PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

X Transfer Course X A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: CSIS 172 Microsoft SQL Server Administration

UNIT VALUE: 2

MINIMUM NUMBER OF SEMESTER HOURS: 40

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills.

ENTRANCE REQUIREMENTS

PREREQUISITE: NONE

COREQUISITE: NONE

RECOMMENDED PREPARATION: CSIS 163

SCOPE OF COURSE:
This course provides students with the knowledge and skills necessary to administer and troubleshoot information systems that incorporate Microsoft SQL Server Enterprise Edition.

SPECIFIC COURSE OBJECTIVES:
1. Installing and Configuring SQL Server 2000
2. Creating SQL Server 2000 Databases
3. Managing, Monitoring, and Troubleshooting SQL Server 2000 Databases
4. Extracting and Transforming Data with SQL Server 2000
5. Managing and Monitoring SQL Server 2000 Security
6. Managing, Monitoring, and Troubleshooting SQL Server 2000

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

I. **SQL Server Overview**
- A. What Is SQL Server
- B. SQL Server Integration

B. SQL Server Integration

C. SQL Server Databases

D. SQL Server Security

E. Working with SQL Server

II. **Planning to Install SQL Server**

A. Hardware Installation Considerations

B. SQL Server 2000 Editions

C. Software Installation Considerations

D. Methods of Installing SQL Server

E. Verifying the Installation

F. Configuring SQL Server Enterprise Manager

G. Troubleshooting

III. **Managing Database Files**

A. Introduction to Data Structures

B. Creating Databases

C. Managing Databases

D. Placing Database Files and Logs

E. Optimizing the Database Using Hardware-based RAID

F. Optimizing the Database Using Filegroups

G. Optimizing the Database Using Filegroups with Hardware-based RAID

H. Capacity Planning

I. Performance Considerations

IV. **Managing Security**

A. Implementing an Authentication Mode

B. Assigning Logins to Users and Roles

C. Assigning Permissions to Users and Roles

D. Managing Security Within SQL Server

E. Managing Application Security

F. Managing SQL Server Security in the Enterprise

V. **Performing Administrative Tasks**

A. Configuration Tasks Routine SQL Server Administrative Tasks Automating Routine Maintenance Tasks Creating Alerts Troubleshooting SQL Server Automation Automating Multiserver Jobs

VI. **Backing Up Databases**

A. Preventing Data Loss

B. Setting and Changing a Database Recovery Model

C. SQL Server Backup

D. When to Back Up Databases

E. Performing Backups

F. Types of Backup Methods

G. Planning a Backup Strategy

H. Performance Considerations

VII. **Restoring Databases**

A. SQL Server Recovery Process

B. Preparing to Restore a Database

C. Restoring Backups

D. Restoring Databases from Different Backup Types

E. Restoring Damaged System Databases

VIII. **Monitoring SQL Server for Performance**

A. Why to Monitor SQL Server

B. Performance Monitoring and Tuning

C. Tools for Monitoring SQL Server

D. Common Monitoring and Tuning Tasks

IX. **Transferring Data**

A. Introduction to Transferring Data

B. Tools for Importing and Exporting Data in SQL Server

C. Introduction to DTS

D. Transforming Data with DTS

X. **Maintaining High Availability**

A. Introduction to Availability

B. Increasing Availability Using Failover Clustering

C. Standby Servers and Log Shipping

XI. **Introducing Replication**

A. Introduction to Distributed Data

B. Introduction to SQL Server Replication

C. SQL Server Replication Agents

D. SQL Server Replication Types

E. Physical Replication Models

REQUIRED READING: Microsoft Official Curriculum – Administering A Microsoft SQL Server Database

SUGGESTED READING: None

REQUIRED WRITING:
Problem solving exercises and skills demonstrated in computer homework assignments. A minimum of one page per homework assignment is required.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours a week practicing the skills learned in class on their home machines. The midterm and final are both take home exams requiring at least 10 hours to complete

INSTRUCTIONAL METHODOLOGY:

Check all that apply:
_X__ lecture
_____ laboratory
_X__ lecture-laboratory combination
_____ directed study

DISTANCE LEARNING:

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.
Yes _ No___X__

If yes, check all that apply:

_____ Television Course (Video one-way, e.g. ITV, video cassette, etc.)
_____ Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
_____ Two-Way Video Conferencing (Two-way interactive video and audio)
_____ One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
_____ Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

Grades for courses are based upon final examinations, mid-term examinations, other tests, assignments, projects, and participation. Faculty will inform students of their grading policy at the beginning of each semester.

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?
Yes ____ No _X__ Number of times course may be taken for credit: _____

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

CONTACT PERSON: Terrie Smith x2610

SIGNATURES:

SIGNATURES ON FILE