

CINE 105 Film Subjects (3)

3 hours lecture

Note: May be taken 4 times**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.

A study of selected motion picture themes such as women in films, the western, the films of Hitchcock/Chabrol. Check the Class Schedule each semester for the particular subject.

CINE 110 The Non Fiction Film (3)

3 hours lecture

Transfer acceptability: CSU; UC

A study of the complete spectrum of this vital genre, including the documentary, political propaganda, personal poetic statement, and travel record. Regular film programs of Flaherty, Grierson, Leacock, Maysles, and Wiseman will be shown.

CINE 115 Creative Writing for Television and Cinema (3)

3 hours lecture

Note: Cross listed as RTV 115**Transfer acceptability:** CSU

Instruction and practice in the art of dramatic script writing. Emphasis is placed on the development of the initial story idea into a viable, professional shooting script for TV or film.

CINE 120 Film Criticism (3)

3 hours lecture

Transfer acceptability: CSU; UC

A study of the writing of major film critics. The work of Kael, Sarris, Youngblood, Farber, and others will be considered in the attempt to formulate aesthetic standards for cinema. Motion picture viewing assignments will be made in connection with the readings.

CINE 125 Beginning Film and Video Field Production (3)

6 hours lecture/laboratory

Note: Cross listed as RTV 125**Transfer acceptability:** CSU; UC – CINE/RTV 125 and 225 combined: maximum credit, one course

A study of the basic techniques of field production using Super 8 or 16mm film or analog or digital video equipment as applied to various cinematic forms. The student will work with a team on a project through the preproduction, shooting, and postproduction phases of storytelling for the screen.

CINE 225 Intermediate Film and Video Field Production (3)

6 hours lecture/laboratory

Prerequisite: A minimum grade of 'C' in RTV 110 and CINE/RTV 125**Note:** Cross listed as RTV 225**Transfer acceptability:** CSU; UC – CINE/RTV 125 and 225 combined: maximum credit, one course

Principles, techniques, and theory of field production using digital or analog video or 16mm film equipment. Theory and practice of off-line linear or nonlinear editing.

CINE 296 Special Projects (1,2,3)

3, 6, or 9 hours laboratory

Prerequisite: CINE 115/RTV 115 or CINE 225/RTV 225**Note:** May be taken 2 times**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.

Independent work on an original film project. The instructor will approve the work plan and afford personal guidance in its completion. Normally a student will make a fully satisfactory and acceptable screenplay or short film.

Communications (COMM)

See also Cinema, Journalism, and Radio/Television

Contact the Communications Department for further information, (760) 744-1150, ext. 2440. For transfer information, consult a Palomar College counselor.

Public Relations

This certificate includes a selection of courses that provides academic preparation to individuals who are seeking employment, or are currently employed, in public relations. Major growth in this industry is anticipated.

CERTIFICATE OF PROFICIENCY

| Program Requirements | | Units |
|----------------------|--------------------------------|-----------|
| COMM 104 | Principles of Public Relations | 3 |
| GCIP/ | | |
| R GCIP 149 | Page Layout and Design I | 3 |
| JOUR 101 | News Writing and Reporting | 3 |
| JOUR 105 | Newspaper Production | 3 |
| RTV/ENTT 120 | Digital Television Production | 3 |
| TOTAL UNITS | | 15 |

COURSE OFFERINGS**COMM 100 Mass Media in America (3)**

3 hours lecture

Transfer acceptability: CSU; UC – COMM 100 and 105 combined: maximum credit, one course; CAN JOUR 4

A multi media approach to a comparative survey of communication in 20th century America, studying the history, structure, and social impact of television, cinema, radio, journalism, and new forms of communication.

COMM 104 Principles of Public Relations (3)

3 hours lecture

Transfer acceptability: CSU

A survey of public relations history, theories, and practices with emphasis on applications to business, public agencies and institutions. A practical approach to using the media, creating press releases, organizing and executing campaigns, and promoting favorable relations with various segments of the public.

COMM 105 Human Values in the Mass Media (3)

3 hours lecture

Transfer acceptability: CSU; UC – COMM 100 and 105 combined: maximum credit, one course

An analysis of the changing social and ethical issues that confront both our mass communication systems and the public. The media's role in reflecting, creating, and controlling human values, both personal and social. Examination of images of women, African-Americans, Native Americans, Asian-Americans, and Latinos in the mass media and their sociological consequences.

COMM 144 Exploring the Effects of Media on Young Children (.5)

½ hour lecture

Note: Cross listed as CHDV 144**Transfer acceptability:** CSU

Explores the effects of media consumption on children's social-emotional, physical, and cognitive development. Research behind the risks associated with television and computer use and popular culture saturation for young children. Techniques for addressing media consumption with children, parents and families.

Computer Science and Information Systems (CSIS)Contact the Computer Science and Information Systems Department for further information, (760) 744-1150, ext. 2387 or <http://www.palomar.edu/cs>

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY**Cisco**

The Cisco networking program is designed to teach students the skills needed to design, build, and maintain small to medium-sized networks. This provides stu-

dents the opportunity to enter the workforce and/or further their education and training in the computer-networking field.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|---|-----------|
| CSIS 130 Cisco Networking Fundamentals | 3 |
| CSIS 131 Cisco Router Configuration | 3 |
| CSIS 132 Cisco Advanced Routing/Switching | 3 |
| CSIS 133 Cisco WAN Design/Support | 3 |
| TOTAL UNITS | 12 |

Computer Network Administration

This program prepares the student for employment in the field of Computer Networking. The focus is on developing skills in a combination of the Network Operating Systems produced by Cisco, Microsoft, and Linux/UNIX. Specific learning outcomes include developing team dynamics in the following skills: Network Media Installation, LAN and WAN Design, Network Management, Fundamentals of Networking Devices, Client Hardware Repair, Network Operating Systems Installation and Configuration, Networking Device Operating Systems, Installation and Configuration, Client Operating Systems Installation and Configuration, Network Security, Remote Access, Routing Principles and Configuration, and Maintaining a Corporate Network.

