

# MAT 101 — Introduction to Computer Programming (C++), Fall 2004

## Review Sheet #2

- Before Exam #1
  - logging into albert, using unix commands, using emacs, Makefiles
  - types, valid identifiers, assignment, initializing
  - cout and cin
  - arithmetic with literals and variables
  - integer versus floating point arithmetic (p22)
  - lvalue vs. rvalue
  - type casting (p23)
  - incrementors, decrementors (p25)
  - Input (cin) and Output (cout)
  - Using Comments (// and /\*) (p35)
  - Boolean expressions and comparisons (&&, ||, ==, <, >, <=, >=) (p44+)
  - Short-circuit evaluation (p51)
  - if-else (p54+)
  - switch statements (switch, case, break, default) (p62)
  - Loops, while, do-while, for, break, continue (p66+)
  - Functions
    - \* functions (predefined and using include) (p96+)
    - \* programmer defined functions
    - \* scope (local variables vs global variables)
    - \* functions: call by value, call by reference (p135+)
    - \* functions: overloading and default arguments (p151+,159+)
  - strings (arithmetic, comparisons) (p387+)

- Before Exam #2
  - Arrays
    - \* Declaration p172
    - \* Referencing p172
    - \* Using **for** Loops with arrays p175
    - \* Indexing starts with Zero p175
    - \* Defined Constant for Sizes p175
    - \* Using Arrays in Functions p181
    - \* Searching an Array p197
    - \* Sorting an Array p199
    - \* Partially filled arrays p194
    - \* Multi-dimensional arrays p204
  - Recursion
    - \* Recursion vs. Iteration p559
    - \* Infinite Recursion p556
    - \* Recursive output functions p549
    - \* Recursive Functions that Return a Value p561
    - \* Binary Search (involves arrays) p 568
  - Classes p236
    - \* Member Data
    - \* Dot Operator p241
    - \* Member Functions, p240
    - \* scope resolution operator p241
    - \* Public Vs. Private (p243–247)
    - \* Encapsulation p242
    - \* Driver Programs p162