ANALYSIS OF VARIANCE (ANOVA) WITH SPSS 10, 11

If you want only bivariate F tests (i.e., no control variables, no interaction tests), click on Compare Means, and then on Means. This has the advantage of being able to test many dependent variables in one run.

General Linear Models, Univariate is usually the best choice. Note that if you specify covariates, current usage is to refer to the analysis as an analysis of covariance (ANCOVA).

General Linear Models, Multivariate is used when you want to estimate the effect of the independent variables on a group of dependent variables. The program does something analogous to a factor analysis of the group of dependent variables and then estimates the relation of the independent variable to that factor. It also gives the effect of the independent variables on each of the dependent variables separately. If there is a lot of missing data, use of this program can result in a much reduced sample. The specifications listed below for the Univariate program also apply to Multivariate program.

UNIVARIATE

If the value labels (not the variable labels) for the variables you are running are long, you may need to use Landscape output format to avoid having the left half of a table on one page, and the right half on another page. This makes for a difficult to read table and also a long printout. If the output from the first run has that problem, do it over using Landscape format: In the Output window, click on the Files Menu and then on Page Setup. Click on Landscape and set all margins to .5

Click on Analyze, then on General Linear Models, and then on Univariate
Highlight the dependent variable and click it into the Dependent Variable box. Same for the independent variables and covariates.

Click on Model
Click on Custom
In Build Terms pull down menu, chose Main effects. Then Highlight all the variables in the Factors and Covariates box and click into Model box.
In Build Terms pull down menu, chose Interactions. Then highlight the pairs of variables that you want to investigate and click over to the Model box. In my research, I am usually interested only in the interaction of the main independent variable with each of the control variables, for example: Corporal Punishment with Gender, Corporal Punishment with SES, Corporal Punishment with Race/Ethnic group. Only rarely will I want to test for interactions of the control variables with each other.

Contrasts: Skip this unless you want a different set of contrasts than provided by Compare Main Effects in the Options screen. If you do use Contrasts, each one chosen must also be put into effect by clicking Change.

For the IDV study: Select the Deviation contrast. For the category to omit, check First.

Plots: Each time you specify a plot, you must also click ADD or it will not take effect.
To plot a main effect, click it into the Horizontal Axis and then click Add.
To plot an interaction, click one of the variables into the Horizontal Box and the other into Separate Lines and click Add.

OPTIONS

All the independent variables should be in the Display Means For section. If not, click them over
Compare Main Effects. Check this unless you have selected a more specific comparison and do not also want this. It can produce a very large output. Therefore, if paired comparison are not needed, uncheck it. The largest output occurs when one of the independent variables has many categories (e.g. the Site variable in the IDV study) and you ask for the interaction with that variable with some other independent variable.

For the IDV study, if Deviation contrasts have been selected, do not check Compare Main Effects unless I ask for that to also be done.

Check Descriptive Statistics if you want the unadjusted means for main effects and for each cell. This can also be a large output.
Check Estimates of Effect Size

OUTPUT If the output format is a problem (see above), you can make easier to read and less bulky: (1) Make sure the page format is Landscape. (2) If the left column headings occupy two or more lines, it may sometimes be necessary to make them fit on one line: With the pointer in the table, right click to get a pull down menu with Edit Pivot Table at the bottom and click that and choose Edit. Then drag the vertical line separating the left column of the table to the right, just enough to make the heading fit on one line. But do no do this if it forces the right hand part of the table to be printed on the next page. Also, there is no need to do this if, regardless of the length of the line, that part of the table would require two lines.