

**University of Puerto Rico
Mayagüez Campus
College of Business Administration**

Syllabus

A. Course Information	
General Information:	
Course Code: SICI 3051	Credit-Hours: Three
Course Title: PROGRAM DEVELOPMENT I	Academic Term: 1st Semester 2009-2010
Course Description:	
Elemental computer programming and solution of managerial problems using a modern language. Fundamentals of structured program design: development, testing, implementation and documentation; language syntax, file structure, input/output unit, and operational system facilities for the implementation of programs that generate managerial reports.	
Pre/Co-requisites:	
A student must have successfully completed ADMI 3007 - Introduction to Computerized Data Processing.	
Course General Learning Goals:	
After completing the course, the student will be able to: <ul style="list-style-type: none"> • Analyze business problems and prepare program definitions • Design algorithms and pseudocodes or flowcharts that represent logical solutions to programming problems • Use the techniques of program design and development to code a program in Visual Basic. • Apply testing and debugging methods to assure quality and workability of finished programs • Write program documentation • Given a program, evaluate and modify possible logic errors • Discriminate between ethical/unethical practices in programming 	
Learning Outcomes Addressed in this Course	
This course is intentionally designed to enable students to develop at a basic level the following competencies: <ul style="list-style-type: none"> <input type="checkbox"/> Interpersonal Skills <input checked="" type="checkbox"/> Information Technology Skills <input checked="" type="checkbox"/> Ethical and Professional Behavior <input type="checkbox"/> Entrepreneurship Skills <input type="checkbox"/> Business management knowledge and skills with national and international perspective <input checked="" type="checkbox"/> Research and Analytical Skills for Problem Solving <input checked="" type="checkbox"/> Business Option-Related Skills, Knowledge, and Abilities 	
Content Outline and Time Distribution	
	Hrs.
Introduction to Programming	8
Working in an integrated development environment (IDE)	4
Writing code	3
Types of Variables and Constants	3
Input Statements	2
Building expressions	3.5
Debugging Techniques	3.5
Built-in Functions	1.5
Programming Control Structures	5
Repetition Structures	7
Multiple Forms and Menus	3
Ethical Issues in Programming	1.5

Department/Campus Policies:

Disabilities: According to Law 51: Students with disabilities, after identifying themselves to the instructor of the course and the institution, will receive reasonable accommodations in their courses and evaluations. For additional information, contact Services to Students with Disabilities at the Office of the Dean of Students (Q-019), 787-265-3862 or 787-832-4040, Ext. 3250 or 3258.

Ethics: Any academic fraud is subject to the disciplinary sanctions described in Articles 14 and 16 of the revised General Student Bylaws of the University of Puerto Rico contained in Certification 018-1997-98 of the Board of Trustees. The professor will follow the norms established in Articles 1-5 of the Bylaws.

INSTRUCTOR INFORMATION**General Information:**

Instructor: Awilda E. Valle Rivera Office: AE-330 Phone: (787)832-4040 Ext. 5362
 Office Hours: **Tuesday and Thursday:** 9:45 – 10:15 am; 2:45 – 4:00pm **Wednesday:** 10:00 - 12:30 pm
 E-mail: valle.awilda@adem.uprm.edu
awilda.valle@uprm.edu Course management systems: <http://moodle.uprm.edu>

Textbook, Supplies and Other Resources::

Text: Gaddis, Tony and Irvine, Kip. (2007). **Starting Out with Visual Basic 2008[®]**. 4th Ed. Addison Wesley.

ISBN-10: 0-321-53135-3; **ISBN-13:** 978-0-321-53135-3

IT Web sites: PC World : <http://www.pcworld.com> InfoWorld : <http://www.infoworld.com>
 Computerworld : <http://www.computerworld.com> PC Week : <http://www.zdnet.com/pcweek>
 Certification information: <http://www.learnthat.com> Certification Magazine <http://www.certmag.com>

Instructional Strategies:

- | | |
|--|---|
| <ul style="list-style-type: none"> • Lecture • Class discussion • Presentations • Project Assignment with documentation • Assignments requiring specific software | <ul style="list-style-type: none"> • Practice at Computer Lab • Situations analysis • Group discussions • Today's news discussion • Teamwork |
|--|---|

Minimum Required or Available Resources:

All students are expected to :

- Attend all lectures and be on time.
- Do all assigned readings and related homework.
- Come to class prepared to discuss and work on assigned programs.
- Do all programming projects in Visual Basic language.
- To attend to at least two partial exams and to the final exam.

