Moorpark College
Associate in Science in Computer Science (AS-T)

Program Goals and Objectives

This degree and the courses listed provide students with the foundation needed for students to complete a transfer-level program in computer science and to become computer science professionals. This Associate in Science in Computer Science for Transfer Degree (AS-T in Computer Science) is intended for students who plan to transfer and complete a bachelor's degree in Computer Science, or a major deemed "similar" at a CSU campus.

Program Student Learning Outcomes

Upon completion of this program a student 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.

Catalog Description

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 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 a minimum of 60 semester or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a) The California General Education Transfer Curriculum (Cal-GETC) requirements.
   b) The coursework required for the AS-T in Computer Science as listed in the Moorpark College catalog.

2. Complete all courses in the major and the Cal-GETC with a grade of "C" or better or "Pass/Credit" if the course is taken on a "pass-no-pass" basis. Even though a "Pass/Credit" grade is allowed, it is highly recommended that students complete their major courses with a letter grade (A, B, or C). **Note:** the UC system allows a maximum of 14 semester (21 quarter) units of courses graded "Pass/Credit" toward the 60 transferable semester units required for transfer admission.

3. Obtain a minimum grade point average (GPA) of 2.0 in all CSU-transferable coursework. While a minimum GPA 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.

4. Complete a minimum of 12 semester units within the Ventura County Community 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 to obtain 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	3
CS M135	Programming Concepts and Methodology II	3
CS M145	Computer Architecture and Organization	3

Course ID	Title	Units/Hours
CS M155	Discrete Structures	3
or MATH M21	Discrete Mathematics	
PHYS M20A & M20AL	Mechanics of Solids and Fluids and Mechanics of Solids and Fluids Laboratory	4, 1
Units from LIST A		10
Units from LIST B		5
Total Units for the Major		**32**

LIST A: Complete two semesters of Calculus

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 one course*

BIOL M02A	General Biology I	5
or BIOL M02AH	Honors: General Biology I	
BIOL M02B	General Biology II	5
or BIOL M02BH	Honors: General Biology II	
CHEM M01A	General Chemistry I	5
or CHEM M01AH	Honors: General Chemistry I	

* NOTE: PHYS M20B/L can be used in lieu of courses listed.

Total Units for Major	**32**
General Education (Cal-GETC) Units	34
Double-Counted Units	10
Elective Units	4
Total Units for the AS-T Degree	**60**