COURSE TITLE: Programming for Relational Database Management

INSTRUCTOR: Prof. Carl B. Struck

OFFICE: Caumsett-215 (851-6288)

Monday • 2:30 - 3:30
Tuesday • 3:10 - 4:10

Wednesday • 1:30 - 3:30
Thursday • 10:30 - 11:30

E-MAIL: struckc@sunysuffolk.edu

TEXTBOOK:

SUPPLEMENTAL READINGS:
W3Schools. CSS Tutorial. Copyright 1999-2011 Refsnes Data. (www.w3schools.com/css/default.asp)
W3Schools. SQL Tutorial. Copyright 1999-2011 Refsnes Data. (www.w3schools.com/sql/default.asp)

SUPPLIES:

- Microsoft Visual Studio Community 2015; this free download and install requires that you are a current college student either full-time or part-time.
- USB flash drive (memory stick) or some other storage device for saving files.
COURSE OBJECTIVES:

At the end of this course, students will be able to:

- Design a database system
- Design a system using structure query language (SQL)
- Demonstrate the use of the Visual Studio IDE in the creation of database programs
- Create a Web-based DBMS program using structured programming style
- Use, describe and write programs using multiple files
- Store, retrieve and update data in the database using structured programming style
- Present database web browser oriented programs in detail.

PROCEDURES FOR ACCOMPLISHING THESE OBJECTIVES:

- Class lectures and discussions.
- Use of audio-visual devices.
- Homework review and practice problems from textbook and other sources.
- Application problems on IBM compatible computers.

STUDENT REQUIREMENTS FOR COMPLETION OF THE COURSE:

- Normalization and end of unit projects: 70%
- ASP.NET final project: 30%

Do not expect to get an “A” grade for doing the base project; rather that grade is reserved for students who go beyond the requirements of the assignment.

Students must submit projects to the instructor via Blackboard, an Internet website maintained jointly by Suffolk Community College and the SUNY Learning Network. Students who do not have Internet access from home can get access from the computer lab in Caumsett Hall, room 211.

All assignments and projects are due by the end of the day (11:59 p.m.) on the date announced unless otherwise stated. No late assignments will be accepted unless an extension date is prearranged with the instructor.

Although computer lab time may be scheduled each week during class time, students should be aware that additional lab time outside of class may be necessary to complete the requirements of this course. Students who do not have a computer at home (or some other location) should plan to spend an additional 3-6 hours per week in the computer lab.
ATTENDANCE REQUIREMENTS:

"The College expects that each student will exercise personal responsibility with regard to class attendance. All students are expected to attend every class session of each course for which they are registered. Students are responsible for all that transpires in class whether or not they are in attendance. The College defines excessive absence or lateness as more than the equivalent of one week of class meetings during the semester. Excessive absence or lateness may lead to failure in a course or removal from the class roster." (College Catalog)

Attendance is not a factor in the computation of the course grade but may be a factor in determining class participation. It is the student's responsibility to make his/her attendance known to the instructor if arriving late. Students who stop attending classes without officially withdrawing from the course will receive a failing grade (F).

SCHEDULE OF TOPICS TO BE COVERED:

- **Jan 19 - 21**
  - A review of the relational model and normalization
    - Reading: Mitchell—Hour 13 (pp. 297-303)
    - Reading: Coulson — The 3 Normal Forms: A Tutorial (see instructor's website)
  - **Project 1: Normalization Project** (Due: Jan 26)

- **Jan 26 - 28**
  - Getting Started with ASP.NET
    - Reading: Mitchell—Hour 1
  - An HTML Primer
    - Reading: Mitchell—Hour 2
  - **Project 2: HTML Project** (Due: Feb 2)

- **Feb 2 - 4**
  - Using Visual Studio for Web Development
    - Reading: Mitchell—Hour 3
  - Creating ASP.NET Web Pages
    - Reading: Mitchell—Hour 4
    - Supplemental reading: How to: Add ImageButton Web Server Controls to a Web Forms Page.
    - Supplemental reading: ImageButton Class.
  - Literal and Label Controls
    - Reading: Mitchell—Hour 8 and Hour 2, pp. 37-39, “Image Web control”
  - **Project 3** (Due: Feb 9)
Feb 9 - 11

