Course Requirement Checklist
PhD in Genetics & Genomics

Baylor College of Medicine

GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

Students Starting Academic Year: **2026-2027**

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	
	GS-IY-6403	Effective Grant Writing	4	
Track-Specific Course (choose one based on program track selection – 2 credits):				
	GS-GG-6202	Mammalian Genetics		*Regular Track*
	GS-GG-6208	Applied Data Science & Machine Learning		*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	
Seminar/Journal Literature Courses:				
	GS-GG-5100	Student Research Seminar	1	
Required in terms 1-4 every year from matriculation through attainment of Permission-To-Write.				
	GS-GG-5105	Genetics & Genomics Journal Club	1	*6 total cr.*
Required in terms 3-5 for the first two years of study.				
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.	
Taken each term when a mentor is not appointed (minimum 3 terms)				
	GS-GG-5040	Special Projects	Var.	
Taken each term after a mentor is appointed, and before candidacy is achieved.				
	GS-GG-5050	Dissertation	Var.	
Taken each term after a mentor is appointed, and after candidacy is achieved.				

Graduate Degree Plan
PhD in Genetics & Genomics

Students Starting Academic Year: 2026-2027

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 purse 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) *(two-term course)*	
	GS-GS-6400	Foundations B: Biostatistics	2 (Didactic) *(two-term course)*	
	GS-GS-5101	Responsible Conduct of Research 1	1	
	GS-GG-5100	Student Research Seminar	1	
		Research Rotation/Elective Courses	5	Total to Date
		Total:	12 (5)	12 (5)
Term 2:	GS-GS-6600	Foundations A: Molecules to Systems	3 (Didactic) *(two-term course)*	
	GS-GS-6400	Foundations B: Biostatistics	2 (Didactic) *(two-term course)*	
	GS-GG-6305	Model Systems Genetics	3 (Didactic)	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5030	Research Rotation	3	Total to Date
		Total:	12 (8)	24 (13)
Term 3:	GS-GG-6204	Method & Logic in Genetics & Genomics	2 (Didactic)	
	GS-GG-6202 *or* GS-GG-6206	Mammalian Genetics *(Regular track students)* *or* Applied Data Science & Machine Learning *(BiGSB track students)*	2 (Didactic)	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Rotation/Elective Courses	6	Total to Date
		Total:	12 (4)	36 (17)
Term 4:	GS-GG-6302	Human Genetics	3 (Didactic)	
	GS-IY-6403	Effective Grant Writing	4 (Didactic)	
	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
	GS-GG	Research Hours	3	Total to Date
		Total:	12 (7)	48 (24)
Term 5:	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	11	Total to Date
		Total:	12	60 (24)

Year Two Requirements:

Term 1:	GS-GG-5100	Student Research Seminar	1	
		Research Hours/Elective Courses	11	Total to Date
		Total:	12	72 (24)
Term 2:	GS-GS-5102	Responsible Conduct of Research 2	1	
	GS-GG-5100	Student Research Seminar	1	
		Research Hours/Elective Courses	10	Total to Date
		Total:	12	84 (24)
Term 3:	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	10	Total to Date
		Total:	12	96 (24)

Student's Thesis Advisory Committee must be appointed by the end of Term 3 in the student's second year of enrollment.

Term 4:	GS-GG-5100	Student Research Seminar	1	
	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	10	Total to Date
		Total:	12	108 (24)
Term 5:	GS-GG-5105	Genetics & Genomics Journal Club	1	
		Research Hours/Elective Courses	11	Total to Date
		Total:	12	120 (24)

Six (6) additional didactic hours are required for a total of thirty (30)

Qualifying Exam Requirement:

- 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*

**Students shall enroll in the number of credits of Dissertation needed to be enrolled full-time (12 credits) each term through Graduation.*

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-6102	Genetic Epidemiology & Population Genetics	GS-GG-6207	Career Development in Medical Genetics
GS-GG-6203	Gene & Cell Therapy	GS-GG-6301	Bioinformatics & Genomic Analysis
GS-GG-6205	Single Cell Methods & Analysis		

**Students may select electives from open course options in all graduate programs. Courses may be viewed in the Graduate School Bulletin*