

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: ITD 130

Credits: 4

Course Title: Database Fundamentals

Course Description:

Introduces the student to Relational Database and Relational Database theory. Includes planning, defining, and using a database; table design, linking, and normalization; and types of databases, database description, and definition. Additional topics cover the use of Entity Relationship (ER) modeling in detail through many real-life examples and practical business problems and solutions. After several iterations, the ER model captures the data requirements and business rules and forms a sound basis for the initial design of a relational database. The introduction to SQL allows for the implementation of a database design using SQL. Prerequisite: ITE 115 or school approval. Lecture 4 hours per week.

Course Prerequisites/Co-requisites:

ITE 115 or school approval

Course Objectives:

Upon completing the course, the student will be able to

1. Understand the purposes and uses of databases.
2. Capture business rules and constraints.
3. Read, improve, create, use, and judge ER models.
4. Implement ER models into a physical database design.
5. Write basic SQL Select statements.

Major Topics to be Included:

1. Introduction to databases
2. Planning databases
3. Data modeling/ER model
4. Normalization
5. Types of databases
6. Advanced topics

Effective Date of Course Content Summary: August 15, 2013