CINE 275   Avid Editing for Television and Film (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in DBA 270
Note: Cross listed as DBA 275
Note: May not be taken for Pass/No Pass grading
Transfer acceptability: CSU
Principles and techniques of editing video and film projects using Avid technology. Digitizing source material, storyboarding, timeline, audio editing, importing and exporting graphics, outputting, and media management.

CINE 296   Special Projects   (1, 2, 3)
3, 6, or 9 hours laboratory
Prerequisite: A minimum grade of 'C' in CINE 115/DBA 115 or CINE 125/DBA 125
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, Digital Broadcast Arts, and Journalism
Contact the Media Studies Department for further information.
(760) 744-1150, ext. 2440
Office: P-31
For transfer information, consult a Palomar College Counselor.

Certificates of Proficiency -
Certificate of Proficiency requirements are listed in Section 6 (green pages).
• Public Relations

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	Introduction to Public Relations	3
GCIP 149	Page Layout and Design I	3
JOUR 101	Multimedia Writing and Reporting	3
JOUR 105	Multimedia News Writing and Production	3
DBA/ENTT 120	Digital Television Production	3

TOTAL UNITS   15

COURSE OFFERINGS

COMM 100   Introduction to Mass Communication   (3)
3 hours lecture
Transfer acceptability: CSU; UC – COMM 100 and 105 combined: maximum credit, one course
C-ID JOUR 100
A multi media approach to a comparative survey of communication in studying the history, structure, economic and social impact of television, cinema, radio, journalism, Internet and new forms of communication.

COMM 104   Introduction to Public Relations   (3)
3 hours lecture
Transfer acceptability: CSU
C-ID JOUR 150
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   Race, Gender and Media Effects   (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 young 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, as well as benefits to development. Techniques for addressing media consumption with children, parents and families, and methods for effectively using media will be examined.

Computer Science and Information Technology - Computer Science (CSCI)
See also CSIT - Information Technology,
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).
• Computer Science
• Computer Science with Emphasis in Video Gaming

Certificates of Achievement -
Certificate of Achievement requirements are listed in Section 6 (green pages).
• Computer Science
• Computer Science with Emphasis in Video Gaming

Certificates of Proficiency -
Certificate of Proficiency requirements are listed in Section 6 (green pages).
• Video Game Developer

PROGRAMS OF STUDY

Computer Science

Computer Science is the study and design of computer systems: both hardware and software. Computer scientists are primarily concerned with the design of algorithms, languages, hardware architectures, systems software, applications software and tools. Emphasis in the Computer Science program is placed on the ability to solve problems and think independently. The program offers a foundation in data structures, computer architecture, software design, algorithms, programming languages, and object-oriented programming. See a Counselor for additional university transfer requirements in this major.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		
CSCI 112	Programming Fundamentals I	4
CSCI 114	Programming Fundamentals II	4
CSCI 210	Data Structures	4
CSCI 212	Machine Organization and Assembly Language	4
CSCI 222	C++ and Object-Oriented Programming	4

Electives (Select 2 courses)

CSCI 130	Linux Fundamentals	3
CSCI 230	Java GUI Programming	3
CSCI 235	Android Development	3
CSCI 260	Video Game Programming I	3
CSCI 275	iOS Development	3
MATH 245	Discrete Mathematics	3
TOTAL UNITS		**26**

Computer Science with Emphasis in Video Gaming

Computer Science is the study and design of computer systems: both hardware and software. Computer scientists are primarily concerned with the design of algorithms, languages, hardware architectures, systems software, applications software and tools. Emphasis in the Computer Science program is placed on the ability to solve problems and think independently. The program offers a foundation in data structures, computer architecture, software design, algorithms, programming languages, and object-oriented programming. This program also introduces students to the video game industry, video game design and programming. See a Counselor for additional university transfer requirements in this major.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements

CSCI 112	Programming Fundamentals I	4
CSCI 114	Programming Fundamentals II	4
CSCI 160	Overview of the Video Game Industry	4
CSCI 161	Video Game Design	4
CSCI 210	Data Structures	4
CSCI 212	Machine Organization and Assembly Language	4
CSCI 222	C++ and Object-Oriented Programming	4
CSCI 260	Video Game Programming I	3
TOTAL UNITS		**31**

Video Game Developer

The Video Game Developer certificate program introduces students to the video game industry, video game design and programming.

