

The exam is open book and open notes. You may use your course text book and your notes and handouts for this class.

Topics

1. Introduction

- a. Computer Systems – Hardware and Software
 - i. CPU, ROM, RAM
 - ii. Generations
 - iii. Software
 1. Operating systems
 2. Software tools
 3. Computer languages
 4. Web applications
- b. The Internet
 - i. Internet
 - ii. WWW
 - iii. Hypertext, HTML
- c. Program Planning
 - i. Model Building Process
 - ii. Programming Process
 - iii. Algorithms
 - iv. Composing a computer program
 - v. 6 Elements of Programming

2. VB Controls and Events

- a. Why Visual Basic?
- b. VB Programs
 - i. Developing
 - ii. Running
- c. Program Planning and Flowcharts
 - i. Flowcharting
 - ii. Decisions
 - iii. Average Grade Problem
- d. Visual Basic Interface
 - i. VB Form
 - ii. VB Controls
 1. Picture box
 2. Text box
 3. List box
 4. Labels
 5. Buttons
 - iii. VB Events
 1. Forms & Controls
 2. Events
 3. Objects

4. Procedures
 5. Code
 - iv. Creating a VB Project
3. Computer Storage & Representing Numbers
 - a. Computer Storage
 - i. Numbers & Letters
 - ii. Bits
 - iii. Bytes
 - iv. Binary Numbers
 - b. Computer Storage and Number Representation
 - i. Integers
 - ii. Binary Math
 - iii. Chips and CPUs
 - iv. Words
 - v. Floating Point Numbers
4. Variables & Math Operators
 - a. Computer Memory & Variables
 - b. Data Types
 - i. Byte
 - ii. Integer & Long
 - iii. Single & Double
 - iv. String
 - c. Variable Names & Declaration
 - i. Naming rules
 - ii. Declaring Variables
 - d. Assignment Statements
 - e. Displaying Numbers
 - f. Constants
 - g. Arithmetic Operators & Math Functions
 - i. Modulo Division
 - ii. Integer Division
 - iii. Priority of Operators
 - h. String Variables
5. Input – Output
 - a. Formatting Numbers
 - b. File names and Path names
 - c. Input From Files
 - d. Output To Files
 - e. Concatenation
 - f. Input Boxes
 - g. Text Boxes

- 6. Control Structures: Selection**
 - a. ASCII (ANSI) Character Set**
 - b. Relational Operators**
 - c. Logical Operators**
 - d. Order of Operations**
 - e. Program Control – Selection**
 - i. If/Then**
 - ii. If/Then/Else**
 - iii. If/Then Variations**
 - iv. Select Case**