**OCD link BS**

**Introduction to regression analysis and experimental design**

**EC/STAT-301**

**Book Links**

1. Danial, W. W. (1983). Biostatistics: A foundation for analysis in the health science 3rd.

**Google drive link to access book**

**https://drive.google.com/file/d/1C2gfx5rNsa-wPNXQdzDdETyg6tQxG2Ax/view?usp=sharing**

**Free download**

**http://www.ege.fcen.uba.ar/wp-content/uploads/2014/05/Daniel-1995-Biostatistics.pdf**

1. Field, A., Miles, J., & Field, Z. (2012). *Discovering statistics using R*. Sage publications.

**https://drive.google.com/file/d/1PuazNFJCZbRvfV4qK35jA8dQ09ENHcSn/view?usp=sharing**

1. **SPSS Tutorials**

https://drive.google.com/file/d/10Anq2tOk59bts3jJ9X4VKHc0t6MEAAwC/view?usp=sharing

1. **Data Sets**

https://drive.google.com/drive/folders/1MCt0uwtjSSoQVc7AXak0WVl0OZflIyM4?usp=sharing

**PPT Slides and Videos Links**

1. **Introduction to simple linear regression model**

**PPT**

<https://drive.google.com/file/d/1IcQs75gbjpixqImJs84_93Xttmt8FujA/view?usp=sharing>

**Video link**

# How to Calculate Linear Regression SPSS

<https://www.youtube.com/watch?v=rig4ZZ_cBZo>

1. **Simple linear correlation co-efficient**

**PPT**

https://drive.google.com/file/d/1r56TbelFi3J8vY9epExKE-XCpOhKP\_KT/view?usp=sharing

**Video link**

# How to Run a Simple Correlation in SPSS

**https://www.youtube.com/watch?v=wgfXJi4gcRs**

# Comparing Pearson Correlation and Linear Regression in SPSS

**https://www.youtube.com/watch?v=EGgJUOGgxlQ**

1. **Multiple linear regression**

**PPT**

<https://drive.google.com/file/d/1r56TbelFi3J8vY9epExKE-XCpOhKP_KT/view?usp=sharing>

**Video link**

# How to us SPSS for Multiple Linear Regression

<https://www.youtube.com/watch?v=-QTUWKTCSEU>

# How to Calculate Multiple Linear Regression with SPSS

<https://www.youtube.com/watch?v=ZyruUhomEnQ>

1. **Regression Diagnostics**

**PPT**

https://drive.google.com/file/d/1r56TbelFi3J8vY9epExKE-XCpOhKP\_KT/view?usp=sharing

**Video link**

# Multiple Linear Regression in SPSS with Assumption Testing

**https://www.youtube.com/watch?v=ueNrP5TyZaE**

1. **Hypothesis testing for regression coefficient and correlation co efficient**

**PPT**

https://drive.google.com/file/d/1r56TbelFi3J8vY9epExKE-XCpOhKP\_KT/view?usp=sharing

**Video link**

1. **Testing the equality of two population variances (F-test)**

**PPT**

**Video link**

# Hypothesis Tests for Equality of Two Variances

**https://www.youtube.com/watch?v=7GJkxSYsX70**

# Levene's F test on equal population variances in SPSS

**https://www.youtube.com/watch?v=8k-OIXiRdCc**

1. **ANOVA one way**

**PPT**

<https://drive.google.com/file/d/1jZe6n9bTYCb7gpFAXOaz8BBPxr00dvCx/view?usp=sharing>

<https://drive.google.com/file/d/1wjAHKOD3Hth5aSrvXi5sILIBzSOOkWt_/view?usp=sharing>

**Source of ppt slides attached**

<https://sites.google.com/site/mdotarif/teaching/pbs>

**Video link**

# Testing the Null Hypothesis with ANOVA in SPSS

<https://www.youtube.com/watch?v=2pDsycCY6pA>

# How to calculate a One Way Anova using SPSS (Analysis of Variance)

<https://www.youtube.com/watch?v=il__Q5njlW0>

1. **ANOVA two way**

**PPT**

<https://drive.google.com/file/d/1jZe6n9bTYCb7gpFAXOaz8BBPxr00dvCx/view?usp=sharing>

<https://drive.google.com/file/d/1wjAHKOD3Hth5aSrvXi5sILIBzSOOkWt_/view?usp=sharing>

