CSNT 141 Linux Networking and Security (2)
4 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 140
Transfer acceptability: CSU
A hands-on/theory 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.

CSNT 160 Cisco Networking Fundamentals (3)
1½ hours lecture-3 hours lecture/laboratory
Note: May be taken 3 times
Transfer acceptability: CSU
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.

CSNT 161 Cisco Router Configuration (3)
1½ hours lecture-3 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 160
Note: May be taken 3 times
Transfer acceptability: CSU
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.

CSNT 180 Wireless Networking (3)
1½ hours lecture-3 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 110, and CSNT 111 or CSNT 160
Transfer acceptability: CSU
Provides a hands-on guide to planning, designing, installing and configuring wireless LANs that prepares students for the Certified Wireless Network Administrator (CWNA) certification. 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.

CSNT 181 Hacker Prevention/Security (3)
1½ hours lecture-3 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 110, and CSNT 111 or CSNT 160
Transfer acceptability: CSU
In-depth analysis and hands-on experience in PC and network security concepts specific to Microsoft, Unix-based and Cisco systems. 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. Team dynamics in a lab environment, planning, installing, and configuring various network security elements regarding hardware, software, and media. Understand and demonstrate proper planning and implementation of a secure network, document and offer training to end-users, executives, and human resources on the proper maintenance of a secure network.

CSNT 221 Windows Infrastructure Administration (3)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 121
Note: May be taken 4 times
Transfer acceptability: CSU
Provides the knowledge and skills necessary to install, configure, manage, and support a network infrastructure that uses the Microsoft Windows Server products.

CSNT 222 Managing a Windows Infrastructure (2)
1½ hours lecture-1 hour lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 221
Transfer acceptability: CSU
Provides the knowledge and skills necessary to administer, support, and troubleshoot networks that incorporate Microsoft Windows.

CSNT 224 Active Directory Services Administration (3)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 121
Note: May be taken 4 times
Transfer acceptability: CSU
Provides the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory Services. Also focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers.

CSNT 230 Design Windows Active Directory & Infrastructure (2)
1½ hours lecture-1 hour lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 221, 222, and 224
Transfer acceptability: CSU
Provides the knowledge and skills necessary to design a Microsoft Windows directory services infrastructure in an enterprise network.

CSNT 231 Design Windows Network Security (2)
1½ hours lecture-1 hour lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 221, 222, and 224
Transfer acceptability: CSU
Provides the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft Windows technologies.

CSNT 235 Microsoft Exchange Server (2)
1½ hours lecture-1 hour lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 121, 221, and 224
Transfer acceptability: CSU
Provides the knowledge and skills necessary to implement, administer, and troubleshoot information systems that incorporate Microsoft Exchange Server.

CSNT 260 Cisco Advanced Routing and Switching (3)
1½ hours lecture-3 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 161
Note: May be taken 3 times
Transfer acceptability: CSU
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.

CSNT 261 Cisco Wide Area Network Design and Support (3)
1½ hours lecture-3 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSNT 260
Note: May be taken 3 times
Transfer acceptability: CSU
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.

Computer Science and Information Systems - Web Technology (CSWB)

Seee also CSIS - Computer Science, CSIS - Database, CSIS - Information Technology, and CSIS - Networking

Contact the Computer Science and Information Systems Department for further information.
(760) 744-1150, ext. 2387
Office: ST 6
http://www.palomar.edu/csis

Certificates of Proficiency -

Certificate of Proficiency requirements are listed in Section 6 (green pages).
- Web Developer with Emphasis in Java/Open Source
- Web Developer with Emphasis in Windows
- Web Server Administrator with Emphasis in Linux
- Web Server Administrator with Emphasis in Windows

PROGRAMS OF STUDY

Web Developer with Emphasis in Java/Open Source

This program includes the Web page design and programming languages that allow a developer to build dynamic Web applications with emphasis in the Java/ Open Source platform.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
CSWB 110/		
R CSIS 110	Web Site Development with XHTML	2
CSWB 120	JavaScript	3
CSWB 150	PHP with MySQL	3
CSWB 170	Java for Information Systems	3
CSWB 220	Advanced JavaScript and XML (AJAX)	3
Electives (Select 1 course)		
CSWB 130	Advanced Web Site Development	3
CSWB 160	Perl and CGI Scripting	3
CSWB 180	Python Programming	3
CSWB 270	Java Servlets and JSPs	3
CSDB 110	Introduction to SQL	3
CSDB 140	Introduction to Oracle	3
GCMW/		
R GCMW 102	Web Page Layout I	3
GCMW 140	Web Graphics	3
TOTAL UNITS		**17**

