

Boston University
Department of Mathematics and Statistics

MA213 - Fall 2025
Basic Statistics and Probability
Lab 5 Plan

1. Objectives

- Design and Interpret Confidence Intervals: Design, execute, and interpret confidence intervals for the population proportion.
- Conduct and Interpret Hypothesis Tests for Proportions: Design, execute, and interpret hypothesis tests for population proportions.
- Conduct and Interpret Chi-Square Tests: Assess whether the conditions for a chi-square test (goodness of fit or independence) are met, and if so, design, execute, and interpret the test.

2. Plan

- 1. Simulation of CI for p (Now student can construct it; Maybe no showcase)
- 2. Chi-square test statistic (Give them different categorical data) – this could be a practice for project

3. Grouping

- How many students? (4 to 5?)
- Randomly assigned or Student can choose ?