

課程名稱：統計學

開課年級：二年級

學分數：3 學分

課程內容：

- 1. Introduction:** Statistics in Our Everyday Life, Population and Sample, The purposeful Collection of Data, Objectives of Statistics.
- 2. Organization and Description of Data:** Tables and Graphs, Measure of Center, Measure of Variation.
- 3. Descriptive Study of Bivariate Data:** Scatter Diagram, The Correlation Coefficient, Prediction of One Variable from Another [Linear Regression].
- 4. Sampling Distribution:** The Sampling Distribution of a Statistic, Distribution of the Sample Mean and the Central Limit Theorem.
- 5. Drawing Inferences from Large Samples:** Point Estimation, Confidence Interval, Testing Hypotheses, Inferences about a Population Proportion.
- 6. Regression Analysis:** Regression with a Single Predictor, A Straight-Line Regression Model, The Method of Least Squares.
- 7. Analysis of Categorical Data:** Pearson's χ^2 Test for Goodness of Fit, Contingency Table.
- 8. Analysis of Variance (ANOVA):** Comparison of Several Treatments.
- 9. Nonparametric Inference(Optional):** The Wilcoxon Rank-Sum Test for Comparing Two Treatments, Matched Pair Comparisons, Measure of Correlation Based on Rank