



**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR**

(An Institution of National Importance under NITs Act, Established by Govt. of India)

**मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर**

**JLN Marg, Jaipur-302017 (India)**

Code: CST206	Formal Languages and Automata Theory	Credit: 04
		L-T-P: (3-1-0)
Course Content	<p>Introduction to automata theory, finite automata and regular languages, regular expressions, transition graphs.</p> <p>Non-determination, finite automata with output, regular languages, minimization of finite automata, pumping lemma for regular languages.</p> <p>Chomsky classification of languages, regular grammars, context free grammars, simplification of context free grammars, Normal forms of context free grammars.</p> <p>Push Down Automata Theory: push down automata and languages, push down automata and context free grammars, pumping lemma for context free languages.</p> <p>Turing hypothesis, Turing machine, Minsky's theorem, TM variation and encoding, Post machines, computability and acceptability.</p> <p>Introduction to automata theory, finite automata and regular languages, regular expressions, transition graphs.</p>	
Important Text Books/References	<ol style="list-style-type: none"><li>1. Hopcroft, Motwani and Ullman: Introduction to Automata Theory, languages and Computation, Pearson Education.</li><li>2. Cohen: Introduction to Computer Theory, Addison Wesley.</li><li>3. Martin: Introduction to Languages and Theory of Computation, TMH.</li><li>4. Papadimitriou, Introduction to Theory of Computing, Prentice Hall.</li></ol>	