

Statistics II Course Outline

Unit I

Confidence Intervals and Sample Size

1. Confidence Intervals for the Mean When σ is Known and Sample Size
2. Confidence Intervals for the Mean When σ is Unknown
3. Confidence Intervals and Sample Size for Proportions
4. Confidence Intervals for Variances and Standard Deviations

Unit II

Hypothesis Testing

1. Steps in Hypothesis Testing
2. z Test for a Mean
3. t Test for a Mean
4. z Test for a Proportion
5. χ^2 Test for a Variance or Standard Deviation

Unit III

Testing the Difference Between Two Means, Two Proportions and Two Variances

1. Testing the Difference Between Two Means: Using the z Test
2. Testing the Difference Between Two Means of Independent Samples
3. Testing the Difference Between Two Means of Dependent Samples
4. Testing the Difference Between Proportions
5. Testing the Difference Between Two Variances

Unit IV

Correlation and Regression

1. Scatter Plots and Correlation
2. Regression
3. Coefficient of Determination and Standard Error of the Estimate
4. Test for Goodness of Fit