**Math 6020: Linear Models**  
University of Utah – Spring 2018

**Course Section:** Math 6020-001  
**Meetings:** Monday, Wednesday, Friday, 2:00 - 2:50 PM, HEB 2002

**Instructor:** Tom Alberts  
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**Phone:** 801-585-1643  
**Office:** LCB 114  
**Office Hours:** 3:00 – 4:00 PM Monday and Wednesday, or by appointment  
**Homepage:** Online via Canvas. Official announcements and homework assignments will be posted there.

**Textbooks**

- *An Introduction to Applied Multivariate Analysis with R.* Everitt B. and Hothorn B.  

**Purpose of Course**

More advanced topics in multivariate linear models. Topics include:

- Multivariate linear regression (ch. 7 of Johnson and Wichurn)  
- Data visualization (ch. 2 of text)  
- Principle Components Analysis, or PCA (ch. 3 of text)  
- Factor Analysis (ch. 5 of text)  
- Cluster Analysis (ch. 6 of text)  
- Structure Equations modelling (ch. 7 of text)

**Prerequisites**

You must have at least a "C" in Math 6010. This course assumes a solid knowledge of Calculus (at least Calc I, II, and III), linear algebra (Math 2270), probability theory (Math 5010), and mathematical statistics (Math 5080-5090). If you’re not comfortable with all of those you will probably struggle in this course.

**Homework**

There will be regular assignments and an occasional project. The grade is based on the result of these assigned works.
**Exams**

None in this class.

**Important Dates**

First class: Monday, January 8th  
MLK Holiday: Monday, January 15th  
Presidents Day Holiday: Monday, February 19th  
Spring Break: March 18-25

NO CLASS: Monday, April 23rd, and possibly other dates throughout the semester.

**ADA Statement**

The University of Utah is fully committed to policies of nondiscrimination and equal opportunity. The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic learning, and psychiatric disabilities, and the University seeks to provide equal access to its programs, services, and activities for people with disabilities. Reasonable prior notice is necessary to arrange such accommodations, and students are responsible for obtaining the accommodations and notifying the instructor through official channels early in the semester.