COMPUTER SCIENCE

SANTA ANA COLLEGE BUSINESS DIVISION

Computer Science courses are designed to meet the varying goals of students interested in employment or education in computing fields. These courses provide instruction in low-level and high-level programming languages (C#, C++, Visual BASIC, Java), intermediate/advanced techniques in programming and hardware organization. Refer to Computer Science in the courses section of the catalog and to the schedule of classes for specific information.

- **Programming Certificate** in Computer Science can be earned by those students desiring to enter the workplace at entry-level positions.
- **Associate Degree in Computer Science** can be earned within two years for those students wanting to gain entry-level employment in computer science, engineering, and other areas where high aptitude in computer programming is recognized.
- **Associate Degree in Computer Science for Transfer** can be earned by those students desiring to transfer to a four-year institution with majors related to computer science.

Computer Science Department Faculty

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SAC Nondiscrimination Policy Statement

The Rancho Santiago Community College District is committed to equal opportunity in educational programs, employment, and all access to institutional programs and activities.

The District, and each individual who represents the District, shall provide access to its services, classes, and programs without regard to national origin, religion, age, gender, gender identity, gender expression, race or ethnicity, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.

The Chancellor shall establish administrative procedures that ensure all members of the college community can present complaints regarding alleged violations of this policy and have their complaints heard in accordance with the Title 5 regulations and those of other agencies that administer state and federal laws regarding nondiscrimination.

No District funds shall ever be used for membership, or for any participation involving financial payment or contribution on behalf of the District or any individual employed by or associated with it, to any private organization whose membership practices are discriminatory on the basis of national origin, religion, age, gender, gender identity, gender expression, race, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics, or because of his or her association with a person or group with one or more of these actual or perceived characteristics. Inquiries regarding compliance and/or grievance procedures may be directed to District's Title IX Officer and/or Section 504/ADA Coordinator, 2323 N. Broadway, Santa Ana, CA 92706, 714-480-7490.

REV: 04_08_2019

SANTA ANA COLLEGE

1530 W. 17th Street, Santa Ana, CA 92706 • sac.edu

COMPUTER SCIENCE

Building Skills
Teamwork
Leadership

Technology is Your Ticket to Opportunity

SAC.edu/cs

COMPUTER SCIENCE

Programming Certificate

The certificate curriculum in Computer Science leads to entry-level employment in computer science, engineering and other areas where high aptitude in computer programming is recognized. The program prepares students for careers as engineering aides, scientific computing technicians and junior programmers. The program also prepares students to transfer to a university with a major in Computer Science.

Take ALL of the following courses:		Units
CMPR 120	Introduction to Programming	3
CMPR 121	Programming Concepts	3
CMPR 131	Data Structures Concepts	3
Select ONE course from the following:		
CMPR 112	Java Programming	3
CMPR 205	Advanced Visual BASIC	3
CMPR 213	C# Programming	3
	Total Units	12

SALARY INFO	Annual Salary
Entry Level Software Developer	$68K
JAVA Developer	$88K
Junior Software Developer	$65K
Software Developer Freshman	$80K
Software Developer Intern	$58K
SOURCE: Glassdoor.com	

Option 1

Computer Science Degree

The associate degree and certificate curriculum in Computer Science leads to entry-level employment in Computer Science, engineering, and other areas where high aptitude in computer programming is recognized. The program prepares students for careers as engineering aides, scientific computing technicians, and junior programmers. The program also prepares students to transfer to a university with a major in Computer Science.

Take ALL of the following courses:		Units
CMPR 100	The Computer and Society	3
CMPR 120	Introduction to Programming	3
CMPR 121	Programming Concepts	3
CMPR 129	Introduction to Computer Organization	4
CMPR 131	Data Structures Concepts	3
Select ONE course from the following:		
CMPR 112	Java Programming	3
CMPR 205	Advanced Visual BASIC	3
CMPR 213	C# Programming	3
	Units	19

Select an additional SIX units from the following:		
CMPR 112	Java Programming	3
CMPR 117	Perl Programming and CGI	3
CMPR 118	JavaScript Programming	3
CMPR 134	Microsoft Windows Operating System	3
CMPR 135	Software Deployment Mechanisms	1.5
CMPR 139	Configuration and Administration of Local Area Networks	1.5
CMPR 140	Discrete Structures for Computer Science	3
CMPR 141	UNIX Operating System	3
CMPR 142	Advanced Unix	3
CMPR 205	Advanced Visual Basic	3
CMPR 213	C# Programming	3
CMPR 243	UNIX System Programming	3
CMPR 247	Windows Server Operating System	3
CMPR 248	Microsoft SQL Server	3
CMPR 249	Microsoft Internet Information Server (IIS)	3
MATH 180	Analytic Geometry and Calculus	4
MATH 185	Analytic Geometry and Calculus	4
	Total Units	25

Option 2

Associate in Science in Computer Science for Transfer

The Associate in Science in Computer Science for Transfer (A.S.-T Computer Science) prepares students to transfer into the CSU system. Please consult a counselor regarding specific course requirements for your transfer institution. Completion of the A.S.-T Computer Science also provides guaranteed admission with junior status to the CSU system although does not guarantee acceptance to a particular campus or major. Upon completion of the A.S.-T in Computer Science, students will be well- versed in the use of standard computer control structures to solve problems and develop algorithms. They will have developed skills in writing programs that utilize functions as a method of program organization and control. Additional areas of emphasis will include objects, object-oriented programming, data structures, and abstract data types. Computer science students will also obtain knowledge of computer architecture and organization. The Computer Science curriculum also requires the student to have significant skills in mathematics and the applications of those skills to real world problem solving.

Degree requires completion of classes in a general education package. See catalog for information on requirements.

Required Core (29 units)		Units
CMPR 121	Programming Concepts	3
CMPR 131	Data Structures Concepts	3
CMPR 129	Introduction to Computer Organization	4
CMPR 140	Discrete Structures for Computer Science	3
MATH 180	Single Variable Calculus I	4
MATH 185	Single Variable Calculus II	4
PHYS 217	Engineering Physics I	4
PHYS 227	Engineering Physics II	4
	Total Units	29

* Note: Only IGETC (Plan C) will be accepted toward completion of the general education portion of this degree. Unlike other Associate Degrees for Transfer, CSU-GE (Plan B) completion will not be accepted for this degree. (An Oral Communication course, IGETC Area 1C, must be completed in order to meet CSU admission requirements.)