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

A student must complete the required degree courses and all of the courses in a chosen elective emphasis. The student may choose from the following elective emphases: Microsoft and Linux Management, Cisco and Linux Management, or Cisco and Microsoft Management

Emphasis in Microsoft and Linux Management

A.A. DEGREE MAJOR

| Program Requirements | Units |
|---|----------------|
| CSIS 108 or R CSIS 155 Hardware and OS Fundamentals Computer Technology – Hardware | 3 |
| CSIS 130 or CSIS 111 or R CSIS 160 Cisco Networking Fundamentals Networking Fundamentals Introductions to Local Area Networking | 3 |
| CSIS 135 Wireless Networking | 3 |
| CSIS 136 or R CSIS 161 Hacker Prevention/Security PC/Network Security | 3 |
| CSIS 160 Survey of Computer Science | 4 |
| CSIS 162 or R CSIS 157 Windows Client Windows XP Professional and Server | 3 |
| CSIS 163 Windows Server | 3 |
| CSIS 164 Network Infrastructure Administration | 3 |
| CSIS 165 Active Directory Services Administration | 3 |
| CSIS 225 or R CSIS 145 Linux Fundamentals Introduction to Linux | 2,3 |
| CSIS 227 Linux Administration | 2 |
| CSIS 228 Linux Networking and Security | 2 |
| Group One Electives (Select 2 courses) | |
| CSIS 166 Designing Active Directory Services | 2 |
| CSIS 167 Designing Network Infrastructure | 2 |
| CSIS 168 Designing Network Security | 2 |
| Group Two Electives (Select 1 course) | |
| CSIS 172 Microsoft SQL Server Administration | 2 |
| CSIS 173 Programming Microsoft SQL Server Databases | 3 |
| CSIS 176 Managing a Windows Network | 2 |
| CSIS 177 Microsoft Exchange Server | 2 |
| TOTAL UNITS | 39 - 42 |

Note: By adding CSIS 131, CSIS 132 and CSIS 133 to your Microsoft and Linux Management Emphasis you can also earn a Certificate of Proficiency in Cisco in addition to your Computer Network Administration A.A. Degree.

Emphasis in Cisco and Linux Management

A.A. DEGREE MAJOR

| Program Requirements | Units |
|---|----------------|
| CSIS 108 or R CSIS 155 Hardware and OS Fundamentals Computer Technology – Hardware | 3 |
| CSIS 130 or CSIS 111 or R CSIS 160 Cisco Networking Fundamentals Networking Fundamentals Introductions to Local Area Networking | 3 |
| CSIS 131 Cisco Router Configuration | 3 |
| CSIS 132 Cisco Advanced Routing and Switching | 3 |
| CSIS 133 Cisco Wide Area Network Design and Support | 3 |
| CSIS 135 Wireless Networking | 3 |
| CSIS 136 or R CSIS 161 Hacker Prevention/Security PC/Network Security | 3 |
| CSIS 160 Survey of Computer Science | 4 |
| CSIS 162 or R CSIS 157 Windows Client Windows XP Professional and Server | 3 |
| CSIS 163 Windows Server | 3 |
| CSIS 225 or CSIS/R CSIS 145 Linux Fundamentals Introduction to Linux | 2,3 |
| CSIS 227 Linux Administration | 2 |
| CSIS 228 Linux Networking and Security | 2 |
| TOTAL UNITS | 37 - 38 |

Note: CSIS 130 is a prerequisite for CSIS 131

Emphasis in Cisco and Microsoft Management

A.A. DEGREE MAJOR

| Program Requirements | Units |
|---|--------------|
| CSIS 108 or R CSIS 155 Hardware and OS Fundamentals Computer Technology – Hardware | 3 |
| CSIS 130 or CSIS 111 or R CSIS 160 Cisco Networking Fundamentals Networking Fundamentals Introductions to Local Area Networking | 3 |
| CSIS 131 Cisco Router Configuration | 3 |
| CSIS 132 Cisco Advanced Routing and Switching | 3 |
| CSIS 133 Cisco Wide Area Network Design and Support | 3 |
| CSIS 135 Wireless Networking | 3 |
| CSIS 136 or R CSIS 161 Hacker Prevention/Security PC/Network Security | 3 |
| CSIS 160 Survey of Computer Science | 4 |
| CSIS 162 or R CSIS 157 Windows Client Windows XP Professional and Server | 3 |
| CSIS 163 Windows Server | 3 |
| CSIS 164 Network Infrastructure Administration | 3 |
| CSIS 166 Designing Active Directory Services | 2 |
| CSIS 225 or R CSIS 145 Linux Fundamentals Introduction to Linux | 2 |
| TOTAL | 38-39 |

Note: CSIS 130 is a prerequisite for CSIS 131

Computer Science

This program prepares students for technical positions in software development in business and industry. See a Counselor for additional university transfer requirements in this major.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

| Program Requirements | Units |
|--|-------|
| CSIS 160 Survey of Computer Science | 4 |
| CSIS 220 Programming for Computer Science | 4 |
| CSIS 221 Data Structures | 4.5 |
| CSIS 222 Machine Organization and Assembler Language | 4 |
| CSIS 280 C++ and Object-Oriented Programming | 4 |

Group One (Select 12 – 16 units)

| | |
|--------------------------------------|---|
| CSIS 111 Networking Fundamental | 3 |
| CSIS 235* C for Programmers | 4 |
| CSIS 240 Video Game Programming | 4 |
| CSIS 245 Systems Analysis and Design | 4 |
| CSIS 252 Introduction to Oracle | 3 |
| CSIS 282 C# Programming | 3 |
| CSIS 285 Windows Programming I | 4 |
| CSIS 288 Windows Programming II | 3 |
| MATH 245 Discrete Mathematics | 3 |

Group Two (Select 2-3 units)

| | |
|---------------------------------|---|
| CSIS 138 JavaScript | 3 |
| CSIS 194 Perl and CGI Scripting | 3 |
| CSIS 225 Linux Fundamentals | 2 |

TOTAL UNITS 34.5 – 40.5

*Not recommended for students who have completed CSIS 220 in C.

Desktop Support Specialist

Desktop support specialists are qualified to successfully troubleshoot, repair and upgrade the desktop computer including hardware and software in a networked environment.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|--|-------|
| CSIS 108 or Hardware and OS Fundamentals | |
| R CSIS 156 Computer Technology Software | 3 |
| CSIS 111 Networking Fundamentals | 3 |
| CSIS 162 Windows Client | 3 |
| CSIS 163 Windows Server | 3 |

Electives (Select 1 course)

| | |
|-------------------------------------|---|
| CSIS 176 Managing a Windows Network | 2 |
| CSIS 227 Linux Administration | 2 |

