To receive the BS degree in computer science, the student must earn a minimum of 127 credit hours, including transfer credits, with an average of at least C (2.0 GPA), and a minimum of a C average in the major program.

A. Credit Requirements - A minimum of 127 semester credits of which:
1. a minimum of 60 credits must be in liberal arts and sciences courses
2. a minimum of 30 credits must be earned in Watson School courses

B. Area Requirements
1. Communications ........................................................................................................... 8 credits
   Two communications courses, chosen from courses that meet the Binghamton University General Education Language and Communication requirement or from Creative Writing courses.
2. Humanities/social science electives ............................................................................... 20 credits
3. Science ......................................................................................................................... 12 credits
   • Two course science sequence: BIOL 117 and BIOL 118 or CHEM 107 and CHEM 108 or PHYS 131 and PHYS 132
   • One science elective: chosen from courses that meet the Binghamton University General Education Laboratory Science requirement.
4. Mathematics ................................................................................................................ 20 credits
   • MATH 221. Calculus I
   • MATH 314. Discrete Mathematics
   • One elective chosen from:
     MATH 304. Linear Algebra
     MATH 371. Mathematical Methods in Science I
     MATH 381. Graph Theory
5. Free electives .............................................................................................................. 14 credits
   Four credits must be in humanities, social sciences, engineering, arts and other disciplines, excluding computer science, that provide breadth of background.
6. Computer Science ....................................................................................................... 53 credits
   • CS 101. Introductory Topics in Computer Science
   • CS 140. Introduction to Computer Programming
   • CS 220. Computer Systems II: Architecture and Programming
   • CS 240. Data Structures
   • Four electives chosen from at least two of the following four areas:
     Software Design
     CS 328. Internet Programming
     CS 340. Object-Oriented Analysis and Design
     CS 342. Program Design Patterns
     CS 345. Software Engineering
     CS 422. Web-Based Programming
     Programming Languages
     CS 328. Internet Programming
     CS 340. Object-Oriented Analysis and Design
     CS 342. Design Patterns
     CS 360. GUI and Windows Programming
     Computer Elements and Architecture
     CS 338. Intro. to Multimedia Systems
     CS 346. Enterprise Systems
     CS 424. Microcontrollers and Robotics
     CS 428. Computer Networks
     CS 446. Enterprise Systems Management
     Database and Information Systems
     CS 338. Intro. to Multimedia Systems
     CS 432. Database Systems
     One course from the following list may be used as a CS elective. It does not count in any of the above areas:
     CS 395. Computer Science Internship
     CS 396. Computer Science Co-op
     • CS 325. Computer Organization and Architecture
     • CS 333. Algorithms
     • CS 350. Operating Systems
     • CS 373. Automata Theory and Formal Languages
     • CS 471. Programming Languages
     • CS 495. Professional Ethics and Communication

C. General Education Requirements - see the General Education and Your Watson School Major handout available in the Watson School Student Services Office.

1 Students with limited programming experience are recommended to first take CS 110 Programming Concepts and Applications for students matriculated Fall 2007 or after
Supplemental information regarding the BSCS Degree Requirements

The following information supplements that provided in the University Bulletin. It applies to students who matriculated Fall 2007 or after.

Humanities/Social Science – May be filled by courses offered by the Division of Humanities, the Division of Social Sciences, the Psychology Department and HDEV courses offered by the School of Education and Human Development. Many of the courses taken to meet the General Education requirements will fulfill the Humanities/Social Science requirement.

Mathematics - Students who are strong in math are encouraged to take MATH 330 (Number Systems) instead of MATH 314 (Discrete Mathematics). Students with a strong math background may take MATH 381 (Graph Theory) as their Math elective, even though they have not taken MATH 304 (Linear Algebra). The following Binghamton University courses can be substituted for MATH 327: MATH 447 (Introduction to Probability and Statistics I), ECON 366 (Statistical Methods) and ISE 261 (Probabilistic Systems I).

Free Electives – May be filled by extra courses from any of the areas listed above, SOM courses, or additional Computer Science courses. A maximum of 2 PE credits may be counted as Free Elective credits. At least four of these credits must be in humanities, social sciences, arts and other disciplines (excluding computer science) that provide breadth of background.

01/07
ADDITONAL INFORMATION
2006-7
Software Design
CS 480C, CS 480I, CS 480W
Programming Languages
CS 480C
Computer Elements and Architecture

Database and Information Systems
CS 480I, CS 480L, CS 480W