

## **COMPSCI 230 - Discrete Mathematics for Computer Science**

### **MIDTERM 1**

#### Intro, logic, and proofs

- Proposition
- Logical operators and connectors
- Truth table
- Implication
- De Morgan's laws
- Distributive law
- Valid vs satisfiable

#### Predicates

- Predicates
- Variables
- Quantifiers - negation
- Inference - rules of inference

#### Proofs

- Direct proofs
- By cases
- Contrapositive
- Contradiction
- Well ordering - WOP
- Induction

#### Induction

- Strong induction
- Structural induction