

# CS 440 Language Processors - Spring 2017

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Office Hours: Thursday 2:30-4:15 or by appt

## Course Content

This course will cover the theoretical and implementation aspects of language processing. Emphasis will be on the design and construction of compilers. There are several **substantial** programming assignments associated with this course. These assignments will be implemented in C, Java or C++ (student choice).

- Compiler Design
- Lexical Analysis
- Syntax Analysis - grammars, LL(1) parsers, LR(1) parsers
- Semantic Processing
- Code generation and optimization

## Pre-requisites

- CS 310 - strong programming and data structure experience.
- CS 330 - study of formal languages, including regular and context free.
- CS 367 - experience with assembly language programming and will runtime systems.

## Textbooks

- *Compilers: Principles, Techniques and Tools*, Aho, Lam, Sethi & Ullman, 2006 (2nd edition)
- *lex & yacc*, Levine et. al. (recommended)
- Other course materials, including slides, will be available on Blackboard

## Grading Policies

- There will be 3 programming assignments, together worth 35% of your grade (10% + 10% + 15%). The assignments get progressively larger

and more complex over the semester. These are to be **individual** efforts, meaning no sharing of code or discussion of problem solution allowed with anyone but me or the TA.

- Homeworks (one per major topic), worth 10% of your grade
- Midterm exam, worth 25% of your grade
- The final exam, worth 30% of your grade, will be cumulative with the primary emphasis (70-90%) on the material not tested in the midterm.

Both the final and midterm are closed book. You must have a written excuse (doctor's note, for example) to miss an exam. I reserve the right to give oral makeup exams in lieu of written.

- It has been my experience that time is the biggest determiner of your final grade in this class. I suggest that you start assignments when I hand them out. They often take more time than you think.

## **Honor Code**

You are expected to abide by the honor code. Programming assignments and exams are individual efforts. Information on the university honor code can be found at:

<http://jiju.gmu.edu/catalog/apolicies/honor.html>

This semester I will probably be using similarity detection software to assist me in finding honor code violations, should they occur.