

# Problem Solving and Programming in Business

IS 236

## COURSE SYLLABUS

*When and Where* Spring 2005 – Thursday nights 6:30PM – 9:00PM in LT 135

*Instructor* Alan G. Labouseur *Office* LT015

*Office Hours* Mondays 2:30PM-3:30 PM / Wednesdays 11AM - 2 PM and 3:30PM – 6:30 PM /  
Thursdays 5:30PM – 6:30 PM / and by appointment

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*Text* *Programming Right From the Start with Visual Basic .Net* by Crews and Murphy  
Published by Pearson Prentice Hall. ISBN 0-13-141696-0

<i>Grading Criteria</i>	A	>= 93%	C+	>= 77%
	A-	>= 90%	C	>= 73%
	B+	>= 87%	C-	>= 70%
	B	>= 83%	F	< 70%
	B-	>= 80%		

<i>Grading Opportunities</i>	Homework	30%	5 at 60 points each = 300 possible points
	Mid-term Exam	20%	1 for 200 possible points
	Final Exam	20%	1 for 200 possible points
	Final Project	20%	1 for 200 possible points
	Class Participation	10%	50 possible points for attendance, 50 possible points for sharing in and contributing to class discussions

- Course Objectives and Assessment Methods*
1. Object-Oriented Concepts: You will master the core concepts of Object-oriented programming. You will practice OOP in Visual Basic.Net.
    - o Assessment methods include assignments, exams, and projects.
  2. Event-driven programming: You will master the core concepts of event-driven programming. You will practice these in Visual Basic.Net.
    - o Assessment methods include assignments, exams, and projects.
  3. Programming and Application Design Skills: You will develop the skills to design a Windows-based application capable of solving common business problems.
    - o Assessment methods include assignments, exams, and projects.
  4. Troubleshooting: Writing the code is only half the battle. Debugging is a critical skill for a talented programmer, and one that will be heavily stressed in this course.
    - o Assessment methods include in-class exercises, assignments, and multi-week projects.
  5. Continuing Education: Capable problem solvers never stop learning. You will get practice in finding some answers for yourself.
    - o Preparation and presentation of the final project as well as participation in class discussions.
  6. Provide the students an opportunity to develop a long, large-scale project where they have to live with their past mistakes and shortcuts, or fix them. Either will teach a valuable lesson.

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## SEMESTER SCHEDULE

Wk	Date	Ch	Topic	What's Due
1	1/20	1-4	Introduction / Administrivia / The plan for the semester / Overview of .NET / Principles of OOP /	-
2	1/27	6	The Visual Studio .NET environment / Our first program / Forms / Controls / Forms and controls as objects / Events	-
3	2/3	7	Constants / Data types / Operators / Assignments and expressions / Input controls / Event-driven programming	Homework 1
4	2/10	8, 10	Alternation and Repetition / The badness of "exit" / Menus / Try and Catch / Radio buttons vs. check boxes	-
5	2/17	9	Your own procedures and sub-programs / Variable scope	Homework 2
6	2/24	9, 10	Arrays of data / Arrays of controls / Standard dialogs (file, page setup, print) / Text file I/O	-
7	3/3	-	Debugging / Objects and Collections / Enumerations / Review and examples	-
8	3/10	-	In-class Mid-term Exam	Homework 3
9	3/31	14	Your own Classes and Objects / Access modifiers, constructors, subclasses, and more	-
10	4/7	15	"Intelligent" Systems / Problem solving with heuristics	Homework 4
11	4/14	11	Introduction to databases / Working with databases in .Net	-
12	4/21	-	Introduction to XML / Working with XML in .Net	Homework 5
13	4/28	5.5	Recursive programming / Large-scale integration	-
14	5/5	-	In-class Final Exam	-
15	5/12	-	Final Project Presentations	Final Project

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## PROJECT AND ASSIGNMENTS

**Chapter Readings** You are expected to keep up with the chapters outlined in the syllabus.

**Homework** Homework assignments are essays or programs or problems that I assign. All assignments must be handed in at the beginning of class on the day they are due. Since all homework assignments are outlined in this syllabus or on the web site, arrange to submit homework on schedule, even when a class will be missed.

### Program and Project Evaluation Guidelines

All programs must be free of syntax errors to receive any credit. Programs that compile cleanly but contain logic errors will be graded based on the severity of the errors and your ability to demonstrate your approach to solving the problem. When evaluating your programming assignments, I will ask myself the following questions about your program:

- About the interface...
  - Is it “clean” and well-organized?
  - Does it obey the law of least astonishment?
  - How accurate is it?
- About the source code...
  - Are the comments plentiful, clear, meaningful, and helpful?
  - Are the identifier names accurate, clear, and meaningful?
  - How is its object-oriented architecture?
  - Does it compile cleanly?
  - Is the design worthy of a good grade?
- About the results...
  - Does it perform as assigned?
  - Is the output well-formatted and meaningful?

