Genetics, Genetics, Pathology, Medicine, Pediatrics, and Dentistry are involved in internationally renowned research and the training of PhD students. UAB has rapidly become a major center for biomedical research and ranks among the most prestigious research institutions in the world.

Admissions

Prospective students should visit the [GBS Admissions page](#) for information on admissions requirements, application deadlines, and how to apply.

Financial Support

All students accepted into GBS programs receive a competitive annual stipend and fully paid tuition and fees. Single coverage health insurance is also provided at no cost to the student. Please reference the [GBS Financial Support page](#) for further information.

Curriculum

Requirements	Hours
Lab Rotations	3
GBS 795 Lab Rotation 1	
GBS 796 Lab Rotation 2	
GBS 797 Lab Rotation 3	
Core Courses	7
GBS 701 Core Concepts in Research: Critical Thinking & Error Analysis	
GBS 707 Basic Biochemistry and Metabolism	
GBS 708 Basic Genetics and Molecular Biology	
GBS 709 Basic Biological Organization	
Module Courses	8
GBS 760 Bacterial Genetics and Physiology	
GBS 762 Virology	
GBS 764 Introduction to Structural Biology Methods	
GBS 763 Microbial Pathogenesis	
Theme Required Courses	10
GBS 768 Communicating Science: Reading, Writing and Presentation	
GBSC 742 GBS Student Theme Meeting Course ¹	
GBS Required Courses	49
GRD 717 Principles of Scientific Integrity	
Grant-Writing/Scientific Communication ²	
Biostatistics ³	

Three Advanced Courses ⁴

Journal Clubs ⁵

Research ⁶

Total Hours

77

- ¹ Required fall and spring semester, 2nd year until graduation.
- ² Course selected from the following: GBS 716, GBS 725, GBS 768, GBSC 726, GRD 709
- ³ Course selected from the following: GRD 770, BST 611, BST 612, BY 755, PY 716
- ⁴ Required each fall and spring, 2nd year until graduation. Courses selected from the following: GBS 736, GBS 746J, GBS 747J, GBS 756, GBS 766, GBS 776, GBS 786J, GBS 793, GBSC 700, GBSC 713, GBSC 720, INFO 673, INFO 793
- ⁵ Three advanced courses selected from the following: GBS 700, GBS 702, GBS 715, GBS 718, GBS 726, GBS 729, GBS 739, GBS 742, GBS 749, GBS 754, GBS 757, GBS 758, GBS 765, GBS 775, GBS 778, GBS 779, GBS 783, GBSC 705, GBSC 706, GBSC 707, GBSC 709, GBSC 710, GBSC 710, GBSC 712, GBSC 714, GBSC 715, GBSC 717, GBSC 721, GBSC 724, GBSC 725, GBSC 728, GBSC 730, GBSC 732, GBSC 734, GBSC 735, GBSC 736, GBSC 740, GBSC 741, GBSC 743, GBSC 745, GBSC 746, GBSC 748, INFO 701, INFO 702, INFO 703, INFO 704, INFO 751, INFO 762, INFO 797, INFO 796, BME 723, BME 770, BME 773, BME 780, or other approved course.
- ⁶ Student must complete 24 hours total of dissertation research, GBS 799.

Theme Directors

The theme directors listing for Microbiology is located [here](#).

Theme Faculty

The faculty listing for the Microbiology theme is located [here](#).

For further information, please reference the [GBS website](#).