R AT 50 Auto Body Repair I (4)
8 hours lecture/laboratory
Note: Graded only; may be taken 3 times
Automotive body work with emphasis on repair. Includes welding; working with small damage points; restoring contour of body panels and sections; and realigning bumpers, fenders, doors, and hoods.

R AT 51 Auto Body Repair II (4)
8 hours lecture/laboratory
Recommended preparation: R AT 50
Note: Graded only; may be taken 3 times
Automotive body work with emphasis on increasing diagnostic, estimating and repair skills and updating techniques and related technologies. Introduction to collision industry standards including I-CAR and ASE.

R AT 55 Auto Refinishing I (4)
8 hours lecture/laboratory
Note: Graded only; may be taken 3 times
Introduction to auto refinishing. Preparation of auto surfaces for refinishing: taping, cleaning, and sanding. Refinishing auto surfaces: sanding, application of primers and paint.

R AT 56 Auto Refinishing II (4)
8 hours lecture/laboratory
Recommended preparation: R AT 55
Note: Graded only; may be taken 3 times
Skills development in automotive refinishing techniques including base-coat clear-coat application. Color matching concepts. Identification, prevention and correction of painting problems. Update on new products, techniques, and trends.

R AT 90 Automotive Upholstery (4)
8 hours lecture/laboratory
Note: Cross listed as R UP 90; graded only; may be taken 2 times
Skills and techniques required to replace, repair or customize automotive and related upholstery. Fabrication of interiors and accessories for automobile interiors, watercraft and other recreational vehicles. Techniques and considerations related to auto alarm or sound system installation. Students will complete individual or group projects.

R AT 97 Auto Body Repair/Auto Refinishing Topics (.5-4)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: Graded only; may be taken 4 times
Topics in auto body repair and auto refinishing. See Class Schedule for specific topic offered. Course title will designate subject covered.

Computer Science and Information Systems (R CSIS)

Associate in Arts Degrees -
AA Degree requirements are listed in Section 6 (green pages).
• Computer Technology

Certificates of Achievement -
Certificate of Achievement requirements are listed in Section 6 (green pages).
• Computer Technology

Certificates of Proficiency -
Certificate of Proficiency requirements are listed in Section 6 (green pages).
• Applications Support Specialist
• Microcomputer Operating Systems
• Microcomputer Technology
• PC Repair Technician
• PC Support Technician
• Software Applications Specialist

PROGRAMS OF STUDY

Applications Support Specialist

This program prepares students for employment as technicians supporting software applications such as Microsoft Office Suite in a help desk environment. Building on applications proficiency, it includes supporting coursework in computer hardware, operating systems, web site development and customer support fundamentals.

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
R CSIS 65	Held Desk Fundamentals	2
R CSIS 120/ CSIT 120	Computer Applications	3
R CSIS 110/ CSWB 110	Web Site Development with XHTML	2
R CSIS 157 or R CSIS 158	Windows XP: Professional and Server Windows 2000	3
R CSIS 170 or CSIT 130	Windows Windows Vista	1
R CSIS 172	Windows for Technicians	2
TOTAL UNITS		**13**

