GENETICS AND BIOTECHNOLOGY - BACHELOR OF SCIENCE IN GENETICS

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1220G College Algebra and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and english. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

First Year		
Fall		**Credits**
BIOL 2610G	Principles of Biology: Biodiversity, Ecology, and Evolution	3
GENE 1110	Experimental Systems in Genetics	1
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	4
ENGL 1110G or ENGL 1110H	Composition I or Composition I Honors	4
Area IV: Social/Behavioral Science Course [1]		3
	Credits	**15**
Spring		
BIOL 2110G & BIOL 2110L	Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory	4
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	4
MATH 1220G	College Algebra	3
Area V: Humanities Course [1]		3
Elective		1
	Credits	**15**
Second Year		
Fall		
CHEM 313	Organic Chemistry I	3
MATH 1250G	Trigonometry & Pre-Calculus	4
GENE 315	Molecular Genetics	3
Choose one from the following:		3
ENGL 2210G or ENGL 2210H	Professional and Technical Communication or Professional and Technical Communication	
ENGL 2215G	Advanced Technical and Professional Communication	
Area I: Oral Communication [1]		3
	Credits	**16**
Spring		
CHEM 314	Organic Chemistry II	3
CHEM 315	Organic Chemistry Laboratory	2
MATH 1511G or MATH 1511H	Calculus and Analytic Geometry I or Calculus and Analytic Geometry I Honors	4
GENE 320	Hereditary and Population Genetics	3
Elective Course		3
	Credits	**15**
Third Year		
Fall		
BCHE 395	Biochemistry I	3
MATH 1521G or MATH 1521H	Calculus and Analytic Geometry II or Calculus and Analytic Geometry II Honors	4
PHYS 2230G	General Physics for Life Science I	3
Area IV: Creative and Fine Arts		3
Elective		2
	Credits	**15**
Spring		
BIOL 377	Cell Biology	3
BCHE 396	Biochemistry II, Lecture and Laboratory	4
GENE 305 L	Genetic Techniques	1
PHYS 2240G	General Physics for Life Science II	3
Choose from one of the following:		3
A ST 311	Statistical Applications	
BIOL 455	Biometry	
Elective		1
	Credits	**15**
Fourth Year		
Fall		
BIOL 467	Evolution	3
Choose 3 Credits from Following:		3
GENE 391	Genetics Internship	
GENE 449	Special Problems	
BIOL 302	Molecular Biology Techniques Laboratory	
BIOL 309	Guided Biological Research Lab	
BIOL 351	Biology Internship	
Tier II: Organism Structure Course		3-4
Choose from one of the following:		3
BIOL 446	Bioinformatics and NCBI Database	
GENE 452	Applied Bioinformatics	
VWW: Viewing a Wider World Course [2]		3
	Credits	**15-16**
Spring		
GENE 440	Genetics Seminar	1
AGRO 303V	Genetics and Society	3
Tier II: Molecular and Applied Genetics Course		3
Tier II: Physiology Course		3-4
VWW: Viewing a Wider World Course		3
Elective		1
	Credits	**14-15**
	Total Credits	**120-122**

[1] See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses.

[2] See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section for a full list of courses.