CERTIFICATE OF PROFICIENCY

Program Requirements		**Units**
CSCI 160	Overview of the Video Game Industry	4
CSCI 161	Video Game Design	4
CSCI 260	Video Game Programming I	3
CSCI 261	Video Game Programming II	3
TOTAL UNITS		**14**

COURSE OFFERINGS

CSCI 112 Programming Fundamentals I (4)
3½ hours lecture - 1½ hours laboratory
Transfer acceptability: CSU; UC
Introduction to the basic concepts of Computer Science, the fundamental techniques for problem solving, and the software development process. Includes the syntax and semantics of the C programming language focusing on basic control structures, data types, and input/output.

CSCI 114 Programming Fundamentals II (4)
3½ hours lecture - 1½ hours laboratory
Prerequisite: A minimum grade of "C" in CSCI 112
Transfer acceptability: CSU; UC
Object-oriented programming in Java, focusing on classes, instances, methods, interfaces, encapsulation, overloading, file I/O, inheritance, polymorphism, and exception handling.

CSCI 130 Linux Fundamentals (3)
2 hours lecture - 3 hours laboratory
Transfer acceptability: CSU
An introduction to fundamental end-user skills and tools in Linux, designed for students with little or no command-line Linux or UNIX experience. Emphasis on shell script programming to create tools, applications and to automate routine functions.

CSCI 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.

CSCI 160 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.

CSCI 161 Video 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.

CSCI 197 Topics in Computer Science (.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; UC - Credit determined by UC upon review of course syllabus.
Topics in Computer Science. See class schedule for specific topic offered. Course title will designate subject covered.

CSCI 210 Data Structures (4)
3½ hours lecture - 1½ hours laboratory
Prerequisite: A minimum grade of 'C' in CSCI 114
Transfer acceptability: CSU; UC
A systematic study of data structures, including arrays, stacks, recursion, queues, linear and non-linear linked lists, binary trees, hashing, comparative study of searching and sorting algorithms, graphs, Huffman codes, introductory analysis of algorithms, introduction to the complexity of algorithms including big "O" notation, time and space requirements, and object-oriented design of abstract data types. Focus on object-oriented programming and its principles of objects, classes, encapsulation, inheritance and its relationship to the Java programming language. Includes hands-on laboratory experience reinforcing the lecture material.

CSCI 212 Machine Organization and Assembly Language (4)
3½ hours lecture - 1½ hours laboratory
Prerequisite: A minimum grade of 'C' in CSCI 114
Transfer acceptability: CSU; UC
An introduction to Assembly 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. Also includes 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.

CSCI 220   C Programming   (4)
3½ hours lecture - 1½ hours laboratory
Transfer acceptability: CSU; UC
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 operators, standard control structures, functions, input/output, arrays, strings, file manipulation, preprocessor, pointers, structures and dynamic variables.

CSCI 222   C++ and Object Oriented Programming   (4)
3½ hours lecture - 1½ hours laboratory
Prerequisite: A minimum grade of 'C' in CSCI 114
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.

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 114
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   (3)
2 hours lecture - 3 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 the current version of DirectX. Students learn how to create 3D games as well as 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   (3)
2 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in CSCI 222
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 for Mac and IOS   (3)
2 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in CSCI 114
Transfer acceptability: CSU
Prepares students for application development on the iOS platform.

CSCI 275   iOS Development   (3)
2 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in CSCI 114
Transfer acceptability: CSU
Focus on the Swift programming language and 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).
• Computer Information Systems
• Information Technology
• Management Information Systems
Certificates of Achievement -
Certificate of Achievement requirements are listed in Section 6 (green pages).
• Computer Information Systems
• Information Technology
• Management Information Systems

PROGRAMS OF STUDY

Computer Information Systems

Computer Information Systems (CIS) is a series of courses that bind both technology and business to produce quality information for an organization. CIS emphasizes the technology side of an organization's information system. Typical employment opportunities include computer support specialist, user support specialist, systems analyst, network support specialist, database administrators, software testers and application development.

Key areas of focus in this degree are: Computer Information Systems; Computer Programming; Systems Analysis and Design; System Development; Database Management; Data Communications; Security; and Business Communications.

Students planning to focus on technology and computing in Information Systems are recommended to earn an A.S. in Computer Information Systems. This degree is ideal for students eager to break into the field of computing by earning a career technical certificate or degree while completing transferable coursework.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements

BUS 205	Business Communication	3
CSIT 105	Computer Concepts and Applications	3
CSIT 125	Computer Information Systems	3
CSIT 145	Programming for Information Systems	3
CSIT 146	Systems Analysis and Design	3
CSIT 160	Database Management Systems using Oracle	3
CSNT 111	Networking Fundamentals	3
CSNT 280	Computer Forensics Fundamentals	3