Computer Technology

This program prepares students for employment in various areas of business and industry requiring technical support for stand-alone and networked computer systems. It is designed to provide the basics of computer hardware and software theory and application, familiarity with a variety of operating systems and the fundamentals of networking. Hands-on labs with an emphasis on problem-solving and troubleshooting provide opportunities for the application of theoretical knowledge to real and simulated system malfunctions.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
R CSIS 140	Command Line Operations	3
R CSIS 145	Introduction to Linux	3
R CSIS 155	Computer Technology – Hardware	3
R CSIS 156 or CSNT 110	Computer Technology – Software Hardware and O.S. Fundamentals	3
R CSIS 157	Windows XP: Professional and Server	3
R CSIS 158 or CSNT 120 and	Windows 2000 Windows Client	3
CSNT 121	Windows Server	6
R CSIS 160 or CSNT 111	Introduction to Local Area Networking Networking Fundamentals	3
R CSIS 120/ CSIT 120	Computer Applications	3
R CSIS 172	Windows for Technicians	2
Electives (Select a minimum of 6 units)		
R CSIS 65	Help Desk Fundamentals	2
R CSIS 110*/ CSWB 110	Web Site Development with XHTML	2
R CSIS 159	Industry Certification: Review and Preparation	1
R CSIS 161	PC/Network Security	3
R CSIS 169	Overview of Computer Forensics	3
CSCI 105	Survey of Computer Science	4
ECHT 100	Electronic Components and Circuits	4.5
ECHT 203	Digital/Computer Electronics	4.5
R CSIS 195	Vista Security	3
R CSIS 196	Vista Basic	3
TOTAL UNITS		**32 - 35**

*Note: Formerly CSIS 137/R CSIS 137

Microcomputer Operating Systems

Prepares students for employment in various areas of microcomputer support, specifically operating systems and software installation and support. Focus on client and server applications of Microsoft Windows user and server operating systems. Includes evolution of operating systems, upgrade and transition to emerging industry standards.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
R CSIS 140	Command Line Operations	3
R CSIS 157	Windows XP: Professional and Server	3
R CSIS 158	Windows 2000	3
R CSIS 170 or	Windows	
CSIT 130	Windows Vista	1
R CSIS 172	Windows for Technicians	2
R CSIS 196	Vista Basic	3
TOTAL UNITS		**15**

Microcomputer Technology

Prepares students for entry-level positions supporting, maintaining and repairing stand-alone and networked microcomputer systems.

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
R CSIS 140	Command Line Operations	3
R CSIS 155	Computer Technology - Hardware	3
R CSIS 156	Computer Technology - Software	3
R CSIS 160	Introduction to Local Area Networking	3
TOTAL UNITS		**12**

PC Repair Technician

Prepares students for mid-level positions as PC Repair Technician. Focus on microcomputer structure and Windows operating system. Students will develop skills in component identification, preparation and setup; memory system and repair; power supplies; multiple hard disk preparation, testing and installation; current technology trends and troubleshooting and customer relations.

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
R CSIS 156	Computer Technology - Software	3
R CSIS 159	Industry Certification: Review & Preparation	1
R CSIS 172	Windows for Technicians	2
TOTAL UNITS		**6**

PC Support Technician

Prepares students for entry-level positions as PC Support Technician. Instructional focus on installation, upgrade, maintenance, and repair of microcomputers to the modular level.

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
R CSIS 140	Command Line Operations	3
R CSIS 155	Computer Technology - Hardware	3
TOTAL UNITS		**6**

Software Applications Specialist

Prepares students for employment in positions that require competence in software applications common to business and industry.

In order to earn a certificate, students must achieve a minimum grade of 'C' in each of the certificate program courses.

CERTIFICATE OF PROFICIENCY

Program Requirement		Units
R CSIS 109	QuickBook Overview	1
R CSIS 120/		
CSIT 120	Computer Applications	3
R CSIS 121	Microcomputer Applications – Advanced	3
R CSIS 110/		
CSWB 110 or	Web Site Development with XHTML	
R CSIS 138	Website Design with FrontPage	2
R CSIS 170 or	Windows	
CSIT 130	Windows Vista	1
R CSIS 186	Contemporary Job Search	1
TOTAL UNITS		**11**

COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

R CSIS 65 Help Desk Fundamentals (2)
4 hours lecture/laboratory
Recommended preparation: R CSIS 121 and 172 or 157 or 158
Note: Graded only
A comprehensive overview of the Help Desk environment. Builds on basic software and hardware knowledge to provide entry-level training in computer user support. Includes critical skills in professionalism; communication; call management, customer service and related job stress. Hands-on simulations enable students to identify and troubleshoot a variety of commonly occurring problems.

