



# DATA STRUCTURES

COURSE SYLLABUS

3-0-3

Date: 11/17/11

**COURSE NUMBER:** CPT 244

**PREREQUISITE(S):** None

**CO-REQUISITE(S):** CPT 114 with a minimum grade of "C".

**COURSE DESCRIPTIONS**

This course examines data structures widely used in programming. Topics include linked lists, stacks, queues, trees, and storing and searching techniques. A microcomputer database package will be used.

**TEXTBOOK(S):** **New Perspectives, Microsoft Access 2010, Comprehensive.** Adamski & Finnegan. Course Technology. ISBN: 0-538-79847-5. (Bundle # 1111878455)

**REFERENCE(S):** None

**OTHER REQUIRED MATERIALS, TOOLS, AND EQUIPMENT:**

USB Disk Drive (min. capacity 4 Gb.)  
**Student should have access to Blackboard.**  
Read protocol on **Blackboard** for submitting files to instructor.  
Access-2010 software is a must or you can use campus computers.  
Computer with Internet access, Internet Explorer 6.0 or higher or other current browser is required.  
Computer with Internet access, Internet Explorer 5.0 or higher or other current browser, Java, word processing software (must be able to save Word format), and anti-virus software.

**METHOD OF INSTRUCTION:**

This course will be taught via the Internet using online lecture notes, discussion board, and electronic messaging.

**GRADING SYSTEM:**

|       |   |     |   |   |
|-------|---|-----|---|---|
| 90    | - | 100 | = | A |
| 80    | - | 89  | = | B |
| 70    | - | 79  | = | C |
| 60    | - | 69  | = | D |
| Below | - | 60  | = | F |

**GRADE  
CALCULATION  
METHOD:**

|                           |   |             |
|---------------------------|---|-------------|
| Tests (3 tests)           | = | 30%         |
| Quizzes (8 quizzes)       | = | 10%         |
| Projects (11 assignments) | = | 40%         |
| Final Exam                | = | 20%         |
|                           | = | <u>100%</u> |

**CONFIDENTIALITY:**

All students' e-mail addresses may be available to other students in the class. Although some assignments in an online course may encourage or require peer communication, the instructor will make every effort to protect the confidentiality of any personal communication (for example, grades). However, you should recognize that e-mail and other electronic media are not secure; there is no guarantee of the privacy of your e-mail or other personal information.

**APPROPRIATE  
ONLINE BEHAVIOR:**

The use of Spartanburg Community College's website, e-mail service or course management software for creation and/or distribution of material not pertaining to course participation is prohibited and is grounds for dismissal according to College policy under "disruptive behavior." Such actions, include, but are not limited to:

- Inappropriate use of email and discussion boards for:
  - ✓ Harassment
  - ✓ Unlawful solicitation
  - ✓ "Spamming"
  - ✓ "Flaming"
- Use of online editing tools within the course management software to:
  - ✓ Create offensive material
  - ✓ Link to inappropriate materials

**ATTENDANCE  
POLICY:**

**Attending the orientation is optional.**

An electronic e-mail is required from each student to the instructor by the end of the drop/add period. At this time the Instructor will drop the student from the course if it is not received.

Students are responsible for accessing the web class weekly to meet the course requirements [one contact per week is the minimum requirement] of exams, discussion board and paper submissions). See the Faculty Support section of the DL web page for examples from various SSC online courses.

Instructors maintain attendance records. However, it is the student's responsibility to withdraw from a course. A student who stops attending the online class and fails to initiate a withdrawal will remain on the class roster. *With this in mind, for every assignment, test or exam not completed while still enrolled in the course the student will receive a grade of zero and the final course grade will be calculated accordingly.*

Withdrawal Policy: During the first 75% of the course, a student may initiate withdrawal and receive a grade of W. A student cannot initiate a withdrawal during the last 25% of the course. Extenuating circumstances require documentation and approval by the appropriate department head and academic dean.

