

Course Requirement Checklist

MS in Biomedical Sciences

Students Starting Academic Year: 2024-2025

Didactic Course Requirements (12 credits):				
	GS-BS-4401	Molecular Methods	4	
	GS-BS-4201	Introduction to Biostatistics	2	
	GS-BS-4301	Molecular Cell Biology	3	
	GS-BS-4302	Principles of Genetics	3	
Selective Courses (choose 2 or more credits from the list below):				
	GS-CC-6101	Cancer		
	GS-CC-6207	Ethics & Regulatory Prep for Research with Animal Models		
	GS-DD-6203	Animal Models of Human Disease		
	GS-GS-5106	Intellectual Property		
	GS-GS-5109	Commercialization of Biomedical Technologies		
	GS-IY-6200	Principles of Immunology		
	GS-NE-6100	Principles of Neuroscience		
	GS-QC-6201	Applications to Biology of Computation		
Non-Didactic Course Requirements (14 credits):				
	GS-BS-4100	Student Research Seminar	1	
	GS-BS-4101	Critical Thinking & Scientific Literature Analysis 1	1	
	GS-BS-4102	Critical Thinking & Scientific Literature Analysis 2	1	
	GS-BS-4103	Rigor & Reproducibility in Biomedical Research	1	
	GS-BS-4104	Laboratory Leadership & Management	1	
	GS-BS-4105	Advanced Technology Laboratory Skills	3	(1 cr., take 3 times)
	GS-BS-4300	Thesis Research Preparation	3	
	GS-GS-5105	Scientific Writing	1	
	GS-GS-5112	Powerful Presentations	1	
	GS-GS-5113	Designing & Managing Successful Scientific Projects	1	
Ethics in the Conduct of Research Courses (3 credits):				
	GS-BS-4111	Ethics in the Conduct of Research 1	1	
	GS-BS-4112	Ethics in the Conduct of Research 2	1	
	GS-BS-4113	Ethics in the Conduct of Research 3	1	
Research Hours (variable):				
	GS-BS-4050	Thesis Research	Var.	

Graduate Degree Plan

MS in Biomedical Sciences



Students Starting Academic Year: **2024-2025**

General Degree Requirements:

- Completion of at least 90 term hours
- At least 12 of those term hours must be in Didactic courses
- Students must maintain satisfactory academic progress as detailed in the Student Handbook

Year One Requirements:

Term 1:	GS-BS-4101	Critical Reading & Scientific Literature Analysis 1	1	Total to Date
	GS-BS-4111	Ethics in the Conduct of Research 1	1	
	GS-BS-4300	Thesis Research Preparation	1 <i>(two-term course)</i>	
	GS-BS-4301	Molecular Cell Biology	3 (Didactic)	
	GS-BS-4401	Molecular Methods	2 (Didactic) <i>(two-term course)</i>	
	GS-GS-5113	Designing & Managing Successful Scientific Projects	1	
	Total:			
Term 2:	GS-BS-4103	Rigor & Reproducibility	1	Total to Date
	GS-BS-4112	Ethics in the Conduct of Research 2	1	
	GS-BS-4300	Thesis Research Preparation	2 <i>(two-term course)</i>	
	GS-BS-4302	Principles of Genetics	3 (Didactic)	
	GS-BS-4401	Molecular Methods	2 (Didactic) <i>(two-term course)</i>	
	Total:			

Selective Course Requirement:

Beginning in their third term, students must enroll in a minimum two credits selected from the graduate courses found in the list below on page 2.

Advanced Laboratory Skills Requirement:

Students are required to enroll in at least 3 credits of GS-BS-4105 Advanced Technology Laboratory Skills beginning in their third term.

Term 3:	GS-BS-4113	Ethical Conduct of Research 3	1	Total to Date
	GS-GS-5105	Scientific Writing	1	
	GS-BS-4201	Introduction to Biostatistics	2 (Didactic)	
		Thesis Research/Laboratory Skills/Selective Course(s)	5	
Total:			9 (2)	27 (12)
Term 4:	GS-BS-4102	Critical Reading & Scientific Literature Analysis 2	1	Total to Date
	GS-GS-5112	Powerful Presentations	1	
		Thesis Research/Laboratory Skills/Selective Course(s)	7	
	Total			
Term 5:		Thesis Research/Laboratory Skills/Selective Course(s)	9	Total to Date:
	Total:			9

Year Two Requirements:

Term 1:	GS-BS-4104	Laboratory Leadership & Management	1	Total to Date 54 (12)
		Thesis Research/Laboratory Skills/Selective Course(s)	8	
	Total:		9	
Term 2:	GS-BS-4100	Student Research Seminar	1	Total to Date 63 (12)
		Thesis Research/Laboratory Skills/Selective Course(s)	8	
	Total:		9	
Term 3:		Thesis Research/Laboratory Skills/Selective Course(s)	9	Total to Date 72 (12)
	Total:		9	
Term 4:		Thesis Research/Laboratory Skills/Selective Course(s)	9	Total to Date 81 (12)
	Total:		9	
Term 5:		Thesis Research/Laboratory Skills/Selective Course(s)	9	Total to Date 90 (12)
	Total:		9	

MS in Biomedical Sciences program courses:

GS-BS-4050	Thesis Research	GS-BS-4105	Advanced Technology Laboratory Skills
GS-BS-4100	Student Research Seminar	GS-BS-4111	Ethics in the Conduct of Research 1
GS-BS-4101	Critical Reading & Scientific Literature Analysis 1	GS-BS-4112	Ethics in the Conduct of Research 2
GS-BS-4102	Critical Reading & Scientific Literature Analysis 2	GS-BS-4113	Ethics in the Conduct of Research 3
GS-BS-4103	Rigor & Reproducibility in Biomedical Research	GS-BS-4201	Introduction to Biostatistics
GS-BS-4104	Laboratory Leadership & Management	GS-BS-4300	Thesis Research Preparation
		GS-BS-4301	Molecular Cell Biology
		GS-BS-4302	Principles of Genetics
		GS-BS-4401	Molecular Methods

Selective Requirement Course Options:

GS-DD-6203	Animal Models of Human Disease	<i>Offered in Term 5</i>
GS-QC-6201	Applications to Biology of Computation	<i>Offered in Term 3</i>
GS-CC-6101	Cancer	<i>Offered in Term 3</i>
GS-GS-5107	Commercialization of Biomedical Technologies	<i>Offered in Term 4</i>
GS-CC-6207	Ethics & Regulatory Prep for Research with Animal Models	<i>Offered in Term 1</i>
GS-GS-5106	Intellectual Property	<i>Offered in Term 4</i>
GS-IY-6200	Principles of Immunology	<i>Offered in Term 3</i>
GS-NE-6100	Principles of Neuroscience	<i>Offered in Term 3</i>