R CSIS 97 Computer Science and Information Systems Topics (.5-4)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory,
or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: Graded only; may be taken 4 times
Topics in Computer Science and Information Systems. See Class Schedule for specific topic offered. Course title will designate subject covered.

R CSIS 109 QuickBooks Overview (1)
2 hours lecture/laboratory
Note: Graded only; may be taken 3 times
Transfer acceptability: CSU
Overview and application of QuickBooks to set up and manage bookkeeping/accounting records for small businesses.

R CSIS 110 Web Site Development with XHTML (2)
(Formerly R CSIS 137)
4 hours lecture/laboratory
Note: Cross listed as CSWB 110; graded only
Transfer acceptability: CSU
A foundation course for Internet/Intranet technologies. Skills required to develop and publish web sites utilizing XHTML, including using HTML tables, frames, web page forms, and basic CSS (Cascading Style Sheets).

R CSIS 116 Introduction to Computers (2)
1 hour lecture-2 hours lecture/laboratory
Note: Graded only
Transfer acceptability: CSU
Introduction to basic computer operations and the Windows operating system for students with little or no background in computer science. Includes terminology and techniques as well as keyboarding and mouse functions. Also includes: window management; creating and managing files and folders; performing basic system maintenance using Windows accessory programs; word processing; and accessing the Internet.

R CSIS 120 Computer Applications (3)
1 hour lecture-4 hours lecture/laboratory
Note: Cross listed as CSIT 120; graded only; may be taken 4 times; maximum of 4 completions in any combination of CSIT/R CSIS 120, CSIT 121
Transfer acceptability: CSU
Hands on experience with microcomputers and microcomputer applications featuring the use of Windows, word processing, spreadsheet, database, and presentation graphics software.

R CSIS 121 Advanced Computer Applications (3)
1 hour lecture- 4 hours lecture/laboratory
Prerequisite: R CSIS 120/CSIT 120
Note: Graded only; may be taken 2 times
Transfer acceptability: CSU
This course builds upon fundamental knowledge of Windows operating system and Microsoft Office Suite (Word, Excel, Access and PowerPoint) to progress into advanced functions of each element as well as integration of various elements.

R CSIS 125 Presenting with PowerPoint (1)
2 hours lecture/laboratory
Recommended preparation: R CSIS 170 or CSIT 130
Note: Graded only
Transfer acceptability: CSU
Comprehensive study and application of PowerPoint multimedia capabilities to create effective audience-focused presentations, live and web-based. Preparation of documents in various formats to include: animated slideshows, speaker notes, audience handouts, outlines and web sites.

R CSIS 127 Word Processing Software – Basic (1)
2 hours lecture/laboratory
Recommended preparation: A keyboarding speed of 20 net words a minute
Note: Graded only; may be taken 4 times
Transfer acceptability: CSU
Study of word processing skills using Microsoft Office. Course includes file creation, modification, and formatting, saving and printing files, graphics, report generation elements, and integration of Word documents within the Office suite. Hands-on labs using state of the art software are an integral part of this course, as well as guided instruction.

R CSIS 130 Microsoft Publisher (1)
2 hours lecture/laboratory
Recommended preparation: R CSIS 127 and R CSIS 170 or CSIT 130, or BUS 170 or OIS 136.1
Note: Cross listed as BUS 186; graded only, may be taken 4 times.
Transfer acceptability: CSU
Hands-on applications of Microsoft Publisher, a comprehensive software package that combines text, graphics, illustrations, and photographs to produce typeset quality documents for local printer output or commercial printing. Includes: newsletters; brochures; flyers; web pages; business cards; letterheads and envelopes; advertising and marketing materials; greeting cards; PDF and web file formats; and printing options.

R CSIS 138 Website Design with FrontPage (2)
4 hours lecture/laboratory
Recommended preparation: R CSIS 110/CSWB 110
Note: Graded only
Comprehensive study of web site development and maintenance using Microsoft FrontPage. Includes creation of web pages, application of design elements; comparison of search engines, familiarity with source code, and use of interactive forms to create client databases. Also includes uploading, testing and modification of web site.

