BS - Biology NJCU/BS Biomedical Engineering NJIT

	NJCU Course Number	Description	Credits	NJIT Equivalent Course
First Year				
First Semester				
	Phys 140	Physics for Engineering I, Lecture	3	Phys 111
	Phys 1140	Physics for Engineering I, Recitation and Laboratory	1	Phys 111A
	Engl 101	English Composition I	4	HUM 101
	Math 192	Calculus and Analytic Geometry I	4	Math 111
	Chem 105	General Chemistry I, Lecture	3	Chem 125
	Chem 1105	General Chemistry I, Recitation and Laboratory	2	
			17	
Second Semester				
	Chem 106	General Chemistry II, Lecture	3	Chem 126
	Chem 1106	General Chemistry II, Recitation and Laboratory	2	
	Engl 102	English Composition II	4	HUM 102
	Math 193	Calculus and Analytic Geometry II	4	Math 112
	Phys 141	Physics for Engineering II, Lecture	3	Phys 121
	Phys 1141	Physics for Engineering II, Recitation and Laboratory	1	Phys 121A
			17	
Second Year				
First Semester				
	Biol 130	Principles of Biology I	4	
	Chem 207	Organic Chemistry I	4	
	Math 292	Calculus and Analytic Geometry III	4	Math 213
	Gen Ed		3	
	FYE XXXX	First Year Experience	3	Fresh. Seminar
			18	
Second Semester				
	Biol 131	Principles of Biology I	4	
	Chem 208	Organic Chemistry II	4	
	Math 311	Differential Equations	4	Math 222
	Econ 208	Principles of Economics: Micro	3	Econ 201
	FED 101	Fundamentals of Engineering Design (2-1-2		Taken at NJIT
	BME 101	Introduction to Biomedical Engineering (1-0-0)		Taken at NJIT
	CS 101	Computer Programming and Solving (3-0-3)		Taken at NJIT
			15	
Third Year				
First Semester				
	Biol 230	Cell Biology	4	
	Biol 236	Principles of Anatomy and Physiology I	4	BME 105
	BME 301	Electrical Fundamentals of Biomedical Engineering (1-3-3)		Taken at NJIT
	BME 302	Mechanical Fundamentals of Biomedical Engineering (1-3-3)		Taken at NJIT
	BME 303	Biological and Chemical Foundations of Biomedical Engineering (3-0-3)		
			8	
Second Semester				
	Biol 304	Genetics	4	
	Biol 3xx/4xx	Bio elective class	4	
	Biol 237	Principles of Anatomy and Physiology II	4	BME 106
	BME 310	Biomedical Computing (3-1-3)		Taken at NJIT
	BME 304	Material Fundamentals of Biomedical Engineering (3-0-3)		Taken at NJIT
			12	
	NJIT Course Number	Description	Credits	NJCU Equivalent Course
Fourth Year				
First Semester				
	BME 381	Engineering Models in Physiology (3-0-3)		
	BME Track	Core BME Track Course/Chem 243 for Biomechanics Track (3-0-3)		
	Math 279	Statistics and Probability for Engineers (2-0-2)		
	Math 337	Linear Algebra (3-0-3)		

	BME Track	Core BME Track Course		
	PE XXX	Physical Education: GUR (0-1-1)		
Second Semester				
	Elective	Basic Social Sciences: GUR (3-0-3)		
	BME 382	Engineering Models of Physiological Systems (3-2-3)		
	BME Track	Core BME Track Course		
	BME Track	Core BME Track Course		
	BME Track	Core BME Track Course or Elective Course		
Fifth Year				
First Semester				
	Mgmt 390	Principles of Management (3-0-3)		
	BME 495	Capstone Design I (2-3-3)		
	BME Track	Core BME Track Course		
	BME Track	Core BME Track Course		
	BME Track	Core BME Track Course or Elective Course		
	BME Track	BME Track Elective - Laboratory		
Second Semester				
	Elective	Capstone Seminar - Humanities and Social Sciences: GUR (3-0-3)		
	Elective	Lit/Hist/Phil/STS Phil 351, Hist 379 or Hist 381 recommended: GUR (3-0-3)		
	BME 496	Capstone Design II (2-5-3)		
	BME Track	BME Track Elective		
	BME Track	BME Track Elective		