



## Computer Science

### Associate in Science Degree, Transfer program

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Department Chair: Hans-Peter Appelt

Students in the Computer Science program are educated in the design and implementation of system software. The program provides the first two years of a baccalaureate computer science degree with transfer options that include: scientific programming, systems programming, systems design, computer engineering, and other computer-related disciplines. Graduates of computer science programs commonly seek employment with computer manufacturers or software houses that specialize in system software.

Graduates will be able to use structured problem solving, use procedural and object-oriented programming, understand the structure of mathematics in its relation and application to computer science, communicate effectively, and understand current ethical issues in computer science.

Although it is not a requirement, basic keyboarding skills (minimum BUOT 1061 or equivalent) would enhance the chance of success in this program. Since programs at transfer colleges vary greatly, it is essential that students meet early with their advisor in order to select appropriate electives.

The State University of New York (SUNY) requires students who intend to receive a bachelor's degree from a SUNY college to complete at least 30 credit hours in specific general education areas. Students in this program who plan to transfer to a SUNY college can meet 21 credits of the general education requirement. For more specific information about this requirement, refer to SUNY General Education Requirement on page 8 and see an advisor for program assistance.

*High school or equivalent preparation required: biology, chemistry or physics and four years of mathematics, including algebra, geometry or intermediate algebra, trigonometry, and pre-calculus. Students who don't have this preparation will be able to get it here, but it may take longer to complete the program.*

#### Program Requirements

English (ENGL 1010-1020. By placement)* .....	6	Computer Science (CSCS 1240, 1320,1730, 2320, 2330, 2650 and CSNT 1200) .....	25
Mathematics (MATH 1610-1620)* .....	8	Free electives .....	3
Laboratory Science electives <sup>1</sup> .....	6	Program electives <sup>2</sup> (see list below) .....	6
Social Sciences electives .....	6	Wellness .....	2
Liberal Arts & Sciences electives .....	6	Total hours .....	68

\*Based on placement, students may be required to take ENGL 0950 and/or ENGL 0990 before taking ENGL 1010, and MATH 0960 before taking a math credit course.

Students will be assessed for computer fundamental knowledge and placed in a Computer Essential course (CSCS 1200) for the first semester, if needed. The Computer Essential course will count as a program elective if taken.

*Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.*

#### First Semester

Network Fundamentals (CSNT 1200) .....	4
Structured and Object-Oriented Problem-Solving (CSCS 1240) .....	3
Social Sciences elective .....	3
Calculus I (MATH 1610) .....	4
English (ENGL 1010) .....	3
Wellness (Awareness/Instructional Component) .....	1

#### Third Semester

Program elective <sup>2</sup> .....	3
Laboratory Science elective <sup>1</sup> .....	3
Free elective <sup>1</sup> .....	3
Data Structures (CSCS 2320) .....	3
Discrete Structures (CSCS 2330) .....	3
Wellness (Activity Component) .....	0.5

#### Second Semester

C/C++ Programming (CSCS 1320) .....	4
UNIX/Linux Fundamentals (CSCS 1730) .....	4
Calculus II (MATH 1620) .....	4
Social Sciences elective .....	3
English (ENGL 1020) .....	3
Wellness (Activity Component) .....	0.5

#### Fourth Semester

Computer Organization (CSCS 2650) .....	4
Program elective <sup>2</sup> .....	3
Liberal Arts & Sciences electives <sup>1</sup> .....	6
Laboratory Science elective <sup>1</sup> .....	3

<sup>1</sup>Select to fulfill requirements of transfer college.

<sup>2</sup>Select from CSCS, CSIT, CSNT, CSWT, MATH, PHYS with advisor's approval.