R CSIS 140 Command Line Operations (3)
6 hours lecture/laboratory
Note: Graded only
Introduction to the basic principles of computer operating systems and command line operations, using DOS (Disk Operating System) as a foundation. Includes: introduction to computer hardware; comparative overview of operating systems, managing files, disks and directories; batch files; controlling peripherals; disk maintenance, optimization and data recovery; and configuring system environment.

R CSIS 145 Introduction to Linux (3)
6 hours lecture/laboratory
Note: Graded only
Transfer acceptability: CSU
An overview of the Linux operating system, utilities, and associated applications for workstations. Includes installation, configuration and troubleshooting of Linux Systems within the command-line environment and the graphical X-Windows environment.

R CSIS 150 Computer Spreadsheets (3)
6 hours lecture/laboratory
Note: Graded only
Transfer acceptability: CSU
In-depth study of the varied applications of spreadsheets using Microsoft Excel. Create, modify, format and maintain multiple page worksheets; enter numeric and text data for manipulation; and create and copy formulas. Includes integration of Excel spreadsheets within Microsoft Office Suite. Hands-on experience in networked lab.

R CSIS 155 Computer Technology – Hardware (3)
6 hours lecture/laboratory
Note: Graded only; may be taken 2 times
Introduction to the basic principles of computer hardware architecture and design. Hands on course includes microcomputer design, assembly and troubleshooting, Course content aligns with objectives of the A+ certification core exam.

R CSIS 156 Computer Technology – Software (3)
6 hours lecture/laboratory
Note: Graded only; may be taken 2 times
Prerequisite: R CSIS 140
Fundamentals of computer operating systems and Local Area Network (LAN). Hands-on approach to installing, troubleshooting, and supporting operating systems, networking fundamentals, and preparation for the A+ OS certification exam.

R CSIS 157 Windows XP: Professional and Server (3)
6 hours lecture/laboratory
Prerequisite: R CSIS 170
Note: Graded only; may be taken 2 times
Transfer acceptability: CSU
A focused study of Microsoft Windows XP Professional and Server operating systems. Includes hands-on experience installing, configuring, optimizing, maintaining and troubleshooting Windows XP Professional on stand-alone and client computers in workgroup or domain environment. Study of Windows.NET Server includes setup and configuration of Active Directory Service.

R CSIS 158 Windows 2000 (3)
6 hours lecture/laboratory
Prerequisite: R CSIS 170
Note: Graded only
Transfer acceptability: CSU
Core knowledge and skills for supporting Microsoft Windows 2000 operating system. Includes installing, configuring, customizing, optimizing, networking, integrating, and troubleshooting.

R CSIS 159 Industry Certification: Review and Preparation (1)
2 hours lecture/laboratory
Note: Graded only; may be taken 2 times
A focused study of industry and professional certifications available for PC technicians. Review of Microsoft, Novell, and CTIA certification programs. Content review and preparation for A+ Certification Examination.

R CSIS 160 Introduction to Local Area Networking (3)
6 hours lecture/laboratory
Prerequisite: R CSIS 155 and 156
Note: Graded only; may be taken 2 times
Introduction to the basic principles of Local Area Networking (LAN) structure and function. Hands-on experience in design, construction, installation, maintenance and repair to the modular level using operating systems and diagnostic hardware and software.

R CSIS 161 PC/Network Security (3)
6 hours lecture/laboratory
Note: Graded only; may be taken 4 times
Comprehensive overview of computer security, including stand-alone and networked systems. Includes: fundamentals of network security principles and implementation; e-mail, web and data transmission security; infrastructure security; cryptography; and operational/ organizational security, including disaster recovery.

R CSIS 169 Overview of Computer Forensics (3)
6 hours lecture/laboratory
Prerequisite: R CSIS 161
Note: Graded only
Introduction to computer forensics and investigation including digital information recovery and analysis. Includes hands-on exercises, case studies and discussion of computer forensic ethics. Course content aligns with the objectives of the International Association of Computer Investigative Specialists (IACIS) certification.

