

**Computer Technology Department**  
**Business/Public Service Division**  
**GREENVILLE TECHNICAL COLLEGE**

**COURSE SYLLABUS**

**Course Title: Database Programming**

**Course Number: IST 278**

**READ THIS SYLLABUS CAREFULLY**

You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The following information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

**Attachment 1:**

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

**Attachment 2:**

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."

**Attachment 3:**

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."

**Approved by:**

 B-14-14

Beau Sanders, Department Head, Computer Technology Department  
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**Approved by:**

  
Joel D. Welch, Ph.D., PE  
Dean, Technology Division

**Date:**



*This syllabus will remain in effect until revised or reviewed no later than August 2015.*

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**COURSE SYLLABUS**

**Course Title:** Database Programming

**Course Number:** IST 278

**Lecture hours per week:** 3.0

**Lab/Clinic Hours:**

**Semester credit hours:** 3.0

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

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

**Purpose of the 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 text(s) and other materials:**

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

**COLLEGE-WIDE STUDENT LEARNING OUTCOMES**

1. Communication – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.
2. Information Technology and Technological Literacy – Students will demonstrate competency in using computer technology within a field of study.
3. Critical Thinking/Reasoning – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.
4. Professional and Personal Responsibility – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.
5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

*Revised December 31, 2012*

## COMPUTER TECHNOLOGY PROGRAM LEVEL 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.

*Revised August 2012*

## IST 278 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.
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.*

## 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  
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.***

#### IST 278 – COURSE SPECIFIC REQUIREMENTS

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.

#### IST 278 – EVALUATION AND GRADING INFORMATION

##### 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.

**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