**Class 1: Outline**

**1 – Causation vs. Correlation**

1. **Correlation**
2. **Samples of Convenience**
3. **Observational Studies**
4. **Random Samples**
5. **Causation**
   1. **Experimental Design**

**2 – Randomization**

**3 - DoE Nomenclature**

1. **A/B Testing, Completely Randomized**
2. **Factors**
3. **Other Treatments**

**4 – Making a Decision**

1. **Type 1 and Type 2 errors**
2. **Power**
3. **How much data do you need?**