

# COMPUTER SCIENCE, MS

**Campus:** NYC, Westchester, Online

The Computer Science department of the Seidenberg School reviewed and revised the Master of Science in Computer Science in Fall 2011. Since then, the department has been offering a 30-credit program that has been both strengthened and updated.

The new rigorous curriculum is built on a core of algorithms and computing theory, Internet and web computing, grid and cloud computing, and database systems.

Whether you are looking to advance your career or change focus and keep ahead of the latest technologies, this master's program is your best choice.

Students can choose to complete the Master of Science in Computer Science program online (<https://online.pace.edu/graduate-programs/ms-in-computer-science/>) or opt for an on-campus experience.

## Bridge Course (4 Credits)

An entering student with limited or no previous background in the field of computer science or programming may be required to take four (4) credits of prerequisite bridge coursework. \*\*A student with a baccalaureate in computer science should be able to waive this prerequisite. Bridge courses do NOT count toward the degree; grades earned however are computed into the student's QPA.

Code	Title	Credits
CS 505	Introduction to Computer Science with Java	4
<b>Total Credits</b>		<b>4</b>

## Program Requirements

Code	Title	Credits
<b>Program Requirements</b>		
<b>Required Course</b>		
CS 604	Computer Systems and Concepts	3
CS 604 is required for students whose performance in the Computer Organization and Operating Systems courses is less than the grade of B as evidenced on their transcripts.		
<b>Core Requirements (12 Credits)</b>		
CS 608	Algorithms and Computing Theory	3
CS 610	Introduction to Parallel Computing	3
CS 612	Concepts and Structures in Internet Computing	3
CS 623	Database Management Systems	3
<b>Electives (9 Credits)</b>		
Students will choose individual courses from the current Computer Science academic schedule for a total of 9 CS credits, provided prerequisites are met. Students can take up to 1 non-CS graduate level Seidenberg or Lubin MBA Foundation courses as an elective, with approval of an Academic Advisor or the Department Chair.		
<b>Capstone Project</b>		
Select one of the following:		6
CS 691 & CS 692	Computer Science Capstone Project and Research Project	
CS 693 & CS 694	Thesis I and Thesis II	
<b>Total Credits</b>		<b>30</b>

<sup>1</sup> Academic Advisers will help each student to select courses that have been approved by the department.

## Computer Science Electives

Code	Title	Credits
CS 600	Independent Study in Graduate Computer Science	1-5
CS 607	Simulation and Computer Network Analysis	3
CS 611	Principles of Programming Languages	3
CS 613	Compiler Construction	3
CS 614	Logic and Formal Verification	3

CS 617	Game Programming	3
CS 619	Data Mining	3
CS 624	Application Development with .NET and Web Services	3
CS 627	Artificial Intelligence	3
CS 628	Automata and Computability	3
CS 629	Computer Graphics	3
CS 630	Intelligent Agents	3
CS 633	Data Communications and Networks	3
CS 634	Computer Networking and the Internet	3
CS 635	Topics in Telecommunications	3
CS 636	Optical Communications and Networks	3
CS 637	Wireless Communications	3
CS 639	Mobile Application Development	3
CS 640	Modern Telecommunications Networking	3
CS 641	Mobile Web Content and Development	3
CS 643	Mobile Innovations for Global Challenges	3
CS 644	Web Computing	3
CS 647	Game Model Design and Animation	3
CS 648	Unix/Linux Programming	3
CS 649	Advanced Video Game Programming	3
CS 650	Enterprise Computing	3
CS 651	Secure Distributed System Development	3
CS 652	Secure Web Application Development	3
CS 653	Cryptography and Computer Security	3
CS 654	Security in Computer Networking	3
CS 655	Pattern Recognition	3
CS 656	Introduction to Mainframe Computing	3