TOTAL UNITS 14

Information Systems

This program prepares students for employment in information systems applications development in business and industry. The focus is on developing skills in Visual Basic, Internet, spreadsheets, databases, presentation graphics, word processing, in systems analysis and design, and database design. See a counselor for additional university transfer requirements in this major.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

| Program Requirements | Units |
|---|-------|
| CSIS 105 Computer Concepts/Microcomputer Applications | 3 |
| CSIS 117 Introduction to Visual Basic | 4 |
| CSIS/R CSIS 137 Web Site Development with XHTML | 2 |
| CSIS 138 JavaScript | 3 |
| CSIS 191 or PHP with MySQL | |
| CSIS 268 Active Server Pages | 3 |
| CSIS 214 Intermediate Visual Basic | 4 |
| CSIS 217 Advanced Visual Basic | 4 |
| CSIS 245 Systems Analysis and Design | 4 |

| | |
|--|---|
| CSIS 252 or Introduction to Oracle | |
| CSIS 173 Programming Microsoft SQL Server Databases | 3 |
| CSIS 272 or Java Programming for Information Systems | |
| CSIS 282 C# Programming | 3 |

TOTAL UNITS 33

Linux Operating System

This certificate program in Linux/UNIX is designed for those currently in the computer industry who want to upgrade their skills, and for those with basic computer literacy who want to enter this fast-growing field. Being fluent in Linux/UNIX can make the difference in winning a job or promotion, as more personnel directors regard knowledge and fluency in Linux/UNIX principles as key criteria for job recruitment and selection.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|--|-------|
| CSIS 225 Linux Fundamentals | 2 |
| CSIS 226 Linux Shell Scripting | 2 |
| CSIS 227 Linux Administration | 2 |
| CSIS 228 Linux Networking and Security | 2 |
| CSIS 235 C for Programmers | 4 |

TOTAL UNITS 12

Microsoft SQL Database Administrator

Microsoft SQL Database Administrator is a validation program that provides a reliable measure of technical proficiency and expertise in implementation and administration of Microsoft SQL Server™ databases.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|---|-------|
| CSIS 111 Networking Fundamentals | 3 |
| CSIS 163 Windows Server | 3 |
| CSIS 164 Network Infrastructure Administration | 3 |
| CSIS 172 Microsoft SQL Server Administration | 2 |
| CSIS 173 Programming Microsoft SQL Server Databases | 3 |

TOTAL UNITS 14

Microsoft Office User Specialist

The Microsoft Office User Specialist (MOUS) Program is a validation program that provides proof of proficiency in Microsoft Office applications. It is available for Microsoft Office applications at both Proficient and Expert User levels. As a general rule of thumb, Proficient Specialists can handle a wide range of everyday tasks with ease. Expert Specialists are expected to do all those everyday tasks, plus handle more complex assignments that require more advanced formatting and functionality.

Users who attain Expert Specialist status on all five core Office applications (Word, Excel, Access, PowerPoint, and Outlook) qualify to take the Microsoft Office Integration Exam. Passing this exam demonstrates that the user is not only an expert in the individual Office products, but is also skilled in integrating them into a cohesive whole. This entitles the user to be called a Microsoft Office Expert.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|----------------------|-------|
| CSIS 127 Word | 1 |
| CSIS 174 Excel | 1 |
| CSIS 179 Access | 1 |
| CSIS 185 PowerPoint | 1 |
| CSIS 188 Outlook | 1 |

TOTAL UNITS 5

Network Engineer

Network Engineers are qualified to effectively plan, implement, maintain, troubleshoot and support networks in a wide range of computing environments using Microsoft Windows.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|---|-------|
| CSIS 163 Windows Server | 3 |
| CSIS 164 Network Infrastructure Administration | 3 |
| CSIS 165 Active Directory Services Administration | 3 |

Group One Electives (Select 1 course)

| | |
|--|---|
| CSIS 166 Designing Active Directory Services | 2 |
| CSIS 167 Designing Network Infrastructure | 2 |
| CSIS 168 Designing Network Security | 2 |

Group Two Electives (Select 2 courses)

| | |
|---|---|
| CSIS 166 Designing Active Directory Services | 2 |
| CSIS 167 Designing Network Infrastructure | 2 |
| CSIS 168 Designing Network Security | 2 |
| CSIS 172 Microsoft SQL Server Administration | 2 |
| CSIS 173 Programming Microsoft SQL Server Databases | 3 |
| CSIS 176 Managing a Windows Network | 2 |
| CSIS 177 Microsoft Exchange Server | 2 |
| CSIS 228 Linux Networking and Security | 2 |

TOTAL UNITS 15 - 16

Oracle Database

Oracle is the most widely used relational database management system in the world. This certificate offers a series of courses designed to provide the fundamentals to become successful in the use of this powerful database system.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|--------------------------------------|-------|
| CSIS 252 Introduction to Oracle | 3 |
| CSIS 256 Database Administration I | 3 |
| CSIS 257 Database Administration II | 3 |
| CSIS 258 Database Performance Tuning | 3 |

Electives (Select 1 course)

| | |
|------------------------------------|---|
| CSIS 254 Oracle Data Base Design | 3 |
| CSIS 259 Oracle PL/SQL Programming | 3 |

TOTAL UNITS 15

Video Game Artist

This certificate program introduces students to the video game industry, game design, and the creation of both 2D and 3D artwork for video games.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|--|-------|
| CSIS 241 Overview of the Video Game Industry | 4 |
| CSIS 242 Game Design | 4 |
| ART 241 or GCIP/ | |
| R GCIP 140 or GCIP 141 or GCIP 240 | 3 |
| ARTI 246 or DT 180 or DT 182 | 3 |
| 3D Studio Max – Intro 3D Modeling/Animation | |
| 3D Studio Max – Adv 3D Modeling/Animation | 3 |
| ARTD 220 or Motion Design | |
| ARTI 247 or DT 184 or GCMW 204 | 2,3 |
| Digital 3D Design and Animation | |
| Digital Imaging/Photoshop I | |
| Digital Imaging/Photoshop II | |
| Digital Imaging/Photoshop III | |
| Real Time 3D Technical/Game Animation | |
| Motion Graphics for Multimedia | |

TOTAL UNITS 16 - 17

Video Game Artist Certificate of Proficiency is also listed under Graphic Communications - Multimedia and Web.

Video Game Developer

This certificate program introduces students to the video game industry, game design and programming.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|--|-------|
| CSIS 240 Video Game Programming | 4 |
| CSIS 241 Overview of the Video Game Industry | 4 |
| CSIS 242 Game Design | 4 |
| CSIS 243 Advanced Video Game Programming | 4 |

TOTAL UNITS 16

Visual Basic

This certificate is designed for individuals interested in acquiring the advanced programming skills necessary to design and implement Visual Basic programs.