Web Developer with Emphasis in Windows

This program includes the Web page design and programming languages that allow a developer to build dynamic Web applications with emphasis in the Java/ Open Source platform.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
CSWB 110/		
R CSIS 110	Web Site Development with XHTML	2
CSWB 120	JavaScript	3
CSWB 130	Advanced Web Site Development	3
CSWB 210	Active Server Pages	3
CSIT 180	C# Programming I	3
Electives (Select 1 course)		
CSWB 170	Java for Information Systems	3
CSWB 270	Java Servlets and JSPs	3
CSDB 220	SQL Server Programming	3
GCMW 102/		
R GCMW 102	Web Page Layout I	3
GCMW 140	Web Graphics	3
TOTAL UNITS		**17**

Web Server Administrator with Emphasis in Linux

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.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
CSWB 110/		
R CSIS 110	Web Site Development with XHTML	2
CSWB 160	Perl and CGI Scripting	3
CSCI 130	Linux Fundamentals	2
CSNT 140	Linux Administration	2
CSNT 141	Linux Networking and Security	2
Electives (Select 1 course)		
CSWB 290	Implementing and Administering Web Servers	2.5
CSCI 132	Linux Shell Scripting	2
GCMW 217	Online Store Design I	3
TOTAL UNITS		**13 - 14**

Web Server Administrator with Emphasis in Windows

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.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
CSWB 110/		
R CSIS 110	Web Site Development with XHTML	2
CSDB 210	SQL Server Administration	2
CSNT 120	Windows Client	3
CSNT 121	Windows Server	3
Electives (Select 1 course)		
CSWB 290	Implementing and Administering Web Servers	2.5
CSDB 220	SQL Programming	3
GCMW 217	Online Store Design I	3
TOTAL UNITS		**12.5 - 13**

COURSE OFFERINGS

CSWB 110 Web Site Development with XHTML (2)
4 hours lecture/laboratory
Note: Cross listed as R CSIS 110
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).

CSWB 120 JavaScript (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 110/R CSIS 110
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.

CSWB 130 Advanced Web Site Development (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 120
Transfer acceptability: CSU
Web-based application development using advanced features of HTML, Dynamic HTML, XHTML, and XML.

Students must receive a grade of 'C' or better in each course that applies to an A.A. Degree Major or Certificate

CSWB 150 PHP with MySQL (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 110/R CSIS 110
Transfer acceptability: CSU
Provides 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.

CSWB 160 Perl and CGI Scripting (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 110/R CSIS 110
Transfer acceptability: CSU
Develops basic competency in the Perl programming language. Focuses on using Perl to develop 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.

CSWB 170 Java for Information Systems (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 120 or CSIT 170
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.

CSWB 180 Python Programming (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 110/R CSIS 110
Transfer acceptability: CSU
Provides 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.

CSWB 197 Topics in Web Technology (.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 Web Technology. See class schedule for specific topic offered. Course title will designate subject covered.

CSWB 210 Active Server Pages (3)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSWB 110/R CSIS 110 and CSIT 170
Transfer acceptability: CSU
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.

CSWB 220 Advanced JavaScript and XML (AJAX) (3)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: A minimum grade of' 'C' in CSWB 120
Transfer acceptability: CSU
Provides 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.

CSWB 270 Java Servlets and JSPs (3)
2 hours lecture-2 hours lecture/laboratory
Recommended preparation: CSWB 170
Transfer acceptability: CSU
Provides 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.

CSWB 290 Implementing and Administering Web Servers (2.5)
2 hours lecture-1½ hours laboratory
Recommended preparation: CSNT 121
Transfer acceptability: CSU
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.

CSWB 295 Directed Study in Web Technology (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
Transfer acceptability: CSU
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
Office: AA-138

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

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

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,