CSCI 162 – Final Exam Review

General Notes for Examination:
- **No** multiple-choice
- **No** fill-in-the-blank
- Short answer and coding questions
- Partial credit awarded
- No more than 5 pages

Material

Stacks and Queues
- Implementation with singly-linked list, doubly linked list, and array
- Operations on stacks and queues
- Postfix expression evaluation

Recursion
- What does it mean for a method to be recursive?
- What is induction?
- What is required when writing a recursive method?
- Examples with strings and numbers
- Recursion lab problems

Binary Search Trees
- Definition and requirements
- Representation of a tree node
- Operations: insert, remove, min, max, find, height, size
- Successor and Predecessor
- Big-O complexity of all operations
- Printing: in-order, level-order
- Drawing: be comfortable drawing BSTs before and after operations

Heaps
- Definition and requirements
- How does a heap differ from a binary search tree?
- Operations: insert, remove
- Implementing with an array – how to access parent + children given index

Intellectual Property
- Patents, Trademarks, Copyrights, Trade Secrets

All other material from the first two exams will account for **up to 50 points**