Course of Study Title: Mathematics Content (5-12) Part I: Statistics & Probability

Description: This course outline presents the required sequence of learning steps and activities to help you develop competence in the subject area of *Statistics and Probability*. In this case, your competence will be assessed as you complete a series of performance tasks. The tasks are listed in the sequence below at the point in which you should have covered the learning necessary to build the necessary competence to successfully complete the task. Once all tasks are completed at the appropriate level of competence, you will receive a PASS on your AAP for the MSA Assessment. As with any learning activity, steps may be completed more quickly than noted below, or they could take the full amount of time indicated. We provide the pacing (Week One, Week Two, etc.) as a guide to the amount of time you should take to develop the competencies necessary and prepare to complete the required assessment on time. Completing your assessments within the required timeline keeps you on pace for Satisfactory Academic Progress and Graduation.

Introductory Text: The subdomain of MSA covers only two topics in two tasks, but Statistics & Probability is a large subject area, with several other topics covered on the objective exam. This component of your work at WGU is designed to help you to gain a broad overview of the field of Statistics & Probability with a fundamental understanding of some key concepts and principles.

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                              Thursday, 9:00am – 4:00pm, 7:00pm – 12:00am, Eastern Time
                              Friday, 9:00am – 4:00pm, Eastern Time

Disposition Statement: Western Governors University supports the development and demonstration of professional teaching dispositions throughout the course of its Teachers College (TC) licensure programs. All TC students and faculty will demonstrate the following dispositions described in the Teachers College's conceptual framework and code of ethics:
Competent and caring
Respectful and embracing of diversity
Reflective practitioners
Equitable and fair
Professional practice consistent with the belief that all students can learn
Collaborative professionals
Professional leaders and change agents

Please review the <Teachers College Code of Ethics> found in the WGU Student Handbook.

Required Learning Resources (see listing on the resources tab of your AAP to enroll or order):
Sign up for MyStatLab via the Available LR's in your AAP. This is an interactive Web version of
the text listed below and it includes a multitude of additional resources such as lectures,
interactive applets, practice tests, and other multimedia.

  Wesley. ISBN: 9780321331830

**Appropriate Calculator:** The TI-84+ graphing calculator, its predecessors TI-82, TI-83, or TI-
83+, or equivalent calculators of other brands are recommended. Graphing calculators
possessing built-in **Computer Algebra Systems (CAS) are not allowed** to be used on
competency exams, so we recommend you do not use such a calculator while working on the
mathematics tasks and topics. To download your TI screenshots to your computer, you will
need a **TI Connectivity Kit**, available at

**PLEASE NOTE:** The resources you are using to master the competencies for this assessment
will also be valuable as you as you prepare for future assessments, namely, the MUC objective
exam, the Praxis II exam, and any state-mandated mathematics content exams. Therefore, we
recommend that you complete each activity contained in this document.

**WEEK 1**

**Subject Title:** Elementary Statistics Review

**Subject Description:** The activities for Week 1 will introduce students to a variety of elementary
statistics concepts.
**Background Information:** There are a variety of topics which should be reviewed prior to a more in-depth exploration of statistics. These topics include the different levels of measurement, illustrating data, descriptive statistics, and how to go about making data comparisons.

**Competency Title:** Statistics and Probability  
**Numerical Code:** 203.3.1  
**Competency Description:** The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

**Topic Title:** Introduction to Statistics  
**Instruction Text:** Students will be provided with a review of relevant introductory statistics concepts; the types of data that one may encounter; the critical thinking process; and experimental design.

**Activity Title:** Study Plan  
**Activity Type:** MyStatLab  
**URLs:** There are no URLs associated with this activity.  
**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 1-A. Based upon the sample test results, students will be directed to specific sections within Chapter 1 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 1, they should proceed to the next topic.

**Topic Title:** Summarizing and Graphing Data  
**Instruction Text:** Students will be provided with a review of relevant chapter concepts; frequency distributions; histograms; and statistical graphics which include frequency polygons; ogive graphs; dotplots; stemplots; Pareto charts; pie charts; scatterplots; and time-series graphs.
Activity Title: Study Plan
Activity Type: MyStatLab
URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 2-A. Based upon the sample test results, students will be directed to specific sections within Chapter 2 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 2, they should proceed to the next topic.

