CO SCI 317	Micro Assembly Language Programming (3)
CO SCI 340	Programming in C++ (3)
CO SCI 344	Programming in Java (3)
CO SCI 360	Introduction to Data Structures (3)
CO SCI 942	Discrete Structures (3)
MATH 265	Calculus and Analytic Geometry I (5)
PHYSICS 37	Physics for Engineers and Scientists I (5)
PHYSICS 38	Physics for Engineers and Scientists II (5)

Electives (choose 12 units minimum)

CHEM 101	General Chemistry I (5)
CO SCI 58	Computer Literacy (3)
CO SCI 91	Beginning Basic Programming (3)
CO SCI 92	Hypertext Markup Language (3)
CO TECH 74	A+ Certification I (4)
CO TECH 76	A+ Certification II (4)
MATH 266	Calculus and Analytic Geometry II (5)
MATH 267	Calculus and Analytic Geometry III (5)

Skills Certificate in Computer Science
Major Code: 070700

Major (Core and Electives)	15

Core (12 units)

CO SCI 317	Micro Assembly Language Programming (3)
CO SCI 340	Programming in C++ (3)
CO SCI 344	Programming in Java (3)
CO SCI 360	Introduction to Data Structures (3)

Electives (choose 3 units minimum)

CO SCI 91	Beginning Basic Programming (3)
CO SCI 92	Hypertext Markup Language (3)
CO SCI 942	Discrete Structures (3)

Computer Technology

Associate in Science Degree in Computer Technology
Major Code: 093411

This course of study is designed to prepare students to function as computer customer engineers, as computer systems test technicians with specialized training for the field of research and development. The skilled technicians may find employment with a wide variety of industrial firms dealing with Mini/Microcomputers, peripheral devices (hard disk, printers, terminals, magnetic media, etc.), automated office equipment, automated manufacturing processes, electronic control devices or animatronics. This degree requires greater than 60 units and therefore more time to complete. Students are encouraged to choose the "math" course options, if possible. Students wishing to transfer are advised to use either the CSU GE or IGETC plan, depending on their intended transfer institution.

Program Learning Outcomes: Upon successful completion of the program, students will able to articulate and justify technical problems through oral, written, and graphic communication; troubleshoot a variety of electronic and/or computer-based components and systems including signal processing, communications, computer networks, and controls; employ mathematics, science, and computing techniques in a systematic, comprehensive manner to support the study and solution of engineering problems; demonstrate industry-standards when interpreting and creating engineering drawings; and describe professional and ethical responsibilities in engineering.

Major Requirements	45✦-51
Additional LACCD GE Plan Requirements	**18**
(Not including 3 double-countable major units if the 45-unit major option is chosen or 3 Area E units that may be waived for this degree via graduation petition if the 51-unit major option is chosen). Students wishing to transfer are advised to use either the CSU GE or IGETC plan instead.)	
Total	**63-69**

Core (45✦-51 units)

CO SCI 344	Programming in Java (3)
CO TECH 35	Introduction to Linux + (3)
CO TECH 49	Introduction to Dynamic Web Applications (3)
CO TECH 50	Basic DC Electronics (4)
CO TECH 52	Fundamental Computer Circuits & Lab (4)
CO TECH 56	Computer Logic & Arithmetic (4)
CO TECH 60	Computer Mathematics I (5)✦
CO TECH 61	Computer Mathematics II (5)✦
CO TECH 74	A+ Certification Prep/Intro to PC I (4)
CO TECH 76	A+ Certification Prep/Intro to PC II (4)
CO TECH 78	Intro to Network+ (4)
CO TECH 80	Intro to Server+ (4)
CO TECH 114	Network Security Fundamental (3)
ENG TEK 81	Fabrication Techniques (1)

✦Math 227, 234, or 260 (4 or 5 units each) may be substituted for the set of Co Tech 060 and Co Tech 061 (10 units, total), for a total of 44 major

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units. If this option is chosen, LACCD GE Area E may not be waived. However, 3 units of the higher-level Math courses may be double-counted as GE. In either case, the additional LACCD GE requirements total 18 units.

Certificate of Achievement in Computer Technology
Major Code: 093410

The certificate of achievement in Computer Technician provides the minimum information required for entry-level positions in the computer field. See the program learning outcomes listed under the associate's degree in this subject.

Major (Core and Electives)	28
Additional Requirements	8
Total	36

Core (15 units)

CO TECH 35	Introduction to Linux + (3)
CO TECH 50	Basic DC Electronics (4)
CO TECH 52	Fundamental Computer Circuits & Lab (4)
CO TECH 56	Computer Logic & Arithmetic (4)

Electives (choose 13 units minimum)

CO TECH 49	Introduction to Dynamic Web Applications (3)
CO TECH 74	A+ Certification Prep/Intro to PC Repair I (4)
CO TECH 76	A+ Certification Prep/Intro to PC Repair II (4)
CO TECH 78	Intro to Network + (4)
CO TECH 80	Intro to Server + (4)
CO TECH 114	Network Security Fundamentals (3)
CO TECH 185	Directed Study (1)

Additional Requirements (8 units)

ENGLISH 28	Intermediate Reading and Composition (3)
or ENGLISH 100	Accelerated Prep: College Writing (3)
or ENGLISH 101	Written Communications (3)
CO TECH 60	Computer Mathematics I (5)
or ENG TEK 49	Technical Mathematics II (5)

Effective Spring 2017

Skills Certificates in Network Administration
Major Code: 079900

Completion of this certificate will provide the student with the necessary analytical and mechanical skills for entry-level employment as a Network Administrative Technician. Setting up or modifying existing LAN systems within small to medium sized businesses, including the documentation, providing local "Help Desk" assistance, troubleshooting and repairing computers, are typical employment duties. Courses cover basic troubleshooting, upgrading and repair of hardware/network configurations, networking and server applications. See the program learning outcomes listed under the associate's degree in this subject.