Remember, neatness and style count. If you hand in a program that works, but that does not adhere to reasonable style standards, is inadequately commented, or is poorly designed, you will be penalized. Good habits are important and I want you to develop some.

### Late Submissions

Late assignment submissions will be taken only at the end of the semester. If at that time the assignment appears (at my sole discretion) to be correct you will be given half credit for it. If it does not clearly and obviously appear to be correct, you will receive no credit for it. Since the appearance of correctness relies on my ability to remember what the assignment was, if you miss a deadline and submit it late you should take extra care to make it as obviously correct as possible.

### About Homework

Learning is an iterative process, and it requires time and effort. It cannot be sped up. Homework plays a significant role in this respect. Spending the time to put your best efforts into the homework assignments over the course of the semester will guarantee that you get the most out of this class. I cannot make you do that. Only you can.

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**Tests** Tests cover material presented up to the class in which the test is administered. No makeup tests will be given. If you anticipate missing a test deadline, make arrangements with me to hand in the exam on or prior to its due date.

**Final Project** You will write a substantial .Net application that solves a business problem which you will be assigned. This is an individual project, and all work must be your own. You will make a short presentation to the class to demonstrate your project and speak briefly about your experience developing it. This will be a quick, informal presentation. You will also write-up documentation for your project to be handed in.

<i>Grading</i>	Correctness	40%
	Completeness	30%
	Quality of documentation	20%
	Presentation of project	10%

**Class Participation** Questions and class discussion are encouraged as we learn as much from each other as we do from the text and assignments. Besides, I get sick of hearing myself talk, so your participation is very important and appreciated. (And required.)

**Attendance** The attendance policy for this class is simple: attend. “Class participation” accounts for 10% of your final grade, and this presumes your full attendance. Any planned or anticipated absences should be approved by me in advance. I reserve the right to give a failing grade if you miss more than one or two classes without my prior approval. This 10% of your grade must be earned.

**Contacting Me** Before or after class is not the best time to tell me important things. My short-term memory is too crowded with Sci-fi trivia and geek minutiae to facilitate remembering important developments in your life. It is much better to e-mail me with these things. That way I cannot forget, and there’s a record.

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## ACADEMIC HONESTY

As a part this class, I will uphold and enforce the general policies of this institution on academic honesty and plagiarism. All examinations, papers, projects, and homework assignments are subject to the usual standards of academic honesty as described in the Student Handbook and/or other related publications. Furthermore, I expect my students to behave in a manner appropriate to Computer Science and Information Technology professionals. Professional ethics demand that students embrace traditional “thou shall not cheat” behaviors, and also that they reject additional forms of dishonesty and abuse which are uniquely possible working with computers.

**Every one of you is expected to submit your own original work for assignments.** On many occasions when working on assignments (but never exams) it is useful to ask others – the instructors, your fellow students, strangers – for hints or to talk generally about aspects of the assignment. Collaboration in solving the problems is encouraged; you have a lot to learn from your fellow students, this is an important part of learning, and this is generally a positive and acceptable activity. However, in order to make grading the assignments a meaningful way to measure your effort and your understanding of the material, I must place some restrictions:

- You may work together in small groups on finding solutions, but each of you must then develop your favorite solution independently. You are responsible for understanding, presenting, and being able to explain on your own, all the work that you submit.
- You must indicate on all submitted work any assistance (human or otherwise) that you received. This means the names of your collaborators, the URLs of resources you used, etc. Any assistance that is not given proper citation will be considered a violation of this Academic Honesty policy.
- Any and **all** essay-type **answers must be completely and entirely in your own words**. You may use references (obviously) so long as they are cited. **You may not, under any circumstances, copy and paste another’s material and hand it in as your own.** Any violation of this will be considered a breach of this Academic Honesty policy and will result in academic smack-down the likes of which you have never even considered.

The honesty of a student’s behavior can usually be explored with the help of the following guidelines:

- Plagiarism is suspected if an assignment calling for independent design and implementation results in two or more solutions that differ only by simple mechanical transformations.
- Cheating is suspected if an assignment calling for independent design and implementation results in a solution that can not be explained to the instructor, in terms of either general method or specific techniques. If you are suspected of cheating, you will be asked to explain the work. If you cannot you will be considered in violation of this Academic Honesty policy.

Any violation of this Academic Honesty policy will result in one or more of the following in addition to any other forms of recourse available to the instructor as specified by the Student Handbook:

- you will be ejected from the [course, college, planet] with a failing grade
- a letter will be sent to your department chair, your Dean, and the president of the college
- and more (and worse)

The bottom line is that you are expected to conduct yourself as a person of integrity—you are expected to adhere to the highest standards of academic honesty. This means that **plagiarism in any form is completely unacceptable**. You are soon to be a computing professional; I encourage you to consult the ACM code of ethics. See [www.acm.org/constitution/code.html](http://www.acm.org/constitution/code.html).