B.S. General Engineering

(120 credits)

First Year

1st Semester		Credits

CHEM 121
    or CHEM 125
	Fundamentals of Chemical Principles I [1]
	    or General Chemistry I
		3

CHEM 125A	General Chemistry Lab I	1
FED 101	Fundamentals of Engineering Design [1]	2
ENGL 101	English Composition: Introduction to Academic Writing	3
MATH 111	Calculus I	4
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
FYS SEM	First-Year Student Seminar	0
	Term Credits	**17**

2nd Semester		

CHEM 122
    or CHEM 126
	Fundamentals of Chemical Principles II [2]
	    or General Chemistry II
		3

ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 112	Calculus II	4
PHYS 121	Physics II	3
PHYS 121A	Physics II Lab	1
	Term Credits	**14**

Second Year

1st Semester		
Select one of the following:		3
CS 101	Computer Programming and Problem Solving [3]	
CS 106	Introduction to Computing	
CS 115	Introduction to Computer Science I in C++	
Select one of the following:		3
MATH 211	Calculus III A [4]	
MATH 213	Calculus III B	
Social Science GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/)		3
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
ENGR 330	Applications of Microcontrollers and IoT devices	3
	Term Credits	**15**

2nd Semester		
MATH 222	Differential Equations	4
MATH 333	Probability and Statistics	3
General Engineering Elective (200 level)		3
General Engineering Elective (200 level) [5]		3
General Engineering Elective (200 level) [5]		3
	Term Credits	**16**

Third Year

1st Semester		
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
General Engineering Elective (200 level)		3
General Engineering Elective (200 level)		3

General Engineering Elective (200 level)	3
General Engineering Elective (300 level)	3
General Engineering Lab Elective	1
Term Credits	**16**
2nd Semester	
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)	3
ENGR 211 Professional Skills for Engineers I	1
General Engineering Elective (300 level)	3
General Engineering Elective (300 level)	3
General Engineering Elective (300 level)	3
General Engineering Lab Elective	1
Term Credits	**14**
Fourth Year	
1st Semester	
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)	3
General Engineering Elective (300 level)	3
General Engineering Elective (300 level)	3
General Engineering Elective (400 level)	3
General Engineering Elective (400 level)	3
General Engineering Lab Elective	1
Term Credits	**16**
2nd Semester	
General Engineering Elective (400 level)	3
ENGR 400 Multidisciplinary Engineering Design Project	3
General Engineering Elective (400 level)	3
General Engineering Elective (400 level)	3
Term Credits	**12**
Total Credits	**120**

[1]   Students interested in Biomedical, Chemical, Computer, Electrical Engineering should take CHEM 125
[2]   Students interested in Biomedical, Chemical Engineering should take CHEM 126
[3]   Students interested in Computer, Electrical Engineering should take CS 115
[4]   Students interested in Computer, Electrical and Mechanical Engineering should take MATH 213
[5]   Two of the 200 level General Engineering Elective must have a lab component associated with the course
[6]   ENGR 211 is required only for students who take Math 211.

200 level General Engineering elective - At least 4 from Engineering

300 level General Engineering elective - At least 4 from Engineering

400 level General Engineering elective - At least 3 from Engineering

This curriculum represents the maximum number of credits per semester for which a student is advised to register. A full-time credit load is 12 credits. First-year students are placed in a curriculum that positions them for success which may result in additional time needed to complete curriculum requirements. Continuing students should consult with their academic advisor to determine the appropriate credit load.