

<i>Date</i>	<i>Topic</i>	<i>Assigned Activity</i>
Wk01		
08/22	<p>Course Introduction</p> <p>Instructor Website at http://www.statpower.net</p> <p>Statistics and Experiments All of Life is an Experiment An Incredible Electrolux The King of Luxury Cars</p>	<p>Watch the following video on computer programming. http://www.youtube.com/watch?v=dU1xS07N-FA</p> <p>Obtain a MindTap license code and sign into the Psychology 2101 MindTap website online. Instructions for doing this will be emailed to you, and are also available online here.</p> <p>Purchase or obtain a Turning Technologies Response Card “clicker” (Part #: RCXR-01) available at the bookstore. You must <i>bring your clicker to every class</i>.</p> <p>Sign into Blackboard and register your clicker! (Instructions are in the Statistics Handout section here.)</p> <p>Sign up for <i>PeerWise</i> then join Psychology 2101-01. <i>Note:</i> Instructions will be emailed to you, including identifier and course codes that you must use to sign in. Wait until you receive this email before trying to register on <i>PeerWise</i>.</p>
Wk02		
08/27 Tue	<p>MindTap Demonstration Clicker Demo and Practice Clicker Sign In</p> <p>Class Questionnaire Inherent Interest Computer Access Hours of Study Best Time of Study Confidence Level Year of Study (Freshman, Soph., etc.)</p> <p>Lecture: An Overview of Statistics Approaches to Knowledge Authority Intuition Deduction</p>	<p>For Thursday:</p> <p>Online: Read GW Chapter 01 -- <i>Introduction to Statistics</i> Do Pre-Lecture Quiz on Chapter 01 and submit for grading.</p> <p>Take <i>Action Sheet</i> and record information while studying for next week’s classes. Hand in Action Sheet on Thursday.</p>
08/29 Th	<p>The Scientific Method Hypothetical Constructs Operational Definitions Independent and Dependent Variables Experimental Design Manipulative (True) Experiments Non-Manipulative (Quasi) Experiments Pilot Study Paradigm Development Paradigmatic Tunnel Vision</p>	<p>For Tuesday:</p> <p>Online: Do Applia <i>Introduction to Statistics</i> problem set and submit for grading. Do Applia <i>Introduction to Statistics</i> supplementary materials.</p>
08/30	Meet your Discussion Leader	

Fr	Troubleshoot Experimental Design Scenarios	
Wk03		
09/03	Reliability vs. Validity Internal vs. External Validity Threats to Validity	For Thursday: Online: Read GW Chapter 02 -- <i>Frequency Distributions</i> Do Pre-Lecture Quiz on Chapter 02 and submit for grading. Take Action Sheet 2 and record information while studying for next week's classes. Hand in Action Sheet 2 on Thursday
09/05	Mathematical Preliminaries: Subscript and Summation Notation	For Tuesday: Online: Do Applia <i>Frequency Distributions</i> problem set and submit for grading. Do Applia <i>Frequency Distributions</i> supplementary materials.
09/06	Discussion Section	

Wk04		
09/10	<p>Discrete vs. Continuous Data Nominal vs. Real Limits Levels of Measurement Frequency Distributions Frequency Relative Frequency Cumulative Frequency Cumulative Relative Frequency Quantiles and Percentile Rank</p> <p>Histograms Frequency Polygons Probability Density Plots</p> <p>Shape Characteristics Unimodal vs. Bimodal Symmetric vs. Skewed Positive vs. Negative Skew</p>	<p>For Thursday:</p> <p>Online:</p> <p>Read GW Chapter 03 -- <i>Measures of Central Tendency</i> Do Pre-Lecture Quiz on Chapter 03 and submit for grading.</p> <p>Do Applia <i>Measures of Central Tendency</i> problem set and submit for grading.</p> <p>Do Applia <i>Measures of Central Tendency</i> supplementary materials.</p> <p>Sign onto PeerWise and submit at least two questions on material to be covered on the midterm.</p>
09/12	<p>Measures of Central Tendency Mean Median Mode</p> <p>Computing a mean from a frequency distribution Estimating a mean from a grouped frequency distribution The mean of combined groups Effect of changing a score Effect of adding a number Effect of deleting a number</p> <p>"Listwise" operations Effect of listwise operations on the mean Termination of Coverage for Quiz 01</p>	<p>For next Tuesday:</p> <p>Online:</p> <p>Read GW Chapter 04 -- <i>Measures of Variability</i> Do Pre-Lecture Quiz on Chapter 04 and submit for grading.</p> <p>Termination of Coverage for Quiz 01</p> <p>Take and evaluate at least 4 questions by other students on PeerWise.</p>
09/13	Quiz 01 Review	

W05		
09/17	<p>Measures of Variability Range Variance Standard Deviation</p> <p>Population vs. Sample Formulas</p> <p>"Theoretical" vs. "Computational" Formulas for variance and standard deviation.</p> <p>Effect of listwise operations on the variance and standard deviation</p>	<p>For Thursday:</p> <p>Online: Do Applia <i>Measures of Variability</i> problem set and submit for grading. (Optional) Do Applia <i>Measures of Variability</i> supplementary materials.</p> <p>Start Doing Exam Practice Questions for Chapter 01, Chapter 02, Chapter 03</p>
09/19	Review and Catch-Up	<p>For Friday:</p> <p>Online:</p> <p>Do Part I Summary, and complete unfinished Exam Practice Questions</p>
09/20	Midterm Quiz 01	

