

# Week 3-4 Study Guide

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## Introduction

1. Basic statistics: 1.2
2. Set theory and axioms of probability: 1.13, 1.14,  $B.1$ ,  $B.5(a)$
3. Counting methods: 1.7, 1.8, 1.26

## Conditional Probability

1. Conditional probability: 2.2, 2.7
2. Law of total probability: 2.6
3. Bayes Formula: 2.33, 2.37, 2.40
4. Independence: 2.13, 2.17
5. Conditional independence: 2.27, Example 2.38

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**Note:** This study guide is used for Botao Jin's sections only. Comments, bug reports: [b\\_jin@ucsb.edu](mailto:b_jin@ucsb.edu)