**MOHAWK VALLEY COMMUNITY COLLEGE**

**UTICA, NEW YORK**

COURSE OUTLINE

**I. Catalog Description**

CI271--Database Design & Implementation **C-2, P-2, CR-3**

Prerequisite: Any three (3) credit programming language or Department Head permission.

This course covers database management systems and query languages, including relational database and procedural query languages. It includes projects using database file organization, data structures, and development techniques to design application databases. It emphasizes the role of database in system development and information system design

**II. Student Objectives**

At the conclusion of the course, the students will be able to:

1. Design programs using database(s).

2. Use database through the use of objects.

3. Apply database programming to the microcomputer environment.

4. Apply database programming to the mainframe environment.

5. Use the relational database technology.

**III. General Topical Outline**

WEEK TOPIC

1 Course Introduction/SDLC/MySQL

2 Database components/Introduction to MySQL

3 Entity-Relationship Model

4 Managing MySQL Databases and Tables

5 Database Design Using E-R Model

6 Data Flow Diagram

7 Normalization

8 Introduction to Final Project

9 MYSQL: Data Types and Constraints

10 MySQL: Introduction to Queries

11 MySQL: Advanced Queries

12 MySQL: Subqueries and CTE’s

13 MySQL: Modifying Data

15 FINAL PROJECT DUE

**IV. Laboratory Topics may include but not be limited to the following areas:**

WEEK EXPERIENCE

1 Blackboard, DB and MySQL overview

2 Intro to MySQL

3 Data Modeling

4 MySQL Intro

5 ER to DB

6 Data Flow

7 Normalization

9 Simple Queries Using SQL

10 More Complex SQL

11-15 MySQL implementation of Project

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