W06		
09/24	<p>Pulling together Part I: What's In a List of Numbers? Location (Central Tendency) Spread (Variability) Shape</p> <p>The Vulnerability Box and the Hierarchy of Vulnerability</p> <p>Theoretical and Practical Applications of the Vulnerability Box</p> <p>Linear Rescaling of Course Grades Score Standardization</p>	<p>For Thursday:</p> <p>Read GW, Part II Introduction, and GW, Chapter 05, <i>z-Scores: Location of Scores and Standardized Distributions</i></p> <p>Do <i>Pre-Lecture Quiz</i> on Chapter 05 and submit Do <i>Applia problem set</i> on Chapter 05 and submit for grading for grading.</p>
09/26	Basic Set Theory	<p>For Next Tuesday</p> <p>Read GW, Chapter 06</p> <p>Do <i>Pre-Lecture Quiz on Chapter 06</i> and submit</p> <p>Install R on your computer. (Watch an instructional video here.)</p>
09/27	Discussion Section and Exam Retrospective	

W07		
10/01	<p>Introduction to Probability</p> <p>Two Kinds of Probability Distributions</p> <p style="padding-left: 40px;">Discrete</p> <p style="padding-left: 40px;">Continuous</p> <p>The Normal Distribution and Z-Scores</p>	<p>For Thursday</p> <p>Do Chapter 06 Applia Problems and Submit</p> <p>Bring Laptops to Class with R Installed</p> <p>Submit at least one question to PeerWise on Chapter 04, 05, or 06.</p> <p>Read, answer, and evaluate at least 5 questions written by others on Peerwise.</p>
10/03	<p>An Introduction to R</p> <p style="text-align: center;">Bring Laptops with R installed</p>	
10/04	<p>Discussion Section</p> <p style="text-align: center;">Bring Laptops with R installed</p>	Basic Calculations with R

W08		
10/08	An Introduction to R (continued) Normal Curve Calculations with R Probability of a Sequence	For October 15: Read GW, Chapter 07 Do Pre-Lecture Quiz Problems and submit for grading. Start doing practice exam questions for Chapters 04 through 07 in preparation for Midterm Quiz 02 on October 18
10/10	Fall Break	
10/11	Fall Break	
W09		
10/15	Samples, Statistics, and Sampling Distributions The Sampling Distribution of the Sample Mean Truncation of Coverage for Midterm Quiz 02	For Thursday: Do Aplia Assignment for Chapter 07 and submit for grading Complete practice exam questions for Chapters 04 through 07, submit for grading.
10/17	Catchup and Review for Quiz 02	For October 22 Read GW, Chapter 08 Do Pre-Lecture Quiz on Chapter 08, submit for grading
10/18	Midterm Quiz 02	

W10		
10/22 - 10/24	<p>Introduction to Hypothesis Testing</p> <p>Statistical Inference vs. Probability Theory Decision-making under Uncertainty The medical perspective The 2x2 Table The statistical perspective The 2x2 Table</p> <p>Hypothesis Testing Calculations Error Rates and the Error Rate Tradeoff Reject-Support Testing Accept-Support Testing Critical Values and Critical Regions Controlling alpha</p>	<p>For Thursday – Finish reading GW Chapter 08 Do Aplia Assignment for Chapter 08 and submit for grading</p>
10/25	Discussion Section and Exam Retrospective	

W11		
10/29	<p>Introduction to Hypothesis Testing (ctd)</p> <ul style="list-style-type: none"> The Z-Statistic One-Tailed Tests Computing Power Standardized Effect Size Calculating Required n 	<p>For Thursday – Read GW Chapter 09 Do Pre-Lecture Quiz and submit for grading</p>
10/31		<p>For 11/05 -- GW Chapter 09 Do Aplia Problem Set and submit for grading.</p> <p>By 11/08 – Do Exam Practice Questions for Chapters 08–09, and submit for grading.</p>
11/01	Discussion Section	
W12		
11/05	<p>Confidence Interval Logic The Relation between Confidence Intervals and Hypothesis Tests</p> <p>Student's t distribution</p> <ul style="list-style-type: none"> General Facts Calculations in R <p>Truncation of Coverage for Midterm Quiz 03</p>	
11/07	Review and Catch-up for Midterm Quiz 03	<p>For 11/12</p> <p>Read GW Chapter 10. Do Pre-Lecture Quiz and Submit for Grading Do Chapter 10 Aplia Problem Set and submit for grading</p>
11/08	Midterm Quiz 03	

W13		
11/12	The 2-Sample Independent Sample t -Test Confidence Intervals and Effect Size Measures for the 2-Sample t	For Thursday – Read GW Chapter 11. Do Aplia Chapter 11 Pre-Lecture Quiz and Submit for Grading Do Aplia Chapter 11 Problem Set and Submit for grading
11/14	The Correlated Sample t	For 11/19: Read GW Chapter 14 Do Aplia Chapter 14 Pre- Lecture Quiz and Submit for Grading Do Aplia Chapter 14 Problem Set and Submit for grading
11/15	Discussion Section and Exam Retrospective	
W14		
11/19	Correlation and Regression	For 11/21 Read GW Chapter 12 Do Aplia Chapter 12 Pre- Lecture Quiz and Submit for Grading Do Aplia Chapter 12 Problem Set and Submit for Grading
11/21	Regression and ANOVA	By 12/03 Complete Exam Practice Questions for Chapters 9,10,11,12,14
11/22	Discussion Section	
W15		
11/26	No Class – Thanksgiving Break	
11/28	No Class – Thanksgiving Break	
11/29	No Class – Thanksgiving Break	
W16		
12/03	Review and Catch-Up	
12/05	Midterm Quiz 04	Will cover Chapters 10,11,14, and, optionally, 12