Computer Science

Associate in Science - Transfer (AS-T)

Begin studies toward a Bachelor of Science degree in Computer Science. For the AS-T degree in Computer Science, various courses are offered such as calculus, physics, and computer science. A student can also take individual courses in areas of interest to deepen knowledge and understanding.

For a roadmap that identifies the preferred sequencing of courses and other specific recommendations from faculty, please see the corresponding program map(s):

- Computer Science Associate in Science - Transfer (AS-T) (lowercolumbia.edu/program-maps/stem/AST-Computer-Science)
- Computer Science Associate in Science - Transfer (AS-T) for WSU Vancouver (lowercolumbia.edu/program-maps/stem/AST-Computer-Science-WSU-V)

Degree Requirements

Total credits required to earn this degree: 90 with a cumulative grade point average (GPA) of at least 2.0. Universities may expect certain minimal grades in various courses in order to certify into their computer science programs. A course cannot be credited toward more than one distribution or skill area.

LCC students must meet distribution requirements for bachelor degrees, associate degrees, and specific certificates. See Diversity and Distribution Lists (lowercolumbia.edu/publications/catalog/distribution-lists/) for more information.

General Education Requirements

- **Communications:**

  5 credits - ENGL& 101 English Composition I.
- **Quantitative / Symbolic Reasoning Skills:**

  10 credits – MATH& 151* Calculus I ***AND*** MATH& 152* Calculus II.
- **Humanities / Social Sciences:**

  15 credits – Selected from at least three disciplines on the *Distribution List*. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science in a different discipline.
- **Lab Based Science Course:**

  5 credits – such as biology, chemistry, etc. Confer with advisor and the transfer university for acceptable courses.
- **Diversity:**

  5 credits – From the *Diversity Course List*. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV.
- **Electives:**

  At least 5 additional college-level credits to meet the 90 credit minimum. These remaining credits must include program advisor approved credits.

Program Requirements

Pre-Major Requirements

Course Code	Course Title	Number of Credits
CS 170	Fundamentals of Computer Programming	5
CS 270	Data Structures I	5
CS 275	Object-Orientated Programming	5
CS 280	Advanced Data Structures	5
MATH& 153*	Calculus III	5
MATH 215	Discrete Structures	5
MATH 220	Linear Algebra	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Program Outcomes

Students completing this program should acquire the following skills and abilities:

- Apply mathematics to the solution of problems in computer science.
- Apply physics to the solution of problems in computer science.
- Discover, develop, and utilize algorithms suitable for the design of computer programs.
- Design and implement computer programs using various programming languages.

Notes

Revised November 2017 (effective Fall 2017)

*It is recommended that sequence courses be completed at one institution.

Program planning is based on information available at the time of preparation. It is the student's responsibility to meet with their LCC advisor *and* for checking specific major requirements of baccalaureate institutions in the year prior to transferring. Consult the LCC catalog for LCC graduation requirements.

- MATH 215 is offered winter quarter of even years.
- MATH 220 is offered every spring quarter.

Most four-year universities require one year of a single foreign language as a graduation requirement.