


STA 215 SPSS 22 How-To Sheet


Opening SPSS

On student network → Lab Applications → Statistics → SPSS 22 → then get data open

Opening textbook data

Open SPSS as above → Open an existing data source → Click on  next to Look In → Scroll to GVSU LabData (R:) → STAT → Gabrosek Stephenson Materials → SPSS Datasets → name of data set → Open

Opening classroom data

Open SPSS as above → Open an existing data source → Click on  next to Look In → Scroll to GVSU LabData (R:) → STAT → Hall → name of data set → Open


CH 1: Data Collection

Take SRS: Data → Select Cases → Random sample of cases → Sample → Type a % in box next to Approximately or Check Exactly and Type sample size in 1st box and number of rows in data set in 2nd box → Continue → OK

CH 2: One Categorical Variable

Frequency Table: Analyze → Descriptive Statistics → Frequencies → Drag variable into Variable(s): → OK

Bar Graph: Graphs → Chart Builder → OK → under Choose

from: Choose Bar → Pick  → Drag and Drop in Chart preview → Under Variables: choose variable and drag and drop on X-Axis → OK

Pie Graph: Graphs → Chart Builder → OK → under Choose from:



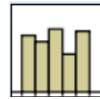
Choose Pie/Polar → Pick → Drag and Drop in Chart preview → Under Variables: choose variable and drag and drop on X-Axis → OK

CH 3: One Quantitative Variable

Numerical Summaries: Analyze → Descriptive Statistics → Explore → Under Display: Be sure Both or Statistics is marked → Drag and drop variable to Dependent List → Click Statistics button in upper right → Check Descriptives and Percentiles → Continue → OK

Boxplot: You get this in Numerical Summaries as long as Both or Plots is marked under Display

Histogram: Graphs → Chart Builder → OK → Under Choose from: Choose Histogram → Pick



→ Drag and Drop in Chart preview → Under Variables: choose variable and drag and drop on X-Axis → OK

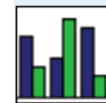
CI on Mean: Analyze → Descriptive Statistics → Explore → Under Display: Be sure Both or Statistics is marked → Drag and drop variable to Dependent List → Click Statistics button in upper right → Check Descriptives → Put the confidence level in the box left of % and right of Confidence interval for Mean. → Continue → OK

HT on Mean: Analyze → Compare Means → One-Sample T Test → Drag and drop variable to Test Variable(s) → Type the Null Value in the box next to Test Value → OK

CH 4: Two Categorical Variables

Two-Way Tables: Analyze → Descriptive Statistics → Crosstabs → Drag and drop explanatory variable to Row(s) → Drag and drop response variable to Column(s) → OK

Clustered Bar Graph: Graphs → Chart Builder → OK → Under Choose from: Choose Bar → Pick



→ Drag and Drop in Chart preview → Under Variables: choose response variable and drag and drop on X-Axis → Under Variables: choose explanatory variable and drag and drop on Cluster on X → Element Properties → Edit Properties of: choose Bar1 → Statistic: choose Percentage → Set Parameters: choose Total for Each Legend Variable Category → Continue → Apply → OK

X²-test: Follow instructions to make a Two-Way Table. Before clicking OK → Click Cells → Under Counts: check both Observed and Expected → Continue → Statistics → check Chi-square → Continue → OK

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CH 5: Two Quantitative Variables

Scatterplot: Graphs → Chart Builder → OK → Under Choose from: Choose Scatter/Dot → Pick



→ Drag and Drop in Chart preview → Under Variables: Choose explanatory variable and drag and drop on X-Axis → Under Variables: Choose response variable and drag and drop on Y-Axis → OK

Linear Correlation: Analyze → Correlate → Bivariate → Drag and drop explanatory and response variables to Variables: → OK

Simple Linear Regression: Analyze → Regression → Linear → Drag and drop response variables to Dependent: → Drag and drop explanatory variable to Independent(s): → OK

R²: Follow the instructions for Simple Linear Regression

HT for Slope: Follow the instructions for Simple Linear Regression

CI for Slope: Follow the instructions for Simple Linear Regression → Before Click OK, click on Statistics in upper right → Check box next to Confidence intervals → Type Level into box → Continue → OK

CH 6: Two Group Independent

Numerical Summaries by Group: Analyze → Descriptive Statistics → Explore → Under Display: Be sure Both or Statistics is marked → Drag and drop quantitative variable to Dependent List → Drag

and drop categorical variable to Factor List → Click Statistics button in upper right → Check Descriptives and Percentiles → Continue → OK

Comparative Boxplot: You get this in Numerical Summaries by Group as long as Both or Plots is marked under Display

Comparative Histogram: Graphs → Legacy Dialogs → Histogram → Drag and drop quantitative variable to Variable → Drag and drop categorical variable to Rows → OK

Independent T-Test: Analyze → Compare Means → Independent-Samples T Test → Drag and drop quantitative variable to Test Variable(s) → Drag and drop categorical variable to Grouping Variable. → Define Groups. Type values in Group 1 and Group 2. → Continue → OK

CI Difference In Two Means: Follow the instructions for Independent T-Test. You get a 95% CI → To change the confidence level, before you click OK, click Options → Put level into Confidence Interval Percentage. → Continue → OK

CH 7: Paired Data

Finding Paired Differences D: Transform → Compute Variable → Under Target Variable, name the variable D → Drag and drop the first variable into Numeric Expression → Click on the minus symbol → Drag and drop the second variable into Numeric Expression after the minus symbol → OK

One you have the variable D, you can find any numerical summaries or graphs following CH 3 One Quantitative Variable.

Paired T-Test: Analyze → Compare Means → Paired-Samples T Test → Drag and drop the first variable into Variable1 → Drag and drop the second variable into Variable2 → OK

CI for Paired Data: Follow the instructions for Paired-Samples T-Test. You get a 95% CI → To change the confidence level, before you click OK, click Options → Put level into Confidence Interval Percentage → Continue → OK

CH 8: Three or More Groups Independent

Numerical Summaries by Group: Follow the instructions under CH 6

Comparative Boxplot: Follow the instructions under CH 6

Comparative Histogram: Follow the instructions under CH 6

ANOVA Table and HT: Analyze → Compare Means → One-Way ANOVA → Drag and drop quantitative variable to Dependent List → Drag and drop categorical variable to Factor → OK

Post Hoc: Follow the instructions for ANOVA Table and HT → Before you click OK, click Post Hoc → Check Tukey and/or Bonferroni → Continue → OK