

CS 332 - Organization of Programming Languages

Syllabus, Fall 2018

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Lecture MWF 1:00 – 1:50, LB 162
Text No text is required
Office Hours MWF 11:00 – 1:00 and by appointment

Course Description: A comparative study of different programming paradigms. Students program in several languages chosen to illustrate the essential features of the paradigms studied. Formal language concepts are also introduced.

Prerequisites: CS222, CS225

Topics and Objectives: By the end of the term students will be able to:

- Perform computations using the Lambda Calculus,
- Distinguish between values, operands, and operators in a computation,
- Define a language using BNF and EBNF grammars,
- Derive and draw parse trees for strings in a language defined by a BNF,
- Identify ambiguous grammars/languages,
- Identify fundamental features of popular programming paradigms and write programs in each,
- Create and operate finite state machines (FSM), push down automata, and Turing machines,
- Provide definition of state transition, accept/reject criteria, string processing,
- State relation of a language to the Chomsky Hierarchy,
- Identify standard primitive data types, compound data types, and user defined data types,
- Perform type checking and identify equivalent data types,
- Author, review, and edit a technical report.

Grade /Breakdown: There are 600 points offered in the course. Grade break down is typical: A (540 – 600), B (480 – 539), C (420 – 479), D (360 – 419), F (under 360).

| Activity | Points | Notes |
|-----------------------|--------|--|
| Tests, quizzes | 200 | In class, open book, open notes. |
| Assignments | 140 | Submitted in class on paper. Late accepted with 50% penalty. |
| Programming Exercises | 160 | Submitted via Canvas, demonstrated to instructor |
| Reports | 100 | |
| Extra Credit | | Up to 5% (30 points) |
| Totals | 600 | |

Course Policies:

Integrity: University policies apply. Simply put, all work you submit for a grade is to be your own. Failure to follow these guidelines may result in a score of zero for an assignment, failure of the course, and disciplinary action by the University.

Attendance/Lateness: Attendance is strongly encouraged, but is not calculated directly into your grade. Missing the first 5 minutes of a test counts as a missed test.