B.S. in Web & Information Systems

(120 credit minimum)

First Year		
1st Semester		**Credits**
CS 100	Roadmap to Computing	3
FYS SEM	First-Year Student Seminar	0
ENGL 101	English Composition: Introduction to Academic Writing	3
IS 117	Introduction to Website Development	3
MATH 138	General Calculus I *	3
Science Literacy GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/natural-science-ger/)		3
	Term Credits	**15**
2nd Semester		
CS 113	Introduction to Computer Science	3
ENGL 102	English Composition: Introduction to Writing for Research	3
IS 265	Introduction to Information Systems	3
IS 247	Designing the User Experience	3
Science Literacy with Lab GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/natural-science-ger/)		4
	Term Credits	**16**
Second Year		
1st Semester		
General Elective 1		3
IT 114 or CS 114	Advanced Programming for Information Technology or Introduction to Computer Science II	3
IS 218	Building Web Applications	3
IS 350	Computers, Society and Ethics	3
MATH 105	Elementary Probability and Statistics [1]	3
	Term Credits	**15**
2nd Semester		
YWCC 207	Computing & Effective Com	1
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
IS 375	Discovering User Needs for UX	3
IS 219	Adv Website Development	3
IS 344	Computing Applications in Business	3
General Elective 2		3
	Term Credits	**16**
Third Year		
1st Semester		
COM 312 or COM 313	Oral Presentations or Technical Writing	3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
IS 331	Database Design Management and Applications	3
IS 390	Requirements Analysis and Systems Design	3
IS 448	Usability & Measuring UX	3
	Term Credits	**15**
2nd Semester		
YWCC 307	Professional Dev in Computing	1
General Elective 3 [2]		3

IS 322	Mobile Applications: Design, Interface, Implementation	3
IS 333	Social Network Analysis	3
IS 373	Content Management Systems	3
IS 392	Web Mining and Information Retrieval	3
	Term Credits	**16**
Fourth Year		
1st Semester		
General Elective 4 [2]		3
IE 492 or ENTR 210	Engineering Management or Introduction to Entrepreneurship	3
IS 421	Advanced Web Applications	3
IT 310	E-Commerce Technology	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**
2nd Semester		
General Elective 5 [2]		3
General Elective 6 [2]		3
Select one of the following:		3
IS 491 or IT 491	Senior Project - IS or IT Capstone Project	
IS 465	Advanced Information Systems	3
	Term Credits	**12**
	Total Credits	**120**

1 **Math:** Math: We highly recommend MATH 333 Probability and Statistics to replace MATH 105 Elementary Probability and Statistics, particularly for students contemplating advanced or graduate work in computing. We also encourage you to take one or more advanced statistics courses as free electives, such as MATH 341 Statistical Methods II or MATH 344 Regression Analysis both of which require MATH 333 Probability and Statistics as a prerequisite.

2 Independent Study (optionally leading to the Undergraduate Thesis Option): We encourage you to consider an independent study (IS 488) as part of your electives as juniors and seniors. You could then continue with an Undergraduate Thesis (IS 489), which optionally can substitute for IS 491 or IT 491. The thesis option is explained further on the Informatics Department web site. Please consult your advisor as early in your studies as possible to plan appropriately for all of these opportunities.

* Student can take MATH 111 (Calculus I) instead of MATH 138 (General Calculus I)

Curriculum Overview

Code	Title	Credits
Core Web Courses		
IS 117	Introduction to Website Development	3
IS 218	Building Web Applications	3
IS 219	Adv Website Development	3
IS 373	Content Management Systems	3
IS 322	Mobile Applications: Design, Interface, Implementation	3
IS 392	Web Mining and Information Retrieval	3
IS 421	Advanced Web Applications	3
IS 333	Social Network Analysis	3
Core Information Systems Courses		
IS 265	Introduction to Information Systems	3
IT 310	E-Commerce Technology	3
IS 247	Designing the User Experience	3
IS 344	Computing Applications in Business	3
IS 390	Requirements Analysis and Systems Design	3
IS 375	Discovering User Needs for UX	3

IS 448	Usability & Measuring UX	3
IS 465	Advanced Information Systems	3
IE 492	Engineering Management	3
or ENTR 210	Introduction to Entrepreneurship	
IS 491	Senior Project - IS	3
Technical Foundation Courses		
CS 100	Roadmap to Computing	3
CS 113	Introduction to Computer Science	3
IS 331	Database Design Management and Applications	3
IT 114	Advanced Programming for Information Technology	3
or CS 114	Introduction to Computer Science II	
Career Building Courses		
YWCC 107	Computing as a Career	1
YWCC 207	Computing & Effective Com	1
YWCC 307	Professional Dev in Computing	1

Electives

BS WIS majors are encouraged to take technical electives within the Ying Wu College of Computing, as well as web-related graphics and communications electives offered by Humanities (COM and ENG) and the School of Architecture. Students can also use 5-6 electives to pursue a minor within or outside the Ying Wu College of Computing.

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

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.