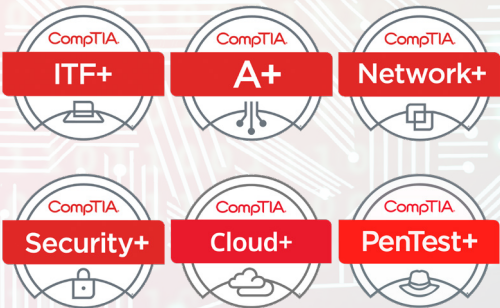


Computer Information Systems (CIS)

The Computer Information Systems program is for students interested in the application of computer hardware and software to business. CIS courses prepare students for entry-level positions in computer and IT support, infrastructure, networking, database, website development, and cybersecurity. These courses may be used for job advancement, an associate degree or certificate of competency, or transfer to a four-year institution. CIS courses cover major programming languages (Visual BASIC and Java) as well as software used in business for database management, and networking.

Santa Ana College offers the IT Support Specialist, IT Desktop and Server Operations, IT Network and Security Operations, Database, Data Analytics, and Web Site Development certificates which offer many Information Technology job opportunities.

Santa Ana College is proud to be a CompTIA Partner Academy.



Computer Information Systems (CIS)

ACADEMIC PROGRAMS:

1. IT Support Specialist
2. IT Desktop and Server Operations
3. IT Network and Security Operations
4. Database
5. Data Analytics
6. Web Site Development

COMPUTER SCIENCE FACULTY

Computer Information Systems (CIS)

Hugh Nguyen • nguyen_hugh@sac.edu • 714.564.6777

Computer Science & CIS

Jason Sim • sim_jason@sac.edu • 714.564.6876

Computer Science

Nicholas Quach • quach_nicholas@sac.edu • 714.564.6756

sac.edu/it



To request this document in an alternate format, please contact (714) 564-5527 or publicaffairs@sac.edu

RSCCD is committed to equal opportunity in educational programs, employment, and access to all institutional programs and activities. To view our Nondiscrimination Policy, visit rscdd.edu/NDP.



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

REV: 11.06.2024

COMPUTER INFORMATION SYSTEMS

Earn Certificates and Degrees
Information Technology and Cybersecurity



- IT Help Desk
- IT Specialist
- Network Administrator
- Systems Administrator
- Database Administrator
- Web Developer



Information Technology Leads to Jobs

sac.edu/it

COMPUTER INFORMATION SYSTEMS

IT Support Specialist

The IT Support Specialist certificate of achievement is based on the learning objectives from the CompTIA IT Fundamentals (ITF+) and CompTIA A+ certifications. This certificate includes help desk 'soft skills' such as effective communication, analytical and critical thinking, diplomacy, problem solving, leadership, team building, and listening skills. Students will gain hands-on experience in a help desk environment, and gain 'on the job' work experience with an IT internship.



Take ALL of the following courses:

	Units
CMPR 100 The Computer and Society	3
CMPR 125 IT Help Desk Fundamentals	3
CMPR 153 A+ Essentials Hardware	3
CMPR 155 A+ Essentials Software	3
CMPR 134 Microsoft Windows Operating System	3
CMPR 104 Work Experience Education - IT Cybersecurity and Computing	1-4

Total Units 16-19

IT Desktop and Server Operations

The IT Desktop and Server Operations certificate of achievement is designed to prepare students in the technical field of desktop, server, and network management. Technical background in operating systems, LAN infrastructure, networks, virtualization, Microsoft and Linux server & client technologies, cloud-based solutions, Students will be prepared to take the CompTIA A+ and Network+ certifications.



Take ALL of the following courses:

	Units
CMPR 153 A+ Essentials Hardware	3
CMPR 155 A+ Essentials Software	3
CMPR 134 Microsoft Windows Operating System	3
CMPR 138 CompTIA Network+ Guide to Networks	3
CMPR 247 Windows Server Operating System	3

Total Units 15

IT Network and Security Operations

The IT Network and Security Operations certificate is to train and certify the competencies of an information security analyst, best practices and solutions in secure network design and management, cyber defense, pen testing, vulnerability risk assessment, disaster response and recovery.



