

Final Issues for COSC 311 WINTER 2010

End of term orts

1. **mergesort project** due Monday after final (4/26), 5pm.

2. **Final exam, Thursday 1:00 - 2:30 meet in this room.**

Others who cannot adjust their schedules, contact me for special handling.

Final exam: open book, open notes.

No calculators, but you may have to estimate to the nearest one digit of precision.

3. **Topics for final:**

All data structures: what's legal, what they're good for, how to use.
Implementation of Data Structures - both dynamic and array based.

Sorting:

no: insertion, selection, bubble

yes: shell, heap, radix, quick, merge (internal & external)

Hashing: everything

no: external hash

Binary trees:

basic structure and definitions

Traversals: in, post, pre, depth, reverse post, reverse in, reverse pre.

BST:

insert, delete

AVL: single rot, double rot

2-3-4 tree or B tree. Test will be on B tree (order between 4 and 7).

how to insert. What is a legal tree (node) structure.

no: how to calculate the size of a node given disk spec and record spec.

Heaps. Insert & delete.

Queues, stacks, circular queue,

no: double ended queues.

no: tries

no: dynamic programming

Expression trees

what they are, representing infix expressions

Recursion

Run time analysis:

Big Oh ordering, Big Oh intuitive

For constant, linear, quadratic $T(n)$, find the c and n_0 that satisfies the Big Oh equation.