Computer Science, Associate in Science for Transfer

Computer Science is concerned with the design, modeling, analysis, and applications of computer-related systems. The Computer Science program at Moorpark College prepares students for further study in Computer Science by providing the training necessary to understand, design, implement, and use the software and hardware of digital systems.

Students who complete the Computer Science program will be able to understand how to successfully think about and work with many aspects related to computers such as an introduction to how computers function, "hands-on" software engineering including beginning to understand how to approach problem solving, use symbolic and abstract reasoning, developing algorithms, using one or more programming languages to convert those algorithms into programs, understand good software engineering techniques, and be able to analyze and correct programs which are not functioning correctly.

The Associate in Science in Computer Science for Transfer (AS-T) is intended for students who plan to transfer and complete a bachelor's degree in Computer Science at a CSU campus. Students completing this AS-T degree are guaranteed admission to the CSU system but not necessarily to a particular campus or major of choice. Students should consult with a counselor for more information on admission to specific universities and their transfer requirements as individual schools may require different or additional course work to that listed for the AS-T in Computer Science.

To earn an AS-T in Computer Science, students must:

1. Complete 60 semester or 90 quarter CSU transferable units.
2. Obtain a minimum grade point average (GPA) of at least 2.0 in all CSU transferable coursework. While a minimum of 2.0 is required for admission, some transfer institutions and majors may require a higher GPA.
3. Complete 32-33 specified major units. All courses in the major must be completed with a grade of C or better or a "P" if the course is taken on a "pass-no-pass" basis (Title 5 § 55063). Even though a "pass-no-pass" is allowed, it is highly recommended that students complete their major courses with a grade.
4. Obtain certification of the Intersegmental General Education Transfer Curriculum pattern.

Course ID	Title	Units/Hours
REQUIRED CORE: Complete the following		

Course ID	Title	Units/Hours
CS M125	Programming Concepts and Methodology I (formerly CS M10A)	3
CS M135	Programming Concepts and Methodology II	3
CS M145	Computer Architecture and Organization	3
CS M155	Discrete Structures	3
PHYS M20A	Mechanics of Solids and Fluids	4
PHYS M20AL	Mechanics of Solids and Fluids Laboratory	1
Additional Requirements (15 units)		
LIST A: Complete 2 semesters of Calculus (10 units)		
MATH M25A or MATH M25AH	Calculus with Analytic Geometry I Honors: Calculus With Analytic Geometry I	5
MATH M25B	Calculus with Analytic Geometry II	5
LIST B: Select and complete one course (5 units)		
BIOL M02A or BIOL M02AH	General Biology I Honors: General Biology I	5
Total Required Major Units: 32 - 33		
IGETC Pattern: 37. NOTE: IGETC 1C is required for all CSU applicants. Students applying to a UC or Private school may earn this ADT without IGETC 1C but will be ineligible to apply to a CSU.		
Double-Counted Units: 10		
Electives to meet 60 CSU units: 0		
Total Units Required for the AS-T Degree: 60		

Upon successful completion of this program, students will be able to:

- demonstrate mastery in core computer science areas such as problem analysis, programming languages, and computer hardware and architecture.
- formulate, develop, and implement solutions to real world problems through applying different solution techniques.

- communicate effectively with diverse stakeholders to present technical solutions to both technical and non-technical audiences.
- demonstrate and apply knowledge of security and ethical concerns and ramifications when implementing solutions and systems.