COMPUTER SCIENCE MAJOR, BA

Campus: NYC, Westchester

Major Completion Summary

Requirement	Credits
University Core Requirements	44-53
Major Requirements	49
Sample Minors	15-18
Open Electives	11-14
Total Credits	**120**

University Core Requirements (44-53 Credits)

See complete University Core (http://catalog.pace.edu/undergraduate/university-core-curriculum/) requirements.

Seidenberg majors are required to complete the MAT 131 Calculus I and CS 121 Introduction to Computer Science from the Foundation Requirements, and are required to complete two courses from each of the four Areas of Knowledge.

Major Requirements (49 Credits)

Code	Title	Credits
Computing Core [1]		
CS 113	Mathematical Structures for Computer Science	4
CS 121	Introduction to Computer Science	4
CS 122	Object-Oriented Programming	4
CS 232	Computer Organization	4
CS 241	Data Structures and Algorithms	4
CS 242	Algorithms and Computing Theory	4
CS 291	Professional Computing Seminar	1
CS 491	Software Engineering Capstone	4
Advanced Required Courses		
CS Elective		4
CS Elective		4
CS 488	Internet and Distributed Computing	4
or CS 312	Research Methods in Computers and Society	
or CS 361	Programming Languages and Implementation	
or CS 371	Operating Systems and Architecture	
Mathematics		
MAT 131	Calculus I [2]	4
MAT 234	Introduction to Probability and Statistical Analysis	4
or CS 377	Mathematical Foundations of Machine Learning	
Total Credits		**49**

[1] Students must earn a grade of "C" or better in each prerequisite course to take subsequent CS courses.
[2] Shared with the University Core.

Sample Minors

Minor Courses: Students in the BA/CS program will enhance their major with a minor or concentration offered by Pace University. For the purpose of illustration, we detail minors in Information Technology, Computer Information Technology and Information Assurance for the Criminal Justice System (cybersecurity). Other minors may be selected from one of the many disciplines within another Pace School. For example, the Digital Design minor, Economics minor etc can be satisfied by the required courses as approved by the relevant school. Once the minor requirement is fulfilled, the completion of 120 credits can be satisfied through elective courses.

Sample Minors for the BA in Computer Science

Seidenberg BA CS students can take a minor from within the Seidenberg School, for example Computer Information Technology (http://catalog.pace.edu/undergraduate/schools/seidenberg-school-computer-science-information-systems/minors/computer-information-technology-minor/) (15-16 credits) or Information Assurance in the Criminal Justice System (http://catalog.pace.edu/undergraduate/schools/seidenberg-school-computer-science-information-systems/minors/information-assurance-criminal-justice-system-minor/) (19 credits).

For the CIT minor, students can take either Option 1 (4 CIT courses) or Option 2 (a blend of CIS civic engagement courses and CIT courses).

The minor in Information Assurance in the Criminal Justice System is a pathway to a career in cybersecurity.

Other popular minors within other Pace schools for BA CS students include Digital Design, Mathematics, Economics, Marketing and General Business.

Open Electives (1-18 Credits)

Code	Title	Credits
Open Electives		
Select 1-18 credits [1]		1-18
Total Credits		**1-18**

[3]   UNV 101 First-Year Seminar: Introduction to University Community is required for all new freshmen.

Note: ENG 105C Composition and Rhetoric, MAT 100 Fundamental Mathematics, and MAT 103 Algebra cannot be used towards the 120 credits for graduation.