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|---------------------------------------|-------|
| CSIS 117 Introduction to Visual Basic | 4 |
| CSIS 214 Intermediate Visual Basic | 4 |
| CSIS 217 Advanced Visual Basic | 4 |
| CSIS 268 Active Server Pages | 3 |

TOTAL UNITS 15

Web Developer

This program includes the Web page design and programming languages that allow a developer to build dynamic Web applications. The student may choose an emphasis on either the Java/Open Source or Windows platforms.

Emphasis in Java / Open Source

CERTIFICATE OF PROFICIENCY

| Program Requirements | Units |
|---|-------|
| CSIS/R CSIS 137 Web Site Development with XHTML | 2 |
| CSIS 138 JavaScript | 3 |
| CSIS 191 PHP with MySQL | 3 |
| CSIS 238 Advanced JavaScript and XML (AJAX) | 3 |
| CSIS 272 Java Programming for Information Systems | 3 |

Elective Courses (select 1 course)

| | |
|--|---|
| CSIS 139 Advanced Web Site Development | 3 |
| CSIS 194 Perl and CGI Scripting | 3 |
| CSIS 195 Python Programming | 3 |
| CSIS 196 Introduction to SQL | 3 |
| CSIS 252 Introduction to Oracle | 3 |
| CSIS 273 Java Servlets and JSPs | 3 |
| GCMW 140 Web Graphics | 3 |
| GCMW/ | |
| R GCMW 102 Web Page Layout I | 3 |

TOTAL UNITS 17

Emphasis in Windows

CERTIFICATE OF PROFICIENCY

Program Requirements

| | Units |
|--|--------------|
| CSIS/ | |
| R CSIS 137 Web Site Development with XHTML | 2 |
| CSIS 138 JavaScript | 3 |
| CSIS 139 Adv Web Site Development | 3 |
| CSIS 268 Active Server Pages | 3 |
| CSIS 282 C# Programming | 3 |

Elective Courses (select 1 course)

| | |
|---|---|
| CSIS 173 Programming Microsoft SQL Server Databases | 3 |
| CSIS 272 Java Programming for Information Systems | 3 |
| CSIS 273 Java Servlets and JSPs | 3 |
| GCMW 140 Web Graphics | 3 |
| GCMW/ | |
| R GCMW 102 Web Page Layout I | 3 |

TOTAL UNITS **16**

Web Server Administrator

This program includes the use and implementation of web-networked environments for the purpose of administering Internet/Intranet applications. Strong emphasis is placed on hands-on server administration, networking, supplemented with web development and design. The student may choose an emphasis on either the Linux/UNIX or Windows platforms.

Emphasis in Linux**CERTIFICATE OF PROFICIENCY****Program Requirements**

| | Units |
|---|--------------|
| CSIS/R CSIS 137 Web Site Development with XHTML | 2 |
| CSIS 194 Perl and CGI Scripting | 3 |
| CSIS 225 Linux Fundamentals | 2 |
| CSIS 227 Linux Administration | 2 |
| CSIS 228 Linux Networking and Security | 2 |

Elective Courses (select 2 courses)

| | |
|---|-----|
| CSIS 226 Linux Shell Scripting | 2 |
| CSIS 266 Implementing/Admin Web Servers | 2.5 |
| GCMW 217 Online Store Design I | 3 |

TOTAL UNITS **15.5 - 16.5**

Emphasis in Windows**CERTIFICATE OF PROFICIENCY****Program Requirements**

| | Units |
|---|--------------|
| CSIS/R CSIS 137 Web Site Development with XHTML | 2 |
| CSIS 162 Windows Client | 3 |
| CSIS 163 Windows Server | 3 |
| CSIS 172 Microsoft SQL Server Administration | 2 |

Elective Courses (select 1 course)

| | |
|---|-----|
| CSIS 173 Programming Microsoft SQL Server Databases | 3 |
| CSIS 266 Implementing/Admin Web Servers | 2.5 |
| GCMW 217 Online Store Design I | 3 |

TOTAL UNITS **12.5 - 13**

Courses numbered under 100 are not intended for transfer credit.

COURSE OFFERINGS

CSIS 55 Practical PC **(1.5)**

1 hour lecture-1 hour lecture/laboratory

Note: May be taken 3 times

An introduction to your personal computer. This course will focus on the basic

skills to use and manage your home computer. Topics included: PC Basics; Windows Operating System; Computer Files; the Internet, the Web and E-mail; Application Software; Graphics, Sound and Video; and simple upgrades and expansion.

CSIS 57 Introduction to Online Learning **(1)**

2 hours lecture/laboratory

This course is an introduction to developing the skills necessary to succeed in an online or in house course using modern computer technology. Students will learn and apply the basics of Windows environment, data organization and management, Blackboard Academic Suite, E-Services, the Word Wide Web, E-mail, and additional tools to enable a student to be successful using electronic tools in a classroom.

CSIS 105 Computer Concepts and Microcomputer Applications **(3)**

2 hours lecture-3 hours laboratory

Transfer acceptability: CSU; UC – no credit if taken after CSIS 160 or 220

The study of computer concepts and basic proficiency in modern application software. Computer concepts will focus on basic terminology; computer literacy; hardware; software; information systems; state of the art technology; structured design techniques, overview of the computer industry; ethics and current issues including virus protection and prevention. Hands on introduction to Windows operating system and application software including basic proficiency of the Internet; browsers; e-mail; word processing; electronic spreadsheets; data base and presentation graphics application programs.

CSIS 108 Hardware and O.S. Fundamentals **(3)**

1 1/2 hours lecture-3 hours lecture/laboratory

This course provides students with the knowledge and skills necessary to build a foundation in computer hardware and operating systems. It will include P.C. hardware and operating system fundamentals; installation, configuration and upgrading; diagnosing and troubleshooting; preventative maintenance; motherboards, processors, and memory; printers; and basic networking including network operating systems.

CSIS 111 Networking Fundamentals **(3)**

1 1/2 hours lecture-3 hours lecture/laboratory

Transfer acceptability: CSU

This course provides students with the knowledge and skills necessary to build a solid foundation in computer networking. It will include networking fundamentals, the OSI model, subnetting, features and functions of networking components and the skills needed to install, configure, and troubleshoot basic networking hardware peripherals and protocols.

CSIS 117 Introduction to Visual Basic **(4)**

3 hours lecture-2 hours lecture/laboratory

Transfer acceptability: CSU

Students design, create, test and run computer applications using Visual Basic. Emphasis is on learning the fundamentals of the Visual Basic interface and how to solve problems using structured design logic and the sequence, decision and repetition procedural language control structure. Selected additional features of the Visual Basic interface and procedural language are included to provide a foundation for the study of more advanced courses.

