

**Business and Information Technology Department
Spring 2010**

Missouri University of Science & Technology
Information Science and Technology 151
Implementing Information Systems - Data Perspective
Spring Semester 2010 – Syllabus

Class Information

Class: Monday, Wednesday, and Friday 10:00-10:50
Class Room: Toomey Hall 251

Contact Information

Instructor: [Carla Bates](#)
Email: [mailto:carla@mst.edu?subject=IST 151 questions](mailto:carla@mst.edu?subject=IST_151_questions)
Phone: 341-6078(office)
Office: Computer Science 101
Office Hrs: By appointment (not available Tuesdays)

COURSE INFORMATION

Catalog Description:

Continuation to object-oriented programming in the context of developing and implementing the various components of an information system with particular attention given to database incorporation. Class will include numerous projects covering intermediate topics. Prerequisite: IST 51.

Extended Description:

Over the last several years the department has previously taught Visual Basic and Java during the first year of introductory programming. After much deliberation, we have decided to teach Visual C# in the IST 51 and IST 151 classes. Visual C# includes many of the best features of Visual Basic and Java, and also has the full power of the .NET Framework. From the student's perspective, this will result in you being able to create much more power programs with less effort. Furthermore, a year on one language allows more depth with less repetition of concepts.

Information systems are the focus of the Information Science and Technology department. An information system is a large set of programs and interfaces that provide timely data for business operations and decision making requirements. There are many important aspects of information systems common to most commercial implementation. This course will introduce students to the Visual C# language in the context of implementing an information system. In particular, IST 151 focuses on the issues of implementation surrounding the system data layer. This layer will be composed of file structures as well as relational databases.

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Course Prerequisites:

IST 51

Required Materials:

Simply C#. An application-driven tutorial approach. Deitel, Deitel, Hoey, Yaeger. ISBN: 0-13-142641-9.

Instructional Methods:

The instruction is a combination of lecture and laboratory. The lectures will be used to teach important concepts, definitions, and techniques. The labs will be highly interactive and directed experiences allowing a hands-on approach to learning the programming exercises.

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Course Learning Objectives:

Course Objectives	Program Learning Objectives			
	Communication Skills	Critical Thinking	Information Technology	Teamwork & Leadership
Understand the various components of an information system and their role in a corporate organization	X		X	X
Learn how to use the Visual C#.NET environment to build information system components	X	X		
Understand and utilize basics of object-oriented design and how it relates to .NET Framework		X	X	
Understand the event driven programming style, including basic controls and methods		X	X	
Understand how to build simple relational databases		X	X	
Build simple databases using MS Access		X	X	
Integrate databases into Visual C# programs using ADO.NET		X	X	
Master the core programming concepts with regards to the manipulation of data fields		X	X	
Learn how to display information from databases on interfaces		X		
Learn to read simple programming requirement documents	X			
Learn to write simple technical specification documents	X			

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COURSE ASSIGNMENTS

Homework and Labs:

Homework and computer laboratory assignments will be made frequently. These are to be done individually. Homework and lab exercises are to be completed on the specified date and time. Late homework or lab exercises will NOT be accepted and will result in a zero for that assignment.

Participation points:

Participation points will include in-class quizzes and assignments. The quizzes will be administered at the **start** of the class (only available to start them during the first 5 minutes of class) and will be multiple choice. These will use the Blackboard assessment tool and your score will be posted immediately. These will be open notes and book but must be taken in class that day. The in-class assignments will be completing a project including new ideas that have been discussed. We will have more than 20, but only the best 20 (quizzes and in-class assignments) will be used to calculate your grade (this will allow for you to miss a few classes without your grade suffering).

Examinations:

The midterm and final will consist of two part examinations. You will have an applied programming project and a debugging exercise. The point of the exercises is to produce quality applications and to be able to debug and modify existing code that you did not write. Both of these are classic information technology daily activities.

COURSE POLICIES AND GRADING

Attendance:

Attendance is strongly encouraged, particularly as the quizzes will be based on the important definitions and concepts presented in the lectures. You will likely want to ask questions. The class moves quickly and it is easy to fall behind and not get caught up. The more you miss class, the more material that will be foreign to you.

If emergency circumstances arise, please contact the instructor as soon as possible to avoid penalties, and to try to catch up to the rest of the class.

