

SPSS for Randomized-Block ANOVA (or Simple “unreplicated” Repeated-Measures ANOVA)

I. Data File Format

- need three columns; one for treatment group designation, one for block designation, and one for data. See the data file example below, which uses the data from Example 12.4 in your book (p. 251-253): column 1 = treatment; column 2 = block; column 3 = data

1	1	7.00
2	1	5.30
3	1	4.90
4	1	8.80
1	2	9.90
2	2	5.70
3	2	7.60
4	2	8.90
1	3	8.50
2	3	4.70
3	3	5.50
4	3	8.10 etc....

II. The Analysis

- (1) From the pull-down menu:

Analyze → *General Linear Models* → *Univariate* <click on this>

- (2) Specify the appropriate variables:

“data” is the DEPENDENT VARIABLE, “treatment” is a FIXED variable, and “block” is a RANDOM variable

- (3) Specify the appropriate ANOVA model:

- click on the “Model” button, then click on “Custom”, then add to the model list: “treatment” and “block” (don’t add an interaction term).

- (4) Proceed as usual for an ANOVA

- now you can add to the analysis anything you might do in a 1-way ANOVA; for example, you might want to specify a multiple comparison procedure, power, check assumptions, etc.

III. The ANOVA Table

Tests of Between-Subjects Effects

Dependent Variable: VAR00003

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Hypothesis	912.600	1	912.600	58.269	.002
	Error	62.647	4	15.662 ^a		
TRT	Hypothesis	27.425	3	9.142	11.825	.001
	Error	9.277	12	.773 ^b		
BLOCK	Hypothesis	62.647	4	15.662	20.259	.000
	Error	9.277	12	.773 ^b		

a. MS(BLOCK)

b. MS(Error)