**CSCI 440/ CIS 640 ; Compiler Design and Implementation**
**COURSE SYLLABUS, Spring 2007**
**Department of Computer Science**
**University of Wisconsin-Parkside**

| | **Instructor** |
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| **Name, e-mail, office, and web page** | J. Ubaldo Quevedo<br>quevedo@cs.uwp.edu<br>249 Molinaro<br>http://uwp.edu/~quevedo |
| **Office Hours**: | Tuesdays & Thursdays 12:30 PM-2:00PM<br>and by appointment |

## Textbook

Compiler Construction, by Kenneth Louden, ISBN 0-534-93972-4

## Course Description

This course presents methods in the design and implementation of compilers. It includes the construction of the components of an actual compiler as a term project. The course will introduce finite automata, regular expressions, and context free grammars, along with software tools that use these formalisms to automatically produce two major components of a compiler.

## General Course Guidelines

1. Each student will be responsible for completing the assigned reading, exercises and attending classes. There will be a sign-in sheet to record attendance.
2. There will be some programming assignments using C, Lex, and Yacc. The assignments must be turned in on the due date to receive full credit.
3. Late assignments are penalized at 20% per calendar day that they are late.
4. If you miss a class, you are still responsible for knowing everything that took place. Your absence does not change the due date of an assignment. This is not an online class.
5. Quizzes covering the previous two week's material will take place at the end of class on Thursday. If you must miss a quiz, please arrange to take a make-up quiz before the next quiz. If you do not take a quiz or a make-up quiz, you will receive a grade of zero for the quiz in question.
6. Exam dates are scheduled in the syllabus but will be confirmed one week before the exam date.
7. Make-up exams: If possible, prior notice should be given to me. No make-ups will be granted unless satisfactory documentation is produced to show an extenuating circumstance.
8. Computer programming assignments, reading and other written assignments will be announced in class as needed.
9. **Cheating:** Cheating on tests and programs will be dealt with very severely. You must make a diligent effort to prevent other students from seeing your test answers. Keep your paper covered and do not let your eyes wander during tests. You should not receive or give help to others on any program that goes beyond help in deciphering syntax errors.
10. **Plagiarism:** Plagiarism is a form of cheating. Copying someone else's program, changing a few lines, and turning it in as your own is plagiarism; thus, this is cheating. Each student is to write his or her own programs.

11. **Incompletes Policy:** Incompletes are not to be used as a shelter from potentially low grades. To take an incomplete, you must have "maintained a passing grade in the course until near the end of the course" (UW-Parkside 2003-2005 catalog, p. 41).
12. Grading

| GRADING |
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| 15% lexical analysis |
| 15% syntax analysis |
| 15% semantic analysis |
| 15% code generation |
| 15% labs/quizzes/assignments/ participation |
| 10% midterm exam / project part 2 |
| 15% final exam / project part 2 |

**13.** Topics or discussions unrelated to class, suggestions about the logistic of the course are all welcome outside class, but are considering disruptive during class and ***will*** affect negatively your "class contribution" grade, and ***may*** impact at the discretion of the instructor your final grade.

**14.** The use of Laptops is not allowed during lecture unless is used for note taking assistance. Therefore, checking e-mail and browsing the WWW during class is strictly forbidden and will severely penalize your class contribution grade.

**15.** All exams and quizzes are closed notes and closed book. However, you will be allowed one 8.5"x 12" sheet of personal notes one-sided for each quiz, and double-sided for each exam.

16. Cellular Telephones and Pagers in Class and Lab: Along with your instructors, many students find these both distracting and rude. As a courtesy to all involved, please either turn off your cellular telephone or pager or disable the ring tone during lecture and lab. If you must use the phone, please leave the classroom or lab and go to a place that will not interrupt others.

**17. List of topics**

Introduction to Compilers
Scanning, regular expressions, finite automata (lexical analysis)
Context free grammars, parsing (syntax analysis)
Semantic analysis
Code generation