

# Test 3 Review

Professor Killian

CSCI 340: Computational Models

*In general, homework problems are representative of what will be on the test. This is just a high-level overview of what's been covered. If you are unsure if something will be on the test, just ask!*

*Questions asked on the exam may be: True/False, Multiple Choice, Short Answer, or otherwise similar to the nature of homework problems assigned*

- **Grammatical Format**

- Regular grammars
- Chomsky Normal Form
- Other definitions and terminology

- **Pushdown Automata**

- Examples and definitions
- Example languages and machines
- Nondeterminism
- Creating a PDA that accepts the language generated by a given CFG

- **Non-Context-Free Languages**

- Basic properties of non-context-free languages
- Concept of pumping lemma for CFLs (decomposition, testing,  $w = uvxyz$ )

- **Context-Free Languages**

- Closure properties
- Decidability definitions, terminology, and methodology
- Which questions are decidable

- **Turing Machines (Depends on how far we go on Thursday)**

- Definitions, terminology
- Execution train or trace
- Relationship to regular languages
- ACCEPT, REJECT, LOOP
- Insert, Delete subprograms