York Technical College
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Course Prefix/Number: **IST 272**
Course Title: **Relational Database**
Lecture Hours/Week: **3.0**
Lab Hours/Week: **0.0**
Credit Hours/Semester: **3.0**

Distance Learning Attendance/VA Statement
Textbook Information

COURSE DESCRIPTION
This course provides a comprehensive foundation in both SQL and relational database design and implementation. Dynamic and embedded SQL programming techniques are emphasized.

COURSE COMPETENCIES
Upon successful completion of this course, the student should be competent to perform the following tasks:

Module 1 – SQL Server Basics and Transact-SQL
- Describe SQL Server and its features.
- Describe SQL Server components and architecture.
- Utilize SQL Server programming tools.
- Identify Transact-SQL syntax elements including identifiers, variables, functions, data types, expressions, and comments.

Module 2 – SQL Database Development
- Identify system requirements.
- Design databases using normalization and relationships.
- Develop a logical data model by identifying entities, their attributes, relationships, and constraints.
- Plan a SQL Server database including goals, data types, and business rules.
- Install SQL Server.
- Create a SQL Server database including creating tables.
- Ensure data integrity.
- Apply constraints including primary key, unique, foreign key, and check constraints.
- Access and modify data using SELECT, INTO, FROM, WHERE, GROUP BY, HAVING, and ORDER BY clauses.
- Employ joins, unions, and subqueries to retrieve data.
- Insert and delete data from a SQL Server database.

Module 3 – SQL Database Advanced Topics
- Import and export data.
- Create distributed queries.
- Retrieve data using cursors.
- Develop and implement stored procedures.
- Develop and implement triggers.
- Create, modify, and delete views.
- Create and implement indexes.
- Manage SQL Server transactions and locks.
- Describe concurrency problems.
- Define isolation levels.

- Describe and administer SQL Server security.
- Design and implement a security plan.
- Monitor and tune SQL Server databases.

MINIMAL STANDARDS
Minimal standards of performance on all course competencies for receiving credit for the course and indicated by 60% overall accuracy on evaluation instruments that address the course competencies listed above. Required standards of performance on all course competencies for enrollment in subsequent higher-level computer technology courses are indicated by 70% overall accuracy on evaluation instruments that address the course competencies listed above.

COURSE REQUIREMENTS
Students are responsible for attending all schedule class meetings until they have completed all course requirements. Students are responsible for all material covered and for all assignments made in all classes. Any student caught cheating or involved in other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action.

Attendance Policy
The attendance policy as stated in the York Technical College Handbook will be enforced. Makeup tests will not be given for theory tests. If a student must miss a theory test, he/she will get a zero for that test. However, students have the option of taking the comprehensive final. The student's grade on the comprehensive final will replace his/her lowest theory test grade. It is the student's responsibility to schedule a time for a makeup hands-on test with his/her instructor.

EVALUATION STRATEGIES/GRADING

<table>
<tr><td>Module 1 (30% total)

Tests – 15% of final average
Homework and Learning Activities – 15% of final average</td><td>Module 2 (40% total)

Tests – 20% of final average
Homework and Learning Activities – 20% of final average</td><td colspan="2">Grading Scale</td></tr>
<tr><td>Module 3 (30% total)

Tests – 15% of final average
Homework and Learning Activities – 15% of final average</td><td></td><td>90-100

89-89

70-79

60-69

Below 60</td><td>A

B

C

D

F</td></tr>
</table>

ENTRY-LEVEL SKILLS
Keyboarding ability and fundamentals of the Windows operating system

PREREQUISITES: CPT 242—Minimum grade of "C"

CO-REQUISITES: None

Disabilities Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.