Syllabus for
CSCE 4123
Fall 2016

Programming Challenges (Elective)

Instructor: Gordon Beavers
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Office Hours: MTWR 3:30 - 4:30

Textbook: **Programming Challenges**
Authors: Skiena and Revilla
Publishers: Springer 2003

Course Description: This course studies the principle methods used in the solution of programming contest problems, e.g., data structures, strings, sorting, machine arithmetic and algebra, combinatorics, number theory, backtracking, graph traversal, graph algorithms, dynamic programming, grids, and computational geometry. Prerequisite: CSCE 2014.

Learning Outcomes: Students learn to rapidly develop efficient solutions to standard computer science problems. Students are expected to submit four correct solutions each week as judged by the UVA Online Judge. Graduate students should submit five problems each week. Students should be prepared to explain submitted solutions in class.

Curriculum Category Content (semester hours):
Programming Languages 1.0
Data structures 1.0
Algorithms 1.0