Course Number STA-164-01 **Course Description** Experimentation is at the heart of the scientific method, both in the physical and social sciences. Not only do experiments validate or disprove existing hypotheses, but often unexpected results lead to the development of new hypotheses and new theoretical understanding. This course will focus on strategies to accelerate the scientific method when experimenting with multiple variables. Specific topics include design options, such as simple comparative experiments, factorials and fractional factorials, and response surface designs, as well as analysis methods such as graphical methods, analysis of variance, and regression models. Academic Term 21/SP Instructor Hoerl, Roger Location & Meeting Time O'Brien Center for Collaborative Engagement-117 M/W/F 12:30PM-01:35PM LEC Credits 1.00 Capacity 20 **Total Students** 19 Additional Information http://muse.union.edu/mathematics **Common Curriculum** QMR Quant & Math Reasoning Academic Department Mathematics Field Of Study Statistics (STA)