

GREENVILLE TECHNICAL COLLEGE

Business and Technology Division Computer Technology Course Syllabus Database Programming IST 278

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Credit/Contact Hours:

3.0

Prerequisite:

IST 272, CPT 186, MAT102. Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:

None

Course Description:

This course is a study of advanced database techniques. Topics will cover procedures, triggers, query optimization, and user security.

Purpose of Course:

To teach the student about programming using a relational database design. Students will get practical experience setting up users, assigning permissions, creating database objects, and using a programming language to interact with the database. Students will complete database design projects.

Required Texts:

1. Beginning SQL Server 2012 Programming; Paul Atkinson, Robert Vieira; Wrox – Wiley Publishing;

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ISBN: 978-1-118-10228-2

2. NOTE: Students in traditional classes must access Blackboard for course-related information.
Students in hybrid and online classes will access their online content through Blackboard.

Additional Materials:

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

SPECIAL NOTE TO ONLINE STUDENTS: The final exam for online students will be administered on the Barton Campus and will be scheduled at a time determined by the department.

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.

1. Demonstrate the ability to take initiative by completing a lab assignment with minimal supervision.
2. Demonstrate the ability to work under pressure and show responsibility by completing lab assignments.
3. Demonstrate trigger knowledge by completing a trigger lab.
4. Demonstrate stored procedure knowledge by completing a stored procedure lab.
5. Demonstrate data manipulation language T-SQL knowledge by completing a data manipulation language T-SQL lab.

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

The objectives of the IST 278 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.

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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

Fifteen (15) percent of the final grade will be based on successful completion of programming assignments and 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.
- Lateness.

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

Twenty-five (25) 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 278 – MAIN TOPICS

PLAN OF INSTRUCTION:

TEXT

CHAPTER MAJOR TOPICS

Chapter 1 – Basics

Chapter 2 – Tools of the trade

Chapter 3 – The Foundation statements of T-SQL

Chapter 4 – Joins

Chapter 5 – Creating and Altering Tables

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Chapter 6 – Constraints

Chapter 7 – More Queries

Chapter 9 – SQL Server Storage and Indexing Structures

Chapter 10 – Views

Chapter 11 – Scripts and Batches

Chapter 12 – Stored Procedures

Chapter 13 – User Defined Functions

Chapter 14 – Transactions and Locks

Chapter 15 – Triggers

Chapter 16 – XML, MISC, Backups, Security

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

Disabilities Information

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.

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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!