**Source of ppt slides attached**

<https://sites.google.com/site/mdotarif/teaching/pbs>

**Video link**

# How to Calculate a Two Way ANOVA using SPSS

<https://www.youtube.com/watch?v=6Hmauags3VA>

<https://www.slideshare.net/vishwanth555/anova-experimental-designs>

# Conducting a Two-Way ANOVA in SPSS

**https://www.youtube.com/watch?v=q4IJtIzgg\_Y**

1. **LSD test**

**Video link**

# ANOVA with Fisher's Least Significant Difference (LSD) Post Hoc Test in SPSS

**https://www.youtube.com/watch?v=LWGC7s6QzLs**

1. **Experimental Design**

**Video link**

# Types of Experimental Designs (3.3)

<https://www.youtube.com/watch?v=10ikXret7Lk>

1. **Completely Randomized Design**

**PPT**

**https://drive.google.com/file/d/1jZe6n9bTYCb7gpFAXOaz8BBPxr00dvCx/view?usp=sharing**

**Video link**

# Completely Randomized & Block Design for Experiments CRD

<https://www.youtube.com/watch?v=ZIX45Iu7yUE>

1. **Randomized Complete Block Design**

**PPT**

[**https://drive.google.com/file/d/1jZe6n9bTYCb7gpFAXOaz8BBPxr00dvCx/view?usp=sharing**](https://drive.google.com/file/d/1jZe6n9bTYCb7gpFAXOaz8BBPxr00dvCx/view?usp=sharing)

**Video link**

# Completely Randomized & Block Design for Experiments CRD

<https://www.youtube.com/watch?v=ZIX45Iu7yUE>

1. **Latin Square Design**

**PPT links**

**Video links**

**Conceptual background**

# Randomized Block Design and Latin Square Design

**https://www.youtube.com/watch?v=H9gwg5B597w**

1. **Checking assumptions of ANOVA**

# Assumptions for T-tests and One Way ANOVA in SPSS - In Depth

[**https://www.youtube.com/watch?v=5OCnY153vU8**](https://www.youtube.com/watch?v=5OCnY153vU8)

# Testing the Assumptions for Two-Way ANOVA Using SPSS

**https://www.youtube.com/watch?v=49eIr-gIqRo**

1. **Non Parametric Tests**
2. **Run test**

**PPT**

**https://drive.google.com/file/d/1SCpyPZ9d\_Mb\_hsCYsJhc5HHMn5FHTY37/view?usp=sharing**

**Video link**

# Conducting the Runs Test using SPSS

**https://www.youtube.com/watch?v=-YN-WFjMmJ0**

1. **Kolmogrove Smirnove test**

**PPT**

**https://drive.google.com/file/d/1SCpyPZ9d\_Mb\_hsCYsJhc5HHMn5FHTY37/view?usp=sharing**

**video link**

# One Sample Kolmogorov-Smirnov Test in SPSS

**https://www.youtube.com/watch?v=P-Ky-TLHDss**

1. **Mann Whitney U test**

**Non Parametric Tests**

**PPT**

[**https://drive.google.com/file/d/1SCpyPZ9d\_Mb\_hsCYsJhc5HHMn5FHTY37/view?usp=sharing**](https://drive.google.com/file/d/1SCpyPZ9d_Mb_hsCYsJhc5HHMn5FHTY37/view?usp=sharing)

# Mann-Whitney U test using SPSS

**https://www.youtube.com/watch?v=qKxmnK4sQoA**

1. **Friedman test**

**PPT**

**https://drive.google.com/file/d/1SCpyPZ9d\_Mb\_hsCYsJhc5HHMn5FHTY37/view?usp=sharing**

# Friedman's ANOVA in SPSS

**https://www.youtube.com/watch?v=H-oiQ3f4ouM**

1. **Kruskal Wallis test**

**PPT**

**https://drive.google.com/file/d/1SCpyPZ9d\_Mb\_hsCYsJhc5HHMn5FHTY37/view?usp=sharing**

# Kruskal-Wallis H Test in SPSS

**https://www.youtube.com/watch?v=GK2PKB\_veQc**

# One-way non-parametric ANOVA (Kruskal-Wallis test) in SPSS

**https://www.youtube.com/watch?v=butN8JLWhyE**