

# Graduate Degree Plan

## PhD in Genetics & Genomics

Students Starting Academic Year: 2020-2021

### 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
- 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 classes in the student's first year in the program. Additional information is available from [genetics-gradprgm@bcm.edu](mailto: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	
	GS-GG-5030	Research Rotation + Electives	5	
	Total:			
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-6201	Model Systems Genetics	2 (Didactic)	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5030	Research Rotation + Electives	4	
	Total:			
Term 3:	GS-GG-6204	Method & Logic in Genetics & Genomics	2 (Didactic)	Total to Date
	GS-GG-6202	Mammalian Genetics <i>(Regular track students)</i>	2 (Didactic)	
	or	or		
	GS-GS-6203	Data Mining <i>(BiGSB track students)</i>		
	GS-GG-5105	Genetics & Genomics Journal Club	1	
	GS-GG-5100	Student Research Seminar	1	
	GS-GS-5105	Scientific Writing	1	
	GS-GG-5030	Research Rotation + Electives	5	
Total:			12 (4)	36 (16)
Term 4:	GS-GG-6302	Human Genetics	3 (Didactic)	Total to Date
	GS-IY-6303	Fundamentals of Effective Grant Writing	3 (Didactic)	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG	Research Hours + Electives	4	
	Total:			
Term 5:	GS-GG-5105	Genetics & Genomics Journal Club	1	Total to Date
	GS-GG	Research Hours + Electives	11	
	Total:			

<b>Year Two Requirements:</b>				
Term 1:	GS-GG-5100	Student Research Seminar	1	Total to Date 72 (22)
	GS-GG	Research Hours + Electives	11	
	Total:		12	
Term 2:	GS-GG-5100	Student Research Seminar	1	Total to Date 84 (22)
	GS-GS-5102	Responsible Conduct of Research 2	1	
	GS-GG	Research Hours + Electives	10	
	Total:		12	
Term 3:	GS-GG-5105	Genetics & Genomics Journal Club	1	Total to Date 96 (22)
	GS-GG-5100	Student Research Seminar	1	
	GS-GG	Research Hours + Electives	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-5105	Genetics & Genomics Journal Club	1	Total to Date 108 (22)
	GS-GG-5100	Student Research Seminar	1	
	GS-GG	Research Hours + Electives	10	
	Total:		12	
Term 5:	GS-GG-5105	Genetics & Genomics Journal Club	1	Total to Date 120 (22)
	GS-GG	Research Hours + Electives	11	
	Total:		12	
<i>Eight additional didactic hours are required for a total of thirty (30)</i>				
<b>Qualifying Exam Requirement:</b>				
<ul style="list-style-type: none"> <li>• Must be taken by the end of the second year of enrollment</li> <li>• Student must complete all prerequisite activities defined by their program before taking the exam</li> </ul>				
<b>Course Requirements beyond Year Two:</b>				
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	
<b>Recurring requirements until Graduation:</b>				
As offered	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>				
<b>Research Course Work:</b>				
	GS-GG-5010	Readings		
	GS-GG-5030	Research Rotation		
	GS-GG-5040	Special Projects		
	GS-GG-5050	Dissertation		
<b>Additional Genetics &amp; Genomics courses*:</b>				
	GS-GG-5101	Clinical Genetics		
	GS-GG-6102	Genetics Epidemiology & Population Genetics		
	GS-GG-6103	Genetics & Genomics of Vision Research		
	GS-GG-6203	Gene & Cell Therapy		
	GS-GG-6205	Single Cell Methods & Analysis		
	GS-GG-6401	Bioinformatics & Genomic Analysis		
	GS-GG-6304	Career Development in Medical Genetics		
<i>*Students may select electives from open course options in all graduate programs. Courses may be viewed in the <a href="#">Graduate Student Bulletin</a></i>				