

Schedule

SECTION 1. (Day 1, Morning)

Registration and Orientation
Sign-in Orientation
Part 1. Introduction to Descriptive Statistics
Course Objectives and Goals Descriptive v. Inferential Statistics 1.1 In-Class Exercise. Descriptive v. Inferential Methods Populations and Samples Central Tendency, Dispersion, and Shape 1.2 In-Class Exercise. Generating Descriptive Statistics MORNING BREAK
Part 2. Scatter Plots and Correlation
Scatter Plots 2.1 In-Class Exercise. Creating a Scatter Plot Correlation (r)
Part 3. Introduction to Simple Linear Regression
Mathematical Description of a Line Estimating Coefficients of a Simple Linear Equation Using Regression Analysis 3.2 In-Class Exercise. Regression Error Deriving a Simple Linear Regression Equation Using Excel 3.3 In-Class Exercise. Deriving a Simple OLS Linear Regression Model in Excel MORNING BREAK Interpreting Linear Regression Output and ANOVA Table REVIEW QUIZ 1 LUNCH

SECTION 2 (Day 1, Afternoon)

Part 4. Assumptions Underlying an Ordinary Least Squares (OLS) Linear Regression Model

OLS Assumptions
Assessing the Assumptions
4.1 In-Class Exercise. Examining Scatter Plots
Major Limitation of Simple Linear Regression
AFTERNOON BREAK

Part 5. Modeling Nonlinear Relationships and Heteroskedasticity Considerations

Nonlinear Relationships
Transformations
5.2 In-Class Exercise. Compound Population Growth
Decay Functions
5.3 In-Class Exercise.
Mass Transit Proximity Rent Decay Function
AFTERNOON BREAK
Heteroskedasticity
5.4 In-Class Exercise. Identifying Heteroskedasticity

SECTION 3 (Day 2, Morning)

Part 6. Fitting Trend Lines Using Excel

The Curve-Fitting Window
6.1 In-Class Exercise.
Population Forecast Using Excel's Built-in Trendline
6.2 In-Class Exercise. Searching for the Best Curve-Fit
REVIEW QUIZ 2
MORNING BREAK

Part 7. Outliers and Normality

Outliers
7.1 In-Class Exercise. Examining Outliers
Normality
MORNING BREAK

SECTION 3 (Day 2, Morning, cont.)

Part 8. Prediction and Forecasting
Predictions v. Forecasts
Prediction Precision v. Forecast Precision
Confidence Intervals and Prediction Intervals
8.2 In-Class Exercise.
Using the Confidence Interval Estimator
Forecasting
8.3 In-Class Exercise. Population Forecast
LUNCH

SECTION 4 (Day 2, Afternoon)

Part 9. Depreciation and Multi-Stage Models
Property Age and Physical Depreciation
Application: 9.1 In-Class Exercise.
Market-Based Physical Depreciation Curve
Part 10. Data Sufficiency and Modeling Limitations
Data Sufficiency
10.1 In-Class Exercise. Sample Size Assessment
Modeling Limitations
Competency
10.2 In-Class Exercise. Random Sampling
AFTERNOON BREAK
Part 11. Combining Two Simple Linear Regression Models into One
Introduction
Example
11.1 In-Class Exercise. Developing a Model with Two Intercepts and One Slope
REVIEW QUIZ 3

SECTION 4 (Day 2, Afternoon, cont.)

Part 12. Exam Content Review and Examination

Preparing for the Exam

Guidance on Taking the Final Exam

Test-Taking Strategies

Content Review: Learning Objectives and Terms and
Concepts to Remember

Evaluations and Other Forms

AFTERNOON BREAK

Course Examination

Section 1