Total	16
CO TECH 35	Intro to Linux + (3)
CO TECH 76	A+ Certification Prep/Intro to PC Repair II (4)
CO TECH 78	Intro to Network + (4)
CO TECH 80	Intro to Server + (4)
CO TECH 81	Intro to Fiber Optics (1)

Skills Certificate in Network Technology
Major Code: 079901

Completion of this skills certificate will provide the student with the necessary analytical skills for entry-level employment installing, configuring and maintaining small to medium scale computer network systems. Students select the type of network configuration to be installed, load the OS and utilities for the network administration and security as required. Students perform preventative maintenance procedures and network system upgrades necessary to maintain reliable operations. See the program learning outcomes listed under the associate's degree in this subject.

Total	12
CO TECH 50	Basic Electronics for Computer Technicians (4)
CO TECH 78	Introduction to Network + (4)
ENG TEK 81	Fabrication Techniques (1)
CO TECH 185	Directed Study – Computer Technology (1)
CO TECH 285	Directed Study – Computer Technology (1)

Skills Certificate in Computer Repair Technology
Major Code: 070106

Completion of this skills certificate will provide the student with the necessary analytical and mechanical skills for entry-level employment for troubleshooting and repairing computers. Students learn basic electronic fabrication techniques, installing and upgrading standard IBM compatible operating systems, troubleshooting, upgrading and repairing hardware configurations and the technical math skills necessary for assessing computer compatibilities and manufacturer's specifications. See the program learning outcomes listed under the associate's degree in this subject.

Total	17
CO TECH 50	Basic Electronics for Computer Technicians (4)
CO TECH 60	Computer Mathematics I (5)
CO TECH 74	A+ Certification Prep/Intro to PC Repair I (4)
CO TECH 76	A+ Certification Prep/Intro to PC Repair II (4)

Skills Certificate in Fiber Optics
Major Code: 070105

This skills certificate provides students with advanced laboratory experiences in electronic fabrication principles. Topics include basic theory of fiber optic data transmission, fabrication of SC, ST and FC fiber optic cable connectors, patch panel and network hub installations, mechanical and fusion splicing techniques, OTDR testing and measurement techniques, termination procedures, troubleshooting and documentation requirements used for fiber optic installations. Note: currently, there is a shortage of qualified fiber optic cable installation and maintenance technicians. Successful completion of this course can lead to employment opportunities for those who desire to work in this unique industry. See the program learning outcomes listed under the associate's degree in this subject.

Total	1
CO TECH 81	Introduction to Fiber Optics (1)

Culinary Arts

Associate in Science Degree in Culinary Arts
Major Code: 130630

The Associate in Science degree in Culinary Arts is designed to qualify students for employment in occupations in the growing food industry. The program provides students with theory and practical experience. Students completing the program will be able to enter careers as cooks in restaurants, hotels, school food service programs, and catering companies, as well as in other areas of hospitality including food sales and consulting, and in entry level management.

Note: The National Restaurant Association certification requires passing ServSafe and ServSafe Alcohol exams.

Also note: For those working toward certification from the American Culinary Federation Culinarian Certification Program, a 200-hour kitchen rotation internship is required upon completion of the second semester major requirements for this degree.

Program Learning Outcomes: Upon successful completion of the program, students will be able to execute verbal, written, and visual instructions in recipe and menu development utilizing the art and science of cooking; communicate effectively with customers, co-workers and management considering the diverse composition of the team and guest; use mathematical concepts and methods to analyze recipes, products, pricing, and vendor services to purchase goods; demonstrate proficiency in any station of a commercial kitchen including the Garde Mange, butcher, savory, pastry, and short order areas; and demonstrate the skills necessary for employment as a manager of a small restaurant operation including utilizing the computer to perform research on culinary and management topics.

Major (1st-3rd Semester Requirements)	36
Additional LACCD GE Requirements	21
(Students wishing to transfer are advised to use either the CSU GE or IGETC plan instead.)	
Additional Degree-applicable Requirements	3
Total	60

First Semester (12 units, taken concurrently)
CLN ART 113	Culinary Skills I (3)
CLN ART 114	Aromatics (2)
CLN ART 115	Food Fabrication (2)

Program listings do not include basic skills prerequisites for college-level courses or prerequisites for GE courses. Numbers appearing in parentheses beside each course title represent course units. Courses may not be offered every term. Students are strongly advised to see a counselor prior to enrolling in any program.