

# **STA 3180 Statistical Modelling: ANOVA**

Topic: ANOVA

## **I. Introduction to ANOVA**

### **A. Definition of ANOVA**

### **B. Types of ANOVA**

#### **1. One-way ANOVA**

#### **2. Two-way ANOVA**

#### **3. Repeated Measures ANOVA**

### **C. Assumptions of ANOVA**

## **II. Calculating ANOVA**

### **A. Sums of Squares**

### **B. Degrees of Freedom**

### **C. F-statistic**

## **III. Interpreting ANOVA Results**

### **A. F-statistic**

### **B. p-value**

### **C. Post-hoc Tests**

## **Problem Solving Strategies:**

1. Understand the assumptions of ANOVA and how they affect the results.
2. Familiarize yourself with the different types of ANOVA and when to use them.
3. Practice calculating the sums of squares, degrees of freedom, and F-statistic.
4. Learn how to interpret the F-statistic and p-value.
5. Understand when and how to use post-hoc tests.
6. Practice solving problems related to ANOVA.