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, or a major deemed similar by a CSU campus. Each CSU campus determines which of the degrees it offers are "similar" and can be completed with the preparation included in the AS-T in Computer Science within 60 units once a student transfers, so which majors are "similar" varies from CSU to CSU. For a current list of what majors (and what options or areas of emphasis within that major) have been designated as "similar" to this degree at each CSU campus, please refer to the CSU's Associate Degree for Transfer Major and Campus Search (https://www2.calstate.edu/apply/transfer/Pages/associate-degree-for-transfer-major-and-campus-search.aspx) website and seek guidance from a Moorpark College counselor. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

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

1. Complete 60 semester or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC).
   b. The required coursework for the AS-T Computer Science as listed in the Moorpark College catalog.
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. Please consult with a counselor for more information.
3. Obtain a grade of "C" or better or "P" in all courses required in the major. Even though a "pass-no-pass" is allowed (Title 5 §55062), it is highly recommended that students complete their major courses with a letter grade (A, B, or C).
4. Complete requirements in residency. For students in the Ventura County Community College District, a minimum of 12 units must be completed in residence within the college district.

Students transferring to a CSU campus that accepts the AS-T in Computer Science degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree (unless the major is a designated "high-unit" major at a particular campus). This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

Course ID	Title	Units/Hours
REQUIRED CORE: Complete the following		
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
or MATH M21	Discrete Mathematics	
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	Calculus with Analytic Geometry I	5
or MATH M25AH	Honors: Calculus with Analytic Geometry I	
MATH M25B	Calculus with Analytic Geometry II	5
or MATH M25BH	Honors: Calculus with Analytic Geometry II	
LIST B: Select and complete one course (5 units)		
BIOL M02A	General Biology I (*)	5
or BIOL M02AH	Honors: General Biology I	
* NOTE: CHEM M01A or PHYS M20B/L can be used in place of BIOL M02A.		
Total Units for the Major		**32**
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 Units to meet 60 CSU transferable		1
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.