

Prerequisite: CSCI 260

Note: May be taken 4 times

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 270 Mac OS Cocoa Programming (3)

2 hours lecture-2 hours lecture/laboratory

Prerequisite: CSCI 110 or CSCI 220

Transfer acceptability: CSU; UC

Introduction to programming using Objective-C language, Apple's X-Code and Interface Builder for creating applications targeting the Macintosh platform with event-driven structures that support the development of graphical user interfaces. Includes hands-on laboratory experience reinforcing the lecture material.

CSCI 271 OpenGL for Mac OS (3)

2 hours lecture-2 hours lecture/laboratory

Prerequisite: CSCI 270

Transfer acceptability: CSU

Macintosh OS X Cocoa Software Development Environment. Introduction to programming using Objective-C language, Apple's X-Code and Interface Builder for creating applications targeting the Macintosh platform with event-driven structures that support the development of graphical user interfaces. Includes hands-on laboratory experience reinforcing the lecture material.

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

(Formerly CSIS 295)

3, 6, or 9 hours laboratory

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

Note: May be taken 4 times for a maximum of 6 units

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 Systems - Database (CSDB)

See also CSIS - Computer Science, CSIS - Information Technology, CSIS - Networking, and CSIS - Web Technology

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).

- Microsoft SQL Database Administrator
- Oracle Database

PROGRAMS OF STUDY

Microsoft SQL Database Administrator

Microsoft SQL Database Administrator is a validation program that provides a reliable measure of technical proficiency and expertise in implementation and administration of Microsoft SQL Server™ databases.

CERTIFICATE OF PROFICIENCY

Program Requirements	Units
CSDB 210 SQL Server Administration	2
CSDB 220 SQL Server Programming	3

CSNT 111	Networking Fundamentals	3
CSNT 121	Windows Server	3
CSNT 221	Windows Infrastructure Administration	3

TOTAL UNITS 14

Oracle Database

Oracle is the most widely used relational database management system in the world. This certificate offers a series of courses designed to provide the fundamentals to become successful in the use of this powerful database system.

CERTIFICATE OF PROFICIENCY

Program Requirements	Units
CSDB 140 Introduction to Oracle	3
CSDB 240 Oracle DBA I	3
CSDB 241 Oracle DBA II	3
CSDB 250 Oracle Performance Tuning	3

Electives (Select 1 course)

CSDB 150 Oracle Data Base Design	3
CSDB 260 Oracle PL/SQL Programming	3

TOTAL UNITS 15

COURSE OFFERINGS

CSDB 110 Introduction to SQL (3)

(Formerly CSIS 196)

2 hours lecture-2 hours lecture/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.

CSDB 120 SQL Database Design (2)

(Formerly CSIS 267)

2 hours lecture-2 hours laboratory

Prerequisite: CSDB 110

Transfer acceptability: CSU

Provides training in administering and implementing Microsoft SQL Server.

CSDB 140 Introduction to Oracle (3)

(Formerly CSIS 252)

2 hours lecture-2 hours lecture/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.

CSDB 150 Oracle Database Design (3)

(Formerly CSIS 254)

2 hours lecture-2 hours lecture/laboratory

Prerequisite: CSDB 140

Transfer acceptability: CSU

A top-down, systematic approach to the development of Oracle relational databases.

CSDB 210 SQL Server Administration (2)

(Formerly CSIS 172)

1½ hours lecture-1 hour lecture/laboratory

Prerequisite: CSDB 110

Transfer acceptability: CSU

Provides students with the knowledge and skills necessary to administer and troubleshoot information systems that incorporate Microsoft SQL Server Enterprise Edition.

CSDB 220 SQL Server Programming (3)
(Formerly CSIS 173)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSDB 120
Transfer acceptability: CSU
Provides students with the knowledge and skills necessary to design, implement, and program database solutions by using Microsoft SQL Server.

