

# North Central Michigan College

## NCMC MASTER COURSE SYLLABUS

DIVISION/AREA: Business and Technology

DEPARTMENT: CIS

DIVISION DIRECTOR: Robert J. Marsh, Ph.D., P.E.

ORIGINATOR: Hwee-Joo Kam

DEAN OF INSTRUCTION: Timothy Dykstra, Ph.D.

TOTAL HOURS OF INSTRUCTION: LECTURE: 2 LAB: 2 TOTAL CONTACT HOURS: 70.4

COURSE NUMBER: CIS 150

CREDIT HOURS: 3

COURSE TITLE: Introduction to Database Administration

TRANSFERABLE YES: (Dependent on Institution) NO: TO:

PREREQUISITE(S)/COREQUISITE(S)/ADVISORY:  
CIS 100

### CATALOG DESCRIPTION:

Introduces the concept and provides hands-on experience with database administration. Students will learn how to set up, administer, tune, troubleshoot, and secure a robust database system. In addition, this course also introduces fundamental database concepts and simple Structured Query Language (SQL) and exposes the students to database backup and recovery.

### GENERAL EDUCATION OUTCOMES:

- Think critically and analytically
- Independently acquire knowledge
- Write and speak effectively

### COURSE OBJECTIVES & OUTCOMES:

- Understand the concepts of relational databases
- Install and configure databases
- Create and control databases
- Administer users
- Manage schema objects and data
- Implement security features
- Monitor database performance
- Perform database backup and recovery

### METHODS OF INSTRUCTION:

Lecture

Demonstration  
 Hands-on tutorials  
 Internet based materials  
 Student programming

METHODS OF EVALUATION:

Exams	30%
- Exam I	- 5%
- Exam II	- 5%
- Exam III	- 10%
- Exam IV	- 10%
Take Home Assignments	40%
- Assignment 1	- 5%
- Assignment 2	- 5%
- Assignment 3	- 10%
- Assignment 4	- 10%
- Assignment 5	- 10%
Hands-On Exercises	15%
Term Paper	10%
Class Participation	5%
Total	100%

REQUIRED TEXTS AND MATERIALS:

- TEXTS:
  - OCA Oracle 10g Administration I; Chip Dawes, Bob Bryla, Joseph C. Johnson, Matthew Weishan; Sybex; Alameda, CA, 2005; ISBN: 978-0-7821-4367-6
  - Hands-On Oracle Database 10g Express Edition for Linux; Steve Bobrowski; New York, NY, 2006; ISBN: 978-0-0722-6327-5

OPTIONAL SUPPLEMENTARY MATERIALS:

Reasonable accommodations can be provided for students with documented disabilities. Please contact Learning Support Services for assistance: 231/348-6817.

TIME ALLOWANCE AND SEQUENCE OF INSTRUCTION:

Week	Course Topic	Textbook	Chapter
1	Course Overview Chapter 1: Introduction to Database and Oracle	Hands-On Oracle Database 10g Express Edition for Linux	1
2	Chapter 2: Install and Start Using Oracle Database 10g Express Edition Hands-On Exercise 1	Hands-On Oracle Database 10g Express Edition for Linux	2
3	Chapter 1: Oracle Database 10g Components and Architecture Hands-On Exercise 2	OCA Oracle 10g Administration I	1
4	Chapter 2: Creating and Controlling a Database Hands-On Exercise 3 Take Home Assignment 1 Due	OCA Oracle 10g Administration I	2
5	Chapter 3: Database Storage and Schema Objects Hands-On Exercise 4	OCA Oracle 10g Administration I	3
6	Chapter 6: User Administration and Security Exam I	OCA Oracle 10g Administration I	6
7	Chapter 7: Secure Database Access Hands-on Exercise 5 Take Home Assignment 2 Due	OCA Oracle 10g Administration I Hands-On Oracle Database 10g Express Edition for Linux	6,7
8	Chapter 7: Secure Database Access (continued) Hands-On Exercise 6	Hands-On Oracle Database 10g Express Edition for Linux	7
9	Chapter 7: Managing Data with SQL, PL/SQL, and Utilities Hands-On Exercise 7 Take Home Assignment 3 Due	OCA Oracle 10g Administration I Hands-On Oracle Database 10g Express Edition for Linux	7
10	Exam II Chapter 8: Manage Database Space	Hands-On Oracle Database 10g Express Edition for Linux	8
11	Chapter 8: Manage Database Space (continued) Hands-On Exercise 8 Take Home Assignment 4 Due	OCA Oracle 10g Administration I Hands-On Oracle Database 10g Express Edition for Linux	8
12	Chapter 9: Protect your Oracle XE Database Hands-On Exercise 9	Hands-On Oracle Database 10g Express Edition for Linux	9
13	Chapter 9: Proactive Database Maintenance and Performance Monitoring Exam III	OCA Oracle 10g Administration I	9

14	Chapter 10: Tune Application and Database Instance Performance Take Home Assignment 5 Due	OCA Oracle 10g Administration I Hands-On Oracle Database 10g Express Edition for Linux	10
15	Backup and Recovery (Hand-out) Term Paper Due		
16	Exam IV		

APPROVED FOR ADOPTION BY THE CRD/AP COMMITTEE ON \_\_\_04/08/09\_\_\_\_\_