Resources:

- General Library at the University is available to obtain professor's reference materials.
- Computers at the Business Administration Laboratory

Evaluation/Grade Reporting:

Grade and Point Range: Φ 90 – 100 A Φ 80 - 89 B Φ 70 - 79 C Φ 60 - 69 D Φ 0 - 59 F

- Two Partial Exams -50%
- Final Exam -25%
- Programming projects -15%
- Assignments and quizzes - 10%

Assessment of Learning:

During the semester we will be using several techniques that will help us determine your level of learning. Our main purpose is to help students identify how much and how well they are learning and to detect areas that may need reinforcement before the final grade is determined. These techniques will also help the professor use more effective teaching strategies. Among others we will use pre and post tests, "the muddiest point", and "direct paraphrasing". These activities will not affect the final grade.

Course Policies

- Class attendance is mandatory and will be recorded daily. If a student must be absent, the situation should be reported in advance.
- A student is expected to do his or her own work. **Programming assignments should be done individually and not in team work unless otherwise instructed.** Submitting the work of another student for evaluation is plagiarism and neither student will be graded. **Cheating and plagiarism will not be tolerated.**
- Three partial exams will be offered and only two of them will be considered for the final grade (the lowest exam grade will be eliminated).
- Exams will be offered during evening outside regular class time.
- No make-up exams or quizzes will be offered.
- Cellular phones will be kept in sounds-off or vibration mode and will never be answered in class.

Course Outline and Schedule (* may need updating during semester according to class needs*)

Day	Topics	Chapter	Time Allotted
1-3	Programming languages Problem Analysis	1	3.5 hrs.
3-5	Algorithm development Programming Tools: pseudocode and flowchart Programming Process	1	4.5 hrs.
6-9	Components in an IDE: Controls, Properties, and Events Components of program: keywords, variables, and operators Writing code Creating a User Interface Techniques for Improving Program Design	2	7 hrs.
10-11	Variables, Constants and Data Types Declaring variables and Scope of variables	3	3 hrs.
12-13	Input and Assignment Statements <ul style="list-style-type: none"> ♦ Gather Input ♦ Arithmetic and logical operators 	3	2 hrs.
*** Partial Exam # 1 (September 28, 2009; 6:00 – 8:00 pm) ***			
14-17	<ul style="list-style-type: none"> ♦ Building expressions ♦ Debugging Techniques ♦ Grouping Controls 	3	5.5 hrs
18	Built-in conversion functions	3,4	1.5 hrs.
19-21	Programming Control Structures <ul style="list-style-type: none"> • Conditional statements: If statement, Nested If, Case statement • Relational operators • Message Box • Radio buttons • Check Boxes 	4	5 hrs.
*** Partial Exam # 2 (October 26. 2009; 6:00 – 8:00 pm) ***			
22-25	Repetition Structures <ul style="list-style-type: none"> ♦ Do While statement ♦ Do Until statement ♦ For Next statement ♦ Counters and accumulators ♦ Input validation ♦ Performing multiple validations 	5	5 hrs.
25-26	<ul style="list-style-type: none"> ♦ Items Collection <ul style="list-style-type: none"> ○ List and Combo Boxes Properties ○ List and Combo Boxes Events 	5	2 hrs.
27-28	Multiple Forms and Menus <ul style="list-style-type: none"> ♦ Multiple Forms 	7	3 hrs.
*** Partial Exam # 3 (November 23, 2009; 6:00 – 8:00 pm) ***			
29	<ul style="list-style-type: none"> ♦ Menus and Submenus 	7	1.5 hrs.

30	Ethical Issues in programming		1.5 hrs.
*** Final Exam ***			
References			
<ol style="list-style-type: none"> 1. Text: Gaddis, Tony and Irvine, Kip. (2007). Starting Out with Visual Basic 2005[®]. 3rd Ed. Addison Wesley. 2. Shelly, Gary B., Cashman, Thomas J., and Hoisington, Corinne (2007) <u>Microsoft Visual Basic 2005 for Windows, Mobile, Web, and Office applications Complete</u>; Course Technology , a division of Thomson Learning, Inc. 3. Zak, Diane (2007) <u>Programming with Microsoft Visual Basic 2005 Third Edition</u>. Course Technology; ITP 			