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 (37 credits required in introductory online MS track).
- 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 6900 Final Assessment - Literature Review in the last semester of coursework to fulfill the final exam requirement: http://microbiologyonline.ifas.ufl.edu/student-resources/graduation-info/

Required courses

- **Students are required to complete at least ONE of the following:**
    - Note – GMS 6121 and MCB 5205 can both be taken and one can count as an elective

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 5205	Microbiology of Human Pathogens (Pre-Req: microbiology course)	3	✓	✓	
GMS 6121	Infectious Disease (Pre-Req: biochemistry course)	3	✓	✓	Sum C**

- **Students are required to complete at least ONE of the following:**
    - Note – GMS 7133 and MCB 5505 can both be taken and one can count as an elective

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 5505	Virology (Pre-Req: microbiology course)	3	✓	✓	Sum C**
GMS 7133	Advanced Molecular Virology (Pre-Req: passing grade in GMS6121)	2	✓	✓	Sum C**

- **Students are required to complete at least ONE of the following:**
    - Note - taking up to 2 additional journal courses can count as electives (maximum 3 credits total)

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 7922	Journal Colloquy – (topic announced each semester) (Pre-Req: none)	1	✓	✓	Sum C**
GMS 7192	Journal Colloquy – Infectious Disease (Pre-Req: none)	1	✓	✓	Sum C**
GMS 7192	Journal Colloquy – Bacteriology (Pre-Req: none)	1	✓	✓	Sum C**
GMS 7192	Journal Colloquy – COVID-19 (Pre-Req: none)	1	✓	✓	Sum C**

- **Students are required to complete ALL THREE of the courses listed below**

Course #	Course Title	Credits	Fall	Spring	Summer
BSC 6459	Fundamentals in Bioinformatics (Pre-Req: molecular biology or biochemistry course)	3	✓		
BCH 5413	Mammalian Molecular Biology and Genetics (Pre-Req: molecular biology or biochemistry course)	3	✓	✓	Sum C**
MCB 6900	Final Assessment - Literature Review (must be taken in final semester)	1	✓	✓	Sum C**

Elective Courses

- Remaining credits must come from elective courses (required and elective credits must total 30 to be eligible to graduate)
    - Note – module courses are offered during shortened periods throughout the semester

Course #	Course Title	Credits	Fall	Spring	Summer
MCB 6796	Microbiological Data Analysis (Pre-Req: microbiology course)	3	✓		
BSC 6895C	AI in Agriculture and Life Sciences (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 (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***
GMS 6108^	Bacterial Physiology, Antibiotics and Genetics (Pre-Req: grade of B+ in GMS6121)	3	✓	✓	Sum C**
GMS 6109^	Advanced Bacteriology (Pre-Req: passing grade in GMS6121)	2	✓	✓	Sum C**
GMS 6132	Introductory Gene and Immunotherapy (Pre-Req: passing grade in GMS6121)	2	✓	✓	Sum C**
MCB 5270	Antimicrobial Resistance (Pre-Req: microbiology course)	3	✓	✓	
MCB 6937	Regulatory Aspects of Microbiome Research (Pre-Req: MCB6424 or MCB4422)	1	✓		Sum C**
MCB 6937	Advanced Molecular Genetics (Pre-Req: molecular genetics course)	3		✓	
MCB 5252	Microbiology, Immunology & Basis for Immuno-Therapeutics (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 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 6424	Probiotics (Pre-Req: microbiology course)	3		✓	
MCB 6670C	The Microbiome (Pre-Req: microbiology course)	3		✓	Sum C**
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**

Introductory Course Track

- 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

^ Students may not take both GMS6108 and GMS6109; students may take either GMS6108 or GMS6109

Updated on 10/03/2025.