Final Exam Topics

• Issues relating to scope and lifetime
  – Automatic vs. Dynamic objects
  – Associated problems with dynamic memory
    • Dangling pointers
    • Memory leaks
  – Managing memory problems with constructors, destructors, assignment operators

• Dangling pointers
• Memory leaks

Analysis and Design

• Identifying classes and objects
• Association, aggregation, inheritance
  – What each means
  – How diagrammed in design notation
  – When used over other choices

C++ Concepts

• Syntax for declarations and definitions
• const-ness - use of const
• Aggregation, assoc., inheritance in C++
• Details of inheritance in C++
• Template classes and functions
• Operator overloading
• Standard Template Library

Philosophy

• Software engineering goals and OO concepts
  – Which constructions support reusability?
  – How do constructions affect flexibility or extensibility?

Format

• Length slightly longer than usual
• Coding questions similar to second exam except be able to write immaculate class declaration
• Some short answer
• Some fill-in, multiple choice, true false
• Possible that some old questions may reappear in new forms