UF | UNIVERSITY of FLORIDA

College of Agricultural and Life Sciences
Department of Microbiology and Cell Science

Please read the requirements below that you must follow to graduate. If you have questions about admission, course planning, or registration contact your academic advisor at mcsadvising@ifas.ufl.edu.

Graduation Requirements

- Students must take at least three credits in the final fall/spring (two credits in summer) semester to graduate.
- Thirty credits are required to complete the degree.
- Only courses completed with a grade of C or higher can be counted towards the degree.
- Students must maintain both a 3.0 overall GPA and 3.0 major GPA to graduate.
    - A lower GPA will result in academic probation and possible dismissal from the program
- Fifteen credits must be completed in major courses with a MCB, PCB, or BSC prefix.
- Satisfactorily complete MCB 7922 – Final Literature Review in the last semester of coursework: http://microbiologyonline.ifas.ufl.edu/student-resources/graduation-info/

Required courses

- **Students are required to complete the six courses listed below (16 credits):**

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 5270	Antimicrobial Resistance (Pre-Req: microbiology course)	3	✓	✓	
MCB 6670C	The Microbiome (Pre-Req: microbiology course)	3		✓	Sum C**
MCB 6424	Probiotics (Pre-Req: microbiology course)	3		✓	
MCB 5505	Virology (Pre-Req: microbiology course)	3	✓	✓	Sum C**
BSC 6895C	AI in Agriculture and Life Sciences (Pre-Req: microbiology course)	3	✓		
MCB 7922	Final Literature Review (must be taken in final semester)	1	✓	✓	Sum C**

- **Students are required to complete two of the courses listed below (two credits):**

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 6937	Regulatory Aspects of Microbiome-Based Therapies (Pre-Req: MCB6424 or MCB4422)	1	✓		Sum C**
MCB 7922	Journal Colloquy: Mechanisms of Host/Microbial Interactions (Pre-Req: microbiology course)	1	✓	✓	Sum C**
MCB 7922	Journal Colloquy: Virome/Host Interactions (Pre-Req: microbiology course)	1	✓	✓	
MCB 7922	Journal Colloquy: Microbiome Therapeutics/Clinical Trials (Pre-Req: microbiology course)	1	✓		Sum C**

Choose a Track

- **Students are required to choose one of two available tracks:**
  - **Microbiome/Host Interactions Track (6 credits)**
  - **Microbiome Quantitative Track (6 credits)**

Microbiome/Host Interactions Track (6 credits):

- **Students are required to complete the course listed below (three credits):**

Course #	Course Title	Credits	Fall	Spring	Summer
PCB 5235	Immunology (Pre-Req: microbiology course)	3		✓	

- **Students are required to complete one of the courses listed below (three credits):**

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 5205	Microbiology of Human Pathogens (Pre-Req: microbiology course)	3	✓	✓	
MCB 6151	Prokaryotic Diversity (Pre-Req: microbiology course)	3			Sum C**
MCB 6407	Prokaryotic Cell (Pre-Req: courses in microbiology and biochemistry)	3	✓		

Microbiome Quantitative Track (6 credits):

- **Students are required to complete two of the courses listed below (five or six credits):**

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 6796	Microbiological Data Analysis (Pre-Req: microbiology course)	3	✓		
MCB 6326	Computational Genomics and Epigenomics (Pre-Req: microbiology course)	3		✓	
BSC 6459	Fundamentals in Bioinformatics (Pre-Req: molecular biology and biochemistry course)	3	✓		
MCB 6318	Comparative Microbial Genomics (module) (Pre-Req: grade of A- in BSC6459)	2		✓	

- **If MCB6318 is selected in the section above, take one of the courses listed below (one credit):**

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 6937	Regulatory Aspects of Microbiome-Based Therapies (Pre-Req: MCB6424 or MCB4422)	1	✓		Sum C**
MCB 7922	Journal Colloquy: Mechanisms of Host/Microbial Interactions (Pre-Req: microbiology course)	1	✓	✓	Sum C**
MCB 7922	Journal Colloquy: Virome/Host Interactions (Pre-Req: microbiology course)	1	✓	✓	
MCB 7922	Journal Colloquy: Microbiome Therapeutics/Clinical Trials (Pre-Req: microbiology course)	1	✓		Sum C**

Elective Courses

- **Students are required to complete six elective credits**
    - **Note – module courses are offered during shortened periods throughout the semester**

Course #	Course Title	Credits	Fall	Spring	Summer
BSC 6459	Fundamentals in Bioinformatics (Pre-Req: molecular biology and biochemistry course)	3	✓		
MCB 6796	Microbiological Data Analysis (Pre-Req: microbiology course)	3	✓		
MCB 6407	Prokaryotic Cell (Pre-Req: courses in microbiology and biochemistry)	3	✓		
MCB 6937	Synthetic Biology (Pre-Req: microbiology course)	3	✓		
MCB 6656	Environmental Microbiology (Pre-Req: microbiology course)	3	✓		
MCB 6937	Fundamentals in Molecular Genetics (Highly recommended for those with limited molecular biology background)	3	✓		
MCB 6417	Microbial Metabolism and Energetics (module) (Pre-Req: biochemistry course)	1	✓		
MCB 6095	Microbiology Careers (Pre-Req: none)	1	✓	✓	Sum B***
MCB 6096	Innovation Project Management (Pre-Req: none)	1	✓	✓	Sum B***
MCB 6937	Advanced Molecular Genetics (Pre-Req: molecular genetics course)	3		✓	
MCB 5252	Microbiology, Immunology & Basis for Immuno-Therapeutics (Highly recommended for those with limited microbiology and immunology background)	4		✓	Sum A*
MCB 6772	Advanced Topics in Cell Biology (module) (Pre-Req: microbiology course)	1		✓	
MCB 6355	Microbial/Host Defense (module) (Pre-Req: immunology course)	1		✓	
MCB 6937	Methods to Study Prokaryotic Transcriptional Regulation (module) (Pre-Req: microbiology course)	1		✓	
MCB 6318	Comparative Microbial Genomics (module) (Pre-Req: grade of A- in BSC6459)	2		✓	
PCB 6667	Human Genomics (Pre-Req: microbiology course)	3		✓	
MCB 6326	Computational Genomics and Epigenomics (Pre-Req: microbiology course)	3		✓	
PCB 5235	Immunology (Pre-Req: microbiology course)	3		✓	
MCB 5705	Astrobiology (Pre-Req: microbiology course)	3		✓	
MCB 6937	Python Programming (Pre-Req: microbiology course)	3		✓	
MCB 6458	Post Translational Modifications in Microbiology (Pre-Req: microbiology course)	2			Sum C**
MCB 6151	Prokaryotic Diversity (Pre-Req: microbiology course)	3			Sum C**
MCB 6937	Microbial Multicellularity (Pre-Req: passing grade in MCB5205)	2			Sum C**

Remedial Courses

- These two courses are required in addition to the standard 30 credits for students who are lacking a foundation in microbiology and/or biochemistry. It will be noted in your admission email if you are required to take either of these courses.

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 6937	Biology of Microorganisms	3	✓	✓	Sum A*
BCH 5404	Fundamentals of Biochemistry and Molecular Biology	4	✓	✓	Sum C**

* Sum A refers to the first six-week summer session, mid-May through late June
** Sum C refers to the 12-week summer session, mid-May through early August
***Sum B refers to the second six-week summer session, early July through early August