Topic Title: Statistics for Describing, Exploring, and Comparing Data

Instruction Text: Students will be provided with a review of relevant chapter concepts; measures of center; measures of variation; measures of relative standing; and exploratory data analysis.

Activity Title: Study Plan
Activity Type: MyStatLab
URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 3-A. Based upon the sample test results, students will be directed to specific sections within Chapter 3 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 3, they should proceed to the next topic.

Topic Title: Mastery of Week 1 Concepts
Instruction Text: To ensure that students have mastered all Week 1 concepts, a final series of sample tests should be taken to assess whether or not a student should proceed to Week 2.

Activity Title: Final Review

Activity Type: MyStatLab

URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample tests for Chapters 1-B, 2-B, and 3-B. It is very important that these sample tests be taken when a student feels as though they have mastered the concepts within Chapters 1, 2, and 3. As before, the Study Plan will identify any areas of weakness which need to be addressed. It is important that students read the text and then work through the identified exercises. Students should complete all identified exercises prior to moving on to Week 2.

WEEK 2

Subject Title: Elementary Probability Review

Subject Description: The activities for Week 2 will introduce students to a variety of elementary probability concepts.

Background Information: There are a variety of topics which should be reviewed prior to a more in-depth exploration of probability.

Competency Title: Statistics and Probability

Numerical Code: 203.3.1

Competency Description: The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

Topic Title: Probability

Instruction Text: Students will be provided with a review of relevant chapter concepts; fundamental probability concepts; the addition rule; multiplication rule; complements and conditional probability; probability through simulations; counting; and Bayes’ theorem.
**Activity Title:** Study Plan  
**Activity Type:** MyStatLab  
**URLs:** There are no URLs associated with this activity.  
**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 4-A. Based upon the sample test results, students will be directed to specific sections within Chapter 4 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 4, they should proceed to the next topic.

**Topic Title:** Mastery of Week 2 Concepts  
**Instruction Text:** To ensure that students have mastered all Week 2 concepts, a final sample test should be taken to assess whether or not a student should proceed to Week 3.

**Activity Title:** Final Review  
**Activity Type:** MyStatLab  
**URLs:** There are no URLs associated with this activity.  
**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 4-B. It is very important that the sample test be taken when a student feels as though they have mastered the concepts within Chapter 4. As before, the Study Plan will identify any areas of weakness which need to be addressed. It is important that students read the text and then work through the identified exercises. Students should complete all identified exercises prior to moving on to Week 3.

**WEEK 3**  
**Subject Title:** Statistical Inference, Theory of Probability, and Sampling Methodologies  
**Background Information:** The activities for Week 3 will immerse students within a review of relevant terminology and concepts with the intent of helping students make relevant
connections between statistical inference, the theory of probability, and sampling methodologies. Many of these topics have already been explored during Weeks 1 and 2.

**Competency Title:** Statistics and Probability

**Numerical Code:** 203.3.1

**Competency Description:** The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

**Topic Title:** Statistical Inference

**Instruction Text:** Students will be provided with a review of terms which include experiment, experimental (or sampling) unit, population, sample, parameter, statistic, sampling distribution, inference, statistical inference, and more.

**Activity Title:** Review of Relevant Terminology

**Activity Type:** Website

**URLs:** [http://www.stats.gla.ac.uk/steps/glossary/basic_definitions.html#statinf](http://www.stats.gla.ac.uk/steps/glossary/basic_definitions.html#statinf)

**Description:** Within the mathematics world, terms which include experiment, experimental (or sampling) unit, population, sample, parameter, statistic, sampling distribution, inference, statistical inference, etc. have very specific meanings. Students should attempt to make relevant connections between each of these terms through an exploration of the provided website.

**Topic Title:** Theory of Probability

**Instruction Text:** Students will be provided with a review of terms and concepts with the intent of helping students better understand the Theory of Probability.

