

Computer Science Curriculum Spring 2008

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| Math 20100 Calculus I Pre: Math 19500 (min. C) 3 cr. | Science Elective ⁵ 4 cr. | Speech 11100 ⁶ Foundations of Speech Comm. 3 cr. | Engl 11000 Freshman Composition 3 cr. | Free Elective ⁷ Any course except remedial, lower level than required, duplicate, worker education, or independent study courses. 3 cr. | |
| Math 20200 Calculus II Pre: Math 20100 (min. C) 3 cr. | Science Elective ⁵ 4 cr. | CSc 10200 Introduction to Computing Pre: Math 20100 (or 20102) (min. C) 3 cr. | CSc 10400 Discrete Math Structures Pre: Math 20100 (or 20102) (min. C) 3 cr. | Liberal Arts (10000 or higher) 3 cr. | |
| Math 20300 Calculus III Pre: Math 20200 (min. C) 4 cr. | CSc 21100 Fund. of Computer Systems Pre: CSc 10200 3 cr. | CSc 21200 Data Structures Pre: CSc 10200 & CSc 10400 3 cr. | CSc 21700 Intro. Simulation Science Pre: CSc 10400 3 cr. | Liberal Arts (10000 or higher) 3 cr. | |
| Math 34600 Elements of Linear Algebra Pre: Math 20300 3 cr. | CSc 30400 Theoretical Computer Science Pre: CSc 10400 3 cr. | CSc 22000 Algorithms Pre: CSc 21200 & [CSc 21700 or EE 31100] 3 cr. | CSc 22100 Software Design Laboratory Pre: CSc 21200 3 cr. | Engl 21007 Writing for Engineering Pre: Eng 11000 3 cr. | |
| Science Elective* 4 cr. | CSc 30100 Numerical Issues in Scientific Prog. Pre: CSc 21700, CSc 22000, Math 20300 (min. C) & Math 34600 (min. C) 3 cr. | CSc 33500 Programming Language Paradigms Pre: CSc 22000 & CSc 22100 3 cr. | CSc 32200 Software Engineering Pre: Eng 21007, CSc 22000 & CSc 22100 4 cr. | Csc 33600 Introduction to Database Systems Pre: Csc 22100 3 cr. | |
| D. Net-Centric Elective ⁸ (1 Course) Csc 31100: XML Technologies Csc 31800: Internet Programming Csc 47200: Computer Graphics Csc 47300: Web Site Design Csc 47500: Windows Programming Csc 47900: Digital Libraries 3 or 0 cr. | CSc 33200 Operating Systems Pre: CSc 22000 3 cr. | CSc 34200 Computer Organization Pre: Csc 21000 or EE 21000 3 cr. | CSc 34300 Computer Organ. Lab Co: Csc 34200 1 cr. | Eco 10400 Quantitative Economics Pre: Math 20100 3 cr. | Liberal Arts (10000 or higher) 3 cr. |
| A. Theory Aspect of CS Elective ⁸ (1 Course) CSc 42200: Computability CSc 42800: Formal Languages & Automata CSc 44800: Artificial Intelligence CSc 45000: Combinatorics & Graph Theory CSc 48000: Computer Security CSc 48600: Computational Complexity 3 or 0 cr. | C. Software Sys. Elective ⁸ (1 Course) CSc 42000: Compiler Construction CSc 43000: Distributed Computing CSc 43500: Concur. in Operating Sys. 3 or 0 cr. | Technical Elective ⁷ Courses in Computer Science, Biology, Chemistry, EAS, Math, Physics, & Engineering; excluding (1) courses at the 10000 level; (2) courses have no prerequisites; (3) "professional" courses; (4) project & seminar courses; (5) duplicate courses. 3 cr. | CSc 59866 Senior Design Project I Pre/Co: Senior, Perm. Two Consecutive Semesters 3 cr. | Liberal Arts (20000 or higher) 3 cr. | |
| E. Architect & Network Elective ⁸ (1 Course) CSc 41200: Computer Networks CSc 43800: Real-Time Computing Systems 3 or 0 cr. | B. Computation Elective ⁸ (1 Course) CSc 44000: Computational Methods CSc 44200: Systems Simulation CSc 44600: Math. Optimization Tech. CSc 47000: Image Processing CSc 47100: Computer Vision 3 or 0 cr. | Technical Elective ⁷ Courses in Computer Science, Biology, Chemistry, EAS, Math, Physics, & Engineering; excluding (1) courses at the 10000 level; (2) courses have no prerequisites; (3) "professional" courses; (4) project & seminar courses; (5) duplicate courses. 3 cr. | Free Elective ⁷ Any course except remedial, lower level than required, duplicate, worker education, or independent study courses 3 cr. | CSc 59867 Senior Design Project II Pre: CSc 59866 3 cr. | Liberal Arts (20000 or higher) 3 cr. |

