Below are the things I would expect you to know for the test on Wednesday, February.

I expect you to be able to use a set of data on two or three variables with 10 or fewer observations (frequently I use digits from your VCU V-number as one of the values in the data set) to be able to do the following:

* Center or mean correct the data and standardize the data.
* Calculate the centroid (mean vector), the covariance matrix, and the correlation matrix.
* For a covariance or correlation matrix, calculate the total variance, generalized variance (determinant), eigenvalues and the corresponding eigenvectors.
* For a vector be able to calculate the length of the vector and use the vector to translate a set of data into a new variable (calculate scores for principal components).

I expect you to answer questions based on Principal Component Analysis or Factor Analysis output from JMP.

I expect you to answer general questions about Principal Component Analysis or Factor Analysis.

Suggested resources: You can download books and save the pdf file from JMP by going to Help > Books > (select the appropriate book)

**Multivariate Methods** The material for test 1 can be found in chapters 3 (Correlations and Multivariate Techniques) & 4 (Principal Components) from this Multivariate Methods book.

**Consumer Research** The material for test 1 can be found in chapter 6 (Factor Analysis) from this Consumer Research book. We **will not use** the **Maximum Likelihood** method of extracting factors **nor** the **Common Factor Analysis** method for estimating the variance for the common factors for each variable.