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Academic Integrity Statement (<http://registrar.mst.edu/academicregs/>):

Violations of the University's academic code include, but are not limited to, possession of or use of unauthorized materials during quizzes or tests; providing unauthorized information to another student; or copying the work of another person. Violations may result in academic penalties in addition to receiving an "F" on the assignment in question. (See page 30 of Mst's "Student Academic Regulations" handbook for further details about student standards of conduct relative to the system's Collected Rules and Regulations section 200.010.)

Academic Alert System (<http://academicalert.mst.edu/>):

Missouri S&T is committed to the success of its students by providing an environment conducive to teaching and learning. To ensure that every student takes full advantage of the educational opportunities and support programs on campus, the University has implemented an Academic Alert System, a web-based application. The purpose of the System is to improve the overall academic success of students by:

- Improving communication between students, instructors, and advisors;
- Reducing the time required for students to be informed of their academic status;
- Informing students of actions they need to perform in order to meet the academic requirements in the courses they are taking.

To assist you, I will initiate an academic alert for students who are not meeting academic course requirements through poor performance on assignments. When an alert is initiated, an email is immediately sent to the instructor, student, and advisor. You are encouraged to respond quickly to all academic alerts. If you fail to open the alert within one week, email notification is sent to your advisor.

Disability Support Services (<http://counsel.mst.edu/>):

If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation. If you have a disability that might require academic accommodations, please visit Disability Support Services in 204 Norwood Hall (341-4211; dss@mst.edu) very early in the semester.

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COURSE GRADING

Grading Breakdown:

Grades will be based on total points, as defined below. There may be bonus points from time to time, which would be added to whatever category the bonus applies to. I will not round up your final grade at all if you have not turned in every assignment. You can expect that there will be class assignments, labs, or tests most every week.

Point Distribution:

Assessment	Description	Points	Number	Total Points
Assignment 1	Managing Rich Text Files	50	1	50
Assignment 2	Reading a Comma Separated Variable File	50	1	50
Assignment 3	Modifying a Comma Separated Variable File	50	1	50
Assignment 4	Creating Databases in Access	50	1	50
Assignment 5	Reading Information from a database	100	1	100
Assignment 6	Updating Information in a database	100	1	100
Assignment 7	Validating data before inserting into a database	100	1	100
Debugging Exams	Debugging Existing Code	50	2	100
Programming Exams	Program a Quality Application	100	2	200
Daily Quizzes & In-Class Assignments	Quizzes and in-class assignments over the Reading Material and Lectures	10	20	200
Total Points				1,000

Grades:

- A: 100% - 90%
- B: 89% - 80%
- C: 79% - 70%
- D: 69% - 60%
- F: Below 59%

COURSE OUTLINE

The course will proceed as follows. This schedule is a best estimate. We may drift a bit from it.

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It should be made clear that you are expected to work on the assignments outside of class. Many of the assignments will be explained during lectures, but you will need time outside of class to bring them closure. Plan on a couple of hours outside of class for each hour spent in class.

Lecture Week	Topics	Reading (Ch. & Section)
1 1/11 – 1/15	Welcome to Course, Managing errors with dialog boxes, Review	Become familiar with this course BlackBoard layout and resources. Review C# syntax.
2 1/20 – 1/22	RichTextBox control, Menus, and event handlers for menu items.	Chapter 22 (section 22.4) and notes.
3 1/25 – 1/29	File manipulations (reading/writing) Rich Text Files,	Chapter 24 and Notes
4 2/1 – 2/5	Comma Separated (Delimited), Review Split and Join	Assignment 1 due February 1. Notes
5 2/8 – 2/12	CRUD, Information Validation	Assignment 2 due February 8. Notes
6 2/15 – 2/19	Midterm Font and Color Dialogs	Assignment 3 due February 15. Chapter 22 pgs. 561-564
7 2/22 – 2/26	Relational Databases, Normal Form, Creating an Access Database	Mid-Term due February 22. Notes/Links
8 3/1 – 3/5	Importing CSV Files	
9 3/8 – 3/10	SQL, Common Database Interactions	Assignment 4 due
10 3/15 – 3/19	Database Interface, Navigating Data	Chapter 25, material posted
11 3/22 – 3/26	Updating Database	Assignment 5 due
12 4/5 – 4/9		
13 4/12 – 4/16	Data Validation, Reporting Errors to User	Assignment 6 due
14 4/19 – 4/23		
15 4/26 – 4/30		Assignment 7 due
16 5/3 – 5/7		
Final	Debugging	Final due May 14

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