CSC 430: Programming Languages

Instructional Information

Professor: Aaron Keen
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Office: 14-228
Office hours: M: 2-3pm, T: 2-4pm, W: 3-4pm, F: 2-3pm
Course Webpage: http://www.csc.calpoly.edu/~akeen/courses/csc430

Lecture Time and Location

Lecture: MWF 11:10am – 12:00pm, online
Lab: MWF 12:10pm – 1:00pm, online

Learning Environment

I believe in a supportive learning environment wherein every person deserves respect, every question deserves an answer, and we all work together toward a goal of improved understanding and life-long learning. All members of this class are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class.

There is an old adage that encourages those with questions to ask because others may have the same question; you do not need some imagined quorum in order to validate your question or your request for assistance. If you have a question or need assistance, that alone is sufficient. You belong here and your participation in the course is not only welcomed but encouraged.

Personal Well-being

There are times when coursework and non-academic obligations may conflate to create a seemingly unbearable situation. During these times, your coursework may suffer and you may opt to not complete (or even attempt) an assignment; I understand this and you need not apologize for it. If this happens, do not get discouraged. The course is structured such that you can pick up with the next assignment (with some work to review what was left incomplete). I am here to assist you; just ask for help.

Course Objectives

- Gain exposure to the theoretical foundations of programming languages.
- Explore the formal semantics of a programming language.
- Apply these theoretical underpinnings to the implementation of an interpreter.
- Gain experience in a different programming style (specifically, functional).

Prerequisites: CSC/CPE 357 and CSC 349

Text

The course language reference is ML for the Working Programmer by Paulson (linked from the course website). Supplemental materials will be linked from the course webpage.

Webpage

Clarifications, changes, etc. regarding the class and assignments will be posted to the course webpage (http://www.csc.calpoly.edu/~akeen/courses/csc430). Read it regularly, especially near when assignments are due. You are responsible for any announcements posted on the course website.
Q&A Forum

I will maintain and regularly monitor a Piazza forum for questions about the assignments and the course material. Questions with code specific to a solution should be made private, but general programming and concept questions should be public to benefit all students.

Activities

Class Participation

The lectures are for your benefit. Ask questions. No, really, ask.

Lecture Comprehension Quizzes

There will be multiple low-risk quizzes to assess comprehension of lecture material. These will generally be posted on the day of each lecture with an extended period of time to complete them.

Assignments

There will be seven programming assignments, each due by 10pm on the posted due date. Start each early to benefit from diffuse thinking.

Exams

There will be six quizzes and one final exam. The quizzes will cover general programming language concepts, the analysis and synthesis of specific concrete programs, and material based on the assignments. The quizzes will be closed book and closed note. For the final exam you will be allowed two 8.5 inches x 11 inches pages of notes.

Grading

The percentage breakdown for the course grade is as follows.

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<thead>
<tr>
<th>Activity</th>
<th>% per</th>
<th>% total</th>
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<tbody>
<tr>
<td>Comprehension Quizzes</td>
<td>7</td>
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</tr>
<tr>
<td>Assignments</td>
<td>7</td>
<td>49</td>
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<tr>
<td>Quizzes</td>
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<tr>
<td>Final</td>
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<td><strong>Total</strong></td>
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Simplicity, presentation, and neatness of your solutions are considered in the grading of assignments and exams.

At a minimum, your solution to a programming assignment must load and compile to be considered for grading. Those that do not meet this minimum criterion will be returned with a score of zero. Test your programs.

Due Dates and Lateness

Programming assignments are to be submitted electronically. Assignments must be turned in ON TIME to receive credit. Except in the most extreme situations, late assignments will not be accepted. If you cannot complete an assignment by the due date, hand in whatever you have done in order to receive partial credit.

Collaboration and Cheating

Policy on Collaboration

Each student is to do their own work on the assignments and exams. It is fine to talk with others about general approaches used to solve the assignments, but each student is to develop their own solution; collaborative efforts are not allowed. Students are not to exchange program code in any form (hardcopy or electronically).

Using solutions from any other source is forbidden (github is not a resource for studying); in particular, using solutions (either instructor’s or other students’) from previous offerings of this course is not allowed. Using solutions found on the Internet is not allowed. Referring to previous solutions while developing your solution is not allowed.
Collaboration that goes beyond a high-level discussion of general approaches will be considered cheating. If you are unsure about what constitutes proper or improper collaboration, consult the instructor for guidance.