

**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.

**General Course Purpose:**

**Course Prerequisites and Co-requisites:**

Prerequisite: ITE 115 or school approval

**Student Learning Outcomes:**

Upon completing the course, the student will be able to

- a. Identify the purposes and uses of databases;
- b. Capture business rules and constraints;
- c. Read, improve, create, use, and evaluate ER models; and
- d. Write basic SQL select statements.

**Major Topics to Be Included:**

- a. Introduction to databases
- b. Planning databases
- c. Data modeling/ER model
- d. Normalization
- e. Types of databases
- f. Structured Query Language (SQL)

**Date Created/Updated (Month, Day, Year):** August 15, 2018