CSIS 120 Microcomputer Applications **(3)**

1 hour lecture-4 hours lecture/laboratory

Note: Cross listed as R CSIS 120; may be taken 4 times; maximum of 4 completions in any combination of CSIS/R CSIS 120, CSIS 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.

CSIS 121 Advanced Microcomputer Applications **(3)**

1 hour lecture-4 hours lecture/laboratory

Prerequisite: CSIS/R CSIS 120

Transfer acceptability: CSU

Hands-on experience with advanced microcomputer applications featuring the use of word processing, spreadsheet, database and presentation graphics software.

- CSIS 127 Word** (1)
 2 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
 This course is intended for individuals seeking the fundamental and advanced skills of Microsoft Word word processing software. It will also prepare individuals who are seeking to become a Microsoft Proficient Specialist and Microsoft Word Expert Specialist.
- CSIS 130 Cisco Networking Fundamentals** (3)
 1½ hours lecture-3 hours lecture/laboratory
Note: May be taken 3 times
 Emphasis on the OSI model and industry standards. Includes network topologies, IP addressing, subnet masks, basic network design and cable installation. This 70 hour course of instruction prepares the student for Cisco certification examination.
- CSIS 131 Cisco Router Configuration** (3)
 1½ hours lecture-3 hours lecture/laboratory
Prerequisite: CSIS 130
Note: May be taken 3 times
 Development of knowledge and skills to install, configure, customize, maintain and troubleshoot Cisco routers and components. This 70 hour course of instruction prepares the student for Cisco certification examination.
- CSIS 132 Cisco Advanced Routing and Switching** (3)
 1½ hours lecture-3 hours lecture/laboratory
Prerequisite: CSIS 131
Note: May be taken 3 times
 Development of knowledge and skills to configure advanced routing protocols, Local Area Networks (LANs), and LAN switching. Design and management of advanced networks. This 70 hour course of instruction prepares the student for Cisco certification examination.
- CSIS 133 Cisco Wide Area Network Design and Support** (3)
 1½ hours lecture-3 hours lecture/laboratory
Prerequisite: CSIS 132
Note: May be taken 3 times
 Development of knowledge and skills to design and configure advanced Wide Area Network (WAN) projects using Cisco IOS command set. This 70 hour course of instruction prepares the student for Cisco certification examination.
- CSIS 135 Wireless Networking** (3)
 1½ hours lecture-3 hours lecture/laboratory
Transfer acceptability: CSU
 This course provides a hands-on guide to planning, designing, installing and configuring wireless LANs that prepares students for the Certified Wireless Network Administrator (CWNA) certification. The text used offers in-depth coverage of wireless networks with extensive step-by-step coverage of IEEE 802.11 b/a/g/pre-n implementation, design, security, and troubleshooting. Material is reinforced with hands-on projects at the end of each chapter from two of the principal wireless LAN vendors, Cisco and Linksys.
- CSIS 136 Hacker Prevention/Security** (3)
 1½ hours lecture-3 hours lecture/laboratory
 This course offers in-depth analysis and hands-on experience in PC and network security concepts specific to Microsoft, Unix-based and Cisco systems. The course includes various topics including hacker prevention and intrusion detection, firewall installation and configuration, wireless network security, disaster recovery, access control lists, identification of malicious code, cryptography and forensics. Students will learn team dynamics in a lab environment, planning, installing and configuring various network security elements regarding hardware, software, and media. The student will understand and be able to demonstrate proper planning and implementation of a secure network and be able to document and offer training to end users, executives, and human resources on the proper maintenance of a secure network.
- CSIS 137 Web Site Development with XHTML** (2)
 4 hours lecture/laboratory
Note: Cross listed as R CSIS 137
Transfer acceptability: CSU
 This course provides a foundation to Internet/Intranet technologies. This course primarily teaches the skills required to develop and publish web sites utilizing XHTML, including using HTML tables, frames, web page forms, and basic CSS (Cascading Style Sheets).
- CSIS 138 JavaScript** (3)
 2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSIS/R CSIS 137
Transfer acceptability: CSU
 Skills required to design Web-based applications using the JavaScript scripting language such as writing small scripts; working with data types; creating interactive forms using various form objects; and using the advanced features of JavaScript including loops, frames and cookies.
- CSIS 139 Advanced Web Site Development** (3)
 2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSIS 138
Transfer acceptability: CSU
 This course will focus on web-based application development using advanced features of HTML, Dynamic HTML, XHTML, and XML.
- CSIS 145 Introduction to Linux** (3)
 6 hours lecture/laboratory
Note: Cross listed as R CSIS 145; 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.
- CSIS 146 FORTRAN 90 for Mathematics and Science** (3)
 2 hours lecture-3 hours laboratory
Prerequisite: A minimum grade of 'C' in MATH 135 or MATH 110 and 115, or a passing grade on the appropriate placement test
Note: Cross listed as Math 146
Transfer acceptability: CSU; UC
 Programming in FORTRAN 90 to solve typical problems in mathematics, computer science, physical sciences, and engineering. Programming is done on a PC.
- CSIS 160 Survey of Computer Science** (4)
 3 hours lecture-2 hours lecture/laboratory
Transfer acceptability: CSU; UC – CSIS 160 and 220 combined: maximum credit, one course
 An overview of the discipline of computer science including such topics as the history of computer science; machine architecture; data storage and manipulation; operating software engineering; data structures; database and information retrieval; data communications; artificial intelligence; theory of computation; social legal and ethical issues. Includes hands-on laboratory experience reinforcing the lecture material.
- CSIS 162 Windows Client** (3)
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 108 or R CSIS 155 and CSIS 111
Note: May be taken 4 times
 This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows Client on stand-alone computers and on client computers that are part of a workgroup or a domain.
- CSIS 163 Windows Server** (3)
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 108 or R CSIS 156 and CSIS 111
Note: May be taken 4 times
 This course provides students with knowledge and skills necessary to install, configure, and administer a Microsoft Windows Server in a Network. Typical network services and applications include file and print, database, messaging, proxy server or firewall, dial-in server, desktop management, and Web hosting.

