

**Vocabulary/Question list for FLASHCARDS (199):**

**Unit I:**

- Qualitative Data
- Quantitative Data
- Frequency vs. Relative Frequency
- Contingency Table
- Marginal Distr.
- Conditional Distr.
- Stem-and-Leaf Plot
- Shape, Center, Spread
- Mean, Median, mode
- Uniform
- Symmetric
- Skewed
- IQR
- Percentile
- 5-number summary
- boxplot
- variance
- Standard Deviation
- Comparing Distr.
- Comparing Boxplots
- Shifting/Scaling
- Standardizing
- Normal Model
- Parameter vs. Statistic
- Z-score
- Empirical Rule
- **VOCAB SHEET # 8, 9, 13, 15, 16, 17, 18, 21, 22, 23, 25**

**UNIT II:**

- Scatterplot

- 5 things to discuss when describing association
- Explanatory vs. Response variable
- Correlation (r)
- Linear Model
- Residual
- Line of Best Fit
- R-squared
- Extrapolation
- Influential point
- **VOCAB SHEET # 28, 30, 31, 32, 33, 44, 45, 46, 48, 49, 50, 52, 58, 59, 63.**

**UNIT III:**

- Random
- Simulation (w/ 7 steps)
- Population
- Sample
- Bias
- Randomization
- Sample Size
- Census
- Representative Sample
- SRS (simple random sample)
- Sampling Frame
- Sampling Error
- Stratified Random Sample
- Cluster Sample
- Systematic Sample
- Voluntary Response Bias
- Convenience Sample
- Undercoverage
- Nonresponse Bias
- Response Bias

- Observational Study
- Prospective vs. Retrospective
- Experiment
- Experimental Units
- Treatment
- 2 differences between obs. Study and experiment
- List and Describe the 4 elements of Experimental Design.
- Statistically Significant
- Control Group
- Single blind vs. double blind
- Placebo
- Placebo effect
- **VOCAB SHEET # 68, 69, 70, 71, 72, 73, 80, 81, 82, 85, 88, 90, 96, 97, 102, 106, 110, 114, 120, 121, 125, 129**

**UNIT IV:**

- Random event
- Probability
- Trial
- Event
- Independence (informally)
- Law of large numbers
- "Law of Averages"
- "Something Has To Happen" Rule
- Complement rule
- Disjoint (mutually exclusive)
- Addition rule

- Multiplication rule
- Sample space
- General addition rule
- Conditional probability rule
- General multiplication rule
- Independence (formally)
- Tree diagram
- Random variable
- Discrete vs. continuous
- Probability model
- Expected value
- STD DEV & Variance of Random variable
- Changing a Random Variable by a constant
- Adding or subtracting Random Variables
- Bernoulli Trials
- Geometric Model
- Binomial Model
- Success/failure condition
- **VOCAB SHEET #**  
133, 139, 140, 144, 145, 149, 151, 152, 153
- Critical value ( $z^*$ )
- Confidence interval
- One-proportion z-interval
- What are the conditions to check?
- Null hypothesis
- Alternative hypothesis
- One-sided vs. two-sided
- P-value
- Alpha level
- Type I error/Type II error
- Power
- **VOCAB SHEET #**  
162, 165, 166, 167, 168, 169, 172, 176, 177, 180, 182, 183, 191, 194, 198, 199, 202, 203, 204, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220.

#### UNIT V:

- Sampling distribution
- ... for proportions
- ... for means
- Central Limit Theorem (CLT)
- Standard error
- Margin of error