

CSCI 230 Java GUI Programming (3)

2 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in CSCI 114**Transfer acceptability:** CSU

Graphical User Interface programming using Java. Emphasizing event-driven programming and the code to create GUI components such as buttons, text area, scrollable views. Includes hands-on laboratory experience reinforcing the lecture material.

CSCI 235 Android Development (3)

2 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in CSCI 230**Transfer acceptability:** CSU

Applied Java programming to mobile Android phones utilizing the Android Software Development Kit (SDK). Assignments and programs will specifically address the basic aspects of developing applications using the Android SDK.

CSCI 260 Video Game Programming I (4)

3½ hours lecture - 1½ hours laboratory

Prerequisite: A minimum grade of 'C' in CSCI 222**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.

CSCI 261 Video Game Programming II (4)

3½ hours lecture - 1½ hours laboratory

Prerequisite: A minimum grade of 'C' in CSCI 260**Transfer acceptability:** CSU

Builds on basic 3D game programming skills acquired during Video Game Programming I. 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.

CSCI 272 Objective-C Programming for Mac (3)

2½ hours lecture - 1½ hours laboratory

Prerequisite: A minimum grade of 'C' in CSCI 220**Transfer acceptability:** CSU

Prepares students for application development on the iOS platform.

CSCI 275 iOS Development (3)

2½ hours lecture - 1½ hours laboratory

Prerequisite: A minimum grade of 'C' in CSCI 172**Transfer acceptability:** CSU

Focus on the tools and APIs required to build applications for the iOS platform. Includes user interface designs for iOS mobile devices and unique user interactions using multitouch technologies.

CSCI 295 Directed Study in Computer Science (1, 2, 3)

3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson/director**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.

Computer Science and Information Technology - Information Technology (CSIT)

See also CSIT - Computer Science

CSIT - Networking, and CSIT - Web Technology

Contact the Computer Science and Information Technology 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).

- Visual Basic

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	3
CSIT 150	Introduction to SQL	3
	or	
CSIT 160	Introduction to 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 140	Ruby on Rails Programming	3
CSWB 220	Advanced JavaScript	3
CSNT 111	Networking Fundamentals	3
CSIT 270	Visual Basic II	3

TOTAL UNITS**30**

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
CSIT 170 Visual Basic I	4
CSIT 270 Visual Basic II	4
CSWB 210 Active Server Pages	3
TOTAL UNITS	11

COURSE OFFERINGS

CSIT 105 Computer Concepts and Applications (3)

2 hours lecture - 3 hours laboratory
Transfer acceptability: CSU; UC – no credit if taken after CSCI 108 or 110
 C-ID ITIS 120

The study of computer concepts and basic proficiency in modern application software. Computer concepts will focus on basic terminology; computer literacy; information 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 and e-mail. The Microsoft Office Suite will be taught using Word, Excel, Access and PowerPoint.

CSIT 120 Computer Applications (3)

2 hours lecture - 3 hours laboratory
Transfer acceptability: CSU

Hands-on experience with microcomputers and microcomputer applications featuring the use of Windows, word processing, spreadsheet, database, and presentation graphics software. The Microsoft Office Suite will be taught using Word, Excel, Access and PowerPoint.

CSIT 121 Advanced Computer Applications (3)

2 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in CSIT 120
Transfer acceptability: CSU

Hands-on experience with advanced microcomputer applications featuring the use of word processing, spreadsheet, database and presentation graphics software. The Microsoft Office Suite will be taught using Word, Excel, Access and PowerPoint.

CSIT 125 Computer Information Systems (3)

2 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in CSIT 105
Transfer acceptability: CSU

Examines information systems and the role in business. Focuses on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components. Application of these concepts and methods through hands-on projects developing computer-based solutions to business problems.

CSIT 135 Access (3)

2 hour lecture - 3 hours laboratory
Transfer acceptability: CSU
 Intended for individuals seeking the fundamental and advanced skills of Microsoft Access database software. Helps prepare individuals who are seeking to become a Microsoft Access Proficient Specialist and Microsoft Access Expert Specialist.

CSIT 140 Online Social Networks (1.5)

1 hour lecture - 1 1/2 hours laboratory
 Focuses on the utilization of social networks to connect with colleagues, customers, family, and friends as well as the dangers and benefits of online social networking. Additional focus on building professional communication channels with Facebook and Twitter utilizing third-party tools. Other social networking forms, such as online gaming and alternate lives in virtual worlds will be explored.

CSIT 145 Fundamentals of Application Development and Programming for Information Systems (3)

2 hours lecture - 3 hours laboratory
Transfer acceptability: CSU
 Fundamental concepts and models of application development including the basic concepts of program design, data structures, programming, problem solving, programming logic, and fundamental design techniques for event-driven programs. Hands-on experience with a modern application programming language and development platform.

