CSC 430: Programming Languages I

Instructional Information

Professor: Aaron Keen
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Office: 14-230
Office hours: M: 2-3, W: 3-4, R: 12-2, F: 2-3
Course Webpage: http://www.csc.calpoly.edu/~akeen/courses/csc430

Lecture Time and Location

Section 1 – Lecture: MWF 8:10 am – 9:00 am, 26-123  Lab: MWF 9:10 am – 10:00 am, 20-127
Section 2 – Lecture: MWF 11:10 am – 12:00 pm, 14-252  Lab: MWF 12:10 pm – 1:00 pm, 20-127

Course Objectives

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

Prerequisites: CSC/CPE 357 and CSC 349

Texts

The course language reference is Elements of ML Programming by Ullman. 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.

Activities

Class Participation

The lectures are for your benefit. Ask questions.

Assignments

There will be seven (7) programming assignments.

Exams

There will be two quizzes, one midterm, and one final exam. The exams 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. The exams will be closed book and closed note. For the midterm you will be allowed a single 8.5 inches x 11 inches page of notes. 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>Assignments</td>
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<td>51</td>
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<tr>
<td>ML Introduction (#1 &amp; #2)</td>
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<tr>
<td>Lexical Analyzer</td>
<td>5</td>
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<tr>
<td>Interpreter Phases I-IV</td>
<td>9</td>
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<tr>
<td>Quizzes</td>
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<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 turned in 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. Receiving partial credit, however, should not be your goal.

Collaboration and Cheating

Policy on Collaboration

Each student is to do his or her 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 his/her 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; in particular, using solutions (either instructors’ 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.

To summarize: all assignments and exams are to be individual and original efforts.

Instances of cheating or plagiarism will be referred to the Campus Student Relations and Judicial Affairs Office. Ask the instructor for clarification beforehand if the above rules are not clear.

Computer Accounts

The compilers and interpreters for the programming languages we will use will be made available on the Computer Science department machines.

You may use other systems but you do so entirely at your own risk. You must verify that your solution works on the CSC machines as this is where it will be submitted and graded.

Be very careful and make your own backups as you work.
The Last Page

This page is so I can gather a little information about you at the beginning of the class. Please fill it out, tear it off and leave it with me on the way out.

Who are you?

Name: _____________________________
Section: ___________________________
Major: _____________________________
Email: _____________________________
Enrollment: ___ Enrolled
___ Enrolled, thinking about dropping
___ Trying to enroll
___ Thinking about enrolling

Programming Language(s) that you have used: _____________________________

Favorite Programming Language(s): _____________________________

Class Expectations
Please take a minute to write out what your goals and expectations are for CSC 430. What do you expect to learn?

Your Interests
Is there anything related to programming languages that you would specifically like to learn about or discuss in this class?