**ACADEMIC  
CONDUCT:**

ACADEMIC DISHONESTY: Students are expected to uphold the integrity of the College's standard of conduct, specifically in regards to academic honesty. All forms of academic dishonesty including, but not limited to, cheating on assignments/tests, plagiarism, collusion, and falsification of information will call for disciplinary action. Disciplinary action imposed may include one or more of the following: written reprimand, loss of credit for assignment/test, termination from course, and probation, suspension, or expulsion from the College. For further explanation of this and other conduct codes, please refer to the Student Handbook.

**CLASS/LAB  
PROCEDURES:**

**Tests and Quizzes:**

All tests and Quizzes will be taken on the **BLACKBOARD**. Tests will be released for a one-day period. There are eight true or false quizzes.

If any test is not taken during the specified time frame, the test grade will be recorded as a zero. One zero on a test may be replaced with the final exam grade with a 10-point deduction. Everyone will take a comprehensive final exam. No exemptions!

**ACCOMMODATIONS:** Students who need special accommodations in this class because of a documented disability should notify Student Disability Services by calling (864) 592-4818, toll-free 1-800-922-3679; via email through the SCC web site at [www.sccsc.edu/resources/disabilities](http://www.sccsc.edu/resources/disabilities); or by visiting the office located in the East Building Room 30-B on the SCC Central campus. Contacting Student Disability Services early in the semester gives the College an opportunity to provide necessary support services and appropriate accommodations.

**The Learning Center**, located in the rooms E-2 & E-5 of the East Building, provides computers for your use. Check the website <http://www.sccsc.edu/resources/tutoring/tlc> or call 592-4968 for current semester operating hours.

**Program Department Chair**

Mrs. Marcia Schenck  
592-4839  
[schenckm@sccsc.edu](mailto:schenckm@sccsc.edu)

**COURSE OUTCOMES & OBJECTIVES:** Upon satisfactory completion of this course, the student will be able to:

- I. Design and create a database with table objects
  1. Organizing Data
  2. Introduce Database and Relationships
  3. Exploring the Microsoft Access Window
  4. Creating a Table in the database
  5. Create a simple Query
  6. Create a simple Form
  7. Create a simple Report
  8. Managing the database
  
- II. Maintain database tables
  1. Introduce setting fields in the table
  2. Naming Fields and Objects
  3. Assigning Fields Data Types
  4. Setting Field Sizes and Data Types
  5. Specifying Primary Keys

6. Importing Data from an Excel Worksheet
  7. Defining Tables Relationships
- III. Maintaining and Querying a Database
1. Updating a Database
  2. Introducing to Queries
  3. Defining Record Selection Criteria for Queries
  4. Defining Multiple Selection Criteria for Queries
5. Creating Calculated Fields
6. Using Aggregates Functions
- IV. Creating Forms and Reports
1. Creating Forms using Wizard
  2. Modifying a Form in Layout View
  3. Creating a Form with a Main form and a Subform
  4. Creating a Report using the Report Wizard
  5. Modifying a Report in Layout View
- V. Creating Advanced Queries and Enhancing Table Design
1. Reviewing the Panorama Database
  2. Using a Pattern Match in a Query
  3. Using a List-of-Values Match in a Query
  4. Using the Not Operator and AutoFilter in a Query
  5. Creating a Parameter, Crosstab, Fine Duplicates, Find Unmatched, Top Values Queries
  6. Defining Data Validation Rules
- VI. Creating Custom Forms
1. Designing Forms
  2. Creating Forms using Form Tools
  3. Planning and Designing a Custom Form
  4. Creating a Custom Form in Design View
  5. Adding Fields and Combo Boxes to a Form
  6. Adding a Subform to a Form
  7. Changing the Tab Order in a Form
  8. Improving Form's Appearance
- VII. Creating Custom Reports
1. Customizing Existing Report
  2. Designing a Custom Report
  3. Creating a Query for a Custom Report
  4. Creating Mailing Labels

- VIII. Sharing, Integrating, and Analyzing Data
  - 1. Exporting an Access Query to an HTML Document
  - 2. Importing CVS Files as an Access Table
  - 3. Importing an XML File as an Access Table
  - 4. Integrating Access with Other Programs
  - 5. Embedding a Chart in a Form
  - 6. Creative and Using a Pivot Table