- Web Forms
  - Reading: Mitchell—Hour 9
- Data Input Using TextBoxes
  - Reading: Mitchell—Hour 10
- Other Data Input Web Controls (DropDownLists, RadioButtons and CheckBoxes)
  - Reading: Mitchell—Hour 11
- Project 4 (Due: Feb 16)

Feb 16 - 18

- Validation Controls
  - Reading: Mitchell—Hour 12
  - Supplemental reading: Mitchell, S. Using the Custom Validator Control. Copyright 2013 QuinStreet Inc.
- Cascading Style Sheets (CSS)
  - Supplemental reading: CSS Tutorial (through "Styling Tables"). Copyright 1999-2013 by Refsnes Data.
- Project 5 (Due: Feb 23)

Feb 23 - 25

- Microsoft SQL Server Review
  - Reading: Mitchell—Hour 13 (pp. 304-318)
  - Supplemental reading: Creating Database Tables in Microsoft SQL Server (see the instructor's website)
- Structured Query Language (SQL), and the SqlDataSource Control
  - Reading: Mitchell—Hour 14
  - Supplemental reading: W3Schools. SQL Tutorial (through "SQL Inner Join"). Copyright 1999-2013 by Refsnes Data.
- Project 6 (Due: Mar 1)

Mar 8 - 10

- Displaying Data (GridView and DetailsView)
  - Reading: Mitchell—Hour 15
- Inserting, Updating and Deleting Data (GridView and DetailsView continued)
  - Reading: Mitchell—Hour 16
- Project 7 (Due: Mar 15)
Mar 15 - 17

- Data Bound List Controls (DropDownList, CheckBoxList and RadioButtonList)
  - Reading: Mitchell—Hour 17
- The Other Fields and Two-Way Data Binding with DropDownList (GridView and DetailsView continued)
  - Reading: Mitchell—Hour 18
- Query Strings

- Project 8 (Due: Mar 29)

Mar 29 - 31

- Templated Data Web Control (ListView and FormView)
  - Reading: Mitchell—Hour 19
- More Templated Data Web Controls (DataList)
  - Supplemental readings (Redmond, WA: © 2013 Microsoft Corporation):
    - Displaying Data with the DataList and Repeater Controls.
    - An Overview of Editing and Deleting Data in the DataList
    - Showing Multiple Records per Row with the DataList Control
    - Paging Report Data in a DataList or Repeater Control
    - Sorting Data in a DataList or Repeater Control

- Project 9 (Due: Apr 5)

Apr 5 - 7

- More Templated Data Web Controls (Repeater)
  - Supplemental readings (Redmond, WA: © 2013 Microsoft Corporation):
    - Supplemental reading: Displaying Data with the DataList and Repeater Controls.
    - Supplemental reading: An Overview of Editing and Deleting Data in the DataList.
    - Supplemental reading: Showing Multiple Records per Row with the DataList Control.
    - Supplemental reading: Paging Report Data in a DataList or Repeater Control.
    - Supplemental reading: Sorting Data in a DataList or Repeater Control.

- Non-Bound SQL Statements (Insert, Update and Delete)
  - Supplemental readings (Redmond, WA: © 2013 Microsoft Corporation):
    - SqlDataSource.Insert Method
    - SqlDataSource.Update Method
    - SqlDataSource.Delete Method

- Project 10 (Due: Apr 21)
• Apr 12 - 14

✓ Master Pages
  ▪ Reading: Mitchell—Hour 21
✓ Web User Controls
  ▪ Supplemental readings (Redmond, WA: © 2013 Microsoft Corporation):
    ▪ ASP.NET User Controls Overview
    ▪ How to: Create ASP.NET User Controls
    ▪ How to: Include ASP.NET User Controls in an ASP.NET Web Page
✓ Project 11 (Due: Apr 28)

• Apr 19 – May 10

✓ The ASP.NET Final Project (Due: May 10)