

CS1040: Introduction to Problem Solving and Programming

Fall 2009 Syllabus

Large Class Meetings: Section 1: Monday, Wednesday 11:00 – 11:50 am in EBW Auditorium (102)

Section 2: Monday, Wednesday 12:00 – 12:50 pm in EBW Auditorium (EBW102)

Instructor: Dr. Markita Price

Office: EBW107a

Phone: 882-5896

Email: pricemar@missouri.edu

Office Hours: posted on Blackboard site

Laboratory Sections [A-W]: (Wednesday, Thursday, Friday in EBW 144 or EBW145)

Laboratory Teaching Assistants

Office: EBW239

Hours: in EBW239 – check website for details

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Website: <https://blackboard.missouri.edu> on Blackboard. Login with your UMC pawprint and password. All course material, assignments, calendar of due dates, special mail, discussions, and grades can be found here.

Required Text: Schneider, David. *An Introduction to Programming Using Visual Basic*® 2008. Seventh edition. Upper Saddle River, NJ: Pearson/Prentice Hall, 2009. [ISBN 0-13-606072-2 or 978-0-13-606072-7] Our text comes with DVD of *Visual Basic*® 2008 Express.

Software: *Visual Studio*® 2008 is on Lab computers throughout campus and on some labs inside residence halls.

The express edition is also available from Microsoft <http://www.microsoft.com/express/product/> OR through the MSDNAA Download from <http://acm.missouri.edu>. This site also has free Microsoft products for you!

REQUIRED material: Response pad for class participation [Classroom Performance System] and USB drive [flash drive] on which to save programs during labs. [Any size]

Text Website: <http://www.prenhall.com/schneider/> See information on Blackboard for help with this site.

References: Feel free to use any online tutorials to help you learn Visual Basic®2008.

Course Description: CS1040 is an introductory programming course that will introduce you to problem solving.

The tasks in the course allow you to apply the Visual Basic language to the solution of the possible simple to complex problems that a computer may solve. The problems given for the various assignments, quizzes and exams will be generally aimed at information systems and will include some practical problems.

Course Goals:

- 1 to introduce an organized approach to problem solving
- 2 to introduce structured programming concepts, especially in relation to object oriented concepts
- 3 to develop an introductory proficiency in a programming language which embodies structured programming principles and tools
- 4 to provide familiarity with computer hardware, software, and tools to further the understanding of the problem solving and programming processes
- 5 to provide an introduction to primitive data structures and their uses

Overview of Topics:

1. Introduction to computers: practical organization
2. Introduction to problem solving and program development
3. Introduction to the Visual Basic programming language and Integrated Development Environment tools
4. Data types, assignment statements and operations, strings and some error handling
5. Selection structures
6. Repetition structures
7. Modularity of algorithm/code design: Sub(routine) procedures and function procedures
8. Arrays, uses in streamlining programs

Use of Response System: This class uses the Classroom Performance System (CPSrf) to enhance your learning experience. Students who do not already have a response pad will need to purchase one at the University Bookstore. Every student will need a current Activation Code available online or at the bookstore. (Codes purchased online are less expensive.) Instructions for registering and using your pad are included with the unit. [DO NOT THROW AWAY THE CARDBOARD WRAPPING ON THE UNIT. It has your Enrollment Code for your unit.] You must register using your full name and student PawPrint. (Use your PawPrint when asked for student id.) You will also be asked for a "class Key" for each class; this course's key is **M50989N521**. This information must be entered correctly in order to receive points for class participation and other exercises using CPS. You are required to bring your response pad to every class session, following the introductory period. The class participation/mini-quiz points will be collected using the Response System (CPSrf). If you have technical problems, or forget your clicker, no points can be recorded for that day. Please make sure that your batteries are alive. A tutorial on the activation and online purchase of your unit is available here <https://courses.missouri.edu/students/clickers/index.php> This URL has a link for your registration of the CPS unit.

ADA Notice: If you need accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me privately immediately after class, or at my office, or call me. Every reasonable effort will be made to accommodate your needs.

To request academic accommodations (for example, a note taker), students must also register with Disability Services, S5 Memorial Union, 882-4696. It is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage or go to <http://disabilityservices.missouri.edu>.

