

## **CSC362: Automata Theory**

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The goal of the course is to introduce basics of automata and formal languages and their applications in computer science. The course topics include: Deterministic finite automata (DFA), Regular languages, Nondeterministic finite automata (NFA), Regular expressions (RE), The Pumping Lemma for regular languages, Proving non-regularity using reduction, Cantor's Theorem and limitations of Finite Automata, Pushdown Automata and Context-Free Languages: Context-free grammars and languages, Chomsky-Schützenberger Theorem, Pumping Lemma for CFLs, Pushdown automata, Closure properties of CFLs, Deterministic PDAs, Turing Machines and Application: Control flow analysis of programs.