Course Expectations

Section 1: Linear Regression Introduction
- Families of Predictive Analytics
- An Example Model

Section 2 – Numeric Literacy
- Types of Data
- Measures of Location
- The Normal Distribution

Section 3 – Predictions Using the Mean
- The Mean is a Predictive Model
- Our First Model
- Hands-on Lab #1

Section 4 – Correlation
- What is Correlation?
- Lies and Statistics
- Visualizing the Iris Dataset
- Hands-on Lab #2

Module 5 – Simple Linear Regression
- Beating the Mean
- Building Simple Linear Regression Models
- Understanding the Model
- Hands-on Lab #3

Module 6 – Multiple Linear Regression
- When Simple Won't Do
- Categorical Data
- The Power of Multiple Features
- The Rewards of Complexity
- Interaction Effects

- Hands-on Lab #4

Module 7 – Is Your Model Any Good?
- Linear Regression Data Assumptions
- Assumption 1 – Models Are Fully Specified
- Assumption 2 – Features Uncorrelated with Errors
- Assumption 3 – Errors Uncorrelated
- Assumption 4 – Errors Have Constant Variance
- Assumption 5 – No Multicollinearity
- Assumption 6 – Errors Normally Distributed
- Hands-on Lab #5

Module 8 – What We Did Not Cover
- Modeling Curvature
- Transforming Data
- Extrapolation
- Standardizing Data
- Models Without Intercepts

Module 9 – Additional Resources