J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: <u>ITD 130</u>   **Credits: <u>4</u>**

Course Title: <u>Database Fundamentals</u>

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 152 or school approval. Lecture 4 hours. Total 4 hours per week. 4 credits

General Course Purpose:

Course Prerequisites and Co-requisites:

Prerequisite: ITE 152 or school approval

Student Learning Outcomes:
Upon completing the course, the student will be able to

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

Major Topics to Be Included:

- Introduction to databases
- Planning databases
- Data modeling/ER model
- Normalization
- Types of databases
- Structured Query Language (SQL)

Effective Date/Updated: August 15, 2018