I. **Course Name:** Visual Basic for Business Applications  
**Prefix and Number:** CSC 245  
**Credit Hours and Contact Hours:** 3 credit hours - 3 contact hours  
**Course Description:**  
Advanced programming concepts and practices are covered in this course, using VB.NET. Advanced concepts in graphical user interface design are also covered, along with a survey of more advanced data structures and object design. Mobile applications, data access classes, ADO.NET, are among the specific topics covered. Prerequisite: CSC 215.

II. **Course Outcomes and Objectives**

**Learning Outcomes**  
Upon completion of the course the participant will be able to:

1. Use advanced controls and objectives in a VB (Visual Basic for Applications) application to create user-friendly applications.  
2. Use VB to handle a database: all aspects (query, update, display)  
3. Use VB to create a dynamic HTML document  
4. Use VB to allow users to customize their applications by creating more convenient ways to perform common tasks.  
5. Use VB to create front-end modules that will interface database management software.  
6. Create a full application project from beginning to end (analyze, design, code, implement, document).

**Relationship to Academic Programs and Curriculum**  
This course is required in the Applications and Database Management track for the AAS IT degree program.

**College Competencies Addressed by this Course**  
Writing  
Reading  
Computer Literacy  
Problem Solving and Critical Thinking  
Ethics and Values

III. **Methods of Instruction**

**Types of Course Materials**  
1. Textbook:

**Methods of Instruction**  
Lecture, discussions, demonstrations, hands-on experiences in the Computer Lab.

**Assessment Measures**
Activities will emphasize problem solving using the computer specifically completing lab activities in the VB and VBA languages.

**Methods of Evaluation**
The demonstration of the satisfactory achievement of the above learning outcomes will be the responsibility of the student, facilitated by the instructor. Specifically, the following activities must be performed and completed for successful course completion:

A. Written examination after every significant part of the course as described above in Learning Outcomes.

B. Assigned projects (most to be completed on a computer) that supports the Learning Outcomes above. A culminating project will be assigned toward the end of the semester. Most of the work on the projects should be completed outside of class, however, some classed time can be used to help the learner get started, or help with any difficulties in the labs. Demonstration by instructor should be considered for some projects, as well.

IV. **Outline of Topics Covered**

A. Advanced VB Topics
   a. Creating variable arrays
   b. Storing data in variable arrays.
   c. Creating an application with one-dimensional array
   d. Creating drag-and-drop objects within an application

B. Database Access with VB
   a. Flexgrid control
   b. Activex database controls
   c. Accessing a database with SQL

C. Creating a Web Page with VB
   a. Using DHTML feature of VB
   b. Create web site locally

D. Creating Activex Controls
   a. Creating your own to be used throughout VB studio

E. Culminating VB Project
   a. Designing a major project
   b. Coding
   c. Documenting
   d. Implementation