Abuses of Trust: Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. See the information online at <http://academicintegrity.missouri.edu/undergraduates/>

In this course, you are encouraged to **discuss** the course material and to make sure you understand the assignments and the particular problems presented. During lectures, discussion and sharing is encouraged. However, any work turned in for a grade **must** be your own. This also means that if you allow someone else to copy or plagiarize your work, you are also committing academic dishonesty. Please guard your account password, do not recycle old copies of your work, do not show another your code, and do not give someone else your work to copy. On exams, any person(s) found to be cheating will be expelled from the exam room and will receive a 0 on the exam. Any evidence of cheating, copying or collusion, plagiarism, etc., will be graded as 0 for **all** students involved and will be referred to both the department Chairman and the Provost for other disciplinary action. Please see the Blackboard Academic Integrity & Pluralism folder inside the Course Info folder for various scenarios that describe typical situations that result in 0's on assignments.

In other words: **Cheating is bad, don't do it!** ☹

Chapter Reading The chapters will be covered in numerical order. No homework exercises will be collected in class; however, the instructor will have the option of asking for some in-class quizzes involving code writing during lecture in addition to the quizzes and questions using the Response System. Teaching Assistants will expect that text exercises will be practiced before lab. Some lab exercises will be done by hand in the lab to account for attendance points that are a part of the lab assignments. At the end of each section in the text, exercises include those that may appear on quizzes or exams. Answers to **odd** exercises appear at the back of the text. Answers to all Practice Problems appear at the end of each section.

Several Lecture Participation and Quizzes Class participation and points for quizzes are available most lecture periods following an introductory period, which will allow students time to register and practice with the CSPrf units. In order to make this a learning situation, you will be able to drop the lowest quiz from your totals in this section. The points for the quizzes will begin Sept 2. We will begin practicing using the units on August 26.

Please bring your response unit to every class.

Several Programming Assignments of varying point totals will be assigned. These assignments allow you the opportunity to use the concepts mentioned in class and in the text. Working on all assignments will help your level of understanding on exams since the questions will parallel material in the assignments. There are two teaching assistants for each lab to help students. The directions for the labs are posted in Blackboard. The assignments overview follows:

- 1 Assignments #1 and #2 can be completed **during the lab** and submitted. These should be completed by the end of the lab session. Full credit given for attending and successfully uploading the lab with good documentation. If you are unable to complete the lab, you will need to finish it outside of class and upload by **11:50 pm** on the particular Tuesday due date posted on the directions.
- 2 The rest of the assignments are more complicated and are to be submitted by **11:50 pm** on the particular Tuesday due date which will be posted on Blackboard. [A five-minute grace period allows for time clock differences between individual computers and the server.] These labs **will require** work outside of the lab period. Students may wish to complete most of the logical work on the assignment before the lab in order to ask specific questions of the teaching assistants during the work session of the lab. All lab assignments will be posted in the Assignments folder on Blackboard at least 9 days before the lab is due. Assignment grades are based on appropriate documentation, problem solution design, programming style, and output.

The Teaching Assistants are also in the TA office in EBW239 or in a computer lab (usually EBW144) during **office hours** to help students learn concepts and use the Integrated Development Environment (IDE) for Visual Basic2008. They can also help you ferret out syntax errors and find your logic errors on assignments. [THERE ARE ALWAYS ERRORS—remember: these are computers we are talking to! ☺] These TAs will not write or rewrite code, do your homework for you, etc. Prepare for office hours by printing your code or outlining your logic. You may attend ANY office hour of any TA or Instructor.

Examinations: [All examinations are comprehensive.]

First Examination: Sept 22, Tuesday evening, from 8:00 – 9:00 pm in Location TBA

Second Examination: Oct 20, Tuesday evening, from 8:00 – 9:00 pm in Location TBA**

Final Examination: Dec 16, Wednesday afternoon from 3:30 – 5:30 pm in Location TBA ***

Alternate Final Examination for students with three exams scheduled for Dec 16 will be on Dec 18,

Friday morning from 10:30 am – 12:30 pm [Please note that the other classes must have numbers greater than 1040.]

