B.S. in Civil Engineering

(120 credits minimum)

First Year		
1st Semester		**Credits**
CS 101	Computer Programming and Problem Solving	3
CHEM 125	General Chemistry I	3
FED 101	Fundamentals of Engineering Design	2
ENGL 101	English Composition: Introduction to Academic Writing	3
MATH 111	Calculus I	4
FYS SEM	First-Year Student Seminar	0
CHEM 125A	General Chemistry Lab I	1
	Term Credits	**16**
2nd Semester		
CHEM 126	General Chemistry II	3
ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 112	Calculus II	4
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
CE 101	CE Computer Aided Design	1
	Term Credits	**15**
Second Year		
1st Semester		
CE 200	Surveying	2
CE 200A	Surveying Laboratory	1
MATH 211	Calculus III A	3
MATH 279	Statistics and Probability for Engineers	2
MECH 235	Statics	3
PHYS 121	Physics II	3
PHYS 121A	Physics II Lab	1
	Term Credits	**15**
2nd Semester		
CE 210	Construction Materials and Procedures	3
CE 260	Civil Engineering Methods	2
MATH 322	Differential Equations for Applications	3
MECH 237	Strength Of Materials	3
ENE 262	Introduction to Environmental Engineering	3
	Term Credits	**14**
Third Year		
1st Semester		
CE 320	Fluid Mechanics	3
CE 320A	Hydraulics Laboratory	1
CE 321	Water Resources Engineering	3
CE 332	Structural Analysis	3
MECH 236	Dynamics	2
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
	Term Credits	**15**
2nd Semester		
CE 333	Reinforced Concrete Design	2
CE 341	Soil Mechanics	3

CE 341A	Soil Mechanics Laboratory	1
CE 350	Transportation Engineering	3
CE 360	Sustainable Civil Engr Mat	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
	Term Credits	**15**
Fourth Year		
1st Semester		
CE 431	Construction Materials Lab	1
CE 432	Steel Design	2
CE 443	Foundation Design	3
CE 494	Civil Engineering Design I	3
CE Elective [1]		3
300-level GER: Select one of the following:		3
COM 339	Practical Journalism	
COM 312	Oral Presentations	
COM 319	Technical, Professional and Scientific Writing for Publication	
COM 337	Photojournalism	
COM 316	Creative Writing	
	Term Credits	**15**
2nd Semester		
CE 495	Civil Engineering Design II	3
CE Designated Elective [1]		3
Science Elective [2]		3
IE 492	Engineering Management	3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
	Term Credits	**15**
	Total Credits	**120**

Co-op Option A Track

(145 credits minimum)

First Year		
1st Semester		**Credits**
CS 101	Computer Programming and Problem Solving	3
CHEM 125A	General Chemistry Lab I	1
CHEM 125	General Chemistry I	3
FED 101	Fundamentals of Engineering Design	2
ENGL 101	English Composition: Introduction to Academic Writing	3
MATH 111	Calculus I	4
FYS SEM	First-Year Student Seminar	0
	Term Credits	**16**
2nd Semester		
CHEM 126	General Chemistry II	3
ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 112	Calculus II	4
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
CE 101	CE Computer Aided Design	1
	Term Credits	**15**

Second Year		
1st Semester		
CE 200	Surveying	2
CE 200A	Surveying Laboratory	1
MATH 211	Calculus III A	3
MATH 279	Statistics and Probability for Engineers	2
MECH 235	Statics	3
PHYS 121	Physics II	3
PHYS 121A	Physics II Lab	1
	Term Credits	**15**
2nd Semester		
CE 210	Construction Materials and Procedures	3
CE 260	Civil Engineering Methods	2
MATH 322	Differential Equations for Applications	3
MECH 237	Strength Of Materials	3
ENE 262	Introduction to Environmental Engineering	3
ENGR 210	Career Planning Seminar for En	1
	Term Credits	**15**
Summer		
CO-OP I		
	Term Credits	**0**
Third Year		
1st Semester		
ENGR 310	Co-op Work Experience I	12
	Term Credits	**12**
2nd Semester		
CE 320	Fluid Mechanics	3
CE 320A	Hydraulics Laboratory	1
CE 321	Water Resources Engineering	3
CE 332	Structural Analysis	3
MECH 236	Dynamics	2
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
	Term Credits	**15**
Summer		
CO-OP II		
	Term Credits	**0**
Fourth Year		
1st Semester		
ENGR 410	Co-op Work Experience II	12
	Term Credits	**12**
2nd Semester		
CE 333	Reinforced Concrete Design	2
CE 341	Soil Mechanics	3
CE 341A	Soil Mechanics Laboratory	1
CE 350	Transportation Engineering	3
CE 360	Sustainable Civil Engr Mat	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
	Term Credits	**15**

