This is intended as a guideline for studying for the exam... but only as a guideline. I wouldn’t have covered something if I didn’t think it was important. If you are wondering about a topic and you don’t see it here, ask me!

The exam will be primarily composed of problem-solving questions (like the ones you’ve been doing on homework), but there may be some true/false, multiple choice, fill-in-the-blanks mixed in as well.

Chapter 2: Languages
  • Different ways to define a formal language
  • Kleene closure

Chapter 3: Recursive Definitions
  • Components of a recursive definition
  • Be able to define a language using a recursive definition

Chapter 4: Regular Expressions
  • Formal definition of regular expressions
  • Finite languages are regular
  • Be able to understand and generate regular expressions to define a language

Chapter 5: Finite Automata
  • Formal definition of FA
  • Be able to understand and generate FAs to define a language

Chapter 6: Transition Graphs
  • Formal definition of TG
  • Contrast between TG and FAs
  • Non-determinism

Chapter 7: Kleene’s Theorem
  • FA = TG = RE
  • Turning TGs into REs (be able to perform algorithm)
  • Converting REs into FAs (be able to perform algorithm)
  • Non-deterministic FAs