**Students in Accountancy 2258 → speak to instructor about alternate exam instead of that evening.

***Students in Accountancy 2037 or in Math 1100 MUST speak with their instructor about an alternate exam time for their final since those finals are scheduled at the same time as ours. DO it this week!

Drop Deadlines: September 28 [last day to drop online with no grade – discuss with adviser]; November 2 [last day to withdraw with adviser and instructor signature for W]; December 9 [last day to withdraw from all classes at the university – discuss with adviser, may need instructor & adviser signatures]

Grades:

	POINTS	WEIGHT
Assignments & Lab Attendance/Quizzes	200	22%
Lecture Class Participation & Quizzes	100	11%
Examinations		
Exam #1, Tuesday, Sept 22 at 8:00 pm	150	17%
Exam #2, Tuesday, Oct 20 at 8:00 pm	150	17%
Final Examination, Wednesday, Dec 16, at 3:30 – 5:30 pm	300	33%
TOTAL	900	100%

Grading Scale: Grades for the course will be calculated on total points for the course. A rough estimate includes approximately 792 points for lowest A-, 704 points for lowest B-, 599 points for lowest C-, 484 points for D. At the end of the semester, the total points are calculated and the above scale is used. The **points for the course are used to determine the actual grade**. The percentages for the letter grades [90% = A-, 80% = B-, 68% = C-, 55% =

D-] are a guideline only. The instructor **reserves** the right to adjust the scales for the class. Note: Blackboard calculated percentages posted after the final will NOT include rounding and those grades are generally the lowest possible grade. All exams are curved, but none of the assignments or any class participation/quiz scores are curved. The final curve depends on the total points of the course.

Lecture class is canceled on Wednesday, October 21 [in lieu of evening exam], Lab sessions are canceled October 21, 22, and 23 [in lieu of evening exam]. Labs are canceled Dec 9, 10, 11. Optional Classes on Monday, Sept 21 and Monday, October 19.

TIPS FOR SUCCESS in PROGRAMMING

Come to every class and lab!

Read the text and do the exercises. Do NOT get behind in your reading / assignments.

ASK QUESTIONS early AND often when you don't understand something!

Plan to finish your Lab Assignments at least 1 day early – cushions are good to have.

If you are having any difficulties, talk to your lab leader or helper or your instructor as soon as possible!

"Learn by doing!" This class is impossible if you don't practice on a computer DAILY!!!! ☺

Study Hints [from previous students, previous classes, and previous examinations]

- 1 As in any language class, all exams are comprehensive. That means you need to know the structure of programs, the syntax and semantics of Visual Basic code construction, and how to apply the language to the solution of problems.
- 2 Read the summaries at the end of each chapter.
- 3 Know all the vocabulary and terminology. This is a language. You can't put a sentence together unless you know the vocabulary and can understand how it is put together. Each exam builds on the previous one.
- 4 **Make mistakes** and learn what programming errors are and how to fix them! Learn how to test and debug a program. Learn good programming practices. The text lists lots of hints about each type of code we are learning
- 5 Work the exercises at the end of each chapter.
- 6 Study program code and learn to step through the programs by hand. The code exercises in each section are good practice for reading code on an exam.
- 7 Participate in lecture and lab. Think about the questions asked in lecture and discuss them with neighbors; these are for your practice and are designed to mimic some exam questions.

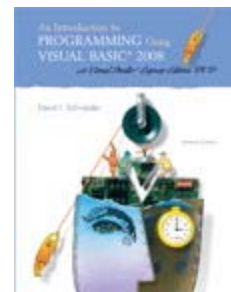
And now, a word from our sponsor, Pearson/Prentice Hall Publishers.

The required textbook for this course is

An Introduction to Programming Using Visual Basic 2008, 7/E, by Schneider.

It's important you buy this book because:

- There will be required reading from the book
- Some lab assignments will come from the book
- I will test on material from the book
- It will help you get a better grade in my course



Additional resources available to help you get the most from your course:

- **Companion Website** - This website provides copies of all the examples in the text. The resource is a zip file which can be downloaded and extracted. Go to <http://www.pearsonhighered.com/schneider/details.html>
- **"e-tips for A grades" Website** - There's no condescending advice here - just info to help you succeed in tackling your academic, social, and professional challenges! Visit <http://www.etipsforagrades.com>