COURSE SYLLABUS

Course Title: Database Programming
Course Number: IST 278

Lecture hours per week: 3.0   **Lab/Clinic Hours:**   **Semester credit hours:** 3.0

Prerequisite: IST 272, CPT 186, MAT109 or MAT 110 or higher

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) or other materials:
1. Beginning SQL Server 2008 Programming; Robert Vieira; Wrox – Wiley Publishing; ISBN: 978-0-470-25701-2
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.

Approved March 26, 2009

COMPUTER PROGRAMMING PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the CPT/Programming program, the graduate will be able to:
1. Students will be able to analyze, design, develop, and document solutions that will satisfy the information needs of business users using established design methodologies and standards.
2. Students will be able to design, create, test, and document logical programming solutions to prescribed specifications following established standards and using current development environments and languages for application development and database management.
3. Students will be able to demonstrate the knowledge and ability to install and maintain microcomputer hardware and operating system software.
4. Students will be able to demonstrate the use of a minimum of three business application software packages.
5. Students will be able to demonstrate fundamental team building, project management, and presentation skills by participating in team projects that include team goals and values, a development methodology for documentation and coding, group presentations, and exposure to topics such as diversity, time management, and goal setting.
6. Students will be able to demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer lab assignments.

IST 278 COURSE OUTCOMES

Students who successfully complete this course will have demonstrated the skills necessary to accomplish the following objectives with a minimum competency 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/Programming program level student learning outcomes numbered 2 and 7 above.

IST 278 – Main 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

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.

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 above information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment I:

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."
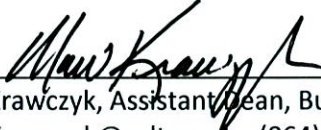
Attachment 3:

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."
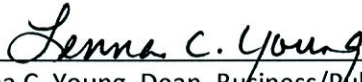
Approved by: _____

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Lenna C. Young, Dean, Business/Public Service

27 June 11
Date

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This syllabus will remain in effect until revised or reviewed no later than   August 2012.