**Activity Title:** Review of Relevant Terminology

**Activity Type:** Website

**URLs:** [http://www.stats.gla.ac.uk/steps/glossary/probability.html](http://www.stats.gla.ac.uk/steps/glossary/probability.html)

**Description:** Within the mathematics world, terms which include outcome, sample space, event, relative frequency, probability, etc. have very specific
meanings. Students should attempt to make relevant connections between each of these terms through an exploration of the provided website. It is important to remember that sampling involves a very deliberate process where one is extracting data from a target population in order to answer very specific questions. If done correctly, such a process is intended to provide a glimpse at the truth as it pertains to our target population.

**Activity Title:** Conceptualizing the Theory of Probability

**Activity Type:** Website

**URLs:** [http://janda.org/c10/Lectures/topic05/L12-probability.htm](http://janda.org/c10/Lectures/topic05/L12-probability.htm)

**Description:** Within the mathematics world, terms which include probability, a priori expectations (theoretical probability), empirical probability, discrete probability distribution, continuous probability distribution, etc. have very specific meanings. Students should attempt to make relevant connections between each of these terms through an exploration of the provided website. It is important to remember that probability determinations can be theoretical or empirical. For instance, one can predict (in theory) what the probability of acquiring a head on the first toss of a fair coin would be through an examination of the sample space of all possible outcomes. In this case, there is one chance of getting a head out of two possible outcomes (heads or tails). Remember that this prediction is made without ever tossing the coin. It is also possible to perform an experiment to actually investigate the probability of such an occurrence through the use of trials and observations. Toss a fair coin one thousand times and observe what happens. What do you think happens as the number of tosses becomes arbitrarily large? The answer to this question involves the Law of Large Numbers. This topic was discussed in Section 4-2 of [Triola].

**Title:** Sampling Methodologies

**Instruction Text:** Students will be provided with a review of terms which include target population, matched samples, independent samples, random sampling, simple random sampling, stratified sampling, cluster sampling, quota sampling, spatial sampling, and more.

**Activity Title:** Review of Relevant Terminology
Activity Type: Website

URLs: http://www.stats.gla.ac.uk/steps/glossary/sampling.html

Description: Within the mathematics world, terms which include target population, matched samples, independent samples, random sampling, simple random sampling, stratified sampling, cluster sampling, quota sampling, spatial sampling, etc. have very specific meanings. Students should attempt to make relevant connections between each of these terms through an exploration of the provided website. It is important to remember that sampling involves a very deliberate process where one is extracting data from a target population in order to answer very specific questions. The sampling method that one chooses will depend upon the types of questions that one is attempting to investigate and also the design of one’s investigation.

Topic Title: Application – Statistical Inference vs. Theory of Probability and Sampling

Instruction Text: Now that students have reached this point within the Course of Study it is time to apply the acquired knowledge by drafting a response to Task 203.3.1-03. Carefully read through the given task directions. Students will need to be able to explain the relationship between statistical inference and the theory of probability and sampling.

Activity Title: Task 203.3.1-03

Activity Type: Performance Assessment

URLs: There are no URLs associated with this activity.

Description: For this task, students will need to be able to explain the relationship between statistical inference and the theory of probability and sampling through the careful discussion of relevant terms (i.e. statistical inference, theory of probability, sampling, etc.) and relevant examples.

WEEK 4

Subject Title: Probability Distributions

Subject Description: The activities for Week 4 will introduce students to a variety of probability distributions.
Background Information: The study of probability distributions will help students to better visualize elementary statistics and probability concepts within the context of real world applications.

Competency Title: Statistics and Probability

Numerical Code: 203.3.1

Competency Description: The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

Topic Title: Discrete Probability Distributions

Instruction Text: Students will be provided with a review of relevant chapter concepts; random variables; binomial probability distributions; mean, variance, and standard deviation for the binomial distribution; and the Poisson distribution. It is important to remember that the distributions which will be explored within this topic involve discrete random variables. Within the next topic (Normal Probability Distributions), the distributions which will be explored involve continuous random variables. Throughout both topics, think carefully about whether or not you are dealing with a discrete or continuous random variable and which mathematical methodologies are used to study these variables within selected applications.

