B.A. in Computer Science

(120 credits minimum)

First Year

1st Semester		Credits
CS 100	Roadmap to Computing	3
MATH 111	Calculus I	4
ENGL 101	English Composition: Introduction to Academic Writing	3
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
FYS SEM	First-Year Student Seminar	0
	Term Credits	**14**

2nd Semester		
CS 113	Introduction to Computer Science	3
MATH 112	Calculus II	4
ENGL 102	English Composition: Introduction to Writing for Research	3
Science with Lab Elective (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/natural-science-ger/)		4
	Term Credits	**14**

Second Year

1st Semester		
CS 114	Introduction to Computer Science II	3
MATH 333	Probability and Statistics	3
CS/IS/IT Elective 200 or above [3]		3
Science Literacy GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/natural-science-ger/)		3
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		
CS 280	Programming Language Concepts	3
IS 350	Computers, Society and Ethics	3
CS 241	Foundations of Computer Science I	3
COM 312 or COM 313	Oral Presentations or Technical Writing	3
Free Elective [1]		3
YWCC 207	Computing & Effective Com	1
	Term Credits	**16**

Third Year

1st Semester		
Free Elective [1]		3
CS 331	Database System Design & Mgmt	3
Social Science GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/)		3
CS 288	Intensive Programming in Linux	3
CS 332	Principles of Operating Systems	3
	Term Credits	**15**

2nd Semester		
CS 356	Introduction to Computer Networks	3
YWCC 307	Professional Dev in Computing	1
CS Elective 300 or above		3

Math/Science Elective [2]		3
CS 350	Intro to Computer Systems	3
CS Elective 300 or above		3
	Term Credits	**16**
Fourth Year		
1st Semester		
CS 490	Guided Design in Software Engineering	3
CS 435	Advanced Data Structures and Algorithm Design	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Math or Science Elective [2]		3
Free Elective [1]		3
	Term Credits	**15**
2nd Semester		
CS 491	Senior Project	3
CS Elective 300 or above		3
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
Free Elective [1]		3
CS/IS/IT Elective 200 or above [3]		3
	Term Credits	**15**
	Total Credits	**120**

[1]   Free Elective: A minimum of 4 courses (12 credits minimum). Please consult your advisor for appropriate general electives.

[2]   Math or Science Elective:

If you took MATH 244 (http://catalog.njit.edu/search/?P=MATH%20244) Introduction to Probability Theory you must take MATH 341 (http://catalog.njit.edu/search/?P=MATH%20341) Statistical Methods II.

If you took MATH 333 (http://catalog.njit.edu/search/?P=MATH%20333) Probability and Statistics you may take any of the following:

CS 337 (http://catalog.njit.edu/search/?P=CS%20337) Performance Modeling in Computing,

MATH 211 (http://catalog.njit.edu/search/?P=MATH%20211) Calculus III A

MATH 213 (http://catalog.njit.edu/search/?P=MATH%20213) Calculus III B,

MATH 222 (http://catalog.njit.edu/search/?P=MATH%20222) Differential Equations

or any Math 300/400 level except MATH 305 (http://catalog.njit.edu/search/?P=MATH%20305) Statistics for Technology.

[3]   CS/IS/IT Elective: Two 3-credit CS/IS/IT electives (200-level or above).

[4]   The following cannot count as elective courses:

MATH 107 University Mathematics A

MATH 108 University Mathematics B

MATH 110 University Mathematics B II - Trigonometry

MATH 226 Discrete Analysis

MATH 326 Discrete Analysis for Computer Engineers

Minimum Grades:

Prerequisite grade requirement for Computer Science majors:

Students are expected to earn a grade of B or better in CS 100. Students are expected to earn a grade of C or better in all CS courses that serve as prerequisites in a sequence of courses

Co-op

A GPA of 2.7 is required to enroll in co-op. Students may use up to 6 credits of co-op toward their free elective requirements.

See the **General Education Requirements** "Refer to the General Education Requirements for specific information for GER courses"