Mercer County Community College

Division of Business and Technology

IST 102

COMPUTER CONCEPTS WITH PROGRAMMING

COURSE DESCRIPTION

The course is designed to help students become computer literate. Topics include understanding the fundamentals of computer nomenclature, particularly with respect to personal computer hardware and software and the World Wide Web. The course stresses the World Wide Web as a repository of the latest information and an integrated learning tool. The course focuses on why computers are essential to business and society, with a focus on the computer as a productivity aid and problem-solving tool.

The laboratory uses VB.NET, a popular, PC oriented, programming language to illustrate essential concepts and to reinforce the aspects of computers that have made them so pervasive in today's society. The course demonstrates how programming structures contribute to the seven factors that have made computers so prevalent in society (specifically: accuracy, speed, repetition, decision making, data storage, and problem solving).

Text (s): **Reference Division Booklist**

Prerequisites: MAT101 and experience with Microsoft Office. An introduction to computer literacy. Topics include hardware, software, applications, trends, issues, and careers in information technology. Laboratory exercises focus on database applications and programming in VB.NET.

Co-requisites: None

Credits: **3** Lecture Hours: **2** Studio/Lab Hours: **2**

Food and Drink are strictly prohibited in classrooms as per Health and Safety Laws. Students may not bring in chemicals or cleaning fluids of any kind without the appropriate MSD sheets.

Course Coordinator: **Winston H. Maddox** **Latest Review: Fall 2003**

I. COURSE OBJECTIVES

Upon completion of this course, students will be able to:

- Understand and use the fundamentals of computer nomenclature.
- Use the World Wide Web as an integrated learning tool to retrieve and interpret the latest information.
- Discuss the interaction between the demands for information and advances in computer technology.
- Explain in-depth why computers are essential in today's business and society.
- Discuss how computers support and help to advance several other disciplines.
- Demonstrate the ability to use the Microsoft Windows operating system and Microsoft Office applications.
- Use VB.NET as a tool to solve problems on the computer.
- Demonstrate the ability to develop procedures and apply programming objects using the correct VB syntax.
- Demonstrate through example programs, classroom discussions, and writing assignments, several of the factors that have led to the pervasive use of computers in our society.
- Students will demonstrate critical thinking skills by analyzing and choosing the most appropriate constructs to complete assignments in VB.NET.
- Explain career options and education programs in information technology.

Students will be required to enter, compile, and test programs outside of class. There are suitably configured computers in the library.

Students will be expected to prepare for each class by reading assignments from the textbooks, by completing short-answer written exercise to demonstrate a factual understanding of the material, and by entering the code for the laboratory exercise in an appropriate text file.

The course will consist of two hours of lecture and two hours of laboratory each week.

During the course, each student will be expected to complete 12 memos describing various aspects of computing and programming, 10 routine homework assignments, 13 significant programming/ laboratory assignments, and three major reports or presentations.

Textbooks: Shelly, G. B., Cashman, T.J., & Vermaat, M. E. (2002).
Discovering Computers: Concepts for a digital world: Complete Edition.
Boston, MA: Course Technology. ISBN: 0-7895-6514-5. **REQUIRED**

Need To Check (2003). ***Programming in Visual Basic.NET***.
Boston, MA: Course Technology. ISBN: ***Need To Check.*** **REQUIRED**

Twelve laboratory/homework programming assignments are required during the course. This will be graded based on the following criteria:

Submitted On-time	20%
Performs the Required Functions	30%
Uses All Previously Covered Material, Including the Current Topic	10%
Uses a Consistent and Correct Indentation Style	10%
Uses Sound Program Structuring Methods	10%
Contains Comments that Adequately Describe the Code	10%
Uses Constructs that are Typically Used by VB Programmers	10%

The lowest grade will be discarded.

Twelve memos (two pages or less each) are required during this course to demonstrate the students understanding of various concepts. Memos are expected to be typed using word processing software and to follow standard business form and are not expected to exceed two pages in length. Students name must appear on both pages of a two-page memo. When appropriate, students are expected to use Excel and Excel graphics to prepare portions of the memo. Multiple page memos should be stapled. Each student is expected to prepare two major reports with an associated in-class presentation and a final essay. The reports are expected to use word-processing, and spreadsheets with graphics. The in class presentations are expected to use presentation graphics. Each of the two rounds of in-class presentations will be followed by quizzes based on the presentations. Writing assignments and presentations will be graded based on the following criteria:

Submitted On-time	20%
Content	40%
Effective Use of Personal Computer Productivity Tools	30%
Grammar, English Usage, Citations, and References	10%

The lowest grade will be discarded.

About ten short-answer homework assignments are required. These involve completing multiple choice or fill-in questions in the text or completing worksheets. These will be graded based on the percent correct. The lowest grade will be discarded.

The course grade will be based on the following weights:

Programming / Laboratory Assignments	30%
Final Essay (1)	15%
Papers & Presentations	15%
Memo / Homework Assignments	15%
Short Answer Homework Assignments	10%
Quizzes	5%
Attendance and Participation	10%

Because of the amount of homework that the instructor needs to grade, because students must stay caught up to master this subject and because a reasonable number of low grades are being dropped, LATE HOMEWORK, LABORATORY EXERCISES, and PROGRAMMING ASSIGNMENTS WILL NOT BE ACCEPTED. Late assignments will be checked and assigned a grade 10% lower than the lowest grade received by an on-time submission.

Students are reminded of the school's academic integrity policy. In this class, if a student submits work that has been copied from an outside source, without proper citations, or if two or more students submit work that is essentially identical, the grade for the assignment will be ZERO. Grades of ZERO will not be dropped. Students who receive two or three ZEROS, depending on the assignment, will not be able to pass the course.

The course percentage will be determined by multiplying the student's average in each category by the specified weight and totaling these products. The letter grade will then be determined as follows:

$90 \leq$ Percentage ≤ 100	A
$80 \leq$ Percentage < 90	B
$70 \leq$ Percentage < 80	C
$60 \leq$ Percentage < 70	D
$0 \leq$ Percentage < 60	F

Students are reminded that they must be aware of the deadline for the drop-add period. The professors who teach this course are not obligated to withdraw students who stop coming to class. WITHDRAWING FROM ANY COURSE IS THE STUDENTS RESPONSIBILITY.