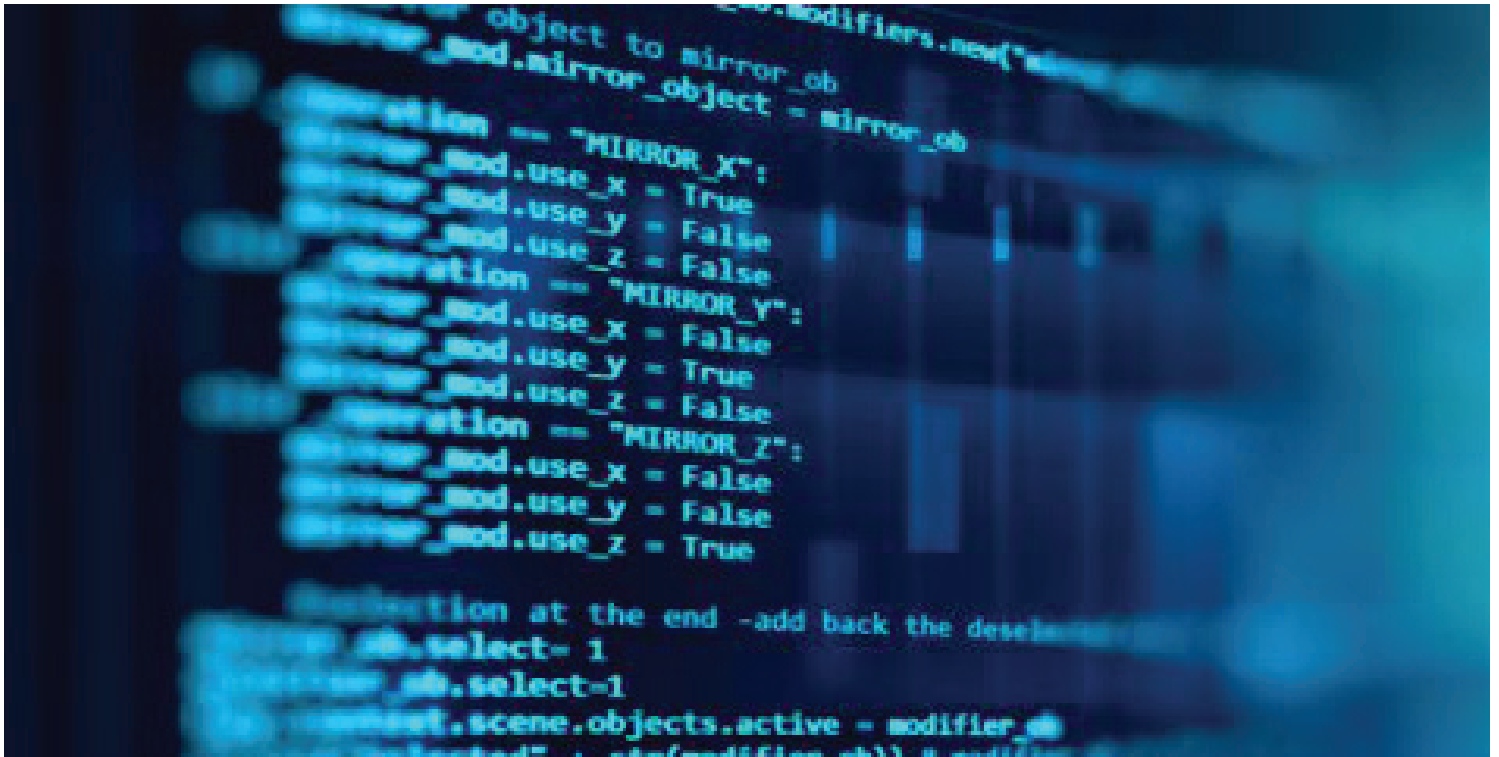


# Computer Science

A.S. | Associate in Science



This program is recommended for transfer students planning to earn a baccalaureate degree with a major in computer science. Students should be at Math Placement Level 4 or higher.

For more information, contact the Admissions Office at (845) 431-8010 or visit [www.sunydutchess.edu/academics](http://www.sunydutchess.edu/academics)

# Computer Science (CPS)

(HEGIS 5101)

The Associate in Science (A.S.) is awarded upon completion of the requirements for this program.

Students who successfully complete the Associate in Science (A.S.) degree in Computer Science (CPS) will be able to:

- Demonstrate the ability to design, implement and execute programs in an object oriented programming language;
- Demonstrate the implementation and/or use of data structures such as arrays, stacks, queues, linked lists, binary trees and maps;
- Demonstrate the ability to read and interpret computer code and programming language documentation.

Courses should be selected in consultation with an advisor.

## FIRST SEMESTER

ENG 101	Composition I	3
BHS 103	Social Problems in Today's World	3
Math (a)	MAT 185 or MAT 221 or MAT 222	4
CPS 141	Computer Science I	4
SPE 101	Public Speaking	3

**Total: 17**

## SECOND SEMESTER

ENG 102	Composition II	3
American History (Appendix D)		3
Math (a)	MAT 221 or MAT 222	4
CPS 142	Computer Science II	3
Elective (b)		3-4

**Total: 16-17**

## THIRD SEMESTER

Science (c)		4
Math (a)	MAT 222 or Elective	4
CPS 231	Computer Science III/Data Structures	3
Elective (b)		3-4

**Total: 14-15**

## FOURTH SEMESTER

MAT 214 or MAT 215	Discrete Mathematics Using Proofs or Linear Algebra	3
CIS 227	Computer Architecture and Organization	3
Elective (b)		3-4
Free Elective (d)		3
General Education Elective (e)		3

**Total: 15-16**

**Total Credit Hours: 62**

- Students must complete MAT 222 to satisfy the CPS degree requirements.
- Elective courses: MAT 186 or MAT 223 or MAT 230 or second semester of science sequence recommended. Many four-year colleges require a two-semester sequence in physics or chemistry. Courses applicable in this program are (a) Specific courses listed above; (b) courses applicable in designated programs.
- Physics or Chemistry or Biology recommended. Many four-year colleges require a two-semester sequence in physics or chemistry. Applicable four-credit courses are in astronomy, biology, chemistry, geology, physical sciences, physics. Students should select a course from General Education Appendix B.
- See a full discussion of the free elective requirement. The subject area for Computer Science includes all courses labeled CPS.
- General Education Elective: Courses applicable to this program are listed in the General Education Appendices E, F, and I. See list of the General Education Appendices.