Miami Dade College

Course Competencies Template - Form 112

GENERAL INFORMATION	
Name: Diane King	Phone #: 7-7021
Course Prefix/Number: CTS1437	Course Title: Microsoft SQL Administration
Number of Credits:	

Degree Type	☐ B.A. ☐ B.S. ☐ B.A.S ☐ A.A. ☒ A.S. ☐ A.A.S. ☐ C.C.C. ☐ A.T.C. ☐ V.C.C

Date Submitted/Revised: 06-23-2011	Effective Year/Term: 2011-1

☐ New Course Competency   ☒ Revised Course Competency

Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): ☐ Yes   ☐ No

The above course links to the following Learning Outcomes:

☐ Communication
☐ Numbers / Data
☐ Critical thinking
☐ Information Literacy
☐ Cultural / Global Perspective

☐ Social Responsibility
☐ Ethical Issues
☐ Computer / Technology Usage
☐ Aesthetic / Creative Activities
☐ Environmental Responsibility

Course Description (limit to 50 words or less, must correspond with course description on Form 102):

An introductory database administration course for students majoring in Internet Services, Database Technology Microsoft Database Administration or (DBA), Computer Programming and Analysis, and for students preparing for Microsoft DBA certification exams. Students will learn to install, administer, and optimize an enterprise-level database system, and how to use SQL to define databases, tables, and how to use SQL to define databases, tables, stored procedures, and constraints. Recommended Preparation: CGS1540 or CGS1541. A.S. degree credit only. Laboratory fee. (3 hr. lecture; 2 hr. lab).

Prerequisite(s): CGS1541	Corequisite(s):

Course Competencies: (for further instruction/guidelines go to: http://www.mdc.edu/asa/curriculum.asp)

Competency 1: The student will demonstrate an understanding of Installing and Configuring SQL Server 2008 by:

1. Install SQL Server 2008 and related services.
2. Configure SQL Server instances.
3. Configure SQL Server services.
4. Configure additional SQL Server components.
5. Implement database mail.
6. Configure full-text indexing.

Competency 2: The student will demonstrate an understanding of maintaining SQL Server Instances by:

1. Manage SQL Server Agent jobs.
2. Manage SQL Server Agent alerts.
3. Manage SQL Server Agent operators.
4. Implement the declarative management framework (DMF).
5. Back up a SQL Server environment.

Competency 3: The student will demonstrate an understanding of Managing SQL Server Security by:

1. Manage logins and server roles.

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Approved By Academic Dean Date: _____   Reviewed By Director of Academic Programs Date: _____

2. Manage users and database roles.
3. Manage SQL Server instance permissions.
4. Manage database permissions.
5. Manage schema permissions and object permissions.
6. Audit SQL Server instances.
7. Manage transparent data encryption.
8. Configure surface area.

Competency 4: The student will demonstrate an understanding of Maintaining a SQL Server Database by:

1. Back up databases.
2. Restore databases.
3. Manage and configure databases.
4. Manage database snapshots.
5. Maintain database integrity.
6. Maintain a database by using maintenance plans.

Competency 5: The student will demonstrate an understanding of Performing Data Management Tasks by:

1. Import and export data.
2. Manage data partitions.
3. Implement data compression.
4. Maintain indexes.
5. Manage collations.

Competency 6: The student will demonstrate an understanding of Monitoring and Troubleshooting SQL Server by:

1. Identifying SQL Server service problems.
2. Identifying concurrency problems.
3. Identifying SQL Agent job execution problems.
4. Locate error information.

Competency 7: The student will demonstrate an understanding of Optimizing SQL Server Performance by:

1. Implementing Resource Governor.
2. Use the Database Engine Tuning Advisor.
3. Collecting trace data by using SQL Server Profiler.
4. Collecting performance data by using Dynamic Management Views (DMVs).
5. Collecting performance data by using System Monitor.
6. Use Performance Studio.

Competency 8: The student will implement high availability by:

1. Implement database mirroring.
2. Implement a SQL Server clustered instance.
3. Implement log shipping.
4. Implement replication.