CSDB 240 Oracle DBA I (3)
(Formerly CSIS 256)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSDB 140
Transfer acceptability: CSU
Design, create, and maintain an Oracle database; gain a conceptual understanding of the Oracle database architecture and how its components work and interact with one another; and learn how to create an operational database and properly manage the various structures in an effective and efficient manner. Topics are reinforced with structured hands-on practices.

CSDB 241 Oracle DBA II (3)
(Formerly CSIS 257)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSDB 240
Transfer acceptability: CSU
Transporting data between databases, and the utilities to perform these activities. Introduction to networking concepts and configuration parameters, as well as how to solve some common network problems. In hands-on exercises, configure network parameters so that database clients and tools can communicate with the Oracle database server. Addresses backup and recover techniques, and examines various backup, failure, restore and recovery scenarios. Examine backup methodologies based on business requirements in a mission critical enterprise. Use multiple strategies and Oracle Recover Manager to perform backups, and restore and recover operations.

CSDB 250 Oracle Performance Tuning (3)
(Formerly CSIS 258)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSDB 240
Transfer acceptability: CSU
Introduction to the importance of good initial database design and the method used to tune a production Oracle 9i database. The focus is on database and instance tuning rather than specific operating system performance issues. Practical experience tuning an Oracle database. Recognize, troubleshoot, and resolve common performance related problems in administering an Oracle database.

CSDB 260 Oracle PL/SQL Programming (3)
(Formerly CSIS 259)
2 hours lecture-2 hours lecture/laboratory
Prerequisite: CSDB 150
Transfer acceptability: CSU
Learn the Oracle PL/SQL language, a flexible procedural extension to SQL, which increases productivity, performance, scalability, portability and security. Use PL/SQL's tight integration with Oracle database that allows application developers to build and deploy distributed applications with considerable flexibility. Learn how to utilize advanced techniques to design PL/SQL applications to solve complex business problems.

Associate in Arts Degrees -
AA 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).
• Microsoft Office User Specialist
• Visual Basic
• Web 2.0

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, in systems analysis and design, project management, and database design. See a counselor for additional university transfer requirements in this major.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
CSIT 105 Computer Concepts and Applications	3
CSIT 120/ R CSIS 120 Computer Applications	3
CSIT 170 Visual Basic I	4
CSIT 290 Systems Analysis and Design	4
CSDB 110 or CSDB 140 Introduction to SQL	3
CSNT 110 Introduction to Oracle	3
CSNT 111 Hardware and O.S. Fundamentals	3
CSWB 110/ R CSIS 110 Networking Fundamentals	3
CSWB 110 Web Site Development with XHTML	2
Electives (Select 3 courses)	
CSIT 70 Web 2.0 - The Web's Edge	3
CSIT 121 Advanced Computer Applications	3
CSIT 180 C# Programming I	3
CSIT 270 Visual Basic II	4
CSCI 130 Linux Fundamentals	2
CSDB 120 or CSDB 150 SQL Database Design	2
CSDB 150 Oracle Database Design	3
CSWB 120 JavaScript	3
CSWB 130 Advanced Web Site Development	3

TOTAL UNITS 32 - 35

Microsoft Office User Specialist

The Microsoft Office User Specialist (MOUS) Program is a validation program that provides proof of proficiency in Microsoft Office applications. It is available for Microsoft Office applications at both Proficient and Expert User levels. As a general rule of thumb, Proficient Specialists can handle a wide range of everyday tasks with ease. Expert Specialists are expected to do all those everyday tasks, plus handle more complex assignments that require more advanced formatting and functionality.

Users who attain Expert Specialist status on all five core Office applications (Word, Excel, Access, PowerPoint and Outlook) qualify to take the Microsoft Office Integration Exam. Passing this exam demonstrates that the user is not only an expert in the individual Office products, but is also skilled in integrating them into a cohesive whole. This entitles the user to be called a Microsoft Office Expert.

Computer Science and Information Systems - Information Technology (CSIT)

See also CSIS - Computer Science, CSIS - Database, CSIS - Networking, and CSIS - Web Technology

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