

Course Requirement Checklist

PhD in Genetics & Genomics

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

Foundations Courses (10 credits):				
	GS-GS-6600	Foundations A: Molecules to Systems	6	
	GS-GS-6400	Foundations B: Biostatistics	4	
Program Core Courses (12 credits):				
	GS-GG-6204	Method & Logic in Genetics & Genomics	2	
	GS-GG-6302	Human Genetics	3	
	GS-GG-6305	Model Systems Genetics	3	
Track-Specific Course (choose one based on program track – 2 credits):				
	GS-GG-6202	Mammalian Genetics		Regular Track
	GS-GG-6206	Data Mining		BiGSB Track
Didactic Elective Courses (at least 6 credits):				
Responsible Conduct of Research Courses (4 credits):				
	GS-GS-5101	Responsible Conduct of Research 1	1	
	GS-GS-5102	Responsible Conduct of Research 2	1	
	GS-GS-5103	Responsible Conduct of Research 3	1	
	GS-GS-5104	Responsible Conduct of Research 4	1	
Professional Development Course (1 credit):				
	GS-GS-5105	Scientific Writing	1	
	GS-IY-6403	Effective Grant Writing	4	
Seminar/Journal Literature Courses:				
	GS-GG-5100	Student Research Seminar	1	
<i>Required in terms 1-4 every year from matriculation through attainment of Permission-To-Write.</i>				
	GS-GG-5105	Genetics & Genomics Journal Club	1	6 total cr.
<i>Required in terms 3-5 for the first two years of study.</i>				
Research Hours:				
In each term, students enroll in the number of credits [beyond other coursework] needed to be enrolled full-time (minimum 3 per term)				
	GS-GG-5030	Research Rotation	Var.	
<i>Taken each term when a mentor is not appointed (minimum 3 terms)</i>				
	GS-GG-5040	Special Projects	Var.	
<i>Taken each term after a mentor is appointed, and before candidacy is achieved.</i>				
	GS-GG-5050	Dissertation	Var.	
<i>Taken each term after a mentor is appointed, and after candidacy is achieved.</i>				

Graduate Degree Plan

PhD in Genetics & Genomics

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

General Degree Requirements:

- Completion of at least 180 term hours
- At least 30 of those term hours must be in Didactic courses
- Completion of at least three terms of Research Rotation before appointing a major advisor
- Students must maintain satisfactory academic progress as detailed in the Student Handbook

Track Selection:

Genetics & Genomics students may select to pursue the standard PhD curriculum, or can opt to pursue a track in Bioinformatics, Genomics, and Systems Biology (BiGSB). The choice between following the regular track or the BiGSB track is made during the first week of July prior to the student's first year in the program. Additional information is available from genetics-gradprgm@bcm.edu.

Year One Requirements:

Term 1:	GS-GS-6600	Foundations A: Molecules to Systems	3 (Didactic) <i>(two-term course)</i>	Total to Date
	GS-GS-6400	Foundations B: Biostatistics	2 (Didactic) <i>(two-term course)</i>	
	GS-GS-5101	Responsible Conduct of Research 1	1	
	GS-GG-5100	Student Research Seminar	1	
		Research Rotation/Elective Courses	5	
Total:			12 (5)	12 (5)
Term 2:	GS-GS-6600	Foundations A: Molecules to Systems	3 (Didactic) <i>(two-term course)</i>	Total to Date
	GS-GS-6400	Foundations B: Biostatistics	2 (Didactic) <i>(two-term course)</i>	
	GS-GG-6305	Model Systems Genetics	3 (Didactic)	
	GS-GG-5100	Student Research Seminar	1	
		Research Rotation/Elective Courses	3	
Total:			12 (8)	24 (13)
Term 3:	GS-GG-6204	Method & Logic in Genetics & Genomics	2 (Didactic)	Total to Date
	GS-GG-6202 or GS-GG-6206	Mammalian Genetics <i>(Regular track students)</i> or Data Mining <i>(BiGSB track students)</i>	2 (Didactic)	
	GS-GS-5105	Scientific Writing	1	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Rotation/Elective Courses	5	
	Total:			
Term 4:	GS-GG-6302	Human Genetics	3 (Didactic)	Total to Date
	GS-IY-6403	Effective Grant Writing	4 (Didactic)	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	3	
Total:			12 (7)	48 (24)

Term 5:	GS-GG-5105	Genetics & Genomics Journal Club	1	Total to Date 60 (24)
		Research Hours/Elective Courses	11	
	Total:		12	
Year Two Requirements:				
Term 1:	GS-GG-5100	Student Research Seminar	1	Total to Date 72 (24)
		Research Hours/Elective Courses	11	
	Total:		12	
Term 2:	GS-GS-5102	Responsible Conduct of Research 2	1	Total to Date 84 (24)
	GS-GG-5100	Student Research Seminar	1	
		Research Hours/Elective Courses	10	
	Total:		12	
Term 3:	GS-GG-5100	Student Research Seminar	1	Total to Date 96 (24)
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	10	
	Total:		12	
<i>Student's Thesis Advisory Committee must be appointed by the end of Term 3 in the student's second year of enrollment.</i>				
Term 4:	GS-GG-5100	Student Research Seminar	1	Total to Date 108 (24)
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	10	
	Total:		12	
Term 5:	GS-GG-5105	Genetics & Genomics Journal Club	1	Total to Date 120 (24)
		Research Hours/Elective Courses	11	
	Total:		12	
<i>Six (6) additional didactic hours are required for a total of thirty (30)</i>				
Qualifying Exam Requirement:				
<ul style="list-style-type: none"> • Must be taken by the end of the second year of enrollment • Student must complete all prerequisite activities defined by their program before taking the exam 				
Course Requirements beyond Year Two:				
Year 3, Term 3:	GS-GS-5103	Responsible Conduct of Research 3	1	
Year 4, Term 3:	GS-GS-5104	Responsible Conduct of Research 4	1	
Recurring requirements until Graduation:				
Terms 1-4:	GS-GG-5100	Student Research Seminar		As required*
Terms 1-5:	GS-GG-5050	Dissertation		As required*
<i>*Students shall enroll in the number of credits of Dissertation needed to be enrolled full-time (12 credits) each term through Graduation.</i>				
Research Course Work:				
	GS-GG-5010	Readings		
	GS-GG-5030	Research Rotation		
	GS-GG-5040	Special Projects		
	GS-GG-5050	Dissertation		
Additional Genetics & Genomics program courses offered*:				
GS-GG-5101	Clinical Genetics	GS-GG-6205	Single Cell Methods & Analysis	
GS-GG-6102	Genetics Epidemiology & Population Genetics	GS-GG-6207	Career Development in Medical Genetics	
GS-GG-6203	Gene & Cell Therapy	GS-GG-6301	Bioinformatics & Genomic Analysis	
<i>*Students may select electives from open course options in all graduate programs. Courses may be viewed in the Graduate School Bulletin</i>				