Instructor: Song-James Choi, Ph.D.  
Office: CS 544  
Tel: 714-2787257  
Fax: 714-2787168  
Office Hours: M, W 2:15 – 3:45 PM  
T 11:30 – 12:30 PM  
Email: sjchoi@ecs.fullerton.edu

Lectures:  
Section 1: MW 4:00 – 5:15 PM  
Section 2: TTh 10:00 – 11:15 PM

Textbook:  
Thomas W. Parsons, Introduction to Compiler Construction  
W.H. Freeman and Co. 1993

Prerequisites: CPSC321, CPSC331. Please note that the CS department takes it very seriously. If it is not met, you may be dropped by the department. If you have any concerns about the prerequisites, Please contact the department immediately.

Course work: There will be 3 programming assignments, two midterms and a final. The weight distribution is as follows:

Programming Assignments 30% (10% each)  
2 Midterms 15% each  
Final Exam 40%

Grading Scale:

90% and above A  
80% - 89.9% at lease B  
70% - 79.9% at lease C  
60% - 69.9% at lease D

Midterm: If you are absent for a midterm exam, you will receive a zero unless you have a valid excuse. If you miss a midterm with valid excuse, the final will have increased weight. You cannot miss both midterms in any case.  
1st Midterm: Oct 4 (Wednesday)/Oct 5(Thursday)  
2nd Midterm: Nov 8 (Wednesday)/Nov 9(Thursday)

Final: The final exam will be comprehensive and will be given at the specified time in the class schedule. A missing final exam will be dealt with according to the university regulations on the incomplete and withdrawals.

All exams are closed book and closed notes unless otherwise announced.

Programming Assignments: There will be 3 programming assignments each taking about 4-5 weeks. For your assignments, you may choose between Pascal, C or C++. You
may work on the assignments with a partner or alone. If you want to work with a partner, you must have a partner when you turn in the first programming assignment and both names must appear in the document. Otherwise, I will assume that you will do it alone. If you choose a partner, your group will get the same grade for the assignments. You cannot change the partner between assignments. No collaboration is allowed between groups. Although, your partner may work on different parts, you are responsible for understanding all parts of the assignments you turn in.

**Late Assignments**: late assignments will be accepted, however there will be deductions. First day you are late, there will be 0.5 deduction, and 0.1 deduction each additional day you are late. For example, if you are late 1 week, the total deduction will be 0.5(First day) + 0.6 (6 additional days) = 1.1. Hence, you can receive maximum of 8.9 for an assignment instead of 10.

**Homework Assignments**: Suggested homework assignments will be given periodically. They will not be graded but they will be useful for understanding the course material. It is strongly recommended that you try them out.

**Attendance**: You are expected to attend all lectures. You are responsible for a missed work if you are absent. Please arrange with a friend to pick up any assignments or handouts.

**Drop Deadline**: Please see the Schedule of Classes for the deadlines to drop the class.

**Few words for Academic Dishonesty**

**Academic dishonesty** include such things as cheating, inventing false information or citation, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves and attempt by a student to show possession of a level of knowledge or skill which (s)he dose not possess.

**Cheating** is defined as the act of obtaining or attempting to obtain credit for work by the use of any dishonest, deceptive, fraudulent or unauthorized means. Examples of cheating include, but are not limited to using notes or aids or help of other students on tests and examinations in the ways other than those expressly permitted by the instructor, plagiarism as defined below, tampering with grading procedure, and collaborating with others on any assignment where such collaboration is expressly forbidden by the instructor.

**Plagiarism** is defined as the act of taking the specific substance of another and offering it as one’s own without giving credit to the source (e.g., copying other person’s program). When sources are used, acknowledgment of the original author or source must be made following standard scholarly practice.

The Penalty for academic dishonesty is very serious and will be dealt according to the university regulations.

**Final words**

If you have any problem with this course, please contact me as soon as possible. I want the entire class to do well and for that I am willing to help you as much as possible.
Course Description

This course is an introduction to the principles of compiler design. The course will cover some of the theoretical foundations underlying compiler design including study on regular languages, FSM, context free languages and different grammars. Furthermore, the course will deal with the actual construction of the parts of a compiler and discuss more advanced feature such as optimization.

Approximate Class Schedule (may be slightly modified)

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<thead>
<tr>
<th>Topic</th>
<th>Book Readings</th>
<th># of weeks covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Ch1</td>
<td>1</td>
</tr>
<tr>
<td>Lexical analysis</td>
<td>Ch2</td>
<td>2</td>
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<tr>
<td>Syntax analysis</td>
<td>Ch3</td>
<td>2</td>
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<tr>
<td>Theoretical Background</td>
<td></td>
<td></td>
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<tr>
<td>Top-Down, Recursive-descent Parsing etc.</td>
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<td></td>
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<tr>
<td>Midterm Exam I</td>
<td></td>
<td>1/2</td>
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<tr>
<td>Bottom-Up Parsing</td>
<td>Ch4</td>
<td>2</td>
</tr>
<tr>
<td>Intermediate Code Generation</td>
<td>Ch5</td>
<td>2</td>
</tr>
<tr>
<td>Symbol Table</td>
<td>Ch8.1</td>
<td></td>
</tr>
<tr>
<td>Midterm Exam II</td>
<td></td>
<td>1/2</td>
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<tr>
<td>Object Code Generation</td>
<td>Ch7</td>
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<tr>
<td>Optimization</td>
<td>Ch6</td>
<td>1</td>
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<tr>
<td>Lex., Yacc</td>
<td>Appendix B</td>
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<tr>
<td>Memory Use and other topics</td>
<td>Ch8</td>
<td>1</td>
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</tbody>
</table>