- CSIS 164 Network Infrastructure Administration (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 163
Note: May be taken 4 times
 This course provides students with the knowledge and skills necessary to install, configure, manage, and support a network infrastructure that uses the Microsoft Windows Server products.
- CSIS 165 Active Directory Services Administration (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 163
Note: May be taken 4 times
 This course provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory services. The course also focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers.
- CSIS 166 Designing Active Directory Services (2)**
 1½ hours lecture-1 hour lecture/laboratory
Recommended preparation: CSIS 165
 This course provides students with the knowledge and skills necessary to design a Microsoft Windows directory services infrastructure in an enterprise network.
- CSIS 167 Designing Network Infrastructure (2)**
 1½ hours lecture-1 hour lecture/laboratory
Recommended preparation: CSIS 164
 This course provides students with the knowledge and skills necessary to design a Microsoft Windows networking services solution for enterprise networks.
- CSIS 168 Designing Network Security (2)**
 1½ hours lecture-1 hour lecture/laboratory
Recommended preparation: CSIS 165
 This course provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft Windows technologies.
- CSIS 170 Windows (1)**
 2 hours lecture/laboratory
Note: Cross listed as R CSIS 170
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.
- CSIS 172 Microsoft SQL Server Administration (2)**
 1½ hours lecture-1 hour lecture/laboratory
Recommended preparation: CSIS 163
 This course provides students with the knowledge and skills necessary to administer and troubleshoot information systems that incorporate Microsoft SQL Server Enterprise Edition.
- CSIS 173 Programming Microsoft SQL Server Databases (3)**
 2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSIS 196 or 252
 This course provides students with the knowledge and skills necessary to design, implement and program database solutions by using Microsoft SQL Server.
- CSIS 174 Excel (1)**
 2 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
 This course is intended for individuals seeking the fundamental and advanced skills of Microsoft Excel spreadsheet software. It will also prepare individuals who are seeking to become a Microsoft Excel Proficient Specialist and Microsoft Excel Expert Specialist
- CSIS 176 Managing a Windows Network (2)**
 1½ hours lecture-1 hour lecture/laboratory
Prerequisite: CSIS 162 and 163
 This course provides students with the knowledge and skills necessary to administer, support, and troubleshoot networks that incorporate Microsoft Windows.
- CSIS 177 Microsoft Exchange Server (2)**
 1½ hours lecture-1 hour lecture/laboratory
Prerequisite: CSIS 162 and 163
 This course provides students with the knowledge and skills necessary to implement, administer, and troubleshoot information systems that incorporate Microsoft Exchange Server.
- CSIS 179 Access (1)**
 2 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
 This course is intended for individuals seeking the fundamental and advanced skills of Microsoft Access database software. It will also prepare individuals who are seeking to become a Microsoft Access Proficient Specialist and Microsoft Access Expert Specialist.
- CSIS 185 PowerPoint (1)**
 2 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
 This course is intended for individuals seeking the fundamental and advanced skills of Microsoft PowerPoint graphics software. It will also prepare individuals who are seeking to become a Microsoft PowerPoint Expert Specialist.
- CSIS 188 Outlook (1)**
 2 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
 This course introduces students to the fundamental and advanced skills of Microsoft Outlook software. Will help prepare individuals who are seeking to become a Microsoft Outlook Proficient Specialist and Microsoft Outlook Expert Specialist.
- CSIS 191 PHP with MySQL (3)**
 2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSIS/R CSIS 137
 This course provides students with the knowledge and skills necessary to use the PHP scripting language to develop dynamic Web-based applications. Topics of study include the fundamentals of the scripting, using PHP with HTML forms, creating functions, and integrating with databases using MySQL.
- CSIS 194 Perl and CGI Scripting (3)**
 2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSIS/R CSIS 137
Transfer acceptability: CSU
 This course develops basic competency in the Perl programming language. It focuses on using Perl to developing web-based Internet and Intranet applications. Topics of study include Perl for UNIX, Perl for Win32, CGI standards, HTML forms, scalar and array variables, control structures, file I/O, regular expressions and subroutines.
- CSIS 195 Python Programming (3)**
 2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSIS/R CSIS 137
 This course provides students with the knowledge and skills necessary to use the Python programming language to develop software for Internet applications, perform systems programming, and implement user interfaces. Topics of study include the fundamentals of the language, parallel system tools, system tools, graphical user interfaces, network scripting, client-side scripting, and server-side scripting. Also covered are databases and persistence, and data structures.
- CSIS 196 Introduction to SQL (3)**
 2 hours lecture-2 hours lecture/laboratory
Transfer acceptability: CSU
 Intended for individuals who want to learn how to search for and manipulate data in a database, create tables and indexes, handle security, control transaction processing, and learn the basics of how to design a database.

CSIS 197 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: May be taken 4 times

Transfer acceptability: CSU

Topics in Computer Information Systems. See class schedule for specific topic covered. Course title will designate subject covered.

CSIS 197B Computer Science and Information Systems Topics in Microsoft Office (.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: May be taken 4 times

Transfer acceptability: CSU

Topics in Microsoft Office to include Word, Excel, Access, PowerPoint, and Outlook. See Class Schedule for specific topic offered. Course title will designate subject covered.

CSIS 214 Intermediate Visual Basic (4)

3 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 117

Transfer acceptability: CSU

An intermediate level programming language which provides for building special purpose Windows applications using the Graphical User Interface of Windows. Includes extensive practice using programming logic control structures in designing algorithms and a wide array of Visual Basic objects in implementing the three-step approach to building Windows applications in Visual Basic.

CSIS 217 Advanced Visual Basic (4)

3 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 214

Transfer acceptability: CSU

Advanced course in Visual Basic programming. Special emphasis will be placed on the application of the Visual Basic language to solve business problems including requirements definition, design, construction, testing, and documentation. Multiple forms, objects, controls, object linking and embedding (OLE), and the use of the data control object to interface with databases external to Visual Basic will be covered.

CSIS 218 Visual Basic for Applications (2)

4 hours lecture/laboratory

Prerequisite: CSIS 217

Transfer acceptability: CSU

This course is designed to apply skills developed in previous Microsoft Office and Visual Basic programming classes. Includes learning the Visual Basic for Applications model to programmatically create integrated Microsoft Word and Excel applications.

CSIS 220 Programming for Computer Science (4)

3 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 160

Transfer acceptability: CSU; UC; CAN CSIS 12

Introduces object-oriented programming and design using Java. Focuses on implementation and testing of software in a platform-independent, event-driven, graphical user interface environment. Covers basic concepts of data representation, user interface design, and software engineering.

CSIS 221 Data Structures (4.5)

3 hours lecture-3 hours lecture/laboratory

Prerequisite: CSIS 220

Transfer acceptability: CSU; UC

Focus on object-oriented programming and its principles of objects, classes, encapsulation, inheritance, graphical user interface, and its relationship to the Java programming language. Introduction to the principles of modularity, data abstraction, abstract data types as they apply to various data structures. Focus on the definition, implementation, and applications of the basic data structures and associated operators that are found in computer science. These include arrays, stacks,

recursion, queues, lists, tables, references, trees, sorting, searching, event-driven structures that support the development of graphical user interfaces. Includes hands-on laboratory experience reinforcing the lecture material.

