

The following schedule gives you an idea of the topics we will cover, along with the related reading and homeworks. It is subject to change.

<b>Week 1</b> Sep 5 - 9	Introduction, math review, strings and languages, finite automata. Lectures 1, 2 & 3	
<b>Week 2</b> Sep 12 - 16	Regular sets, closure properties & nfa's. Lectures 4 & 5	<b>hwk 1</b>
<b>Week 3</b> Sep 19 - 23	The subset construction, limitations of FA, the pumping lemma. Lectures 6, 11 & 12	<b>hwk 2</b>
<b>Week 4</b> Sep 26 - 30	Regular expressions, equivalence with FA. Lectures 8 & 9	<b>hwk 3</b>
<b>Week 5</b> Oct 3 - 7	Homomorphisms & DFA minimization. Lectures 10, 13 & 14	<b>hwk 4</b>
<b>Week 6</b> Oct 10 - 14	Context-free grammars and languages, normal forms. Lectures 19, 20 & 21	<b>test #1</b>
<b>Week 7</b> Oct 17 - 21	Normal forms, pumping lemma for CFGs. Lectures 21 & 22	<b>hwk 5</b>
Oct 24 - 28	<b>Fall Break</b>	
<b>Week 8</b> Oct 31 - Nov 4	Pushdown automata, PDAs and CFGs, simulating NPDAs by CFGs. Lectures 23, 24 & 25	<b>hwk 5.5</b>
<b>Week 9</b> Nov 7 - 11	Parsing, the Cocke-Yasami-Younger theorem, Turing Machines. Lectures 26, 27 & 28	<b>hwk 6</b>
<b>Week 10</b> Nov 14 - 18	Turing Machines, equivalent models, universal TMs. Lectures 29, 30 & 31	<b>hwk 7</b>
<b>Week 11</b> Nov 21 - 23	Decidable and undecidable problems. Lecture 31	<b>test #2</b>
Nov 23 - 25	<b>Thanksgiving</b>	
<b>Week 12</b> Nov 28 - Dec 2	Decidable and undecidable problems, reductions, Rice's Theorem. Lectures 32, 33 & 34	<b>hwk 8</b>
<b>Week 13</b> Dec 5 - Dec 9	Decidable problems, undecidable problems on CFLs, P vs. NP Lectures 33, 34 & 35	<b>hwk 9</b>
<b>Week 14</b> Dec 12 - 13	Goedel's incompleteness theorem, beyond undecidability. Lectures 38 & J	<b>hwk 9.5</b>
<b>Dec 18</b>	<b>Take-home final due by 11am.</b>	