Activity Title: Study Plan

Activity Type: MyStatLab

URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 5-A. Based upon the sample test results, students will be directed to specific sections within Chapter 5 which require further review. It is important that students read the text and then work through the identified exercises. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 5, they should proceed to the next topic.

Topic Title: Normal Probability Distributions
Instruction Text: Students will be provided with a review of relevant chapter concepts; the standard normal distribution; applications of normal distributions; sampling distributions and estimators; the central limit theorem; the use of the normal distribution as an approximation to the binomial distribution; and the assessment of normality. It is important to keep in mind that the distributions which will be explored within this topic involve continuous random variables. Critically think about the similarities and differences which exist with regard to how one uses probability distributions to describe selected discrete and continuous random variables. Reflect upon the understandings which were acquired within the previous topic (Discrete Probability Distributions) as you work through this topic.

Activity Title: Study Plan
Activity Type: MyStatLab
URLs: There are no URLs associated with this activity.
Description: Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 6-A. Based upon the sample test results, students will be directed to specific sections within Chapter 6 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 6, they should proceed to the next topic.

Topic Title: Mastery of Week 4 Concepts
Instruction Text: To ensure that students have mastered all Week 4 concepts, a final series of sample tests should be taken to assess whether or not a student should proceed to Week 5.

Activity Title: Final Review
Activity Type: MyStatLab
URLs: There are no URLs associated with this activity.
**Description:** Students need to go to the Study Plan within MyStatLab and take the sample tests for Chapters 5-B and 6-B. It is very important that these sample tests be taken when a student feels as though they have mastered the concepts within Chapters 5 and 6. As before, the Study Plan will identify any areas of weakness which need to be addressed. It is important that students read the text and then work through the identified exercises. Students should complete all identified exercises prior to moving on to Week 5.

**WEEK 5**

**Subject Title:** The Role of the Binomial Theorem in Probability and Statistics

**Background Information:** The activities for Week 5 will immerse students within a review of relevant terminology and concepts with the intent of helping students make relevant connections between the Binomial Theorem and Binomial Probability Distributions within the context of real world applications. Many of these topics have already been explored during Week 4.

**Competency Title:** Statistics and Probability

**Numerical Code:** 203.3.1

**Competency Description:** The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

**Topic Title:** Binomial Theorem

**Instruction Text:** Students will be provided with a review of the formal expression for the Binomial Theorem and also relevant concepts which include combinatorial notation, factorial notation, Pascal’s Triangle, and how to expand a given binomial expression.

**Activity Title:** Binomial Formula

**Activity Type:** Website

**URLs:** [http://www.purplemath.com/modules/binomial.htm](http://www.purplemath.com/modules/binomial.htm)

**Description:** Before students embark on an exploration of applications which require the Binomial Theorem, it is very important that one has an understanding of what each term within the formal expression represents and other relevant concepts which include combinatorial notation, factorial notation,
Pascal’s Triangle, and how to expand a given binomial expression. Students should explore the provided website to acquire these understandings.

**Topic Title:** Discrete Probability Distributions

**Instruction Text:** Students will be provided with a review of discrete probability distributions with the intent of refining their understanding of the binomial distribution within the context of real world applications.

**Activity Title:** Binomial Probability Distribution

**Activity Type:** MyStatLab

**URLs:** There are no URLs associated with this activity.

**Description:** Within Week 4, students should have taken the sample tests for Chapters 5-A and 5-B. Students should review their results and those areas which were identified as needing further study. It is important that students read the text and then work through the identified exercises. For Week 5, students should use the Study Plan to make sure that they understand Section 5-3 Binomial Probability Distributions within [Triola]. Within Section 5-3, it is important to review the definition for a binomial probability distribution, methods 1 through 3 for using the binomial formula, and many of the real world applications where the binomial theorem can arise. In particular, students should explore the identified practice exercises at the end of this section to immerse themselves within a variety of these applications.

**Topic Title:** Application – The Role of the Binomial Theorem in Probability and Statistics

**Instruction Text:** Now that students have reached this point within the Course of Study it is time to apply the acquired knowledge by drafting a response to Task 203.3.1-08. Carefully read through the given task directions. Students will need to demonstrate an understanding of the binomial theorem and explain its role within a variety of probability and statistics applications.

