Fundamental Methods of Logic (Knachel)

*Fundamental Methods of Logic* is suitable for a one-semester introduction to logic/critical reasoning course. It covers a variety of topics at an introductory level. Chapter One introduces basic notions, such as arguments and explanations, validity and soundness, deductive and inductive reasoning; it also covers basic analytical techniques, such as distinguishing premises from conclusions and diagramming arguments. Chapter Two discusses informal logical fallacies. Chapters Three and Four concern deductive logic, introducing the basics of Aristotelian and Sentential Logic, respectively. Chapter Five deals with analogical and causal reasoning, including a discussion of Mill's Methods. Chapter Six covers basic probability calculations, Bayesian inference, fundamental statistical concepts and techniques, and common statistical fallacies.
1: The Basics of Logical Analysis

2: Informal Logical Fallacies

3: Deductive Logic I - Aristotelian Logic

4: Deductive Logic II - Sentential Logic
5: Inductive Logic I - Analogical and Causal Arguments

6: Inductive Logic II - Probability and Statistics

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