



Semester 1

Term 1

- **Exploring and Understanding Data**
 - W's (who, what, when, where, why, how)
 - Context
 - Categorical Data
 - Quantitative Data
 - Normal Curve
 - Summarizing Categorical Data
 - Distributions
 - Measures of Spread
 - Z-Scores
 - 68-95-99.7
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Term 2

- **Exploring Relationships Between Data**
 - Two Variable Data
 - Regression Lines and Models
 - Associations
 - Outliers
 - Residuals
 - Straightening the Curve
 - Predicted Value
- **Gathering Data**
 - Sampling Methods
 - Randomness
 - Observational Studies
 - Well-designed experimental design
 - Statistical Significance

Semester Review and Exam



Yearly Overview STATISTICS

2020-2021

Semester 2

Term 3

- **Randomness and Probability**
 - Rules, Tables, and Diagrams
 - Multiplication Rules
 - Permutations and Combinations
 - Probability Models
 - Law of Large Numbers
 - Conditional Probability
 - Variance & Standard Deviation
 - Expected Value
 - Success / Fail Condition
 - Bernoulli Trials
 - Independence Assumption

Term 4

- **From the Data at Hand to the World at Large**
 - Confidence Intervals – Proportion & Means
 - Standard Error
 - Margin of Error
 - Critical Values
 - Testing Hypotheses
 - Inferences about a Mean
 - Comparing Proportions or Means
 - Comparing Counts
 - Exponential, Logarithmic, Square Root, and Cubic Functions
 - P-Value
 - Type 1 / Type 2 Error
 - T-test and Z-test
 - Degrees of freedom
 - Goodness of fit
 - Chi-Square

Semester Review and Exam
