## Advanced Visual Basic Programming (ITSE 2449)

**Credit:** 4 semester credit hours (3 hours lecture, 2 hours lab)

**Prerequisite/Co-requisite:** Successful completion of ITSE 1431 Intro to Visual Basic Programming

## Course Description

Advanced Visual Basic programming including file access methods, data structures, modular programming, program testing and documentation.

## Required Textbook and Materials

1. Microsoft® Visual Basic 2008: Comprehensive Concepts and Techniques , 1st Edition
    a. ISBN number is 13: 9781423927167
2. USB Flash Memory drive

## Course Objectives

Upon completion of this course, the student will be able to:

1. Design and write Visual Basic programs containing data structures (SCANS:C5, C6, C8, C9, C19, F1, F2, F3, F9)
2. Develop graphical user interfaces (SCANS: C5, C6, C8, C9, F9)
3. Integrate external programs and libraries with Visual Basic applications (SCANS: C5, C6, C8, C9, F2, F3, F9)
4. Create appropriate documentation (SCANS: C5, C6, C8, C9, F1, F2, F3, F9)
5. Design and write Visual Basic programs containing data structures and input/output file handling (SCANS:C5, C6, C8, C9, C19, F1, F2, F3, F9)

## SCANS Skills and Competencies

Beginning in the late 1980's, the U.S. Department of Labor **S**ecretary's **C**ommission on **A**chieving **N**ecessary **S**kills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools.* In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies

## Course Outline

A. Visual Basic Overview
    1. Basic Operators
    2. Form Controls
    3. Code Basics
    4. Variables & Arithmetic Operations
    5. Decision Structure

B. Loop Structures
    1. Proper Loop Procedures
    2. For…Next Loop

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3. Do Loop
4. Do Until Loop
5. Nested Loops

C. ASP.net
1. Naming Page Divisions
2. Arranging Div Contents
3. Div Elements
4. Adding Styles
5. Validating Controls

D. Procedures and Exceptions
1. Splash Screen
2. Combo Boxes
3. Sub Procedures
4. Argument Passing

E. Array Handling
1. Arrays
2. Initializing an Array
3. Array Scope
4. Passing Arrays
5. File Handling

F. ADO.net
1. Database Files
2. Binding Data
3. Establishing Data Connections
4. Event Planning

G. Inheritance
1. Classes
2. Creating a Class
3. Coding a Class
4. Constructors
5. Event Planning Documentation

## Grade Scale

| | |
|---|---|
| 90 – 100 | A |
| 80 – 89 | B |
| 70 – 79 | C |
| 60 – 69 | D |
| 0 – 59 | F |

## Course Evaluation

Final grades will be calculated according to the following criteria:

| | |
|---|---|
| 1. Daily work | 60% |
| 2. Quizzes | 10% |
| 3. Test & Final | 30% |

## Course Requirements

1. Demonstrate proper System Life Cycle documentation
2. Create Flow Charts when required
3. Demonstrate proper form layout & code design
4. Successfully integrate VB w/ other software, Access, MySQL, HTML

## Course Policies

1. No food, drinks, or use of tobacco products in class.
2. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
3. Do not bring children to class.

4. No late assignments will be accepted. Any assignment submitted after the BlackBoard cut-off time will result in a '0'.
5. **Tests**. Students that miss a test are not allowed to make up the test. Students that miss a test will receive a grade of '0'.
6. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.
7. A grade of 'C' or better must be earned in this course for credit toward degree requirement
8. Test will be closed book/note and will test information in assigned chapters and material discussed in class.
9. All assignments will be completed using either Blackboard. Assignment may NOT be submitted via email
10. The materials for this course are mandatory. A student not acquiring these materials will not be able to PASS this course.
11. Data files can be located on the CD provided with the textbook or on the publisher's resource website or under the download section in BlackBoard.
12. **Attendance**: Students should be present and punctual for all classes. Two absences are allowed. The first absence incurred after the initial two absences will result in the loss of one letter grade. Each absence after that will result in deducting half a letter grade from your overall grade.
13. **Tardiness**: If tardy, enter quietly and do not disturb the class. Students that are tardy or miss a class are responsible for all work and/or discussion missed. The student is responsible to obtain missed material from a classmate. **Do not expect your instructor to repeat a lecture & do not interrupt your instructor.**
14. Do not talk, type, or print while the instructor is talking to the class or when a student is asking a question that pertains to the class.
15. Refrain from "surfing" the Web during class, unless directed by your instructor.

## Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

## Course Schedule

Refer to Blackboard or MyITlab for actual assignments and due date

| Week of | Topic | Reference |
|---|---|---|
| Week 1 | Course introduction and policies<br>Blackboard Navigation / How to save | |
| Week 2 | Quick Refresher | Chapters 1-5 |
| Week 3 | Web Applications | Chapter 6 |
| Week 4 | Web Applications | Chapter 6 |
| Week 5 | Review & First Test | Ch 1-6 |
| Week 6 | Procedures and Exception Handling | Chapter 7 |
| Week 7 | Procedures and Exception Handling | Chapter 7 |
| Week 8 | Review & Second Test | Ch 1-7 |
| Week 9 | Arrays and File Handling | Chapter 8 |
| Week 10 | Arrays and File Handling | Chapter 8 |
| Week 11 | Review & Third Test | Ch 1-8 |
| Week 12 | ADO.NET 2.0 | Chapter 9 |
| Week 13 | ADO.NET 2.0 | Chapter9 |
| Week 14 | Review & Fourth Test | Ch 1-9 |
| Week 15 | Classes and Inheritance | Chapter 10 |
| Week 16 | Final Exam | Ch 1-10 |

## Contact Information:

**Instructor:** Josh McNamara
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**Office Hours:** MW: 10:30-11:15
12:20-200
TR: 1:05-2:00
4:05-5:30
F: 10:30-11:15