**Activity Title:** Task 203.3.1-08

**Activity Type:** Performance Assessment

**URLs:** There are no URLs associated with this activity.
**Description:** For this task, students will need to demonstrate an understanding of the binomial theorem through a careful examination of all components to this theorem. Such an examination should naturally lead to a discussion of the important role that this theorem plays within a variety of probability and statistics applications. Students should be able to provide examples to support their claims.

**WEEK 6**

**Subject Title:** Chi-Square Distribution

**Subject Description:** The activities for Week 6 will introduce students to the chi-squared distribution.

**Background Information:** The study of probability distributions will help students to better visualize elementary statistics and probability concepts within the context of real world applications. Students have already explored selected discrete probability distributions and normal distributions. Recall that discrete probability distributions were used to describe discrete random variables, whereas normal distributions where used to describe continuous random variables. The existence of categorical (or qualitative, or attribute) data necessitates the need for chi-squared distributions.

**Competency Title:** Statistics and Probability

**Numerical Code:** 203.3.1

**Competency Description:** The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

**Topic Title:** Multinomial Experiments and Contingency Tables

**Instruction Text:** Students will be provided with a review of relevant chapter concepts; multinomial experiments (goodness-of-fit); contingency tables (independence and homogeneity); and McNemar’s test for matched pairs (optional). These methods and concepts will use the same chi-squared distribution that was first introduced within Section 7-5 [Triola].

**Activity Title:** Study Plan

**Activity Type:** MyStatLab
URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 11-A. Based upon the sample test results, students will be directed to specific sections within Chapter 11 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. A mastery of Section 11-4 with [Triola] is recommended but optional. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 11, they should proceed to the next topic.

Topic Title: Mastery of Week 6 Concepts

Instruction Text: To ensure that students have mastered all Week 6 concepts, a final sample test should be taken to assess whether or not a student should proceed to Week 7.

Activity Title: Final Review

Activity Type: MyStatLab

URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 11-B. It is very important that this sample test be taken when a student feels as though they have mastered the concepts within Chapter 11. As before, the Study Plan will identify any areas of weakness which need to be addressed. It is important that students read the text and then work through the identified exercises. Students should complete all identified exercises prior to moving on to Week 7.

WEEK 7

Subject Title: Bivariate Data Analysis

Subject Description: The activities for Week 7 will introduce students to several techniques which can be used to analyze bivariate data.

Background Information: As the name suggests, bivariate data analysis involves the analysis of two variables. One variable is called the independent variable, whereas the other variable is
called the dependent variable. Bivariate analyses attempt to ascertain whether or not there exists a mathematical relationship between an independent and dependent variable (correlation). If there exists a discernible relationship, one can then attempt to construct a best-fit mathematical model (regression) from a given data set with the goal of using the constructed model to make future predictions. Since this analysis involves two variables, one can also use a Cartesian plane to visualize the existence of trends or patterns by plotting the independent variable along the abscissa (x-axis) and the dependent variable along the ordinate axis (y-axis). Such graphing of ordered pairs (x,y) generate graphs called scatterplots or scatter diagrams. These graphs were initially discussed within Section 2-4 within [Triola].

**Competency Title:** Statistics and Probability

**Numerical Code:** 203.3.1

**Competency Description:** The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.

**Topic Title:** Correlation and Regression

**Instruction Text:** Students will be provided with a review of relevant chapter concepts; correlation; regression; variation and prediction intervals; multiple regression; and modeling.

**Activity Title:** Study Plan

**Activity Type:** MyStatLab

**URLs:** There are no URLs associated with this activity.

**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 10-A. Based upon the sample test results, students will be directed to specific sections within Chapter 10 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 10, they should proceed to the next topic.
**Topic Title:** Mastery of Week 7 Concepts

**Instruction Text:** To ensure that students have mastered all Week 7 concepts, a final sample test should be taken to assess whether or not a student should proceed to Week 8.

**Activity Title:** Final Review

**Activity Type:** MyStatLab

**URLs:** There are no URLs associated with this activity.

**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 10-B. It is very important that this sample test be taken when a student feels as though they have mastered the concepts within Chapter 10. As before, the Study Plan will identify any areas of weakness which need to be addressed. It is important that students read the text and then work through the identified exercises. Students should complete all identified exercises prior to moving on to Week 8.

