Washtenaw Community College Comprehensive Report

CIS 282 Database Principles and Application
Effective Term: Winter 2016

Course Cover

Division: Business and Computer Technologies
Department: Computer Instruction
Discipline: Computer Information Systems
Course Number: 282
Org Number: 13410
Full Course Title: Database Principles and Application
Transcript Title: Database Principles and Applic
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course title
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Outcomes/Assessment
Objectives/Evaluation
Rationale: Database management was historically based upon the relational model for structured data. Today, industry uses both structured and unstructured data for operations. While the main emphasis of this course will remain the relation model, the student will be introduced to the concepts of unstructured NOSQL data.
Proposed Start Semester: Winter 2016
Course Description: In this course, students are introduced to contemporary database theory and practice. Topics covered include terminology, database structures, SQL (structured query language), and NOSQL concepts and application. This course is intended for anyone possessing a basic knowledge of programming who is interested in database theory and practice. The previous titles of this course are Small Systems Database and Relational Database Concepts and Application.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 45 **Student:** 45
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

No Level Required

Requisites

Level II Prerequisite
CPS 120 minimum grade "C"
or
Level II Prerequisite
CPS 171 minimum grade "C"
or
Prerequisite
CPS 161 minimum grade "C"

General Education

General Education Area 7 - Computer and Information Literacy
Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify concepts of data management for structured and unstructured data.
   Assessment 1
   Assessment Tool: Department created final exam - short answer/multiple choice questions
   Assessment Date: Fall 2016
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: answer key
   Standard of success to be used for this assessment: 70% of the students will score 70% or higher.
   Who will score and analyze the data: departmental faculty

2. Apply techniques of data management.
   Assessment 1
   Assessment Tool: Department created final exam - short answer/multiple choice questions
   Assessment Date: Fall 2016
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: answer key
   Standard of success to be used for this assessment: 70% of the students will score 70% or higher.
   Who will score and analyze the data: departmental faculty

Course Objectives

1. Identify concepts of database structures for both relational structured databases and unstructured databases.
   Matched Outcomes
2. Apply relational model techniques, including entity relationships and normalization.
   Matched Outcomes
   2. Apply techniques of data management.
3. Use Structured Query Language to manipulate tables in relational databases.

Matched Outcomes

2. Apply techniques of data management.

4. Identify concurrency control, transaction management, describe backup and recovery, and security functions.

Matched Outcomes

5. Use NOSQL language to retrieve data from a NOSQL database.

Matched Outcomes

2. Apply techniques of data management.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Computer workstations/lab

Reviewer	Action	Date
Faculty Preparer:		
Michael Galea	*Faculty Preparer*	*Feb 19, 2015*
Department Chair/Area Director:		
John Trame	*Recommend Approval*	*Feb 20, 2015*
Dean:		
Kimberly Hurns	*Recommend Approval*	*Feb 25, 2015*
Vice President for Instruction:		
Bill Abernethy	*Approve*	*Mar 16, 2015*