DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
Summary of Requirements for the Master of Science Degree in Computer Science (MSCS)

Each candidate must submit a coherent program of 10 graduate courses (30 credits), which must be passed with a grade point average of 3.0 (B) or better. In each of the core courses, the student must achieve a grade of B- or better, and no more than two courses with grades B- or below may be included in any program. At least eight of the courses in a program must be numbered 600 or higher, and at least six of the courses in a program must be CIS courses. The Graduate School requires that master's programs be completed within seven years, and that the student must maintain a satisfactory rate of progress toward completion of degree requirements. Within this program, the student may elect to prepare and defend a master's thesis, in accordance with the rules of the Graduate School, for up to six of the required 30 credits.

Candidates for M.S. in computer science are **not allowed** to take CIS 521, 541, 542, 551, 552, 555, 556, 575 or 586 for credits to be counted towards the degree.

All candidates for the M.S. in computer science must complete the computer science core:

CIS 623 Structured Programming & Formal Methods
CIS 655 Computer Architecture
CIS 657 Principles of Operating Systems
CIS 675 Design & Analysis of Algorithms

Candidates are required to complete the final examinations in the core courses with an average grade of 3.0 (B) or better.

Students with inadequate backgrounds in discrete mathematics and data structures may be required to take CIS 521 as part of the degree program; however this course will not count towards the 30 credit hours required for the degree.

International students must be matriculated for at least nine credits (usually three courses) during the fall and spring semesters for a total of at least 18 credits per year. Students whose native language is not English will be required to demonstrate proficiency, both written and oral, in the English language. Students found to be deficient will be required to take remedial courses outside the degree program.

One-Year M.S. Program in Computer Science – Students may finish the master's degree in computer science in one year if they wish. To do so, they must start the program in the fall semester, take four courses in the fall semester, four courses in the spring semester, and two courses in the summer. Students may also complete the degree in a less intensive fashion over three or four semesters.

Admission
The graduate advisor is guided by the admission requirements given below.

Candidates are expected to possess competency in the following areas. When an applicant's record indicates deficiencies in any of these areas, the graduate advisor will require that appropriate remedial courses be taken.

1) ***Higher-Level Programming***

CIS 351	Data Structures
CIS 352	Programming Languages: Theory and Practice
CIS 453-454	Software Specification and Design, Software Implementation

2) ***Assembly Language Programming***

CIS 341	Computer Organization and Programming Systems

3) ***Mathematics***

CIS 275	Discrete Mathematics

4) ***Theoretical Computer Science***

CIS 473	Computability Theory

5) ***Computational Methods***

CIS 575	Introduction to Analysis of Algorithms

6) ***Systems***

CIS 586	Operating Systems

Combined B.S./M.S. Degree in Computer Science – This combined degree program is designed for students who want to complete consecutive bachelor's and master's degrees in computer science. The program may be completed in five years with students taking two master's degree courses in their senior year. One graduate course may be shared between the two programs of study, so that the M.S. requires only 27 additional credits. Students are normally certified for the bachelor's degree at the end of their fourth year and for the master's degree at the end of their fifth year.

Admission to this program, usually requested in the junior year, will be based on academic progress.

For more information, the reader is referred to the following web site:

http://www.lcs.syr.edu