R CSIS 170 Windows (1)
2 hours lecture/laboratory
Note: Graded only
Transfer acceptability: CSU
Fundamentals of Windows Graphical User Interface. Students will develop proficiency in: changing desktop settings; file/folder management at both desktop and Explorer levels; and basic system maintenance.

R CSIS 172 Windows for Technicians (2)
4 hours lecture/laboratory
Prerequisite: R CSIS 170
Note: May be taken 2 times; graded only
A technical study of the Windows operating system; hands-on experience installing, configuring, optimizing, maintaining, and troubleshooting.

R CSIS 175 Excel (1)
2 hours lecture/laboratory
Note: Graded only; may be taken 2 times; graded only
Transfer acceptability: CSU
Study of spreadsheets using Microsoft Excel. Course includes creating spreadsheets, formatting data, manipulating data, creation and application of formulas, charting data, and printing considerations. Preparation for the Excel MOS certification exam.

R CSIS 180 Access (1)
2 hours lecture/laboratory
Note: Graded only; may be taken 2 times
Transfer acceptability: CSU
Study of Access database program within the Microsoft Office Suite. This class introduces and reinforces the creation, modification and
maintenance of Access databases. Students will create the database structure, enter data in tables, execute queries, generate reports and forms, modify properties and layout at the design level and maintain the database. Preparation for the Access MOUS certification exam.

R CSIS 186 Contemporary Job Search Techniques (1)
2 hours lecture/laboratory
Note: Graded only
Use the Internet, current software and research tools to organize and implement a job search. Includes: online resources; preparation and posting of application materials, including resume and cover letters; interview strategies and mock interviews; industry speakers, and hard copy and online portfolios.

R CSIS 195 Vista Security (3)
6 hours lecture/laboratory
Prerequisite: R CSIS 161
Note: Graded only; May be taken 4 times
Comprehensive overview of Microsoft Vista operating system security, on stand-alone and client computers. Includes hands-on experience configuring, and implementation of; user and group accounts; user and computer policies; file security; resource sharing; cryptography; and operational/organizational security, including disaster recovery.

R CSIS 196 Vista Basic (3)
6 hours lecture/laboratory
Note: Graded only; May be taken 4 times
A focused study of Microsoft Windows Vista operating system. Includes hands-on experience configuring, optimizing, maintaining and troubleshooting Windows Vista on stand-alone and client computers in workgroup or domain environment.

Culinary Arts (R CUL)

See also Culinary Arts

Associate in Arts Degrees -
AA Degree requirements are listed in Section 6 (green pages).
• Culinary Arts

Certificates of Achievement -
Certificate of Achievement requirements are listed in Section 6 (green pages).
• Culinary Arts

Certificates of Proficiency -
Certificate of Proficiency requirements are listed in Section 6 (green pages).
• Culinary Skills
• Patisserie and Baking

PROGRAMS OF STUDY

Culinary Arts

Prepares students for employment and career opportunities in various areas of the foodservice industry. The focus is on food preparation and production skills, with supporting coursework in nutrition, food sanitation and safety, menu planning, purchasing and inventory control, kitchen management and employee supervision. Practical hands-on lab activities in a commercial kitchen environment and directed workplace learning opportunities prepare students for foodservice positions in resorts, casinos, and fine dining establishments.

Students will need to possess a current San Diego County Food Handler Card to participate in kitchen/lab activities.

In order to earn a certificate or degree, students must achieve a minimum grade of 'C' in each of the certificate program courses.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
FCS/MICR 110	Microbiology and Foods	3
FCS/HE 165	Fundamentals of Nutrition	3
R CUL/CUL 110	Culinary Essentials I	3
R CUL/CUL 111	Culinary Essentials II	3
R CUL/CUL 120	Patisserie and Baking I	3