CSIS 222 Machine Organization and Assembler Language (4)

3 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 220 or 235

Transfer acceptability: CSU; UC

An introduction to Assembler Language programming. Language syntax is covered, together with a study of the instruction set mnemonics, segment, index, pointer, general purpose and flag registers. A variety of memory addressing techniques will be covered, as well as stack operations, particularly those associated with passing parameters to subroutine calls. The course will also include I/O to screen, printer, and disk interfaces. Emphasis will be placed on interaction between the student's code and the operating system's supplied functions for I/O to peripheral devices. Use of editor and debugging tools will also be addressed.

CSIS 225 Linux Fundamentals (2)

4 hours lecture/laboratory

Transfer acceptability: CSU

A hands on introduction to a computer operating system including operating system terminology, E-mail user utilities, file structure, file security, and an introduction to shell programming using the Bourne shell.

CSIS 226 Linux Shell Scripting (2)

4 hours lecture/laboratory

Prerequisite: CSIS 225

Transfer acceptability: CSU

Intermediate concepts of shell script programming, advanced utilities, file management, and alternative editors. Includes usage of sed (stream editor), awk (a UNIX scripting language), and graphical user interfaces. Introduction to UNIX networking concepts.

CSIS 227 Linux Administration (2)

4 hours lecture/laboratory

Prerequisite: CSIS 225

Transfer acceptability: CSU

A hands on/theory introduction to UNIX System Administration including system start up and shutdown, administration files, system security, backup procedures, and user registration. Course will cover terminal and printer administration.

CSIS 228 Linux Networking and Security (2)

4 hours lecture/laboratory

Prerequisite: CSIS 227

Transfer acceptability: CSU

A hands-on introduction to important administration activities required to manage a Linux network configuration. Course will cover topics configuring TCP/IP, DNS, PPP, send mail, Apache Web Server and the firewall.

CSIS 235 C for Programmers (4)

3 hours lecture-2 hours lecture/laboratory

Transfer acceptability: CSU; UC

Intended for students with high-level programming language experience. An introduction to the C programming language emphasizing top down design and principles of structured programming. Includes hands-on laboratory experience reinforcing the lecture material. Language syntax is covered, together with variations in standard control structures, data structures, pointers, function declarations, and file input/output. The use of header files and processor directives will be covered. Development and maintenance function libraries will be included.

CSIS 238 Advanced JavaScript and XML (AJAX) (3)

2 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 138 or Knowledge of Basic JavaScript

Transfer acceptability: CSU

This course provides students with the knowledge and skills necessary to use JavaScript, XML, and server-side languages to develop dynamic Web-based applications. Topics of study include the use of asynchronous JavaScript, how to use the Document Object Model, the use of XML in Web page requests, how to use server-side languages (e.g. PHP, Java) to query and return information from a database and how to design and develop new AJAX applications.

- CSIS 240 Video Game Programming (4)**
 3 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 235 and CSIS 220, or CSIS 280
Note: May be taken 4 times
Transfer acceptability: CSU
 Introduction to the programming of video games. Course will explore 3D game development with Microsoft's DirectX 9.0. Students learn how to create a 3D game from scratch. They learn the basics of designing and using a 3D engine. Includes hands-on laboratory experience reinforcing the lecture, text, and course materials.
- CSIS 241 Overview of the Video Game Industry (4)**
 4 hours lecture
Transfer acceptability: CSU
 Survey of the historical, technological, business, social and psychological aspects of the video game industry. Intended for those considering a career in the video game industry, or those with a strong interest in video games and how they are made.
- CSIS 242 Game Design (4)**
 4 hours lecture
Transfer acceptability: CSU
 An introduction to video game design, including the study of various genres of games, and the preparation of a game design document. Intended for those considering a career in the video game industry, or those with a strong interest in video games and how they are made.
- CSIS 243 Advanced Video Game Programming (4)**
 3 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 240
Note: May be taken 4 times
Transfer acceptability: CSU
 Advanced video game programming. Builds on basic 3D game programming skills acquired during CSIS 240. This course focuses on sound, input, networking and methods such as artificial intelligence to drive these games. Includes hands-on laboratory experience reinforcing the lecture, text and course materials.
- CSIS 245 Systems Analysis and Design (4)**
 3 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 117 or 220 or 235
Transfer acceptability: CSU; UC
 Specific projects, problems, and systems. Application of appropriate programming languages and the use of analytical tools in solving case studies and problems.
- CSIS 252 Introduction to Oracle (3)**
 2 hours lecture-2 hours lecture/laboratory
Transfer acceptability: CSU
 An introduction to relational database concepts including the design and creation of database structures to store, retrieve, update and display data.
- CSIS 254 Oracle Database Design (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 252
Transfer acceptability: CSU
 A top-down, systematic approach to the development of Oracle relational databases.
- CSIS 256 Database Administration I (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 252 or knowledge of Basic SQL
Transfer acceptability: CSU
 Student will learn how to design, create, and maintain an Oracle database. Students will gain a conceptual understanding of the Oracle database architecture and how its components work and interact with one another. Students will also learn how to create an operational database and properly manage the various structures in an effective and efficient manner. The lesson topics are reinforced with structured hands-on practices.
- CSIS 257 Database Administration II (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 256
 Students will learn about transporting data between databases and the utilities to perform these activities. Students are also introduced to networking concepts and configuration parameters, as well as how to solve some common network problems. In hands-on exercises, students configure network parameters so that database clients and tools can communicate with the Oracle database server. This course also addresses backup and recover techniques, and examines various backup, failure, restore and recovery scenarios. Students also examine backup methodologies based on business requirements in a mission critical enterprise. Students use multiple strategies and Oracle Recover Manager to perform backups, and restore and recover operations.
- CSIS 258 Database Performance Tuning (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 257
 Student will be introduced to the importance of good initial database design and the method used to tune a production Oracle 9i database. The focus is on database and instance tuning rather than specific operating system performance issues. Students will gain practical experience tuning an Oracle database. Students will learn how to recognize, troubleshoot and resolve common performance related problems in administering an Oracle database.
- CSIS 259 Oracle PL/SQL Programming (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS 252
 Student will learn the Oracle PL/SQL language, a flexible procedural extension to SQL, increases productivity, performance, scalability, portability and security. Student will use PL/SQL's tight integration with Oracle database that allows application developers to build and deploy distributed applications with considerable flexibility. In this course you learn how to utilize advanced techniques to design PL/SQL applications to solve complex business problems.
- CSIS 264 TCP/IP Internet Architecture and Protocols (2)**
 2 hours lecture-2 hours laboratory
Note: May be taken 2 times
 This course will focus on the basic concepts and architecture of Transmission Control Protocol/Internet Protocol (TCP/IP). Topics covered will include an overview of TCP/IP, LAN technologies, packet networks, IP addressing, Control Protocol/Internet Protocol (TCP/IP), Transport Layer, Gateway, Routing, Application Layer Protocols, Internet Mail Protocols, how TCP/IP works with LAN and WAN protocols, the Domain Name Service (DNA), Network File System (NFS), Network Information Systems (NIS), and managing TCP/IP.
- CSIS 266 Implementing and Administering Web Servers (2.5)**
 2 hours lecture-1 1/2 hours laboratory
Recommended preparation: CSIS 163
 Explores issues dealing with building and managing a web server. Topics will include web server and network issues, TCP/IP connectivity, server setup, web site administration, security, Internet commerce, and the function of the Webmaster.
- CSIS 267 SQL Server (2)**
 2 hours lecture-2 hours laboratory
Prerequisite: CSIS 196 and 264
 This course provides training to students who are interested in administering and implementing Microsoft SQL Server.
- CSIS 268 Active Server Pages (3)**
 2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSIS/R CSIS 137
Transfer acceptability: CSU
 This course presents an introduction to the technologies and features in Active Server Pages. Topics include: introduction to ASP, Webforms, controls, events, validation, custom controls, data binding, and various methods of code reuse, state management, configuration, caching, and application deployment.

