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. Subprocedures
   a. Subs
      i. How are they defined
      ii. How do they work
      iii. What are arguments
      iv. Pass by “Value”, pass by “Reference”
   b. Functions
      i. How are they defined
      ii. How do they work
      iii. Structured Programming

2. Loops
   a. Do While
      i. Indeterminate vs Determinate looping structure
      ii. How are they defined
      iii. How do they work
      iv. What is an “Infinite” loop
   b. Do Until
      i. How are they defined
      ii. How do they work
      iii. How it Do Until different from Do While?
   c. Peek
   d. For Next
      i. How are they defined
      ii. How do they work
      iii. How many times are they executed?
      iv. Nested loops

3. Arrays and Matrices
   a. Arrays
      i. Definition
      ii. Index
      iii. Use
      iv. Multidimensional arrays
      v. String arrays and Splitting
   b. Matrices
      i. Definition
      ii. Arithmetic

4. Linear Equations
   a. Direct Methods
      i. Gauss Elimination
         1. Forward elimination
2. Backward substitution
3. Pivoting
4. Roundoff error

b. Indirect Methods
   i. Iteration
   ii. Errors and Stopping Criteria
   iii. Jacobi
   iv. Gauss Seidel