**WEEK 8**

**Subject Title:** Estimation, Hypothesis Testing, and Inference

**Subject Description:** The activities for Week 8 will introduce students to standardized procedures for testing whether or not one should reject or fail to reject a claim about a property about a population.

**Background Information:** Now that students are within the last week of this Course of Study, it is important that one reflects upon the concepts which were covered within prior weeks with the intent of making relevant connections to topics which are covered within this week. The primary focus of this week is to help students construct ways to statistically test one’s claims (or hypotheses) within the context of real world settings.

**Competency Title:** Statistics and Probability

**Numerical Code:** 203.3.1

**Competency Description:** The graduate understands descriptive and inferential statistics and probability from both experimental and theoretical viewpoints, including random variables, multiple random variables, estimation theory, and decision theory.
**Topic Title:** Estimates and Sample Sizes

**Instruction Text:** Students will be provided with a review of relevant chapter concepts; estimation methods for a population proportion; estimation methods for a population mean where the population standard deviation is known; estimation methods for a population mean where the population standard deviation is unknown; and estimation methods for population variance.

**Activity Title:** Study Plan

**Activity Type:** MyStatLab

**URLs:** There are no URLs associated with this activity.

**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 7-A. Based upon the sample test results, students will be directed to specific sections within Chapter 7 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. A mastery of Section 7-5 is recommended but optional [Triola]. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 7, they should proceed to the next topic.

**Topic Title:** Hypothesis Testing

**Instruction Text:** Students will be provided with a review of relevant chapter concepts; the basics of hypothesis testing; methods for testing a claim about a population proportion; methods for testing a claim about a population mean where the population standard deviation is known; methods for testing a claim about a population mean where the population standard deviation is unknown; and methods for testing a claim about a population standard deviation or variance.

**Activity Title:** Study Plan

**Activity Type:** MyStatLab

**URLs:** There are no URLs associated with this activity.
**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 8-A. Based upon the sample test results, students will be directed to specific sections within Chapter 8 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. A mastery of Section 8-6 is recommended but optional [Triola]. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 8, they should proceed to the next topic.

**Topic Title:** Inferences from Two Samples

**Instruction Text:** Students will be provided with a review of relevant chapter concepts; methods for testing a claim about a two population proportions; methods for testing a claim about two independent population means where the population standard deviation for each population is either known or unknown (assumed equal or unequal); methods for testing a claim about population mean differences from matched pairs (two samples are dependent); and methods for testing a claim about two population standard deviations or variances.

**Activity Title:** Study Plan

**Activity Type:** MyStatLab

**URLs:** There are no URLs associated with this activity.

**Description:** Students need to go to the Study Plan within MyStatLab and take the sample test for Chapter 9-A. Based upon the sample test results, students will be directed to specific sections within Chapter 9 which require further review. It is important that students read the text and then work through the identified exercises. These exercises will allow for a mastery of the material. A mastery of Section 9-5 is recommended but optional [Triola]. There is a Multimedia Library which can also be used to help students better visualize those concepts which require further study. Once students have successfully mastered the topics within Chapter 9, they should proceed to the next topic.

**Topic Title:** Mastery of Week 8 Concepts
Instruction Text: To ensure that students have mastered all Week 8 concepts, a final series of sample tests should be taken to assess whether or not a student is finished with one’s review of this week’s topics.

Activity Title: Final Review

Activity Type: MyStatLab

URLs: There are no URLs associated with this activity.

Description: Students need to go to the Study Plan within MyStatLab and take the sample tests for Chapters 7-B, 8-B, and 9-B. It is very important that these sample tests be taken when a student feels as though they have mastered the concepts within Chapters 7, 8, and 9. As before, the Study Plan will identify any areas of weakness which need to be addressed. It is important that students read the text and then work through the identified exercises. Students should complete all identified exercises to complete their review of Week 8 topics.

Feedback

If you wish to provide feedback on this course of study, please contact Rob Duncan, Mathematics Program Coordinator, at rduncan@wgu.edu.