

## COSC 382 Organization of Programming Languages

### Exam outline

Monday, October 30, to cover the following material, and of course the lectures on them:

End of Chapter 3 (pp. 163–end): Denotational semantics

Remember that we had only gotten as far as the boolean statements of M at the last exam.

Chapter 12: Object-oriented programming, especially C++ since we had a lab on it, but also Java and Javascript. You may omit Ada and C#. You may (so far) omit 12.10. Do include my handout “C++ is not a superset of C.”

Chapter 4 (pp. 175–191): Lexemes, tokens, LL parser, recursive descent parsing

Chapter 5: Binding times, static/dynamic scope, static/dynamic binding to memory, scope/lifetime, strong typing, structural and name equivalence of types.

Chapter 6 (pp. 251–266): Data types through strings.

### October 27, 2006 outline

Finish Pascal as an exception to strict name-equivalence or structural-equivalence of types, and hence finish Chapter 5.

### Chapter 6 is about data types

The overarching design questions are listed.

String, functions, patterns, arrays, records

First-class entities: Can be passed as argument or returned as value of a function, can be assigned to a variable. Easier in a late-binding language like Javascript or Lisp.

Pointers

Dangling and the solution

Garbage collection, and two solutions (eager, lazy)