GREENVILLE TECHNICAL COLLEGE

Business and Technology Division
Computer Technology
Course Syllabus
Relational Database IST 272

Credit/Contact Hours:
3.0

Prerequisite:
CPT113 or CPT 101, MAT 102 or higher. Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:
None

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. *Note: SQL Server is used.*

Purpose of Course:
To teach the student about database management system concepts and relational database design. Students will get practical experience creating, updating, and retrieving data from a relational database using interactive SQL.

Required Texts:
1. Murach's SQL Server 2012 for developers; Bryan Syverson & Joel Murach; Murach; ISBN: 978 -1-890774--69-1

2. A portable storage device such as a flash drive will be needed for coursework storage.

3. NOTE: <u>Students in traditional classes</u> must access Blackboard for course-related information.
    <u>Students in hybrid and online classes</u> will access their online content through Blackboard.

4. A fully functional computer running a Microsoft operating system (Windows XP, Vista, Windows 7, or Windows 8) – The database management system used at home in the course is SQL Server 2012 Express With Management Tools. This software can be downloaded for free from the Microsoft website. If your computer is not capable of running SQL Server 2012 Express With Management Tools, you will need to use the ET 113 computer lab on the main campus to complete lab assignments and tests.

Additional Materials:
SPECIAL NOTE FOR ALL STUDENTS: Online students will be REQUIRED to come to the Barton Campus for two on-campus events. The first event will be an ET113 lab assignment. The second event will be the final exam. The average duration of each of these events is anticipated to be three hours or less.

Assignments will require homework time which is spent in the lab in addition to the lab time indicated on the syllabus.

Tutoring is now available in the Business Division Student Lab located on the Barton Campus in the Engineering Building (#103), Room 113.   The hours for tutoring are posted in the lab (ET 113); no appointment is necessary. There are no fees required for this service.

Course Outcomes:
Students who successfully complete this course will have demonstrated the skills required to accomplish the following objectives with a minimum competence level of 70 percent.

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1. Demonstrate data manipulation language T-SQL knowledge by completing data manipulation language T-SQL labs.

2. Demonstrate data definition language T-SQL knowledge by completing a data definition language T-SQL lab.

3. Demonstrate understanding of data normalization by completing a data normalization lab.

4. Demonstrate an understanding of ERD diagrams by completing an ERD lab.

The objectives of the IST 272 course are intended to meet the CPT program level student learning outcomes.

Program Student Learning Outcomes:
Upon successful completion of the Computer Technology Degree students will be able to:

1. Install computer and network hardware.

2. Install computer operating systems and application software.

3. Design, create and test computer programming solutions.

4. Demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer assignments.

5. Analyze, troubleshoot, and correct computer related technical problems.

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Greenville Technical College Core Competencies:

Communication Core Competency: Students will demonstrate effective written and oral communication skills to convey information, ideas, or opinions.

- Written Communication: Students will demonstrate effective written communication skills to convey information, ideas, or opinions.
- Oral Communication: Students will demonstrate effective oral communication skills to convey information, ideas, or opinions.

Critical Thinking Core Competency: Students will demonstrate effective reasoning, problem solving, or quantitative skills to develop an opinion or conclusion.

- Critical Reasoning: Students will employ inquiry, analysis, and synthesis of information to formulate and/or evaluate an opinion or conclusion.
- Problem Reasoning: Students will design and formulate a strategy to answer a question or achieve a desired goal.
- Quantitative Reasoning: Students will be able to analyze numerical information or observable facts resulting in informed conclusions.

Information Literacy Core Competency: Students will be able to locate, evaluate, and use information effectively from diverse sources.

Professionalism Core Competency: Students will demonstrate conduct and etiquette appropriate to the community and chosen career.

- Professionalism: Students will display professional conduct and work habits.
- Teamwork: Students will collaborate with others to accomplish a shared goal.

Instructional Agreement:
This syllabus is an agreement between the student and instructor concerning course objectives, course content, grading and other policies and procedures particular to the course as well as any posted program, departmental, and divisional policies. It is also the student's responsibility to become familiar with the Student Handbook/College Catalog found in the Student Resource area of Blackboard.

Grading Scale:
GRADING POLICY

Twenty (20) percent of the final grade will be based on successful completion of lab / homework assignments including a two-page paper that discusses the use of SQL around the world.

Points will be deducted for the following on all lab assignments:

- Incorrect results.
- Documentation that is missing or incomplete.
- Documentation that is not neat, clean, or readable.

Sixty (60) percent of the final grade will be based on test grade averages.

Twenty (20) percent of the final grade will be based on the comprehensive final examination.

All assignments (i.e., labs, projects, research papers, etc.) for this course must be completed and submitted to the instructor by the due date established in order to receive credit for the assignment.

NOTE: ALL TESTS AND EXAMS ARE RETAINED BY THE INSTRUCTOR.

Final letter grades will be issued as follows:

A = 90 - 100

B = 80 - 89

C = 70 - 79

D = 60 - 69

F =   0 - 59

Course Policies:

IST 272 – MAIN TOPICS

PLAN OF INSTRUCTION:

 TEXT

CHAPTER   MAJOR TOPICS

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Chapter 1: An introduction to relational databases and SQL

Chapter 2: How to use the Management Studio

Chapter 3: How to retrieve data from a single table

Chapter 4: How to retrieve data from two or more tables

Chapter 5: How to code summary queries

Chapter 6: How to code subqueries

Chapter 7: How to insert, update, delete data

Chapter 8: How to work with data types

Chapter 9: How to use functions

Chapter 10: How to design a database

Chapter 11: How to create and maintain databases and tables with SQL statements

The instructor reserves the right to modify the Plan of Instruction by changing the sequence of text material or testing content.

Disabilities Information

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Students with disabilities, including those who were served in Special Education (resource or tutorial), should contact Student Disability Services (SDS) to discuss their need for services and accommodations. The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113.

Staff can be reached by phone at 864 250-8202 or via email to DisabilityServices@gvltec.edu . Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services: http://gvltec.edu/disability-services/

Efforts have been made to ensure all materials presented in an electronic format are accessible for students with disabilities and the college is committed to this obligation. However, if you experience any difficulty accessing these materials please notify your instructor immediately so a solution can be provided. You may also contact Student Disability Services directly at 864-250-8202 or by email at DisabilityServices@gvltec.edu.

Students who need a PDF reader for accessibility of course documents presented in PDF format may download a free reader at https://acrobat.adobe.com/us/en/products/pdf-reader.html

Starfish

We care about your success! Greenville Technical College is proud to offer Starfish, a software tool designed to promote student success through coordination and communication between students, instructors and support staff.

When you set up your profile in Starfish, you can connect with services, faculty and staff at Greenville Technical College. The link to Starfish is located in Blackboard. Throughout the term, you may receive emails regarding your attendance, course grades or academic performance.

To benefit from this software, it is important that you check your Greenville Technical College Gmail regularly and read the Starfish alerts. If your academic performance begins to drop, you may also be contacted directly by a Success Coach or the Student Success Center.

Start, Stay, Succeed!