# MAT 101 — Introduction to Computer Programming (C++)

Handout #12, March 17, 2005

Today's tasks:

1. **array** p 172 - list of variables

2. declaration p172 ex: int grades[3];
   creates three variables accsesed by grades[0] grades[1] and grades[2]

3. Notice that grades[3] is not acceptable.

4. Indices always start with 0 p173

5. There may be 3 variables created by int grades[3], but the highest index is the size-1 (or 2 in this case).

6. Use for loops for arrays (including initialization) p175

7. Common errors and good practices

   - For loops work naturally with arrays
   - Use a const variable to define the size of an array
   - Starting array indexing with 1.
   - Forgetting to initialize elements of the array
   - Going over array bounds.

8. Classwork

   - Write a simple program that declares an integer array of size 15.
   - Initialize the variables in the array to 0 using a for loop.
   - Use a for loop to get input for each element of the array (see p 174).
   - Use a for loop to output the values of the array.
   - Can you extend this further to compute the average of these 15 scores?