CSIS 272 Java Programming for Information Systems (3)

2 hours lecture-2 hours lecture/laboratory

Recommended preparation: CSIS 117 or 138**Transfer acceptability:** CSU

An introduction to Java programming with emphasis on the syntax and structure of the Java language. Specific topics will include data types, exception handling, object-oriented programming, multi-threaded programming, event-driven programming and an introduction to Java Servlets and JSPs.

CSIS 273 Java Servlets and JSPs (3)

2 hours lecture-2 hours lecture/laboratory

Recommended preparation: CSIS 272

This course provides students with the knowledge and skills necessary to perform server-side Java programming using Servlets and JSPs, HTML form data, Session Tracking, Cookies, JSP scripting elements, including Applets in JSP documents, using JavaBeans with JSP, and creating custom JSP Tag libraries.

CSIS 280 C++ and Object Oriented Programming (4)

3 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 221 or CSIS 235**Transfer acceptability:** CSU; UC

Detailed study of the C++ programming language and its support for data abstraction and object-oriented programming. Presents an introduction to the fundamental elements of object-oriented programming including encapsulation, classes, inheritance, polymorphism, templates, and exceptions.

CSIS 282 C# Programming (3)

2 hours lecture-2 hours lecture/laboratory

Recommended preparation: CSIS/R CSIS 137**Transfer acceptability:** CSU

This course provides students with the knowledge and skills necessary to use the C# programming language in the .NET Framework, build both server-side programs and with Windows applications, accessing data with ADO.NET, use C# with Web Forms and using C# with the .NET CLR.

CSIS 285 Windows Programming I (4)

3 hours lecture-2 hours lecture/laboratory

Prerequisite: CSIS 221**Transfer acceptability:** CSU

An introduction to the fundamental concepts of Windows programming which will enable students to develop Windows applications using a graphical user interface. Includes a detailed study of the Windows Application Programming Interface.

CSIS 288 Windows Programming II (3)

3 hours lecture-2 hours laboratory

Prerequisite: CSIS 280 and 285**Transfer acceptability:** CSU

Windows programming using the WIN32 API for writing applications that use multitasking, threads, synchronization, and structured exception handling. Covers implementation of Dynamic Link Libraries (DLLs), Graphic Device Interface (GDI) optimization, and creation of Help files. Includes a detailed study of the Microsoft Foundation Class (MFC) Library. Presents techniques to add Object Linking and Embedding (OLE) functionality to Windows applications.

CSIS 294 Enterprise JavaBeans and J2EE (3)

2 hours lecture-2 hours lecture/laboratory

Recommended preparation: CSIS 273**Transfer acceptability:** CSU

This course provides students with the knowledge and skills necessary to code and deploy Enterprise JavaBeans (EJBs), how to use JDBC with EJBs, Servlets and EJBs working together and the Java Naming and Directory Interface (JNDI).

CSIS 295 Directed Study in Computer Science and Information Systems (1,2,3)

3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson/director**Note:** May be taken 4 times for a maximum of 6 units**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.

Designed for the student who has demonstrated a proficiency in computer science subjects and the initiative to work independently on a particular sustained project which does not fit into the context of regularly scheduled classes.

Construction Inspection (CI)

Contact Occupational & Noncredit Programs for further information, (760) 744-1150, ext. 2284

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY**Construction Inspection**

Prepares students for a career as Building Construction Inspectors, or upgrades skills necessary for employment in the building construction trades.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

| Program Requirements | Units |
|----------------------------------|-----------|
| CI 89 Plumbing Codes | 2.5 |
| CI 90 Mechanical Codes | 2.5 |
| CI 100 Building Codes I | 3 |
| CI 101 Building Codes II | 3 |
| CI 105 Electrical Codes I | 3 |
| CI 106 Electrical Codes II | 3 |
| CI 115 Nonstructural Plan Review | 3 |
| CI 120 Structural Plan Review | 3 |
| CI 125 Plan Reading | 3 |
| TOTAL UNITS | 26 |

COURSE OFFERINGS

Courses numbered under 100 are not intended for transfer credit.

CI 89 Plumbing Codes (2.5)

2½ hours lecture

Note: May be taken 2 times

An in-depth study of the fundamental concepts and interpretations of current state adopted plumbing codes. Topics covered include compliance issues, plumbing specifications, basic plumbing principles, and inspection methods and techniques. International Conference of Building Officials (ICBO) revisions every three years.

CI 90 Mechanical Codes (2.5)

2½ hours lecture

Note: May be taken 2 times

An in-depth study of the fundamental concepts and interpretations of current state adopted mechanical codes. Topics covered include compliance issues, mechanical specifications, basic mechanical principles, and inspection methods and techniques. International Conference of Building Officials (ICBO) revisions every three years.

CI 100 Building Codes I (3)

3 hours lecture

Note: May be taken 2 times**Transfer acceptability:** CSU

Introduction to building code requirements with an emphasis on minimum construction standards and code enforcement. Code requirements controlling the design, construction, quality of materials, use, occupancy and location of all buildings are evaluated. Revisions to the Uniform Building Code are every three years.