CSNT 124   Implementing a Microsoft Desktop Application Environment   (3)
2 hours lecture - 3 hours laboratory
Prerequisite: *A minimum grade of 'C' in CSNT 121. Completion of, or concurrent enrollment in CSNT 121*
Transfer acceptability: *CSU*
Provides the knowledge and skills necessary to design and prepare the desktop application environment. Design and implement a presentation virtualization environment, design and implement an application virtualization environment, deploy and manage the application environment, and design business continuity for the desktop and application environment.

CSNT 140   Linux Administration   (3)
2 hours lecture - 3 hours laboratory
Prerequisite: *A minimum grade of 'C' in CSCI 130*
Transfer acceptability: *CSU*
For users of Linux (or UNIX) who want to start building skills in systems administration to a level where they can attach and configure a workstation on an existing network.

CSNT 141   Linux Networking and Security   (3)
2 hours lecture - 3 hours laboratory
Prerequisite: *A minimum grade of 'C' in CSNT 140*
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.

CSNT 160   Cisco Networking Fundamentals   (3)
2½ hours lecture - 2 hours laboratory
Prerequisite: *A minimum grade of 'C' in CSNT 110*
Recommended preparation: *CSNT 111*
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)
2½ hours lecture - 2 hours laboratory
Prerequisite: *A minimum grade of 'C' in CSNT 160*
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)
2½ hours lecture - 2 hours 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)
2½ hours lecture - 2 hours 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 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.

CSNT 280   Computer Forensics Fundamentals   (3)
2 hours lecture - 3 hours laboratory
Transfer acceptability: *CSU*
Introduces methods used to properly conduct a computer forensics investigation beginning with a discussion of ethics, while mapping to the objectives of the International Association of Computer Investigative Specialists (IACIS) certification. Topics covered include an overview of computer forensics as a profession; the computer investigation process; understanding operating systems boot processes and disk structures; data acquisition and analysis; technical writing; and a review of familiar computer forensics tools.

Computer Science and Information Technology - Web Technology (CSWB)

See also CSIT - Computer Science

CSIT - Information Technology, and CSIT - Networking

Contact the Computer Science and Information Systems Department for further information.
(760) 744-1150, ext. 2387
Office: MD-275
http://www.palomar.edu/csit

Associate in Science Degrees -
AS Degree requirements are listed in Section 6 (green pages).
• Information Technology

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

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

PROGRAMS OF STUDY

Information Technology

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

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements

CSIT 105	Computer Concepts and Applications	3
CSIT 120	Computer Applications	3
CSWB 110	Web Site Development with HTML5/CSS3	3
CSWB 120	JavaScript and jQuery	3
CSIT 150	Introduction to SQL	3
	or	
CSIT 160	Database Management Systems using Oracle	3
CSIT 180	C# Programming I	3
CSIT 280	C# Programming II	3
CSWB 150	PHP with MySQL	3
	or	
CSWB 210	Active Server Pages	3
CSWB 170	Java for Information Technology	3
	or	
CSIT 170	Visual Basic I	3

Electives (Select 1 course)

CSWB 130	Mobile Web Application Development	3
CSWB 220	Advanced JavaScript	3
CSNT 111	Networking Fundamentals	3
CSIT 270	Visual Basic II	3
TOTAL UNITS		**30**

Information Technology A.A. Degree Major or Certificate of Achievement is also listed in Computer Science and Information Technology – Information Technology.

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 HTML5/CSS3	3
CSWB 120	JavaScript and jQuery	3
CSWB 150	PHP with MySQL	3
CSWB 170	Java for Information Technology	3

Electives (Select 1 course)

CSWB 130	Mobile Web Application Development	3
CSWB 220	Advanced JavaScript	3
CSIT 150	Introduction to SQL	3
CSIT 160	Database Management Systems using Oracle	3
TOTAL UNITS		**15**

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 HTML5/CSS3	3
CSWB 120	JavaScript and jQuery	3
CSWB 130	Mobile Web Application Development	3
CSWB 210	Active Server Pages	3
CSIT 180	C# Programming I	3
TOTAL UNITS		**15**

COURSE OFFERINGS

CSWB 110 Web Site Development with HTML5/CSS3 (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 HTML, including using HTML tables, web page forms, and basic CSS (Cascading Style Sheets).

CSWB 120 JavaScript and jQuery (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. Learn to use jQuery to simplify JavaScript development.

CSWB 130 Mobile Web Application Development (3)
2½ hours lecture - 1½ hours laboratory
Recommended preparation: CSWB 120
Transfer acceptability: CSU
Mobile Web-based application development using advanced features of HTML5, JavaScript/JQuery, and CSS.

CSWB 135 Advanced JavaScript and Mobile Apps (3)
2½ hours lecture - 1½ hours laboratory
Prerequisite: CSWB 120
Provides the knowledge and skills necessary to use Advanced JavaScript/jQuery techniques to develop dynamic Web applications that display in a browser or on mobile devices. Topics include jQuery Ajax, Mobile Web App Design using jQuery Mobile, DOM (Document Object Model) Navigation, connecting Web pages to server-side programs, XML and JSON.

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 Technology (3)
2½ hours lecture - 1½ hours laboratory
Transfer acceptability: CSU
Introduction to Java programming with emphasis on the syntax and structure of the Java language. Specific topics will include data types, decision statements, object-oriented programming, arrays, collections and date handling.

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   (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	3
CI 90	Mechanical Codes	3
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		**27**

COURSE OFFERINGS

Courses numbered under 100 are not intended for transfer credit.

CI 89   Plumbing Codes   (3)
3 hours lecture
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 Association of Plumbing and Mechanical Officials (IAPMO) revisions every three years.

CI 90   Mechanical Codes   (3)
3 hours lecture
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.

CI 100   Building Codes I   (3)
3 hours lecture
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 International Building Code are every three years.

CI 101   Building Codes II   (3)
3 hours lecture
Transfer acceptability: CSU
A study of the requirements and standards for design, loads, wood, concrete, masonry and steel buildings. The study of exits, roofs, fireplaces, drywall, glass and stucco systems are examined. Interpretation is based on the International Code Council (ICC) building code which is revised every three years.

CI 105   Electrical Codes I   (3)
3 hours lecture
Transfer acceptability: CSU
The first half of The National Electrical Code reviewed in an explanatory, easy-to-understand, yet in-depth manner. Basic electrical theory as it pertains to building construction is discussed with real-life situations used as examples of Code items and inspection techniques. Prepares students for electrical certification tests based on the building codes (both the ICC and the IAEI certifications), as well as advaning knowledge levels for existing Inspectors.

CI 106   Electrical Codes II   (3)
3 hours lecture
Prerequisite: A minimum grade of 'C' in CI 105
Transfer acceptability: CSU
The second half of The National Electrical Code reviewed in an explanatory, easy-to-understand, yet in-depth manner. Basic electrical theory as it pertains to building construction is discussed with real-life situations used as examples of Code items and inspection techniques. Prepares students for electrical certification tests based on the building codes (both the ICC and the IAEI certifications), as well as advancing knowledge levels for existing Inspectors.

CI 115   Nonstructural Plan Review   (3)
3 hours lecture
Transfer acceptability: CSU
A study of basic methods used by plans examiners to check the nonstructural details of construction drawings in compliance with the international building code. Topics cover analyzing nonstructural details and determining compliance with the minimum requirements for concrete, masonry, wood, and steel structures.