- New freshmen engineering students are no longer required to take **NSS 10000: New Freshman Seminar** (0 cr.).
- "C" Passing Grade Requirement:** Courses in shaded area () require a minimum passing grade of "C".
- CUNY CPE, ACT & SKAT Requirements:** Students must pass the CUNY/ACT in Reading and Writing and CUNY Mathematics Skills Assessment Test (SKAT) before completing 61 credits. Students must pass the CUNY Proficiency Examination (CPE) before graduation.
- General Education / Liberal Arts Requirements:**

Csc students must take five approved courses and Speech 11100 (Foundations of Speech Communication) for 18 credits (six courses) of which at least 6 credits (two courses) must be at the 20000 level or higher. The six courses must satisfy at least three of the four approved general education clusters.

Only courses in these four clusters are eligible: **Professional and Ethical Responsibilities Cluster** (Outcome f), **Communication Cluster** (outcome g), **Global and Societal Context Cluster** (outcome h), and **Contemporary Issues Cluster** (Outcome j). A list of approved courses is posted on the School of Engineering web site at <http://www.cny.cuny.edu/engineering/genreq.html> and can be viewed at the Office of Undergraduate Affairs (ST-209) or the Office of Student Programs (ST-2M). This list is subject to periodic review and updates.
- Science Elective Requirements:** Students are required to take at least 12 credits of science. These credits must include one of the following sequences: (a) Bio 10100 & 10200 (8 cr.), (b) Chem 10301 & 10401 (8 cr.), or (c) Phys 20700 & 20800 (8cr.). In addition students need to take at least one more course in Biology, Chemistry or Physics at a level not lower than the required in Biology, Chemistry or Physics.
- Speech Requirements:** Students, who are exempted from Speech 11100 must take another speech course in its place.
- Free/Technical Elective Requirements:** CSc 10000 can be used as a Free Elective **only** if it is taken before CSc 10200; CSc31700: *The Internet counts only as a free elective.*
- Csc Electives:** At least one course must be taken from **four** of the **five** groups **A** through **E**.
- Other Graduation Requirements:** Apply for graduation during registration for the last semester. Minimum GPA of 2.00. Minimum QPA of zero. Pass CUNY Proficiency Exam (CPE). Residency Requirement: 33 credits of 30000-level or higher Computer Science courses.
- Program Changes:** Substitution of other courses for required courses must be approved by the Computer Science Department (NAC-8/206), and submitted in writing to the Office of Undergraduate Affairs (T-209).
- Declaring Your Major:** Freshmen, sophomores and new transfer students with the code 007 (Waiting for Computer Science) who have taken calculus I or who are currently taking calculus I, should file for the code **616** (Computer Science). For an application and submission of the form go to room ST-209 Steinman Hall.
- Note, that the latest version of the program curriculum sheet supersedes the curriculum reported in the Undergraduate Bulletin.**

Total Credits: 126.