CSIT 146 Systems Analysis and Design (3)

(Formerly CSIT 290)
 2 hours lecture - 3 hours laboratory
Transfer acceptability: CSU; UC
 Specific projects to systems analysis and design to solve information systems problems. Application of appropriate programming languages and the use of analytical tools in solving case studies and problems.

CSIT 150 Introduction to SQL (3)

2 1/2 hour lecture - 1 1/2 hours 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.

CSIT 160 Introduction to Oracle (3)

2 1/2 hours lecture - 1 1/2 hours 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. Additionally, database management issues are studied.

CSIT 170 Visual Basic I (4)

2 hours lecture - 3 hours laboratory
Transfer acceptability: CSU
 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.

CSIT 180 C# Programming I (3)

2 1/2 hours lecture - 1 1/2 hours laboratory
Transfer acceptability: CSU; UC
 Provides the knowledge and skills necessary to use the C# programming language in the .NET Framework. Build Windows applications and server-side programs; access data with ADO.NET; use C# with Web Forms and .NET CLR.

CSIT 270 Visual Basic II (4)

3 1/2 hours lecture - 1 1/2 hours laboratory
Prerequisite: A minimum grade of 'C' in CSIT 170
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.

CSIT 280 C# Programming II (3)

2 1/2 hours lecture - 1 1/2 hours laboratory
Prerequisite: A minimum grade of 'C' in CSIT 180
Transfer acceptability: CSU; UC
 Provides intermediate-level knowledge and skills necessary to use the C# programming language. Topics include language syntax, data types, operators, exception handling, casting, string handling, data structures, collection classes and delegates. Programming of windows-based applications is presented along with object-oriented programming that includes classes, methods, polymorphism and inheritance. Event-driven programming is discussed along with the C# development and execution environment.

CSIT 295 Directed Study in Information Technology (1, 2, 3)
3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson/director
Transfer acceptability: CSU; UC - Credit determined by UC upon review of course syllabus.

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

Computer Science and Information Technology - Networking (CSNT)

See also CSIT - Computer Science
CSIT - Information Technology, and CSIT - Web Technology

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Associate in Science Degrees -

AS Degree requirements are listed in Section 6 (green pages).

- Computer Network Administration with Emphasis: Cisco
- Computer Network Administration with Emphasis: Microsoft
- Computer Network Administration with Emphasis: Linux

Certificates of Achievement -

Certificate of Achievement requirements are listed in Section 6 (green pages).

- Computer Network Administration with Emphasis: Cisco
- Computer Network Administration with Emphasis: Microsoft
- Computer Network Administration with Emphasis: Linux

PROGRAMS OF STUDY

Computer Network Administration with Emphasis: Cisco

This program prepares the student for employment in the field of Computer Networking. The focus is on developing skills in a combination of the fundamental and basic network technologies produced by Cisco. 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.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
CSNT 110 Hardware and O.S. Fundamentals	4
CSNT 111 Networking Fundamentals	3
CSNT 160 Cisco Networking Fundamentals	3
CSNT 161* Cisco Router Configuration	3
CSNT 260 Cisco Advanced Routing and Switching	3
CSNT 261 Cisco Wide Area Network Design and Support	3
CSNT 180 Wireless Networking	3
CSNT 181 Hacker Prevention/Security	3
CSNT 280 Computer Forensics Fundamentals	3
TOTAL UNITS	28

* Note: CSNT 160 is a prerequisite for CSNT 161

Computer Network Administration with Emphasis: Linux

This program prepares the student for employment in the field of Computer Networking with an emphasis on the Linux Operating System. The focus is on developing skills in a combination of the network technologies produced by Linux/Unix. Specific learning outcomes include developing team dynamics in the following skills: Linux Operating System, Linux Administration and Security, Linux Scripting, 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. Linux will be the primary operating system learned.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
CSNT 110 Hardware and O.S. Fundamentals	4
CSNT 111 Networking Fundamentals	3
CSCI 130 Linux Fundamentals	3
CSNT 140 Linux Administration	3
CSNT 141 Linux Networking and Security	3
CSNT 180 Wireless Networking	3
CSNT 181 Hacker Prevention/Security	3
CSNT 280 Computer Forensics Fundamentals	3
TOTAL	25

Computer Network Administration with Emphasis: Microsoft

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 technologies produced by Microsoft. 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, Active Directory, Network Infrastructure, Exchange Server, Routing Principles and Configuration, and Maintaining a Corporate Network. Students will be prepared to take specific industry certification exams related to Microsoft, CompTia, and Security.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
CSNT 110 Hardware and O.S. Fundamentals	4
CSNT 111 Networking Fundamentals	3
CSNT 120 Windows Client and Microsoft Office Deployment	3
CSNT 121 Windows Server	3
CSNT 122 Windows Systems Administration	3
CSNT 124 Implementing a Microsoft Desktop Application Environment	3
CSNT 180 Wireless Networking	3
CSNT 181 Hacker Prevention/Security	3
CSNT 280 Computer Forensics Fundamentals	3
TOTAL UNITS	28