ISDS 558: Advanced Software Development with Web Applications

Syllabus
CSUF, Spring 2002, Schedule #17456
Lecture: Tu 7:00-8:15 pm. LH 317
Lab: Tu 8:30-9:45 pm. LH 319

http://ecommerce.cbe.fullerton.edu/~rburke/courses/s02/isds558/

Prof. Robin Burke
Office: LH 502A
Office phone: (714) 278-5513
Hours: Th 10 – 11 am,
Tu/Th 9:45 – 10:45 pm (by appointment)
e-mail: rburke@fullerton.edu

Course Prerequisites: ISDS 408, 550, 552
Skill Prerequisite: Facility with Visual Basic 6.0 and associated technologies

Course Description
MSIS 558 covers advanced topics in Visual Basic software development. The class will concentrate on advanced topics in Visual Basic including database integration, components, and web applications. We will also cover object-oriented development. Each student will be expected to complete a portfolio of VB implementations.

Required Readings
Other readings will be available on-line or handed out in class.

Course Organization
The course is divided into lecture and lab periods. During lecture periods, I will present material related to readings from the Bradley and Millspaugh book and other readings. All students are expected to have read this material before class, and to be active participants in the lecture portion of the course. Lab sessions will (usually) be devoted to Visual Basic programming exercises that complement the lecture material. Each student will be required to complete a portfolio of programs in Visual Basic. Students with incomplete portfolios cannot get a passing grade in the course.

Learning Objectives
This course calls on you to demonstrate: (1) knowledge of Visual Basic and COM technologies, applications, protocols and concepts, (2) the ability to reason through analysis, evaluation and design of Visual Basic applications and components, and (3) the ability to effectively apply this knowledge to the construction of such programs. Students will be expected to use the course text and readings as well as outside references to supplement lecture material.

Assessment Measures
Students will be assessed based on their portfolios of completed programming assignments, and performance on the two exams.

Portfolio
The portfolio will consist of 5 Visual Basic programs. The first assignment in the portfolio is a pre-test designed to ensure that each student has the prerequisite programming skills. Students who do not get a passing grade on this assignment will be strongly encouraged to withdraw from the course. Each assignment will be submitted twice: once on its original due date and a second time as part of the final portfolio. Students are encouraged to revise their programs, taking into account instructor comments, before submitting the final portfolio.
• The final portfolio must be complete – it must contain all five assignments.
• A program cannot be included in the final portfolio if the initial assignment was not submitted.
• Portfolio submissions must be accompanied by the original instructor comments from the first submission.
• Partial credit will be given for partial completion of assignments.

Midterm and Final
The midterm and final will be closed-book written exams covering lectures, assignments and readings.

Course Grade Calculation
• Portfolio (60%)
  • 25% original submissions
  • 35% final submissions
• Exams (30%)
  • Midterm (15%)
  • Final Exam (15%)
• Attendance/Participation (10%)

Note:
A student cannot achieve a passing grade if
• The first portfolio assignment receives an F, or
• The final portfolio or set of initial submissions is incomplete.

Attendance
I expect you to come to class every meeting day, arrive on time, and participate fully in class discussions and exercises. Attendance is especially important because this course meets only once a week. Thus you will be allowed only one absence during the course of the semester. If you are absent a second time, your course grade will drop by one full point. If you are absent three times, you will fail the course. This policy applies to both excused and unexcused absences. Students may only be excused for documented medical or family emergencies or religious holidays. You must notify me as soon as possible of documented absences.

Late Assignments
All assignments are due at class time on the assigned date. Late assignments will be accepted up to one week late with a one grade point penalty, but only if an extension is requested in advance. Requests made at the start of class are not “in advance.”

Incompletes
If for some reason you need extra time to complete the course, you must submit a written request for an Incomplete (either in person or by e-mail). Such a request should be made in advance of the final exam date and should include 1) an explanation of why you are unable to meet your obligation, and 2) a completion proposal including a statement of work and the date on which you agree to submit it. Except in cases of documented emergency, I will not issue a grade of Incomplete if you ask for one on or after the date of the final.

I will handle requests for Incompletes on a case-by-case basis. If I approve your request, I will sign a copy and return it to you. Please be aware that your Incomplete is not approved until you receive the signed copy. Also, please be aware that I will not accept your work if you submit it after the date you yourself set for completion of the course.

Classroom Etiquette
• Please turn off pagers and cell phones before coming to class.
• Please do not tape lectures or discussions. If you have a documented need, please let me know.
• Please do not get up and walk out in the middle of class. Such behavior is discourteous and disruptive. If you need to leave early, please let me know ahead of time.
• Please do not chit chat or eat loud food in class.
• Please be mindful that you are part of a learning community. Treat others with respect even if you do not agree with their positions or they with yours.
Important Note
I reserve the right to modify this syllabus at any time during the course of the term. The most current course information will be available on the course web site.

Academic Honesty
Students are expected to do their own work. All parts of a programming assignment submitted by you must be your own work or clearly labeled otherwise. It is permissible (in fact, encouraged) for you to discuss problem-solving approaches and programming language details with classmates, but you are responsible for all low-level design and coding. Students who violate university standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the university. Since dishonesty in any form harms the individual, other students and the university, policies on academic integrity are strictly enforced. I expect that you will familiarize yourself with the academic integrity guidelines found in the current student handbook.

Schedule of Class Meetings & Assignment Due Dates

2/5 Introduction
Lecture: Introduction, Course structure, Course portfolio.

2/12 User Interface Implementation
Lecture: MDI and SDI projects. Design time and run time configuration. Error handling.
Due: Assignment #1 (Basic)
Reading: Chapters 1 and 2

2/19 Database Integration I
Lecture: OLE DB. ADO. The ADO Data Control. Data-bound controls.
Reading: Chapter 3

2/26 Database Integration II
Lecture: Cursors and Recordsets. Sorting and filtering.
Due: Assignment #2 (Database)
Reading: Chapter 4

3/5 Database Integration III
Lecture: ADO Objects. SQL Statements. Stored procedures.
Reading: Chapter 5

3/12 Object-oriented VB
Reading: Chapter 6

3/19 Object-oriented design
Lecture: Multi-tier applications. UML diagrams. Data-aware classes.
Due: Assignment #3 (Object)
Reading: Chapter 7 and TBA

3/26 Midterm

4/2 Spring Break

4/9 ActiveX Components
Lecture: ActiveX components. Dll and Exe components. Interface classes.
Reading: Chapter 8
4/16 **ActiveX Controls**
   Due: Assignment #4 (ActiveX)
   Reading: Chapter 9 (skim 395-409)

4/23 **Internet Applications I**
   Lecture: VBScript. ASP.
   Reading: TBA

4/30 **Internet Applications II**
   Lecture: Web application basics. Web architecture. Internet controls. DHTML. IIS.
   WebClasses
   Due: Assignment #5 (ASP)
   Reading: Chapter 10

5/7 **Design patterns I**
   Reading: TBA

5/14 **Design patterns II**
   Lecture: Instantiation patterns.
   Reading: TBA

5/21 **Distributed applications and .NET**
   Lecture: Distributed systems. Distributed object management: CORBA, RMI, COM+. Web services. .NET.
   Lab: Implementation demos
   Due: Course portfolio
   Reading: TBA

5/28 **Final exam (7:30 – 8:50 pm)**