

Introduction to Formal Logic

Required Text

forall x: *Calgary* (<https://forallx.openlogicproject.org/>)

Course Schedule

Date	Topic	Reading
KEY NOTIONS OF LOGIC		
Week 1	Arguments and logical notions	<i>forall</i> x - Chs. 1-3
TRUTH-FUNCTIONAL LOGIC (TFL)		
Week 2	Connectives and steps to symbolization	<i>forall</i> x - Chs. 4-5
Week 3	Sentences, ambiguity, and use/mention	<i>forall</i> x - Chs. 6-8
TRUTH TABLES		
Week 4	Truth-functional connectives and complete truth tables	<i>forall</i> x - Chs. 9-11
Week 5	Semantic concepts, shortcuts, and partial truth tables	<i>forall</i> x - Chs. 12-14
NATURAL DEDUCTION FOR TFL		
Week 6	Natural deduction and rules for TFL	<i>forall</i> x - Chs. 15-16
Week 7	Constructing proofs	<i>forall</i> x - Ch. 17
Week 8	Proof theoretic concepts and additional rules	<i>forall</i> x - Chs. 18-20
Week 9	Soundness and completeness	<i>forall</i> x - Ch. 21
FIRST-ORDER LOGIC (FOL)		
Week 10	Building blocks for FOL and one-quantifier sentences	<i>forall</i> x - Chs. 22-23
Week 11	Multiple generality and identity	<i>forall</i> x - Chs. 24-25
Week 12	Sentences, definite descriptions, and ambiguity	<i>forall</i> x - Chs. 26-28
INTERPRETATIONS		
Week 13	Extensionality, truth, semantic concepts, using interpretations	<i>forall</i> x - Chs. 29-33
NATURAL DEDUCTION FOR FOL		
Week 14	Basic rules for FOL and proofs with quantifiers	<i>forall</i> x - Chs. 34-35
Week 15	More rules for FOL; provability and semantic entailment	<i>forall</i> x - Chs. 36-39