Prerequisite: A minimum grade of 'C' in CSNT 221, and 222
Transfer acceptability: CSU
Provides the knowledge and skills necessary to implement and manage a Microsoft Windows SQL Server in an enterprise network.

CSNT 231   Design Windows Network Security   (2.5)
2 hours lecture - 2 hours 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   (3)
2½ hours lecture - 2 hours 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)
2½ hours lecture - 2 hours laboratory
Prerequisite: A minimum grade of 'C' in CSNT 161
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)
2½ hours lecture - 2 hours laboratory
Prerequisite: A minimum grade of 'C' in CSNT 260
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)

See also CSIS - Computer Science

CSIS - Information Technology, and CSIS - Networking

Contact the Computer Science and Information Systems Department for further information.
(760) 744-1150, ext. 2387
Office: MD-275
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	Web Site Development with XHTML	3
CSWB 120	JavaScript	3
CSWB 150	PHP with MySQL	3
CSWB 170	Java for Information Systems	2.5
CSWB 220	Advanced JavaScript and XML (AJAX)	3
Electives (Select 1 course)		
CSWB 130	Mobile Web Application Development	3
CSIT 150	Introduction to SQL	3
CSIT 160	Introduction to Oracle	3
TOTAL UNITS		**17.5**

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	Web Site Development with XHTML	3
CSWB 120	JavaScript	3
CSWB 130	Mobile Web Application Development	3
CSWB 210	Active Server Pages	3
CSIT 180	C# Programming I	3
TOTAL UNITS		**15**

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. The student may choose an emphasis on either the Linux/UNIX or Windows platforms.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
CSWB 110	Web Site Development with XHTML	3
CSWB 160	Perl Programming	2
CSCI 130	Linux Fundamentals	3
CSNT 140	Linux Administration	3
CSNT 141	Linux Networking and Security	3
Electives (Select 1 course)		
CSCI 132	Linux Shell Scripting	3
GCMW 217	Online Store Design	4
TOTAL UNITS		**17**

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	Web Site Development with XHTML	3
CSDB 210	SQL Server Administration	3
CSNT 120	Windows Client and Microsoft Office Deployment	3
CSNT 121	Windows Server	3
GCMW 217	Online Store Design	4
TOTAL UNITS		**16**

COURSE OFFERINGS

CSWB 110   Web Site Development with XHTML   (3)
2 hours lecture - 3 hours laboratory
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)
2½ hours lecture - 1½ hours laboratory
Recommended preparation: CSWB 110
Transfer acceptability: CSU

Introduces the 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   Mobile Web Application Development   (3)
2 hours lecture - 3 hours laboratory
Recommended preparation: CSWB 120
Transfer acceptability: CSU

Mobile Web-based application development using advanced features of HTML5, JavaScript/JQuery, and CSS.

CSWB 140   Ruby on Rails Programming   (3)
2½ hours lecture - 1½ hours laboratory
Recommended preparation: CSWB 110
Transfer acceptability: CSU

Provides the knowledge and skills necessary to use the Ruby on Rails (RoR) web application framework to code and deploy web applications. Topics of study include working with layouts; using controllers and models; developing with Scaffolding and REST; presenting models with forms; managing databases; and using Ajax with Rails.

CSWB 150   PHP with MySQL   (3)
2½ hours lecture - 1½ hours laboratory
Recommended preparation: CSWB 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 Programming   (2)
1½ hours lecture - 1½ hours laboratory
Transfer acceptability: CSU

Develops basic competency in the Perl programming language. Topics of study include scalar and array variables, control structures, file I/O, regular expressions and subroutines.

CSWB 170   Java for Information Systems   (2.5)
2 hours lecture - 2 hours 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, event-driven programming and an introduction to Java Servlets and JSPs.

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 and/or laboratory may be scheduled by the department. Refer to Class Schedule.
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)
2½ hours lecture - 1½ hours laboratory
Prerequisite: A minimum grade of 'C' in CSWB 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)
2½ hours lecture - 1½ hours 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 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
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-135

Associate in Science Degrees -
AS 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

Provide comprehensive education in inspection procedures, California code standards, and interpretation of construction drawings to a diverse constituency for a career in the construction industry.

A.S. 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 125	Plan Reading Technologies	3
CI 130	CalGreen Codes	3
TOTAL UNITS		**26**

COURSE OFFERINGS

Courses numbered under 100 are not intended for transfer credit.