The exam is open book and open notes. You may use your course textbook 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