COURSE OUTLINE

Division: Information Technology

Curriculum: Database Administration and Development

Course Title: SQL

Course Number: ITC 222

Quarter-Hour Credits: 55

Type of Course: Professional-Technical

Course Description: This course introduces students to the use of Structured Query language to access and summarize database information, create and alter database objects, set constraints and create views. It will also introduce students to the use of SQL embedded in programming environments such as ASP or CGI or .Net. The course will be project driven. Students will use the SQL they learn to create and manage databases on a Relational Database Management System such as SQL server or Oracle.

Course Objectives: The course will

- Introduce students to SQL the primary tool for accessing and managing relational databases
- Give students practice using SQL with an RBMS
- Provide projects that will allow students the opportunity to research and problem solve database issues.

Student Outcomes: Students completing this course will be able to:

- Use SQL to retrieve information from a database
- Use SQL to create and modify database structures
- Use SQL to create and modify records
- Use SQL to set Constraints and create Views
- Create stored procedures
- Translate SQL into simple XML
- Work together in teams to successfully complete projects
• Locate and use additional sources of information
• Troubleshoot SQL errors and problems
• Recognize and address security issues
• Document code and activities.

Length of Course: One Quarter

Prerequisites: ITC 110 ????

Topical Outline:
• Overview and history of SQL
• Review of relational database theory
• SQL syntax—the SELECT statement
• Advanced SELECT techniques
• Creating and modifying databases and tables
• Adding constraints
• Relating tables
• Inserting records
• Updating and deleting records
• SQL functions
• Aggregate functions
• Stored procedures
• Views and Indexes
• Embedded SQL (in ASP or CGI or Visual Basic for instance)
• SQL and XML