Fifth Year		
1st Semester		
CE 431	Construction Materials Lab	1
CE 432	Steel Design	2
CE 443	Foundation Design	3
CE 494	Civil Engineering Design I	3
CE Elective		3
Select one of the following:		3
COM 339	Practical Journalism	
COM 312	Oral Presentations	
COM 319	Technical, Professional and Scientific Writing for Publication	
COM 313	Technical Writing	
COM 316	Creative Writing	
	Term Credits	**15**
2nd Semester		
CE 495	Civil Engineering Design II	3
CE Designated Elective [1]		3
Science Elective [2]		3
IE 492	Engineering Management	3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
	Term Credits	**15**
	Total Credits	**145**

Co-op Option B Track

(145 credits minimum)

First Year		
1st Semester		**Credits**
CE 101	CE Computer Aided Design	1
CS 101	Computer Programming and Problem Solving	3
CHEM 125	General Chemistry I	3
FED 101	Fundamentals of Engineering Design	2
ENGL 101	English Composition: Introduction to Academic Writing	3
MATH 111	Calculus I	4
FYS SEM	First-Year Student Seminar	0
	Term Credits	**16**
2nd Semester		
CHEM 126	General Chemistry II	3
CHEM 124		
ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 112	Calculus II	4
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
	Term Credits	**14**
Second Year		
1st Semester		
CE 200	Surveying	2
CE 200A	Surveying Laboratory	1
MATH 211	Calculus III A	3
MATH 279	Statistics and Probability for Engineers	2
MECH 235	Statics	3

PHYS 121	Physics II	3
PHYS 121A	Physics II Lab	1
	Term Credits	**15**
2nd Semester		
CE 210	Construction Materials and Procedures	3
CE 260	Civil Engineering Methods	2
MATH 322	Differential Equations for Applications	3
MECH 237	Strength Of Materials	3
ENE 262	Introduction to Environmental Engineering	3
	Term Credits	**14**
Third Year		
1st Semester		
CE 320	Fluid Mechanics	3
CE 320A	Hydraulics Laboratory	1
CE 321	Water Resources Engineering	3
CE 332	Structural Analysis	3
MECH 236	Dynamics	2
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
ENGR 210	Career Planning Seminar for En	1
	Term Credits	**16**
2nd Semester		
ENGR 310	Co-op Work Experience I	12
	Term Credits	**12**
Summer		
CO-OP I		
	Term Credits	**0**
Fourth Year		
1st Semester		
CE 333	Reinforced Concrete Design	2
CE 341	Soil Mechanics	3
CE 341A	Soil Mechanics Laboratory	1
CE 350	Transportation Engineering	3
CE 360	Sustainable Civil Engr Mat	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
	Term Credits	**15**
2nd Semester		
ENGR 410	Co-op Work Experience II	12
	Term Credits	**12**
Summer		
CO-OP II		
	Term Credits	**0**
Fifth Year		
1st Semester		
CE 431	Construction Materials Lab	1
CE 432	Steel Design	2
CE 443	Foundation Design	3
CE 494	Civil Engineering Design I	3
CE Elective		3
Select one of the following:		3
COM 339	Practical Journalism	

COM 312	Oral Presentations	
COM 319	Technical, Professional and Scientific Writing for Publication	
COM 313	Technical Writing	
COM 316	Creative Writing	
	Term Credits	**15**
2nd Semester		
CE 495	Civil Engineering Design II	3
CE Designated Elective [1]		3
Science Elective [2]		3
IE 492	Engineering Management	3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
	Term Credits	**15**
	Total Credits	**144**

[1] Student must choose one of the following: CE 307, CE 351, CE 410, CE 414, CE 450, EnE 360, EnE 361

[2] Biology, Geology, Geomorphology only

GER Electives

Refer to the **General Education Requirement** section of this catalog for further information on GER electives.

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.