Take ALL of the following courses:

	Units
CMPR 153 A+ Essentials Hardware	3
CMPR 155 A+ Essentials Software	3
CMPR 138 CompTIA Network+ Guide to Networks	3
CMPR 247 Windows Server Operating System	3
CMPR 175 CompTIA Security+ Guide to Network Security	3

Total Units 15

Database

The database certificate trains students in becoming Database Administrators, Database Architects, Data Analysts, and or Business Analysts. Students will learn how to create and design relational database systems, maintain database systems, and backup data with a host of related database topics.



Take ALL of the following courses:

		Units
CMPR 167	Microsoft Access	3
CMPR 168	MS SQL Database Development	3
CMPR 169	Structured Query Language (SQL)	3

Select ONE group of the following courses

CMPR 105	Visual BASIC Programming	3
	- AND -	
CMPR 205	Advanced Visual Basic	3
	- OR -	
CMPR 112	Java Programming	3
	- AND -	
CMPR 113	Advanced Java	3

Total Units 15

Data Analytics

This certificate is designed for students who have an interest in working with datasets, database systems, SQL (Structured Query Language), Pandas, Jupyter, and other related DAtools. The program is also tailored for working professionals who might want to change careers in BIG DATA or Data Analytics.



Take ALL of the following courses:

		Units
CMPR 114	Python Programming	3
CMPR 115	Python for Data Analytics	3
CMPR 167	Microsoft Access	3
MATH 219	Statistics and Probability	4
	- OR -	
MATH 219H	Honors Statistics and Probability	4
	- OR -	
MATH 219S	Statistics and Probability with Support	4.5
BA 188	Microsoft Excel	3

Total Units 15-15.5

Web Site Development

The Web Site Development certificate gives students the skills to design, implement, and publish web content using HTML, CSS, and JavaScript.



Take the following 2 courses:

CMPR 152	HTML	3
CMPR 118	Javascript Programming	3

Select ONE course from the following:

CMPR 113	Advanced Java Programming	3
CMPR 213	C# Programming	3

Total Units 9

Computer Information Systems Certificate and Degree

The Certificate of Achievement/AS Degree curriculum in Computer Information Systems is concerned with the development of procedures that are effective and efficient, computer languages suitable for starting these procedures, and systems for executing the procedures. This may include the ability to write programs in Visual BASIC, C++ or Java, experience in microcomputer data processing applications such as Excel or Access, and ability to structure data for the computer. Students intending to obtain a bachelor's degree in Computer Information Systems should consult the major and transfer requirements for upper-division standing listed under the Business Administration major at the 4-year institution of their choice.

Take ALL of the following courses:

		Units
BA 189	Advanced Microsoft Excel	2
CMPR 105	Visual BASIC Programming	3
CMPR 134	Microsoft Windows Operating System	3
CMPR 167	Microsoft Access	3
CMPR 138	CompTIA Network+ Guide to Networks	3
CMPR 205	Advanced Visual Basic	3
CMPR 247	Windows Server Operating System	3

Select ONE course from the following:

BUS 150	Introduction to Information Systems and Applications	3
CMPR 100	The Computer and Society	3

Select a minimum of THREE units from the following:

ACCT 101	Financial Accounting	4
ACCT 102	Managerial Accounting	4
CMPR 104	Work Experience Education-IT Cybersecurity and Computing	1-4
CMPR 112	Java Programming	3
CMPR 118	JavaScript Programming	3
CMPR 120	Introduction to Programming	3
CMPR 121	Programming Concepts	3
CMPR 125	IT Help Desk Fundamentals	3
CMPR 152	HTML	3
CMPR 153	A+ Essentials Hardware	3
CMPR 155	A+ Essentials Software	3
CMPR 169	Structured Query Language (SQL)	3
CMPR 175	CompTIA Security+ Guide to Network Security	3
CMPR 248	Microsoft SQL Server	3

Total Units 26-27

General Education Units 34

Total AS Degree Units 60