Topics:

- List the available resources — human, electronic and/or otherwise — available to assist students.
- Examine the historical relationship of logic and computer science.
- Informally discuss the topics and goals for the course.
- Introduce/review basic logical concepts.

By the end of class, students should be able to

- Find resources provided to them for the course.
- List some reasons why logic is relevant to computer science.
- Explain what a “proposition” is.
Topics:

- The formal syntax of propositional logic: symbols, expressions, formulas, and parse tree.
- Applying mathematical induction to formulas of propositional logic.
- Properties of well-formed formulas.

By the end of class, students should be able to

- State, precisely, what a “formula” is.
- Given an expression, determine whether or not it is a formula of propositional logic.
- Express simple properties of formulas in a manner suitable for inductive proof, and describe the steps required to complete the proof.
Topics:

- Defining the meaning (semantics) of a formula from its syntax. Explain “truth valuations”.
- Show that every well-formed formula has a unique meaning, using structural induction.

By the end of class, students should be able to

- Carry out a complete proof on the structure of a well-formed formula (given a suitable outline).
- Given a valuation and a formula, determine the value of the formula.
- Fill out the truth table for a given formula.